A GUIDE TO MISSOURI'S

EDIBLE AND POISONOUS MUSHROOMS

MISSOURI DEPARTMENT OF CONSERVATION

A Guide to Missouri's Edible and Poisonous Mushrooms

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Front cover: Morels are the most widely recognized edible mushroom in Missouri. They can be found throughout the state and are the inspiration of several festivals and mushroom-hunting forays. Photo by Jim Rathert.

Caution!
If you choose to eat wild mushrooms, safety should be your first concern. Never forget that some mushrooms are deadly, and never eat a mushroom you have not positively identified. If you cannot positively identify a mushroom you want to eat, throw it out. The author, the reviewers, the Missouri Department of Conservation, and its employees disclaim any responsibility for the use or misuse of information in this book.

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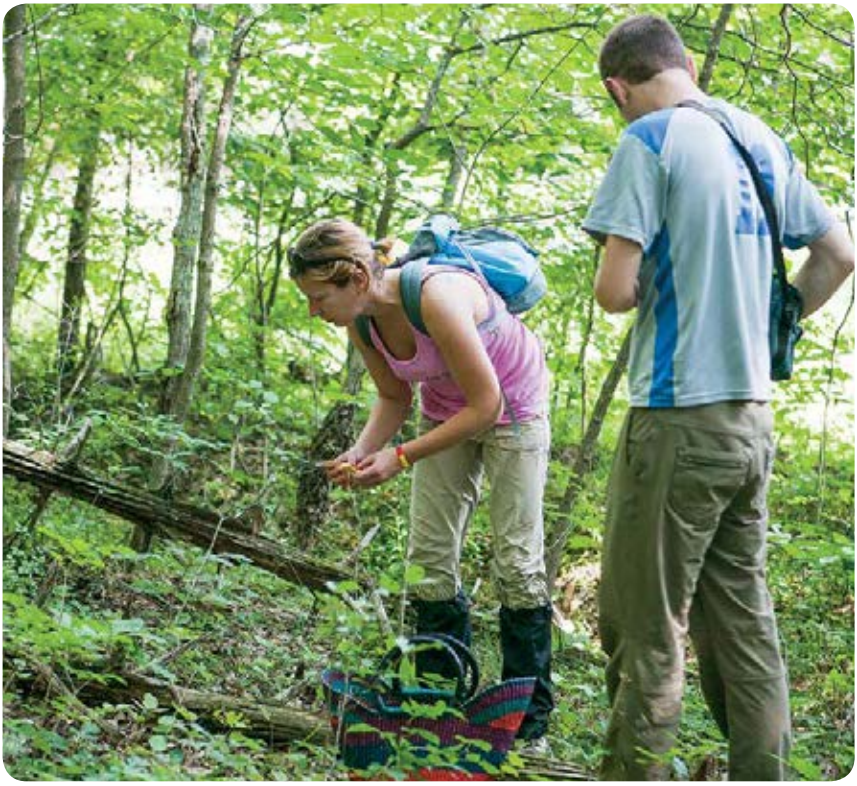
ENJOY MISSOURI'S WILD MUSHROOMS SAFELY

Most people new to mushroom hunting have one basic question: Is it edible or is it poisonous? To answer this question, even experienced mushroom hunters practice caution. They check and double-check the identification of each mushroom, and, when in doubt, they throw it out.

This book can help you enjoy Missouri's wild mushrooms safely. Keep it handy to identify our state's choicest edible mushrooms and to avoid those that could sicken you or worse.

As you gain experience hunting, identifying, and enjoying wild mushrooms, you may develop a deeper interest in other types of fungi



DAVID STONNER

To aid positive identification, collect whole specimens, including the base, and closely observe field details.

and their role in our world. Fungi play an incredibly important role in breaking down organic material and returning those nutrients to the soil. Many form mutually beneficial relationships with roots of trees and other plants, increasing their capabilities to absorb water and nutrients that help them survive and flourish. In fact, researchers are learning that soil health and function are based to a large degree on the relationship between fungi and plants.

Once the fascinating natural history, variety, and function of macrofungi in our environment have captured your interest, you may find that some of your most enjoyable moments spent mushroom hunting might even be the times you find unfamiliar yet nonedible mushrooms.

Ensure a Positive Experience

Always practice caution when gathering mushrooms for the table. Follow these tips to help ensure a positive experience all the way from forest to fork.

