Alabama Mushroom Society Newsletter

Oct 2021

Written and Edited by Alisha Millican and Anthoni Goodman

Hello Mycoenthusiasts!

As we are seeing fall-like weather creeping in, we are seeing the wind-down of our summer fungi and starting to see the fall fungi popping up! We are seeing a lot of folks finding *Laetiporus* (Chicken of the Woods), have seen a couple *Hericium americana* (Lion's Mane) and have even seen some very early *Grifola frondosa* (Hen of the Woods) already!

We are coming up on our last monthly forays for the year, so if you haven't gotten to attend one yet, jump on the opportunity! We will be taking a hiatus from November through January where we will not be holding the monthly forays, sending out the newsletter, or having our Zoom meetings. This will give us time to finish up our FunDiS DNA Sequencing project and focus on planning the Alabama Mushroom Festival scheduled for October 8-9th, 2022 at Lake Howard in Sylacauga, AL. We will still be active on our Facebook and Instagram and will post updates in both locations. If you aren't already following us on instagram, do so here!: https://www.instagram.com/alabamamushroomfestival/

Our new website has been a success and our old website will be expiring and going offline later this month. Be sure you have created your account with the new website so you can continue to utilize all the amazing content available to the public and the special perks for paid members. You should find you received an email inviting you to do just that. If you don't see it, check your spam folder. (Once the switch happens, the new site will be found at the old web address.)

Looking for a way to get more involved?
We are looking for members who want to serve on committees to help with upcoming projects. These include the Alabama Mushroom Festival Planning Committee, the Health Dept Certification Course Committee and the FunDiS Vouchering Committee.
Email almushroomsoc@gmail.com for more information.


Cortinarius violaceus by Joel Pounders

Upcoming Events

Click HERE for more details or to register for an event.

Oct 2nd ----------AMS South Monthly Foray
Oct 5th ----------AMS Zoom Meeting
Oct 9th ----------AMS North-Central Monthly Foray

Mushroom of the Month

Cortinarius

Purple gilled Cortinarius note the peronate universal veil on the bulb

Cortinarius is a **massive** genus of mushrooms, in fact it is **the largest genera** in regards to numbers of species.

Cortinarius, also called "Webcaps" are in the Order Agaricales (gilled toadstools) and Family Cortinariaceae which was shared with the fibercaps - Inocybaceae (now removed but notice morphological overlap). The scientific name *Cortinarius* and common name webcaps both refer to the same almost universally shared trait, the cortina. This structure is found outside of the Cortinariaceae family in several convergent evolutionary lines (see *Echinoderma asperum*) and is a highly fibrous partial veil (the structure that becomes the ring on an Amanita) which, in maturity, forms a cobweb-like structure often adhering to the stipe and cap margin. There are also some *Hebeloma* that contain many of these features.

Notice the cortina remnants on this Cortinarius violaceus

This cortina can actually take on a couple of forms which will be covered shortly.

Another universal characteristic of Cortinarius is the "Rust-Brown" spore-print, which is conspicuously found on the mature gills and cortina remnants.

Finally, adnexed or enmarginate gill attachment (or close enough) is common across *Cortinarius*.

Here you can clearly see the spore drop on the gills and stipe

Unfortunately, (other than all being ectomycorhizzal) that's where the universal overlap ends and we have to start parsing this massive genus into more manageable groups.

Subgenera are determined by a handful of factors and many are further divided into groups prior to species - we won't cover those here because its a dissertation's worth of work. Furthermore, genetic data will (and already is) re-defining these complex groups and continuously adding species, many of which have greatly overlapping features). Similar to Amanita, Cortinarius also include subtaxa to include Subgenus, Section, Stirps, and Species. The term Clade is also used at the genus and subgenus level.
Subgenera include:
Myxacium which contain a slimy/viscid cap AND stem

Phlegmacium which contain a slimy/viscid cap but a dry stem (these are further divided by bulb characteristics and gill color).
Dermocybe which is dry on the cap and stem, often with brightly colored (but never blueish or violet gills)
Cortinarius which are dry, large and often contain intense orange-brown or violet colors (the type species for the entire genus is found here *Cortinarius subgenus Cortinarius violaceus*).
Telamonia which are dry to 'greasy' and primarily hygrophanous (the cap dries to become a dull-er color often resulting in a two-tone or gradient of color on the cap).
Other groups may include Holoxanthae, Leprocybe, and Malicoriae - but these groups are currently in a state of flux as genetic lineage is sorted.

