



SPORE PRINT

The Alberta Mycological Society Newsletter

Special Edition Fall 2021 - Fiesta and Dickson Forays, September 19, 2021: Honey, Honey!



Above: An exuberant member of the AMS with baskets at the ready

The crisp fall air had us all itching to get out into the woods after an unusually dry summer. With fall rains come an exquisite flush of fall mushrooms, and forays were called in Clearwater County. Avid mushroom hunters both novice and experienced filtered through the trees at Fiesta Lake with the morning sun.

Baskets were filled and laughter was heard, with exclamations of joy at the bountiful findings. Honey mushrooms in full bloom, as well as their lookalikes *Galerina*, *Flammulina* and *Cortinarius*. Experienced honey hunters filled baskets upon baskets, while the rest of us filled baskets with mixed species, eager to learn the markers of identification.

Honey mushrooms, *Armillaria* are a diverse family of light spored, gilled mushrooms that are edible and prized by many although they have several poisonous or inedible look-alikes. There are about 14 species of *Armillaria* (Honey mushrooms) that have been formerly categorized as *Armillaria mellea*, but have now been given their own categories. Generally, there are two widespread varieties. It is possible that we found and harvested more than two species, and any staunch mycologists are encouraged to pipe up with their two cents!



Above: Experienced honey hunters filled every available vessel with bountiful yields

Both species featured here are edible and choice. The slight differences between the species are not always easily distinguishable, and one could spend many years learning them!



Above: Christine assisting us with identification of *Armillaria* while on the hunt

The largest known organism of *Armillaria* covers over 3 square miles, located in Malheur National Forest in Oregon and is somewhere between 1900 and 9600 years old! ⁱ

Honey Mushrooms are prized by mycophiles (and chefs too!) yet often abhorred by gardeners and farmers. They are prolific and spread between both dying and live trees using “bootstraps”, dark *rhizomorphs*ⁱⁱ made of bunches of parallel fungal *hyphae*ⁱⁱⁱ. Be sure not to throw unwanted honeys into your garden, as they have been known to infect live trees and shrubs to which there is no cure. (On reflection I’ve decided maybe that wouldn’t be the worst thing ever!) The next time you discover a cluster of honey mushrooms on a decaying piece of wood, you can peel back the bark to reveal this complex highway of “bootstraps”. (Honey mushrooms are also called “Bootstrap Fungus” by some.)

Honey mushrooms are considered

Right: a cluster of honey mushrooms found on decaying wood and their accompanying “bootstraps”. Darkly coloured rhizomorphs act as highways for nutrients and means of expansion for the fungus.



an intermediate to advanced mushroom, both

due to the diversity of individual species within the *Armillaria* family, but also because they have several poisonous look-alikes. When learning to identify this mushroom it is helpful to learn both what it is and what it is not.

What it is:

- White Spores and Gills
- Growing in clusters on wood
- Honey-coloured cap often with tiny hairs visible, with a different, flakier texture on the stem.
- White to yellow ring on stem
- Cobweb-like white veil



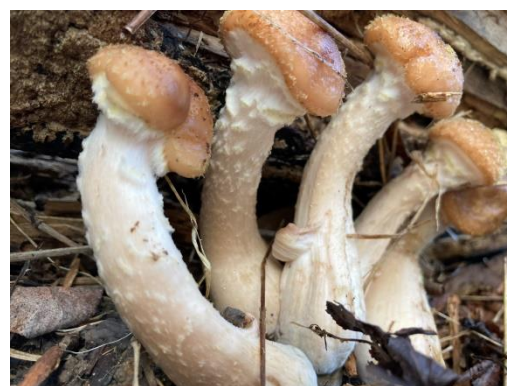
Left: a young cluster of Honey *Armillaria* growing on wood. Note the small hairs and yellow, cobweb-like veil. Sometimes more yellow, in *Amarillia bulbosa* which also has a more bulbous stem as seen below (we called these the short fats)



Above: *Armillaria* can be distinguished by their white spore print, here already done for us in the field!



Left: a cluster of Honey (*Armillaria*) mushrooms with white gills. Longer slender stems lend themselves more towards *Amarillia mellea*



Above: a young cluster of *Armillaria*, note the texture difference between the cap and stem

Below: *Armillaria* grows on wood



What it is NOT:

- Brown gills or spores
- Shaggy hairs (thicker, flakier)
(*Pholiota* species have a shaggier appearance that is the same texture on both the cap and stem)
- Growing alone
(Sneaky *Galerina* have been known to nestle within a cluster of *Armillaria* Honeys, be sure to check each mushroom within a cluster for telltale gill colour. Sometimes you may find a stand-alone *Galerina* or even a Honey that has branched out from his buddies...)
- Growing on grass
(This is tricky sometimes because Honey *Armillaria* can grow on **buried** wood. Be sure to dig into the substrate to get the entire mushroom out. You will discover an old forgotten stick or root somewhere!)
- Brown cobwebby veil.
(The brown cobweb veil belongs to *Cortinarius*. In young specimens it will nestle under the cap, in older ones stuck to the stem)

Below: *Flammulina velutipes* (Velvet Foot). NOT a honey mushroom despite having white gills. It lacks the ring (some species of Honey *Armillaria* also lack a ring but that is a discussion for another post). It has a cap that is similar in colour to the Honey *Armillaria*, but lacks the fine yellow to black "hairs" on the cap, and often grows in similar tufts or clusters on decaying wood. It is considered edible although bland. It is very similar in appearance to the Deadly *Galerina*, but *Flammulina* lacks *Galerina*'s ring (however, *Galerina*'s ring occasionally disappears with age. It is for this reason that for now, I'll probably keep *Flammulina* out of my pan too!!)



