Prairie States Mushroom Club

Symbiosis©

Spring 2024

The newsletter of the Prairie States Mushroom Club

https://www.facebook.com/PSMCofIowa http://iowamushroom.org

Message from the President

by Sarah DeLong-Duhon

Early Spring Beauties

Spring is finally here! The wildflowers are beginning to pop and everything's looking a little greener. This year we already had our first foray on March 10th, and while it was too early for morels we found scarlet cups, jellies, polypores and more! Winter and early spring is a good time to investigate lichens and crust fungi – there's really a lot more diversity than you'd expect, and it's a great excuse to get some sunlight. I wish you all an excellent morel harvest!

This issue's theme:

Attraction

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From the Editor

by Dave Layton

The theme of this issue is attraction. I figured that this theme would be broad enough so that people could write about nearly anything relating to fungi and it would fit, so we have four very different articles focused on taxonomy, beauty, ethnomycology and flavour. Sure enough, they all fit the theme in four very different ways.

In "The Fairfield Toadstool Club", Art McBreen tells a touching and humorous story about a couple who enjoy fungi and wish to attract the company of like-minded folks by creating a mushroom club in their town in the 1920s. It's fun reading about their events and activities a hundred years ago and knowing that at least a few of our ancestors were also kindred spirits.

In "Funga in the Spotlight (finally!)", Sarah DeLong-Duhon writes about how fungi have finally attracted enough attention in the scientific community to garner their own kingdom, "Funga". She discusses some of the history that has led to this accomplishment, including a connection to the University of Iowa. Plus, she notes the role that mushroom clubs (including the North American Mycological Association and even our own PSMC) play in bringing fungi to the larger community's awareness.

In "How Now, Choose COW", Loulwa Soweid nominates *Laetiporus sulphureus* (half of Iowa's chicken of the woods duo) for Iowa state mushroom. Why nominate just the one species when it and *L. cincinnatus* are equally tasty? - one reason is because *L. sulphureus* is more attractive! She makes a good point and I agree. When towering up an old tree trunk, pristine gold and orange sulfur mushrooms could easily be the most attractive fungus in Iowa.

(cont. on pg. 10)

The Fairfield Toadstool Club

by Art McBreen

Fairfield downtown around 1920. It appears Fairfield had a car club - why not a Toadstool Club? Photo provided courtesy of Jefferson County Heritage: https://jeffersoncountyheritage.org/

On July 15, 1920 the following announcement appeared in the Society column of the Fairfield Daily Journal: "The Toadstool Club will meet Monday, July 19th at 7 p.m. sharp, not 7:15 or 7:30, but 7 o'clock. Anyone wishing to join is invited to attend." The club was the brainchild of Dr. J. Fred Clarke, himself a product of the Agassiz Association, a national society for nature study that flourished in the 1880s. Given his insistence on punctuality, you might take Dr. Clarke for something of a martinet, but his follow-up in the rival Fairfield Tribune a day later (*Unique Club Has But Two Members, Has Been in Existence for Thirty Years, Will Expand*) reveals a lighter side.

"Each member," he writes, "holds several offices. There is the (1) president, curator and librarian, and the (2) vice president, secretary and treasurer." In other words, Clarke and his wife, the former Melinda Clapp, unfailingly referenced in the manner of the times as Mrs. J. Fred Clarke. "The club has had thirty meetings (which) begin in April and continue until the last agaric comes out of the frosty ground in November." Sound familiar? He reassures us that "The membership so far has not been reduced by poisoning," and concludes with, "Obey the impulse if you feel it." Indeed.

The Toadstool Club first came to my attention while reading Susan Fulton Welty's *A Fair Field*. It got only brief mention but I loved the quirky-sounding name and thought it must've been tongue-in-cheek. Apparently though, this was what they were called back then; usage of the word *toadstool* peaked around 1900. *Mushroom*, on the other hand, really didn't see similar popularity till recently, so the former was just the common way of referring to fungi.

