MARCH 2024 NEWSLETTER



AMS LEADERSHIP

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AMS MISSION:

Our mission is to educate the public about mushrooms, their identification, various uses and scientific, culinary and environmental value, whilst prioritizing safety; and to promote advancement in the science of mycology.

APPLYING THAT MISSION:

The field of mycology is always changing and growing, and we're here to help people catch-up and understand both identification and re-classification of species and genera that grow in our backyard. We have probably hundreds of unidentified species of mushrooms thriving right there in Alabama, and we seek to help create classifications for those mushrooms by working closely with herbariums, botanical gardens, & citizen scientists like you! But more importantly, we have a ton of fun foraging for elusive mushrooms, identifying them together, and eating the best of them!

E: almushroomsoc@gmail.com W: https://alabamamushroomsociety.org/

Spring Has Sprung!

Greetings, fellow mycophiles! Spring has almost sprung, and it won't be long until the forest revives itselfand many of the fungi that we've been pining over will make their presences known again!

We are excited to announce our speaker for the March meeting is Kerri McCabe! Be sure to check out our events list (on page 2) which includes: upcoming forays, scheduled presentations, meetings, and other events.

HAVEN'T RENEWED YOUR AMS MEMBERSHIP YET?

Now is the perfect time! <u>Benefits include:</u>

- \uparrow free monthly guided forays
- \uparrow members-only events
- $\widehat{\uparrow}~$ discounted or waived rates & first-notification of educational lectures
- \uparrow \$5 off a membership to the NAMA
- \uparrow access to AMS lending library
- \uparrow access to lender microscopes & supplies
- \uparrow a vote for board-member elections
- $\ensuremath{\widehat{}}$ access to our private online "Members' Lounge"

MARCH 2024 NEWSLETTER



UPCOMING EVENTS

Click HERE for more info or to register for an event!

CONTEST
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MEETING INFORMATION

AMS meetings take place the first Tuesday of the month at 7pm CST via Zoom and are open to the public. Join us March 5th. After our normal business announcements, we will welcome fungi expert and AMS member **Kerri McCabe**. She will be presenting to us on **Cryptogams**. This fascinating group of organisms include slime molds, algae, lichens, mosses, liverworts, ferns, and fungi.

LINK TO AMS MEETING Meeting ID: 815 5182 4511

Meeting ID: 815 5182 43 Passcode: 18 us02web.zoom.us



Microscope & Book Lending Program for AMS Members

AMS has two compound microscopes with all needed supplies to perform fungal microscopy. This includes slides, immersion oil, cover slips, tweezers, razor blades, mounting chemicals, etc. Members must complete one of our microscopy courses or otherwise demonstrate proficiency in using a compound microscope in order to borrow one.

We also have a lending library! Available books can be viewed HERE! It works just like your public library; you may borrow a book for two weeks and then bring it back.

MARCH 2024 NEWSLETTER



2024 SCAVENGER HUNT

Join us on a treasure hunt for fungi! Pick the tier level that corresponds to your skill level and find and document the fungi on that list. From brand new fungiphiles to seasoned experts, we have a list for you! You have all of 2024 to find them, and winners will be announced at our February 2025 AMS Meeting. Have fun finding new and interesting fungi and have the chance to win prizes while you're at it!

Must be a paid AMS member to participate. Full rules and lists of fungi HERE.



1. DOWNLOAD THE INATURALIST APP ON YOUR SMARTPHONE OR ACCESS IT VIA THE WEBSITE, www.inaturalist.org.

2. SIGN UP FOR FREE TO MAKE YOUR ACCOUNT.

3. JOIN THE INATURALIST PROJECT TITLED "AMS 2024 SCAVENGER HUNT" MUST BE A PAID AMS MEMBER TO WIN!

MARCH 2024 NEWSLETTER



THE SEQUENCING SCOOP

By Alisha Millican

Since we began doing DNA sequencing in 2021 with our very first FunDiS grant, we have sent out nearly 2000 samples to better understand and document the fungal diversity in Alabama.

Every month, I am going to highlight some of the results that we have gotten back in the preceding month, but you can look at all of the results in the iNaturalist project HERE.

Initially, observations were only added to this project when results came back. When we reached a certain quantity, it was too difficult keeping track and now everything that is sent out for sequencing is added. So, there are some fungi that were sent that have not been added yet, and some added that do not have results back. If an observation doesn't have a DNA Barcode added yet, check back in the coming months!