Cortinarius violaceus with it's distinctive cap texture and rich color

Cortinarius, likely subg. telamonia

Notice the fibrous stipe and abrupt basal bulb

One of the multitude of purple stipe'd Cortinarius

Potential Look A-Likes

Laccaria

Laccaria is another genus that often sports fibrous stipes, grows in abundance in the cooler months, and often has purple or warm-colored gills which are often enmarginate. However they drop a white spore print and lack a cortina.

Inocybe

This is another absolutely monstrous group of mushrooms which are nightmarish to ID. They are colloquially called 'fiber caps' and some can look remarkably like Cortinarius, but lack the cortina and whose spore prints are a slightly darker brown.

Fungi Foragecast

As always, rains continue to determine our mushroom hunting success. A good rain map will be your key for determining the best locations for a good forage. This map is my go-to.

October brings lower temperatures and scattered rainfall for most of Alabama, this will dramatically shift our fungal finds. These changes will be most obvious following cool rains and sudden temperature shifts ushering in our cool-weather fungi while warm-weather fungi will 'migrate' South (and I don't mean a literal migration!).

Cool weather will see polypores popping from added growth rings of *Fomes* or similar hard/woody and long-lasting fruitbodies to the lovely lavender of *Trichaptum sp*. For the best polypore finds, wait 3-8 days following several intermittent rains or a big rainfall. Seems like a perfect time to pick up the latest Bessette book on Polypores (Polypores and Similar Fungi of Eastern and Central North America).

Cool-weather polypores will include Tremendous flushes of Trametes such as

T.'s betulina, versicolor, lactinea, aesculi, and *hirsuta*. Look for them on almost any dead wood, especially somewhere near a source of water (creek beds are especially popular hangouts for *betulina*). Trichaptums and Stereums will also see massive growth adorning the deadwood with violets, whites, orange, and vermilion - perfect for autumnal photography.

This is also the beginning of the "big-birds of the wood's" growth season in the South. This means *Laetiporus* (already being somewhat frequently encountered in September) species (the Chicken of the woods [C.O.W.]) will become more and more commonplace (you're looking for *L.'s cincinnatus* on the ground, *sulfureus* and *gilbertsonii* on deadwood). *Meripilus sumstinei*, the black-staining polypore and jokingly called 'Rooster of the Woods' by Michael Kuo, will also make a more pronounced appearance alongside some *Bondezarwia berkelyi* (Berkeley's polypore). Last but certainly not least of the 'Big Birds' is *Grifola frondosa* - the Hen of the woods (also maitake, sheep's/rams' head, etc.) which will start showing up in greater number as autumn swings into full gear. Look for these at the foot of oak trees.

As for the Agaricales (those gilled toadstools) - expect another dramatic shift which will follow the cool temperatures from north to south and promote absolutely humongous honeys (genus *Armillaria* and ringless pseudo-genus *Desarmillaria*), lots of *Laccaria* (especially in sandy-piney areas), ramped-up *Russula* production (expect lots of the red and purple-capped varieties), and plenty of *Pluteus* & *Pleurotus* (with less and less bugs as temperatures drop, also more *Pleurotus dryinus/levis*). Lactarius species will shift from the heat-loving varieties to the hyper-colorful *Lactarius deliciosus* groups (section *Deliciosi*) which include *L.'s indigo, subpurpureus, paradoxus, chelidonium var. chelidonioides*, and other green-staining *Lactarius*. Other *Lactarious* include: *salmoneus, atroviridis, croceus, hepaticus*, and so many others (for more information on this group see Kuo's page here). If you're far enough South, you might also find some of the late *Craterellus* flushes.

Wax-caps (family *Hygrophoraceae*) and *Tricholomas* are also going to start showing up. From the extra-viscid *Gliophorus*, to the extra-waxy *Hygrophorus* and *Cuphophyllus*, and many of the brightly colored *Hygrocybe* such as *miniata* found in moss-beds, *cantharellus, coccinea, conica, flavescens, punicea* (under beech), and so many others.

Also expect Countless *Cortinarius*.

Remember in earlier newsletters when I omitted *Amanita sect. lepidella*? That's because we're going to start seeing them in ridiculous amounts now. Most *Amanita* are mycorrhizal, so knowing their favorite tree-hosts will help us track them down. Almost as importantly is the season, and let me tell you the Big, hyper ornamented, big bootied, and sometimes stinky lepidellas love early Fall. Keep a lookout for *Amanita abrupta, atkinsoniana, (sub)cokeri, daucipes, mutabilis, onusta* (in the Northern portion of the state), *ravenelii, rhopalopus* (pronounced rope-a-lope-us!), *roanokensis, thiersii*, and the absolutely unique *A. westii*.