That first meeting must've been a rousing success; membership "increased by 300 per cent" and a whopping 37 species were "collected, examined and categorized" during the day, including enough "gay *Boleti*" to fill an 8 quart peck, which "the ladies of the club prepared and all members enjoyed eating." So what else exactly were they finding? The usual suspects, as it turns out, though often under different aliases. Take the Hollow Bolete, for instance. Dr. Clarke knew it as *Boletinus porosus*; today we call it *Suillus cavipes*. Another example is *Clitocybe infundibuliformis*, aka *Clitocybe gibba*. *Russula roseipes* retains its old name but *Amanitopsis vaginata* apparently will soon be replaced with *Vaginatae*. And so on. In 1921 alone, 26 different species were mentioned and expounded upon, their scientific appellations dependably bungled by the typesetter.

The newspaper pieces continue more or less regularly throughout the summer, detailing the club's encounters with Stinkhorns and Earth Stars, Wood Ears and Death Angels, tasting and describing and lamenting the waste of bushels of *boletinus* because "Americans have not learned to utilize them".

(cont. on pg. 10)

How Now, Choose COW: Nominating *Laetiporus sulphureus* as Iowa State Mushroom

by Loulwa Soweid

Chicken of the Woods (COW), *Laetiporus sulphureus* from iNaturalist obvservations made in Iowa. Taken by karsennotcarson

While fungi abound from the East Coast to the West Coast and everywhere in between, when searching for a state mushroom one often turns up empty-handed. Only five US states currently boast them, with Oregon leading the way since 1999 (electing *Cantharellus formosus* as representative fungus), followed by Minnesota over a decade later in 2010 (with the popular but in my opinion rather clichéd pick *Morchella esculenta*), followed by Texas in 2021 (with *Chorioactis geaster*) and most recently, California and Utah in 2023 (with *Cantharellus californicus* and the delectable Porcini, respectively). But Iowa still lacks a state mushroom to proudly pin up beside our state bird (eastern goldfinch), state flower (wild rose), state tree (bur oak), and state rock (geode). The question is, which mushroom deserves to be nominated?

I considered a couple different angles when thinking about a candidate to select. Could geographic specificity be a deciding factor? For example, Texas' *C. geaster* was in part nominated due to its relative uniqueness to the state (having only ever been found growing in Texas, Oklahoma, and Japan), and I believe the previously mentioned *C. californicus* is a California-specific fungus. However, to my knowledge (and I conferred with much more seasoned mycophiles about this) there are no mushrooms that we currently know of that occur solely in Iowa.

What about a mushroom symbolic of the state? Barbara Ching, the past president of the North American Mycological Association, already beat me to it in our Summer 2023 *Symbiosis* issue when she proposed *Ustilago maydis* (aka corn smut) as the corn state's state mushroom. Inspired by this, I decided to search for prairie-specific fungi to highlight, both as a nod to our prairie-filled past and to potentially bring attention to current prairie restoration efforts. However, the only results I found were for arbuscular mycorrhizal fungi, microscopic fungi that form beneficial symbiotic relationships with the roots of plants, including many prairie plants. While they are fascinating and indispensable, I admitted to myself that choosing fungi that were invisible to the naked eye would probably not garner much enthusiasm from the public.

Which left me to approach the decision from a more practical aspect: mushrooms and mycology should be for everyone, so what mushroom would appeal to both laypeople and seasoned mycologists alike? What could proudly serve as The People's Mushroom, if you will? And after some thought, I have landed on the mighty and merit-worthy Chicken of the Woods (I should clarify that I am referring to *Laetiporus sulphureus* specifically, as the moniker "Chicken of the Woods" encapsulates more than one species in the *Laetiporus* genus) and am nominating it for Iowa state mushroom.

Now onto why:

1. *L. sulphureus* is easy to identify. It is championed as a beginner-friendly mushroom for people looking to start foraging or simply to begin learning about local mushrooms. I did not want to nominate a mushroom that would be difficult to recognize – I want Iowans to be able to catch a glimpse of it and know exactly what it is they are looking at, pointing to it and confidently declaring "COW!"

2. In a similar vein, I would venture to say that *L. sulphureus* is a beautiful mushroom. Strikingly orange and yellow, almost candy-corn-like, it is a fungal wonder to behold. While being starkly eye-catching is not a prerequisite for nomination, it certainly doesn't hurt that Chicken of the Woods is pleasant to look at (I mean, I appreciate corn smut in all its weird-growth-like glory, but it is rather displeasing to the eye). (cont. on pg. 4)

How Now, Choose COW...

