



The photo below shows my haul from 8/15/2026, gathering every mushroom I could find before mowing the lawn:



These were gathered underneath a large oak tree that has been referenced elsewhere on the blog. (1) Now, this isn't the first time I've collected mushrooms from under this tree, but it *is* the first time I've tried to be comprehensive about it. Perhaps the completion of my degree has induced a bit of boredom. "Nature" as a thing to be diffusely enjoyed is great and all - but now I

want to put things into little boxes and exercise my brain and impose a structure that has, in the past few days, vanished.

The first thing to note is that the two small mushrooms with the blackened stems at about the three o'clock position are quite a bit different from the others. While every other mushroom on the table has gills, these two follow the so-called "bolete" structure, which is easier shown than described:



As these two mushrooms are old and nondescript, I simply categorize them as "boletes" and move on.

Due left from the boletes and immediately south of the group of yellow mushrooms is a solitary small mushroom with a thin stem. Like the boletes, this stands out from the others. Also like the boletes, it's too decrepit and dull for me to attempt an ID. We note the presence of gills and a thin stem and proceed.



Now getting into the more interesting stuff. On the left side of the table, at around the nine o'clock position, we have four relatively long-stemmed mushrooms with gray caps. These appear to represent different stages

of the mushroom lifecycle for a single species. In particular, the mushroom begins with the highly convex "lampshade" look embodied by the first and third mushrooms (numbered from left to right), opens up a bit in the style of the second mushroom, then flattens out like the fourth mushroom.

To convince yourself the flat mushroom is in fact the same species as the more curved specimens, note the coloration of the cap and the presence of long striations near the perimeter of the cap in both of the specimens below.





Acting first on a suggestion from Gemini then taking a deeper dive on [MushroomExpert.com](https://www.mushroomexpert.com) (2), these mushrooms appear to be from the *Amanita vaginata* group. By that I mean they come from a

single species among many in the "*vaginata* cluster" of the (extremely large) *Amanita* genus. To quote Michael Kuo - the retired English teacher from Ohio who maintains MushroomExpert.com - it is likely "there are *many* North American species going under the classic European name "*Amanita vaginata*"" (3) He then cites the keys of a man named Rod Tulloss to back this claim - this Tulloss individual being an established mycologist coauthoring such articles as "The genus *Amanita* should not be split." (4)

Not finding it worthwhile to dig any deeper, I settle with the "*Amanita vaginata*" designation, which Kuo says can also go by the name "grisette" in field guides. I make this identification on the basis of the following characteristics:

- Plain resemblance to the pictures on Kuo's page
- A gray cap with relatively long striations near the edge
- Crowded white gills

- None of the four specimens having a ring on the stem
- An established “egg-like to flat” growth cycle typical of amanitas
- Specimens found at the base of a living oak tree, consistent with the described mycorrhizal habit of the species
- Kuo saying it is “widely distributed in North America” and that he often finds it “in lawns that are not meticulously manicured.”

Granted, I didn't dig any of these up in the way you're supposed to dig up amanitas (to find the underlying volva), but all of the above factors seem to converge on a clear identification.

Now moving on to the yellow mushrooms at the top of the table, which are again taken to be different stages in the lifecycle of a single species. We see classic *Amanita* signs on some of the specimens such as: a ring on the stem, warts on the cap, and crowded white gills free from the stem.







In the interest of being a bit more careful with this ID, I went out and gathered a few more specimens two days later. Though not picked, the (fresh) specimen below is a young one with plainly visible warts, suggesting that *all* of the specimens have them at some point but that they are quickly washed away whenever it rains.



It should also be noted that I kept an eye on one particular mushroom from August 16th to August 17th. On the first day it looked like:



While on the second day it looked like:



As I would have grouped the first in with my yellow mushrooms, the takeaway here is that these lose their color rather quickly and become quite dull. Now, looking at three specimens I gathered - these in the proper manner, using a little shovel to ensure I always got the whole thing - we see little yellow patches at the base of each stem.



Zooming in on the third specimen in the photo above, we also see slight striations near the edge of the cap, but nothing nearly as pronounced as in the grisettes.



Finally, I decided to experiment with "bruising" one of the mushrooms, as the presence of discoloration in the event of cutting can apparently be a helpful diagnostic tool in this case. Here, not daring to taint our silverware with a mushroom of unknown edibility, I ripped one of the stems in half with my bare hands. The following photo was taken at 7:23 PM on August 17th.



Now, Gemini believes the discoloration immediately encountered is diagnostic on its own - the mechanism here being that maggots burrow through the mushroom's inside, causing the bruising color to appear.

Here, we see more bruising at the bottom of the mushroom as that's where the maggots start out and are more likely to be.

Additional evidence for this hypothesis is small holes representing the maggot tunnels and the presence of, well, *actual maggots* when I ripped open the mushroom.