HUGE thanks to our AMS Collection Committee who put in a ton of work documenting and collecting sequences! All collections get sequenced and vouchered at the University of West Alabama Herbarium. If you are interested in learning to make scientifically valuable collections with us, check out details on our website HERE.

UNDERSTANDING PROVISIONAL NAMES

When you see a species name (or genus name) with a state abbreviation (or providence or other locale) with a number, these are called "provisional names" (abbreviated Nom. Prov.) and should always be in quotation marks.

In the example *Clavulinopsis "fusiformis-IN01"* you should understand that this specimen is very close to *Clavulinopsis fusiformis* and may even BE *Clavulinopsis fusiformis*, but more collections are needed and more research required to determine if this species is different enough to warrant being described as another species (or if it is close enough to be considered *Clavulinopsis fusiformis*). Sometimes we need to wait for the type specimen of the species to get sequenced to compare them.

The IN in the above example indicates that the first sequence of this species was collected in Indiana and it is the first species collected in Indiana that is close to *Clavulinopsis fusciformis*. If another specimen is collected in Indiana that sequences as very close to *Clavulinopsis fusciformis* but the sequence doesn't match "*fusiformis-IN01*" it will be dubbed *C. "fusiformis-IN02"*.

MARCH 2024 NEWSLETTER







Clavulinopsis "fusiformis-IN01" We had two collections come back with this ID, one by myself and one by Heather Gossett, both collected in Cullman County in different locations.





Sarcoscypha "occidentalis-IN03" This was a collection made by me in Cullman County on soil in a mixed wood forest.

MARCH 2024 NEWSLETTER







Another collection by myself, this was made in Jefferson County. We historically have called these *Neofavolus alveolaris* but a phylogeny by Alden Dirks indicates that the real N.a. probably doesn't occur in North America. The "Sav" in this nom prov. is referencing Savoy Mountain in Massachusetts.

Photo by Alisha Millican

Millica



Clavulinopsis "aurantiocinnabarina-IN03"



MARCH 2024 NEWSLETTER







Clavulina "sp-TN01"

Again, one of mine but this time collected in Van Zandt County Texas. We aren't even sure what species to call this one and it may be undescribed.



Photo by Alisha Millican







Photo by Alisha Millican

Marasmiellus "sp-AL01" Again, one of mine. Collected in Jefferson County, Alabama.

65 - EVENTS A YEAR

50+ FORAYS

Monthly Foray

February - October in 5 counties: Baldwin, Cullman, Tallapoosa, Jefferson.

Morel Foray

Jefferson county in the spring. Hosted with Feral Foraging and Magic City Mushrooms.

Chanterelle Foray

June – August c<mark>entral</mark> and north Alabama.

Black Light Foray

February - October central and north Alabama.

15 + OTHERS

Monthly Speaker

February - October a new guest speaker each month over zoom.

AMF

Alabama Mushroom Faire is in the fall, forays, talks, vendors, food, and more.

Others

Microscopy, Dyeing with mushrooms, Birds and mushrooms, How to use a field guide, Nature Journaling Mushrooms, and more events.



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MEMBERS ONLY



GREATER BIRMINGHAM AREA

MARCH 2024 NEWSLETTER



MUSHROOM OF THE MONTH

DEVIL'S URN (Urnula craterium) -- by KIT KING



Often considered a harbinger of Spring, Urnula craterium emerges in March across all of Alabama. Its unusual black fruiting bodies sprout from the underside of hardwood branches that have fallen to the forest floor. Devil's Urn first appears as dark grey, pinky-shaped clubs that break through the thick winter duff in clusters or rows along the branches from which they grow. As *U. craterium* matures, a star-shaped opening forms at its top and the fungus opens into a large, scaly cup or urn. The outer surface is generally black to rusty grey with shaggy scales, while the spore bearing surface inside the cup is velvety and black. Slicing into the flesh of Devil's Urn reveals white tissue sandwiched between black inner and outer flesh. Like many other cup fungi, Urnula craterium has a rubbery texture which

becomes leathery with age. The large black urns may persist for several months after they emerge and it's not uncommon to find the older cups filled with rainwater, pollen and even mosquito eggs as spring becomes summer.