(cont. from pg. 3)

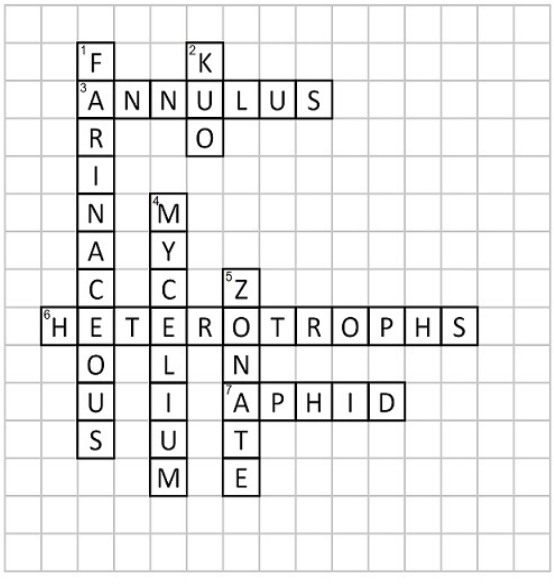
Chicken of the Woods (COW), *Laetiporus sulphureus* from iNaturalist obvservations made in Iowa.
Taken by hleab and tgrant999

3. *L. sulphureus* is abundant. While not invasively overpopulous (like the golden oyster, *Pleurotus citrinopileatus*, has been accused of being), one needn't trek for miles to find a ripe COW specimen from spring all the way to early autumn. I would hesitate to suggest a state mushroom that was so elusive that it consistently evaded our sights, or was so scarcely-growing that only a few people would ever encounter it in the wild. The easier a mushroom is to find, the more people stand to be captivated by it!

4. Finally, *L. sulphureus* is a choice edible. Four out of five of the current state mushrooms in the United States happen to be edible as well, which makes sense given that most of the mushroom photos I see uploaded to Facebook identification groups not only contain the question, "what is this?" but invariably also "can I eat it?" I also believe that being able to forage, pick, prepare, and consume a mushroom allows us to form a more personal connection with and understanding of the natural world. A bonus is that *L. sulphureus* has no toxic lookalikes, so the chances of accidentally dining on its evil twin are nil.

With all this said, I urge you to consider this mushroom – whether you refer to it as *Laetiporus sulphureus*, Chicken of the Woods, or simply COW – as a worthy contender for the title of state mushroom. But I will also profess that as someone with a deep respect for all fungi large and small, wild and cultivated, local and global, at the end of the day I believe that I will be content with whichever mushroom ends up as a state representative, so long as it ushers in further intrigue and respect towards our fungal friends.

Crossword puzzle answers from Fall 2023 issue.



CLUES:

Across

3 The scientific term for the remnant of a mushroom's partial veil; it looks skirt-like in appearance

6 While most plants are autotrophs, which in simple terms means that they can create their own food from inorganic material, all fungi are this term, which means that they cannot create their own food and need to derive it from other sources of organic materials

7 Ash boletes were thought to have mycorrhizal association with ash trees, but in actuality they maintain a mutualistic relationship with this type of parasitic insect, which feeds on ash tree

Down

1 You would use this word to describe the scent of fungi that smell like cucumber or melon rind

2 This self-taught midwestern mycologist runs mushroomexpert.com and has published the extensive field guide "Mushrooms of the Midwest"