Amanita sect Lepidella smelling of gym socks

Hygrocybe coccina

Boletes will begin slowing down, presenting more and more of the red-capped and yellow or red-pored varieties. Still keep a look out for some of the remaining tasties such as *B. nobilis* and allies.

Finally the multitude of 'coral' and 'club' shaped fruitbodies will see massive growth from the wood-growing *Artomyces pyxidatus* and *Ramaria stricta*, to the colorful ground-growing *Clavulina* and *Clavulinopsis*. You may also find some of the *Lentaria* growing on dead leaves. Don't forget about *Clavariadelphus* which

will fruit in abundance on hillsides.

Other oddballs include Entoloma subg. Nolanea, Entoloma aborvitum (Shrimpies!), Spongipelis pachyodon, hosts of Mycena, and of course the unique Tolypocladium which parasitize the deer truffles of Elaphomyces

As the humidity keeps up also look for fungally parasitized insects and spiders. If you find any- we have a few that we are collecting for researchers (as well as a few other things!). See the complete list on facebook HERE.

Don’t forget to post your cool and unusual finds both on our Facebook group and on iNaturalist!

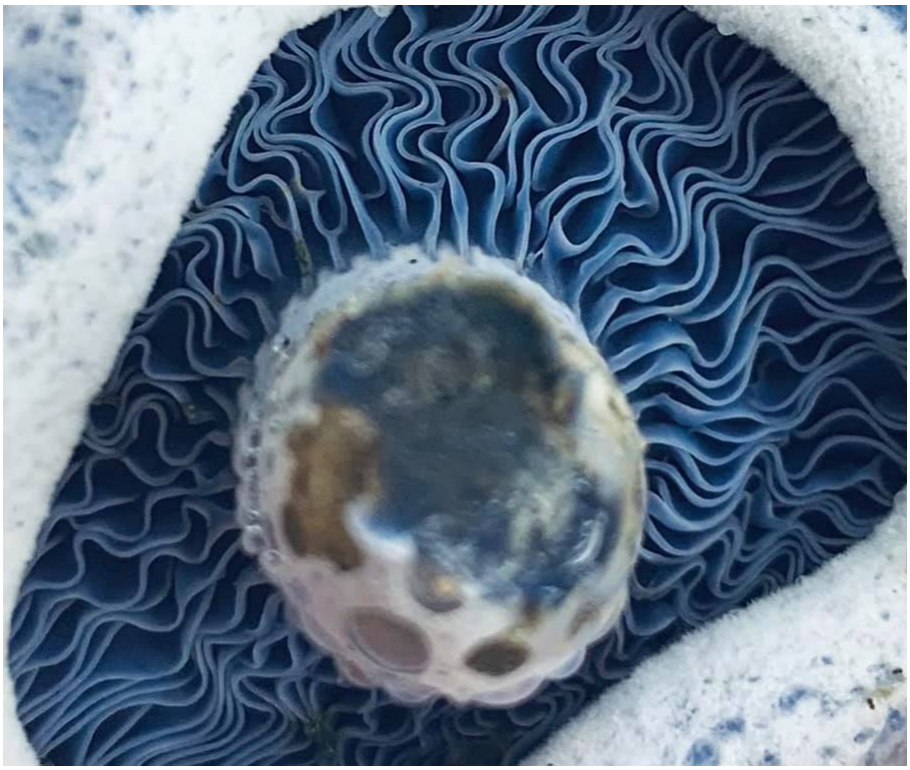
Clavaridelphus

Tolypocladium

Clavulinopsis fusiformis

Calendar Contest

September's winner is Tammy Havel Kenny with her gorgeous close up of the gills of *Lactarious indigo* taken in Baldwin County. It was another close race this month with a lot of fantastic fungi photos! Don’t forget to submit your own photos on the Calendar Contest thread of our Facebook page! Our 2022 calendars with all of this year’s winners will be available to order on our website in December. Thank you all for your support of the Alabama Mushroom Society.



In the Kitchen

Photo by Kevin Hébert

We are excited to welcome Kevin Hébert to our Newsletter team! He will be providing us with delicious mushroom-centric dishes featuring in season mushrooms each month for us all to try! You may have seen his delectable creations on the AMS Facebook page where he shows off his culinary prowess.