Collect carefully. Carry a digging tool and a roll of wax paper (not plastic wrap, which hastens decay) in a flat-bottomed basket. This kit will allow you to collect entire specimens (including the base), keep them separate, and avoid crushing them. Record field details for mushrooms that need to be identified: where the mushroom is growing (on wood, soil, or decaying organic material), habit (single or in clusters), the color of the various parts of the mushroom, and distinctive features such as staining or bruising. Take only fresh, young specimens, and wrap them so that different species are kept separate.

Check and double-check the identification. To be completely confident that a mushroom is edible, make sure that all the features of the mushroom in hand match those described in this guide. If all but a few features match, the mushroom may be a similar-looking yet poisonous mushroom.

Be sure to inspect every mushroom. It is easy when gathering mushrooms to harvest a similar-looking yet different and potentially dangerous mushroom. Give each mushroom a thorough inspection.

Try a small amount first. Even popular mushrooms like morels can make some people sick. If you have never eaten a certain kind of mushroom, try a small cooked amount of it first, then wait at least 24 hours before eating more.

Never eat a raw mushroom. To rid mushrooms of insects, slice them lengthwise and soak them in salted water for a few minutes. Cooking will kill any harmful bacteria that might be present.

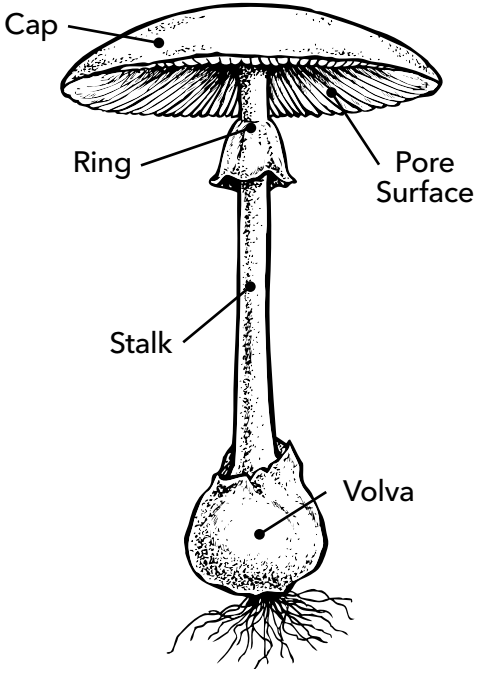
Don't eat old mushrooms. Many edible mushrooms are good to eat for a very short period of time. If the mushroom is soggy, has a foul odor, or is darkening, leave it for the bugs and other wildlife to enjoy.

When in doubt, throw it out. If you are in the slightest doubt of the identification of a mushroom, don't risk eating it.

Learn More About Mushrooms

Mushrooms are only a small part of a much larger organism. They are the fruiting bodies of fungi that release spores for reproduction. Often compared to an apple on an apple tree, a mushroom is attached to an extensive network of hairlike mycelium, the vegetative part of the fungus that is growing on or throughout wood, soil, or decaying matter.

To determine accurate identification, learn to identify the features of a mushroom. Mycologists (scientists who study mushrooms) use the following terms to describe the parts and characteristics of mushrooms. Familiarity with these terms will help you to use this guide to describe unidentified mushrooms.



MARK RAITHEL

Cap and stalk. The cap is the part of the mushroom that supports the spore-bearing surface while the stalk (stem or stipe) supports the cap. Caps and stalks vary greatly in size, shape, color, and texture among the many different species of mushrooms.

Habit. The shape and arrangement that mushrooms exhibit is another important feature. Most field guides categorize mushrooms by shape such as cap, bracket, rosette, vase, club, ball, tooth, coral, column, cup, and jelly. Various species of mushrooms grow in different patterns as well. Some grow in rings (known as fairy rings) or scattered, and others grow very close to each other and are tightly compacted.

Habitat. Many mushrooms are particular to a specific growth medium such as bases and trunks of trees, decaying wood, soil, organic matter, etc. Some are also specific to certain types of forest, such as oak/hickory or cedar/pine, and even specific tree species, such as elm or ash.

Pore surface. This is the part of the mushroom through which spores are emitted. The pore surface can consist of gills, ridges, tubes, spines, or pits.

Spore color. Spores are like the seeds for mushrooms. They vary in color and can be an important identifying feature for a mushroom. Making a spore print is an easy, fun way to determine the spore color. See Page 6 for instructions on how to make a spore print.