4 A root-like network of hyphae that gives rise to the fruiting bodies of fungi

5 A physical descriptor for mushrooms that have varying zones of color or texture on their caps

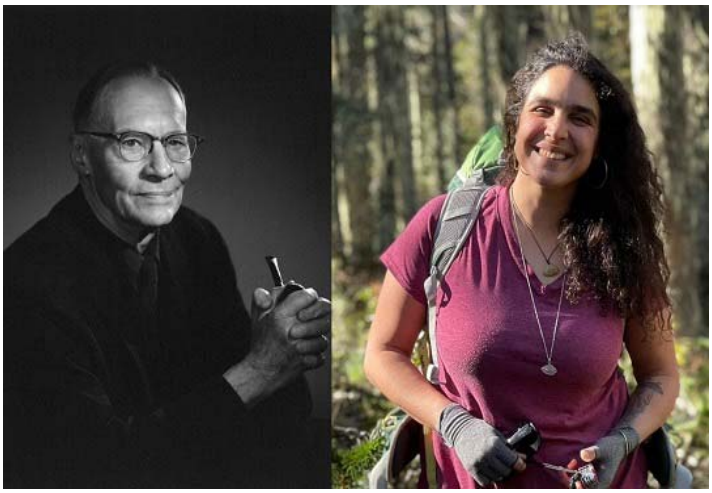
Funga in the Spotlight (finally!)

by Sarah DeLong-Duhon

Surely by now, you know that fungi are neither plant nor animal, but a kingdom all of their own. You likely also know that it was not always so. Fungi seemed rooted in place with their mycelium much like the roots of plants, and this was a simple enough distinction from animals to warrant their initial placement in Plantae. Fungi were considered flora by most until the culmination of arguments advocating for the Fungi kingdom, when in 1969, Robert Whittaker published an 11-page article proposing 5 kingdoms of life. He challenged both Linnaeus's 2 kingdom system (plants and animals,) and the more recent 4 kingdom system of Herbert Copeland, both of which ignored the unique characteristics of fungi. Whittaker's 5 kingdom system was widely accepted, and while there are still new arguments for additional kingdoms, there is no argument about fungi getting their own.

Long before any of this happened, however, the mycologist George W. Martin was probing the taxonomy of slime molds and fungi at our very own University of Iowa with T. H. Macbride (yes, that Macbride!). Dr. Martin published several articles on fungal classification that, in a big way, made the case for the classification of fungi in their own kingdom. In 1936 he published "A Key to the Families of Fungi Exclusive of the Lichens", then "Outline of the Fungi" in 1940, which was included in Ainsworth and Bisby's "Dictionary of the Fungi" in 1961. In 1955, Dr. Martin published an article called "Are Fungi Plants?" that specifically suggested that fungi should be taxonomically separated from plants, outlining their differences, and this is one among several articles from Dr. Martin that Whittaker cites in his text. The lesson here is this: one, you can thank one of your fellow Iowans for advancing mycology in such a critical way; and two, these big strides in knowledge cannot be contributed to any one person. Rather, we are a network of people working together, like mycelium, to further our understanding.

Fauna, Flora, and Funga. In August 2020, the MycoFlora Project (a nonprofit focused on North America's fungal biodiversity and conservation) was reborn as the Fungal Diversity Survey. FunDiS is the parent project for our Iowa Fungal Biodiversity Project. Why did the name change? Simply put, fungi are not flora, and the FunDiS team wanted to make that abundantly clear, and the message is catching on. Just recently in March 2024, National Geographic released its first ever cover story featuring fungi, as well as several other articles acknowledging the importance of Funga. Importantly, the global non-profit National Geographic Society is now including the Fungi kingdom in its definition of wildlife, which previously included only animals and plants, opening up grant opportunities for fungal research and conservation. This is huge!



George W. Martin and Giuliana Furci

This was also made possible by a network of people, but Giuliana Furci, the Executive Director of the Fungi Foundation, had a big part to play. Her Fungi Foundation and all its members have been pushing for the recognition and proper classification of Funga for some time, and they are not done yet. I am very excited to see what organizations like the Fungi Foundation, FunDiS, the North American Mycological Association, and even your very own PSMC do next to further fungal awareness!

Dryads (*Polyporus squamosus*) "Love Them or Leave Them"

By Dave Layton

Dyads showing the pheasant back pattern.
Photo provided courtesy of Jim Frink

I always knew these mushrooms as pheasant back, becase of its pheasant feathered appearance. Another common name for them is dryad saddle. Lots of folks call these mushrooms dryads and so will I. I'm not sure where the name dryad saddle came from. A dryad is some sort of wood sprite apparently. Dryads weren't necessarily small pixies either. They might have been monsters! In the 1800s McIlvaine reported this species growing over three feet in circumference and even reaching a seven and a half foot circumference! Whatever wood sprite would use a saddle that large would have to be scary indeed. The forests that those giant dryads grew in had to be amazing. Imagine how huge the old growth trees were to support dryads that large. So much was lost in our march to subdue the continent.