Below: Also NOT *Armillaria* Honeys. These are *Pholiota squarrosa* aka. "Shaggy cap". In young stages they can look a lot like honey mushrooms, as they have the white gills. There were some found during our foray but I didn't take photos of them, these are from a google search. The caps of *Pholiota* appear more "shaggy" than "hairy." One has to put on reading glasses or pass to a younger forager to see the hairs on *Armillaria* while *Pholiota* are easily seen by those with aging eyes. I find the caps and stems of *Pholiota* share the same colour and texture while the caps and stems of *Armillaria* have two distinct colours and textures.



Below: dark webbed *Cortinarius* have brown gills and spore prints and grow in dirt rather than on decaying wood. The species of *Cortinarius* we found during the foray had a similar cap size, colour and shape as *Amarillia* and a cobweb veil. However the Cortina (web-veil) of *Cortinarius* is a rusty brown colour. After the veil has broken on a mature specimen, the Cortina is visible on the stem. Grows alone or in rings, clusters, after a rain, but not frequently attached to other individuals at the base as are *Amarillia* clusters.



Below: Deadly *Galerina*, (*Galerina autumnalis*, *Galerina marginata*). Barb called this one “The Funeral Bell” as it is deadly poisonous. It is diminutive only in size, not in toxicity and consuming even a small one could leave you fighting for your life. The cap colour closely resembles *Amarillia*. However, gills of this mushroom are brown and the stalk is smooth and slender. Be sure to check all the gills when you are hunting *Amarillia*, to make sure you haven’t mistakenly added a *Galerina* to your basket, as *Galerina* will often grow on rotting wood alongside the prized Honey *Amarillia*, sometimes even in small clusters. Their smaller size makes them an uncommon culprit for poisonings (most of us would normally just write them off as LBMs (Little Brown Mushrooms) but their sneaky way of hiding within a delicious looking honey cluster could easily go undetected!



...Oh yeah, we also found other mushrooms too!

Tricholoma flavovirens, “Man on Horseback” a choice edible. The stark colour and contour of these almost neon mushrooms will now be a dead giveaway for me, which is what drew me to pick it from the forest floor. I’ve never tried one but with a few more positive ID sessions I might feel comfortable enough to try it.

When Barb held up another specimen I knew right away which one out of my basket was a matching pair.



A few *Suillus* found were definitely another checkmark on my to-find bucket list. I have been overturning stumps for weeks, and finally found my first fall boletes. So far my boletus experience has been only with *Leccinums*, which sort of grow in the forests near my house like wildflowers. However, even they seemed a little more sparse this summer with the dry conditions.

One budding young AMS member even found Club coral, which has a sweet flavor, considered a “Dessert mushroom.” The name for this is *Clavariadelphus truncatus*.



Paxillus also showed up. She's big and beautiful and breathtaking but not really good for eating or really anything; except maybe as a beautiful addition to photos, and the age-old game “Is this mushroom bigger than your head?”





Photo by Wayne Li

Honeys were really the quarry of the day! With so many poisonous (and often deadly!) look-alikes, it can be overwhelming. When first learning it is beneficial to do a spore print for *each specimen* once you have narrowed them down using the other characteristics. The *Amarillia* spore print will always be white.

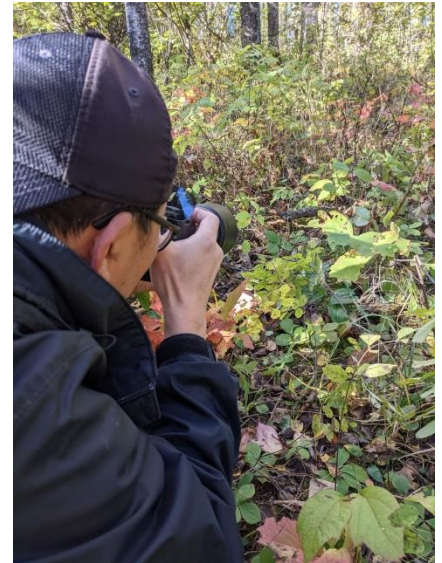
When in doubt, throw it out!

Happy Hunting, let's hope this beautiful fall weather goes on well into the next few weeks, with sprinkling fall rains and tons of fall fruitings.

Both Fiesta Lake and Dickson are ACA sites. These are pieces of land owned and maintained by Alberta Conservation dedicated for public use and enjoyment. Some boast stocked lakes (Fiesta Lake) and others are more directed towards hunting (Dickson.) They are mushroom-hunting friendly, if you are confined to the city limits with no idea where you are allowed to collect mushrooms they can be a great resource. If using these sites during hunting season please use caution and make yourself known while in the bush. Wearing bright colours or even blaze orange is not a bad idea. Maybe you're hunting for deer mushrooms but you are definitely NOT a deer. If being mistaken for a majestic trophy buck is something that worries you, there are plenty of ACA sites that don't allow hunting.

Both the ACA and iHunter apps have locations of all ACA sites with descriptions about their intended use and hunting season durations as well as aerial photographs showing the topography. ACA is free, iHunter requires a small one-time fee for basic use, which I feel as a game hunter and mushroom hunter is a fair price to pay as the amount of data storage within the app, and the usability of it is excellent. It will work to show you your location even when out of cell service in case you're like me and like to get lost only a few feet from the parking lot!

-Kate Mount



ⁱ Daley, Jason (15 Oct 2018). "This Humongous Fungus is as Massive as Three Blue Whales." *Smithsonian.com*. Smithsonian Institution.

ⁱⁱ Rhizomorphs are threadlike or cordlike structures in fungi. They act to absorb and distribute nutrients.

ⁱⁱⁱ Hyphae are branching filaments that make up the mycelium of a fungus. Mushrooms that we see are the "fruit" or "flower" parts of the larger organism that we can't always see; the mycelium.