Urnula craterium is considered both a parasite and a saprobe on hardwoods. In its imperfect (asexual/anamorph) phase, it exists as *Conoplea globosa*, a parasitic canker on living branches of oak and other hardwood trees. When the branch it inhabits falls to the ground, conditions are favorable for the fungus to enter its perfect (sexual/teleomorph) phase, complete with a spore producing fruit body. At this stage, *Urnula craterium* exists as a saprobe, absorbing nutrients from the now dead hardwood limb it originally colonized as a canker! The lifecycle is complete when the urn shaped fruit body disperses ascospores which have the potential to grow into either phase depending on conditions and food source availability. Like all saprobes, Devil's Urn feeds by releasing digestive enzymes onto its substrate, then absorbing the freed nutrients in a process called absorptive nutrition. Master recyclers, saprobes play a vital role in the nutrient cycle by converting complex organic molecules like cellulose

lustration by Kaitlyn Ledbetter

MARCH 2024 NEWSLETTER



into simple carbohydrates that are more easily utilized by other organisms within the ecosystem. *U. craterium's* ability to exist as a parasite and a saprobe allows it to survive and reproduce in a larger variety of habitats and conditions.

As a cup fungus, Devil's Urn lacks many of the defining features of a classic toadstool mushroom. An ascocarp, *Urnula craterium* does not have a defined cap or stem; nor does it produce spores through downward facing gills or pores. Its hymenium, or spore producing surface, is smooth and faces upward. This morphology allows for the expulsion of spores into the air above the fruiting body, where they can be dispersed by air currents. In order to maximize spore dispersal, many ascocarps, especially cup fungi,

manipulate internal pressure within their spore producing cells, allowing them to catapult their spores into the air with explosive force. When conditions are just right, you may be lucky enough to witness *Urnula craterium* expelling dark puffs of spores into the air with surprisingly strong bursts!

In its unopened stage, *Urnula craterium* may be confused for certain species of *Xylaria* commonly called Dead Man's fingers. Both grow from dead hardwood branches and feature dark, club shaped fruit bodies. Closer observation will reveal the difference between the two fungi. Dead Man's Fingers have a crusty, carbon like hymenium on their outer surface and are solid when cut. Unlike Devil's Urn, *Xylaria* is not cup shaped at maturity.

Another potential look alike is *Pseudoplectania,* a genus with species such as *P. nigrella,* which have velvety black cups that



superficially resemble *Urnula craterium*. Their dark black cups are shorter and flatter than Devil's Urn and have a characteristically soft, hairy outer flesh. Unlike *U. craterium*, they grow from very well-rotted, mossy wood and soil rather than solid hardwood branches.

This spring, many of us will enter the woods in hopes of finding morels! Some foragers consider Devil's Urn to be an indicator of morel season because they begin to emerge around the same time and in the same habitat as morels. It may take you a moment to see their black cups among the dark leaf litter, but Devil's Urn are more commonly distributed across Alabama than the elusive morel.

Although they are certainly not considered choice, *Urnula craterium* are edible. They have a mild, non-descript flavor and a rubbery, slightly gelatinous texture that becomes less palatable with age. Young clubs and newly opened cups can be steeped in a salt brine for an unusual looking pickle, although any flavor the fungus has is lost in the process. Devil's Urn can also be dry sautéed and finished with some butter and salt as a mild consolation if you find yourself without any morels to cook up this season!

PHOTO OF THE MONTH

FEBRUARY CONTEST WINNER



PANUS LECOMTEI

Observed in Tallapoosa County, February 21, 2024. Submitted by **BRENT HOLMAN.** SUBMIT YOUR OWN MUSHROOM PHOTOS TO NEXT MONTH'S CALENDAR CONTEST ON OUR Facebook page

eTeTe FUNG-EYE CANDY eTeTe notable photos curated by Leigh Maness & AMS staff



Tolypocladium longisegmentatum by Spencer Lowery



Galerina marginata by Leigh Maness



Entoloma subgenus Nolanea by Leigh Maness



Ophiocordyceps unilateralis by Cassie Pugh



Hypholoma capnoides by Jill Cobb



Hymenoscyphus fructigenus by Cassie Pugh



Pholiota polychroa by Kristi Zoebelein



Cerioporus varius by Flown Kimmerling



Bolbitius reticulatus by Alisha Millican

ALABAMA MUSHROOM SOCIETY 2024 CALENDAR

Plus an In-Season Guide



Click to purchase a copy from the AMS Etsy shop!

MARCH 2024 NEWSLETTER



FUNGI: FACT OR FICTION?

by Cassie Pugh



Scroll to next page for the answer!