On a totally different note, this may be one fungus that I know more about the edibility of than McIlvaine. He reported it as tough but good if sliced thin and stewed for a half hour. In recent years I've learned much more about its culinary possibilities than that. I'll share more about that shortly..

In my early years dryads really only served one purpose for me. That was to avoid looking for morels around trees they grow on. Dryads meant that the trees were too long dead. I didn't consider eating them. I thought they were tough and weird smelling kind of like a watermelon rind. At a PSMC foray Damien Piper joked about stewing them with an old leather belt. When the belt was tender the mushrooms were done, but of course you'd still have to like their flavor.

One spring Sally and I found some young dryads which she thought Damien had called "squamosa". Their pores weren't even visible yet, and they were actually quite tender around the cap rim. I cut a piece and gave it to Sally to smell. She pronounced it "squeamish squamosa." That remains our pet name for dryads.

One time I sauteed a little bit of tender young dryad and added a few morels to see how the morels might affect the dryad's flavor. The morels didn't help the dryads at all, and the dryads certainly didn't help the morels.

Hognose dryads. Even their base is edible when they're this young.

A few years later I found a beautiful batch of very young (hognose) dryads on a day when I found no morels. It was spring and I really wanted fresh fungi so dryads were dinner. This time I used the Internet which had lots of dryad recipes. I had no idea that they were so popular. Something a lot of recipes had in common was strong favorings, like soy sauce (salty) fish oil, ginger, garlic, wine and cumin. I also thought about pickled watermelon rind and decided a vinegar based sauce might be good to add. I ended up with sauteing them with olive oil, minced garlic, white wine, soy sauce and some Heinz sweet chili sauce that I had to find some use for. The result was really quite good, especially as a condiment on steak or hamburgers.

(cont. on pg. 10)

Forays

Future Forays

The only official foray planned at the time this newsletter is going to press is the Mushroom Ramble:

Saturday, May 11, 2024, 9:00 am 12:00 pm
Wickiup Hill Outdoor Learning Area
10260 Morris Hills Road
Toddville, IA, 52341

Forays are always being planned however and some pop up quickly. To learn of more upcoming events go to the PSMC Events page on the website: https://www.iowamushroom.org/events

Recent Forays

Some of our more hearty members have enjoyed midwinter forays already. Here are some pics from recent forays. These pics and more can be found on PSMC's Smug mug site at: https://iowamushroom.smugmug.com/Forays/Foray-2024. More pics and information can also be on the PSMC Facebook page, https://www.facebook.com/PSMCofIowa.

March 10th, Wild Cat Den State Park near Muscatine

Heading into the woods

Schizophyllum commune

Scarlet cups and an Artist fungus coming out of dormancy

Emerging Enoke (*Flammlina velutipes*) The season's first edibles, though not much of a meal

March 23rd, McFarland park in Ames

Intrepid foragers at McFarland park

Fresh Tree Ear (*Auricularia auricula*) an Early Spring Surprise

Chrystal Brain jelly (*Myxarim nucleatum*)

Tree bacon

(cont. on pg. 11)

Coloring Page Photos

Phallus rugulosus' (Wrinkly Stinkhorn)
Photo by Roger Heidt

I saw this photo on Michael Kou's *Mushroom Expert.com*: https://www.mushroomexpert.com/phallus_rugulosus.html. PSMC Past-treasurer Roger Heidt tells how Kuo got it:

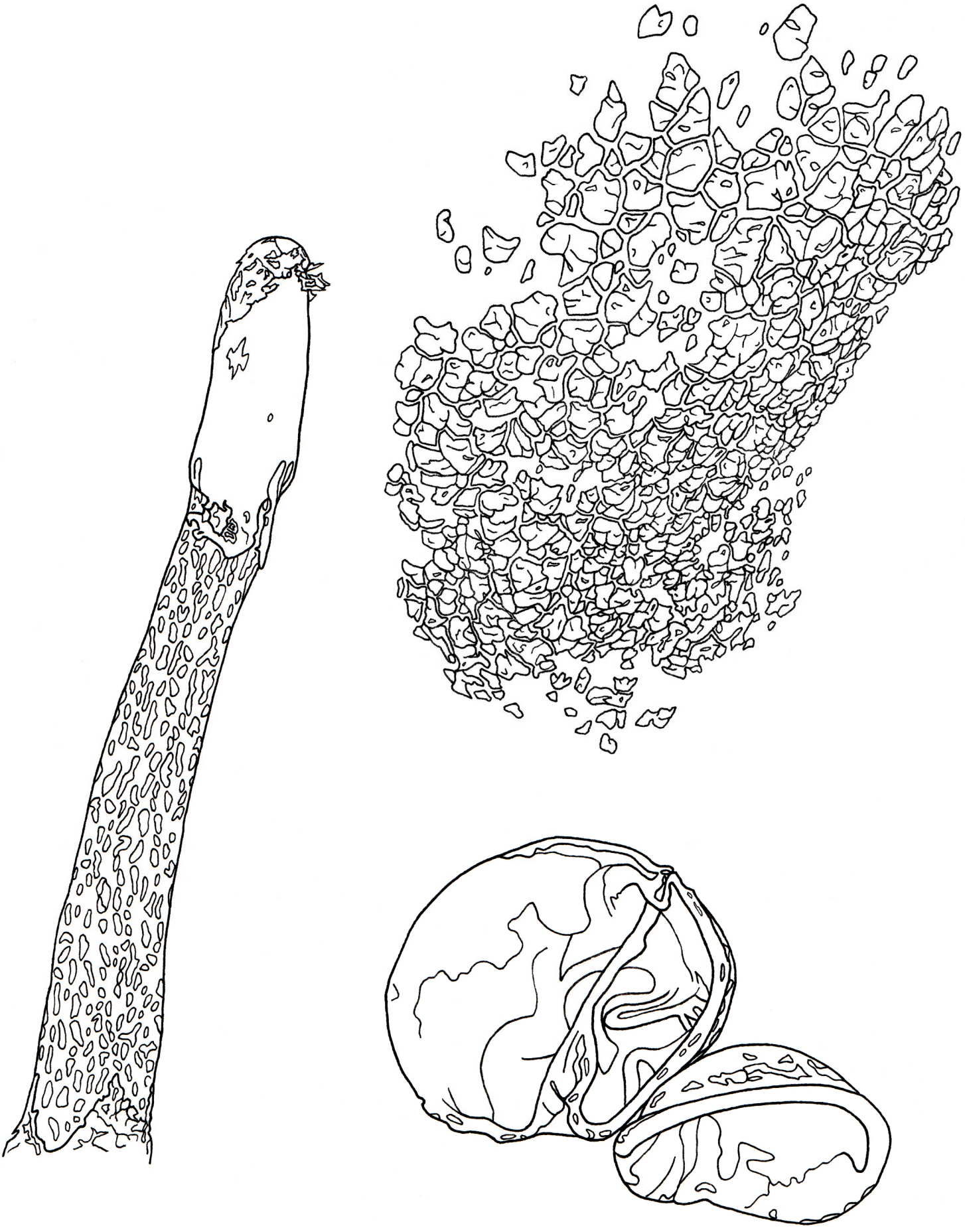
> "That photo was taken and fungus collected on Sept. 19, 2018. I was sending specimens, photos and field notes to Michael Kou for a stinkhorn project he was doing at the time. It was in wood mulch and mixed in with *Mutinus elegans*. In all I sent 9 collections with 4 different species. The nicest was a *Lysurus* species waiting for a name, https://www.mushroomexpert.com/lysurus_species_01.html."

Roger's story points to the important role that mushroom clubs and "citizen scientists" can play in adding to our overall understanding of fungi.

Auricularis sp. (Wood Ear)
Photo by Jim Frink

Xylobolus frustulatus (Ceramic Parchment)
Photo by Jim Frink

Amanda says about one of her drawings, "As Xylobolus frustulatus is not very colorful, I thought it would be fun for artists to color the background to make the fungus pop."