Photo by Kevin Hébert

Todays recipe features the Indigo Milkcap (Lactarious indigo) in three ways, oven roasted, sautéed and as an oil. The oil is a beautiful way to capture the color of this striking milkcap and really bring some interest to your dish.

Indigo Grouper with Green Beans, Lemon Butter, and Indigo Oil

Ingredients (makes about 2 servings):

For the indigo oil:

3-5 fresh L. indigo
1 cup canola oil/vegetable oil

For the main dish:

2-3 fresh L. indigo
2 grouper fillets (or similar white fish)
1/2 cup wild rice
1 bunch of fresh green beans
2 tablespoon minced shallots
1 ½ tablespoon minced garlic
1 ½ tablespoon peanut oil
1 lemon (juiced)
1 cup white wine
½ stick of butter

Directions:

Step 1: Make the indigo oil

Set the oven to 275 degrees. Cut 3-5 fresh mushrooms into bite sized pieces. Add in a single layer to an oven safe dish and cover with oil. Let it slow cook for about an hour. The key is to encapsulate the mushrooms in oil so that they retain their blue color while also making a tasty mushroom flavored oil. After an hour or so strain the oil into a jar. Put the mushrooms on a paper towel or rack to drain.

Step 2: Cook the wild rice

Step 3: Cook the beans and mushrooms

Chop the mushrooms. Blanche the green beans in boiling water for 1-2 minutes. Sautee the garlic and shallots for 30 seconds to a minute and then add the mushrooms. Stir frequently, continuing to cook for 10 minutes. Remove from heat. Add green beans to pan and sauté until done. Remove from heat.

Step 4: Cook the fish

Pat the fish dry and season with sea salt and pepper. Add the peanut oil to the pan at medium high heat and when heated add the fish with the presentation side down. When the fish has a golden crust (3-4 minutes) turn it over and finish cooking for another 3 minutes, depending on size. Keep and eye on the side of the fish and watch the color change from translucent to opaque, that is usually a

good indicator of doneness. It will also start to flake.

Step 5: Finish the dish

Remove the fish from the pan and deglaze the pan with white wine and lemon juice. Reduce by half then turn off the heat and add the butter. Swirl the pan to combine. Toss green beans into sauce.

Combine the sautéed mushrooms with the rice and add to the plate. Top with green beans and then fish and garnish with the oven roasted indigos. Drizzle the plate with indigo oil and any remaining lemon butter sauce. Enjoy!

For more recipes and ideas, don't forget to check out our website here.

MEETING INFORMATION

Our last AMS meeting for the year is **October 5th at 7pm** via Zoom. The Zoom link has been sent out via email to paid members and is also available on our Facebook page under events.
After a brief business meeting, we will have a presentation on Cordyceps sensu lato and other Entomopathogenic fungi by Richard Tehan. Richard Tehan. Richard is originally from upstate, NY. He received a B.S. in chemistry at Utica College, in Utica, NY. He is now completing a PhD in medicinal chemistry at Oregon State University, College of Pharmacy. He is an avid mushroom hunter and photographer, is passionate about fungi and mycology, and is especially fond of Cordyceps and allies.

Monthly meetings are open to the public and take place on the **first Tuesday of every month at 7pm** via Zoom. This is the last monthly meeting for this year and meetings will resume in February of 2022.

Neolentinis lepideus by James Mason

Halloween Mushrooms by Jennifer Taylor

2021 Scavenger Hunt

Join in on our year long scavenger hunt and contribute to citizen science at the

same time! Find and properly identify as many mushrooms in Alabama as you can from our contest list and win prizes at the end of the year! You get credit for finding the mushrooms when you add them on iNaturalist.
Read the full rules on our website here. Any observations you upload to iNaturalist will be automatically submitted to the project.
Joining the project is easy!
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. Member Scavenger Hunt Register your iNaturalist user name by joining the scavenger hunt event on our website

Already using iNaturalist? Please consider joining the project FunDis-Fungal Diversity Survey. All your high quality fungi observations will automatically contribute to a database to help scientists and conservationists better understand and protect fungi all across North America. Our great state of Alabama is know for its biological diversity and it is under-represented in the FunDiS database. Your contributions matter! Check out their project here.

Is there something you would like to see included each month? Do you have foray, photos, a recipe, or something else you would like to contribute? Reach out to us at Almushroomsoc@gmail.com