But AI is known to hallucinate, so I let the mushroom sit out to see what would happen to the coloration of the inside. Ten minutes later it looked like:



So not really any different. Ten more minutes later it looked like:



So again, not really any different. I then let the mushroom sit (outside) for about two more hours. Unfortunately, there was brief downpour in this interval, throwing off the experiment somewhat. Bringing it inside afterwards (as the sun had set), we had:



So the brown *does* extend quite a bit further up the mushroom than it did before, though the rain also had the effect of turning everything to mush. I take the results of this experiment with a (large) grain of salt.

Nevertheless, I'm going to go ahead and say this is *Amanita flavorubens*, which could also go by the name *Amanita flavorubescens*. All of the following align with Michael Kuo's description on [MushroomExpert.com](https://mushroomexpert.com/amanita-flavorubens/) (5):

- The cap is at its brightest yellow at the margin and when young, and the cap becomes more of a yellowish brown with age (i.e., when it flattens)
- The cap may have yellow warts
- The edge of the cap can have faint lines "at maturity"
- The gills are white, crowded, and free from the stem
- The base of the stem can have yellow patches leftover from the volva
- The base of the stem is particularly likely to stain a reddish color
- The mushroom was found near a living oak tree

For the latter one, I'll note that Kuo *goes out of his way* to mention oaks, describing the ecology of *Amanita flavorubescens* as

"Mycorrhizal with hardwoods (especially oaks)." He also says it can pop up in urban areas. By something like a transitive argument, I reckon the mushroom would also be fit for a suburban backyard.

In addition to all of this, the Wikipedia page for *Amanita flavorubens* contains an image that is pretty much an exact fit (6):



This image is sourced from amanitaceae.org, a site I repeatedly tried to access in my research but which would

never load. I'll note that the aforementioned Rod Tulloss is listed on the Wikipedia page as a creator of this image, and he appears to be the person behind that website I was unable to access.

Finally, I'll say that watching some videos from the North Carolina-based mushroom YouTuber Anna McHugh (7) increased my confidence in the *Amanita flavorubens* identification. Looking at her samples, the very slight volva was a good match to what I dug up, and she makes the important point that the warts in this species wash off quite easily in the rain. Furthermore, her video on another species I had been considering (*Amanita flavoconia*) gave me more confidence that *Amanita flavorubens* was the correct ID. In fact, Anna is so confident with her ability to distinguish between these two that she both eats *flavorubens* and describes *flavoconia* as inedible. (8) The videos I watched are linked below. (9)

As for the rest of the mushrooms on the table, figuring out what those are (by gathering new specimens) may come at a later date. For now, I can say that the specimens in the lower left of the below image represent a "little brown mushroom," i.e., something simultaneously boring and in need of significant effort to identify. (10) The specimens in the upper right - distinguished by their indented caps - might be russulas. Said mushrooms are known to break apart easily, and that was pretty much what was happening with these.



For a closer look at one of the purported russulas, see the following.



A quick run of these images through AI (with appropriate context) suggested *Russula mariae*, which a cursory reading of the [MushroomExpert.com](https://www.mushroomexpert.com/russula-mariae.html) entry seems to support (11). But as Michael Kuo himself states in his page on the *Russula* genus, identification within this group is quite difficult (12). In fact, the linked page contains a rather entertaining rant about how species-level identification within the *Russula* genus is a "joke" propped up by "pseudoscientific jargon."

So maybe I confidently get a species ID on my purported russula, or maybe I don't. As a fun fact, squirrels are known to eat these mushrooms (13). Granted, I don't see *nearly* as many squirrels in my backyard as I see chipmunks - but a sciurid is a sciurid.

As of earlier today (August 17th, and prior to the aforementioned downpour), I tossed out my collection that had been sitting on the table. Perhaps some of it will be scavenged.



(1) More precisely, this is the tree I sat under at the beginning of "Random Walks."

(2) It gives me immense pleasure to navigate a website with an aesthetic like this. The stuff of childhood.

(3) https://www.mushroomexpert.com/amanita_vaginata.html

(4) https://www.researchgate.net/publication/305083815_The_genus_Amanita_should_not_be_split

(5) https://www.mushroomexpert.com/amanita_flavorubescens.html

(6) https://en.wikipedia.org/wiki/Amanita_flavorubens

(7) <https://m.youtube.com/@anna-identifies-mushrooms/>

(8) This would appear to imply I have a steady supply of edible mushrooms in my backyard (the mycelium is still underground producing these things, after all).

Nevertheless, the going advice for beginners (such as myself) is to never eat an Amanita.

(9) <https://m.youtube.com/watch?v=SFrXas9KZUo>

<https://m.youtube.com/watch?v=ATredUVxxm4>

(10) Being honest, I'm probably never going to figure out what these are.

(11) https://www.mushroomexpert.com/russula_mariae.html

(12) <https://www.mushroomexpert.com/russula.html>

(13) I first picked this up in the comment section of a post on r/mycology, but this video also states it: <https://m.youtube.com/shorts/KV8Uhit59NA?ra=m>