A. Flaata

From the Editor (cont. from cover)

In my article "Dryads Love 'em or Leave 'em," I share how dryads (*Polyporus squamosus*) have gone from basically a joke to me to an attractive and tasty fungus that brought much joy to two of my grandchildren.

Finally, we have another coloring page from Amanda Flaata along with very attractive photographs of the mushrooms she chose that were taken by Roger Heidt and Jim Frink. You'll be surprised where I first saw Roger's photo. We also have another fun crossword puzzle from Loulwa along with the latest in club news and upcoming forays. So, sit back and enjoy this issue of *Symbiosis*. I hope you find it very attractive!

Dryads... (cont from pg. 6)

I've since tried different combinations on the same theme and all were good as long as I kept the mushroom's strong flavor in mind.

One of my greatest joys in life is when grandkids come running to me shouting, "Grandpa we found mushrooms!" One day Sally's eight-year-old grandson, Isaac and his younger sister, Nora found a tender young fist sized dryad growing on a maple tree in their Michigan yard when we were visiting. After consulting with Sarah, their mom, I told them we could cook and eat that one – Oh boy!

Sarah let me use a little cooking sherry which I combined with soy sauce, worcestershire sauce and ketchup. The kids stirred thin dryad slices into the sauce and I put them in a pan with a little heated oil and butter. I cooked them until liquid was reduced to a glazing on the lightly browned slices. I took the first slice and knew right away it would be my last, for the rest had to be divided exactly evenly between the two kids or there would be trouble. Our mantra could have been, "I scream, you scream, we all scream for squeamish squamosa!"

The Fairfield Toadstool Club (cont. from pg. 2)

An August 5th column touts the club as having a tent at Fairfield's annual Chautauqua gathering, predicting confidently that "Any toadstool brought to this tent will be named for the collector."

On August 9th young members Laura Beck and Mary Etta Moss crawled into the shaft of an abandoned coalmine and brought out a strange specimen that resembled "a large chocolate cream in appearance but on section shows the most beautiful zones like an agate." This new find was not in any of the books of the club's library and specimens were sent to "Mr. Lloyd in Cincinnati, Ohio, to see if he can name this species." Dr. Clarke thought it might belong to the genus *Fomes*, but this is the last we hear of it.

Accounts then cease until New Year's Eve, with a column about the club's "revival supper" held the night before, which rhapsodizes over a menu of *Boletinus porosus* soup, *Agaricus campestris* on steak, stewed *Marasmius oreades* and *Pholiota marginata* pie, regretting that the club has not been able to feature toadstools for dessert, and putting out a call for recipes. Alas, we never find out whether the call was answered because it too is not mentioned again.

There are only two more references to the club: one in April of '21 featuring its favorite ways to prepare morels (with a cream sauce or fried in butter), and the last in August of '22, again inviting the public to visit their tent at Chautauqua but this time promising to provide expanded advice about fungi that are harmful to crops, such as "corn smut" and "wheat rust". After that, the club fades from the public eye; author Welty says that it languished after a couple of years, but what exactly became of it is not known.

What *is* known is that for Clarke it was a lifelong pursuit, something he was also known *by*. In a contemporaneous Fairfield Tribune feature with much good-natured ribbing titled *Who's Who in Old Jefferson No. 35*, a caricature of the good doctor portrays him in his Army uniform, saber hung from his belt, hastening across a field with two overflowing armfuls of – yes, you guessed it – toadstools. He lived for another 21 years, Mrs. J. Fred for another 25, and it wouldn't be too much of a stretch to imagine that the club did as well, if only with its two most long-standing members.

Forays

(cont. from pg. 7)

The following information is from the PSMC Facebook page:

Thanks everyone for such a good time at McFarland Park yesterday! The snow could not stop us from finding wood ear and last year's hen of the woods, as well as fungi like tar crusts, carbon balls, turkey tail and similar species, and the less-observed crystal brain jelly. We also found the rare-for-Iowa "tree bacon" or *Punctularia strigosozonata:* https://www.inaturalist.org/observations/203657704/ More pictures here (if you have more to add please send them along)! https://iowamushroom.smugmug.com/.../McFarland-Park..