MARCH 2024 NEWSLETTER



FUNGI: FACT OR FICTION? (ANSWER)

by Cassie Pugh

FACT!

It's hard to imagine a fungus that could grow taller than a giraffe, but Prototaxites did just that!

A fossil found in the late 1800's, which stumped scientists for over 130 years, had concentric rings throughout its core that resembled the growth rings of trees, hence the confusion over its species of origin.

In 1992 Dr. Francis M. Huber at the Smithsonian Institute took a closer look and identified long tube-like structures very similar to hyphae of modern day fungi. He determined that *Prototaxites* was not a tree, lichen or algae as previously identified, but a fungus! This was later confirmed by chemical analysis of a well-preserved specimen which showed an unbalanced ratio of the isotopes Carbon-12 and Carbon-13, which are commonly found in fungi but not in plants.

Paleontologists have answered what *Prototaxites* was--but are still uncertain as to why it grew to such heights and ultimately disappeared. During the Silurian-Devonian Period cusp (more than 420 million years ago), this fungus towered over streams and riverbanks--leading to the theories that 1) the sparse vegetation of this time forced them to grow taller in order to disperse their spores further and 2) their demise was due to competition from more complex and denser vegetation arising during the shift into the Devonian Period.



A rendering of *Prototaxites* as it may have looked during the early Devonian Period, approximately 400 million years ago. Credit: Painting by Mary Parrish, National Museum of Natural History.

MARCH 2024 NEWSLETTER



LION'S MANE CRAB DIP

By Spencer Lowery		DIRECTIONS:	
INGREDIENTS:	QTY:	1. Heat a large skillet over medium heat. Add butter and sautée poblano pepper and shallots	5
Lion's Mane Mushroom	softball- sized	until they are translucent and slightly caramelized.	
Poblano Pepper, finely diced	1 ea	2 Stir in shredded Lion's Mane mushroom and cook until slightly browned around 7-10	
Shallot	<u>1</u> ea	minutes. *If wild harvested, a dry sautée may be necessary to eliminate some water content	
Cream Cheese	8 oz	3. Lower the heat and add the cream cheese to the skillet. Stir until melted and smooth.	
Colby Jack Cheese	1 cup		
Zest of 1 Lemon		4. Gradually mix in Colby Jack cheese, mayonnaise, lemon zest, lemon juice, Dijon mustard, h	ot
Juice of 1 Lemon		sauce, and Cajun seasoning. Keep stirring until you get a consistent, creamy blend.	
Hot Sauce	to taste	5. Allow the mixture to simmer gently for a few minutes. If the dip is too thick, it can be thinn	nned
Dijon Mustard	1 tbsp	with a splash of milk or water.	
Mayonnaise	1/3 cup	6. Just before serving stir in fresh parsley, and cook for an additional minute to let flavors	024
Cajun Seasoning	1 tbsp	meld.	ch 2(
Butter	_4 tbsp	This dish pairs perfectly with a crusty baguette, tortilla chips, crackers,or even	Marc
		Jiesh veggies. Enjoy the ruves from your guests:	

Prep time: 5 min.

Cook time: 20-25 min.

Serves: 2-3

Want more recipes & foraging content? Go check out <u>Foraging North America</u> on PATREON and TIKTOK!

MARCH 2024 NEWSLETTER



FunDiS SOUTHEAST RARE FUNGI CHALLENGE

Here are the rare fungi target species for our area! We will be pushing this hard and looking for folks to seek out these potentially rare species. A treasure hunt of the most exciting kind- fungi! Find details HERE!



MARCH 2024 NEWSLETTER



AMS CREATIVE CORNER



March 2024

MARCH 2024 NEWSLETTER





MARCH 2024 NEWSLETTER





MARCH 2024 NEWSLETTER





MARCH 2024 NEWSLETTER





AMS is currently accepting creative submissions for our monthly newsletters! Folks of all ages are encouraged to participate by submitting their own fungi-inspired / fungi-adjacent art!

Acceptable forms of media include poetry, drawings, paintings, nature journal pages, digital art, collages, and (images of) sculpture, diorama, ceramics, etc. We are not accepting Al-generated art at this time--and plagiarism will of course disqualify anyone from being featured. 2 entries per person per month are allowed.

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Attention All Creatives!

Chosen submissions will be featured in the next month's newsletter or a future edition! Please email submissions to almushroomsoc@gmail.com with "Monthly Newsletter Art Submission" in your title!

Illustration by Kaitlyn Ledbetter