Thanks Iowa Life for joining us on our foray to document our hike - we hope to see you again when it greens up! They expect to release an episode featuring fungi in October.

March 30th Draco Hill Nature Farm

A large group preparing to forage.

Jeff Patch and Glen Schwartz led over 20 people on this foray with Jeff leading one group and Glen leading another. The folks at Draco showed great hospitality to us and made sure no one got lost in their lovely wooded areas. Lots of downed wood from meant lots of polypores for foragers to discover. All the usual suspects were present including *Irpex lacteus*, turkey tails and *Trametes hirsuta* plus *Stereum*, *Trichaptum* and cinnabar polypores. There were also some lovely *Schizophyllum* and scarlet cups for photographers. I spotted an unusual cinnamon colored polypore on a hickory log that wasn't like the other cinnibars. After seeing more pictures of it, Sarah thought it looked like *Trametes sanguinea* and I agree.

Jeff's group also found fresh *Galerina*, which is always handy for the "Yes poisonous mushrooms grow on wood" lecture. One fellow came back with very familiar looking mushrooms that had us confused for about ten seconds until the farm owner said, "It looks like he found one of our old shiitake logs." She graciously let him keep his find.

Draco Farms would be a fun place to visit throughout the year when prairie grasses are growing and the woods are active. They also have campsites that can be rented through HipCamp online. It'd be fun to take a day canoe trip from Sutliff to Draco then spend the night.

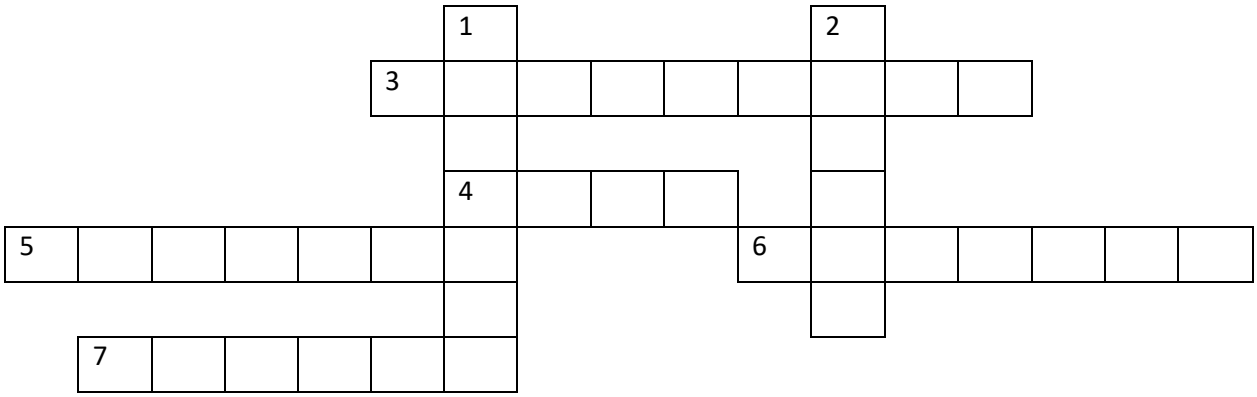
Schizophyllum commune and cinnamon colored polypore. Photos by Mark Gromko.

Glen describing fungi and *Galerina sp*.

Shiitake that had emerged from an inoculated log that the owner had thought was spent.

Prairie States Mushroom Club
2104 Holiday Rd.
Coralville, IA 52241

PSMC Web Site:
http://iowamushroom.org



Down:

1. A term for the bioluminescent glow emanating from certain species of fungi.
2. If you rub the surfaces of Agaricus xanthodermus, especially at the base of the stipe and edge of the cap, it will brightly bruise what color?

Across:

3. In the Netflix series "The Last of Us," a pathogenic fungus infects and zombie-fies its hosts. What is the genus name of the real-life fungus that this is based on?
4. In a first-of-its-kind discovery, researchers in India recently observed a mushroom (thought to be a Mycena species) growing out of the skin of this type of amphibian.
5. The common name for the delicious mushroom Boletus edulis.
6. The name of a cobweb-like partial veil, characteristic of fungi from the Cortinarius genus.
7. The filamentous structures that make up mycelium.