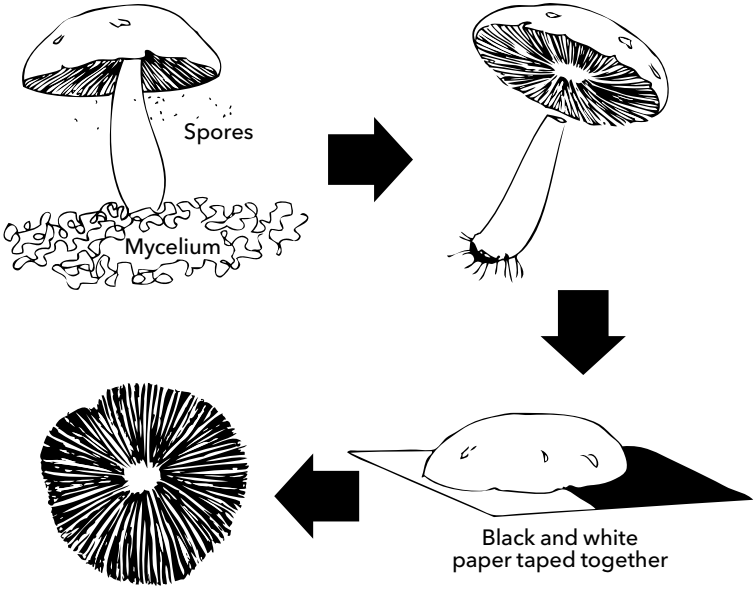
Staining and bruising. Crushing or rubbing the caps and stems of some mushroom species will cause bruising or even a change in color (stain). These are helpful characteristics to use in identifying or describing some mushrooms.

Volva and ring. These are structures that persist on some mushrooms, yet they are absent on others. It is especially important to recognize these features because some of the most poisonous mushrooms have a persistent volva and ring.

Make a Spore Print

Individual spores are too small to be seen with the naked eye. However, you can make a spore print that will show the color of the spores in a mass. This color is an important identifying characteristic for many mushrooms, especially gilled fungi.

Before cutting your specimen, create a surface to catch the spores. You'll need two pieces of paper, one black and one white. Tape the edges together to create one sheet that's half black and half white. This will ensure visibility, whether the spores are light or dark. To make a spore print, cut the stem off the mushroom and place the cap gill- or pore-side down, straddling the paper's seam. Cover with a bowl or jar. If the mushroom is not too young, too old, or too deteriorated, the spores will slowly collect on the paper. A spore print will be visible in 1–12 hours.



DONNA PASLEY

EDIBLE MUSHROOMS

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The Puffballs

Lycoperdon* and *Calvatia

Description: Puffballs are white, rounded to turban-shaped balls, with or without spiny warts, and a pore at the top. They become yellowish to pinkish to brownish with age and change from pure white on the inside to brownish dust. When mature, a pore opens at the top to release thick, dusty-brown spores.

Size: Depending on their size, puffballs can easily be mistaken at a distance for golf balls, baseballs, or even soccer balls. Commonly, they are found roughly 1–2½ inches wide and 1–3 inches tall, although some can be as much as 20 inches wide and tall.

When and where: Puffballs appear in late summer or fall (July–October) and grow in lawns, open woods, pastures, and barren areas on soil or decaying wood.

Habit: They are found growing singly or in clusters.

Gem-studded puffball *Lycoperdon perlatum*

NOPPADOL PAOTHONG

Cautions: Slice each puffball from top to bottom and examine the interior. It should be completely white and featureless inside, like a marshmallow, with no trace of yellow or brown. Some other mushrooms, including the deadly destroying angel (*Amanita bisporigera*), have round, "button" stages that look like puffballs. **If a sliced specimen shows any sign of a developing cap or stem inside, it means the mushroom is not a puffball and should not be eaten.**

Cooking hints: Remove outer skin if it is tough, then slice, dip in batter, and fry.

Pear-shaped puffball *Lycoperdon pyriforme*

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Shaggy Mane

Coprinus comatus

Description: A white mushroom when young, with a shaggy, cylindrical cap that turns black and inky with age. As the mushroom matures, the cap gradually expands from a cylindrical shape to a bell shape, with the cap's white scales turning brownish and becoming more upturned, giving the cap a shaggier texture. Finally, the cap and gills become inky black and liquefy, leaving only the standing stalk. The spore print from a shaggy mane is black.

JON RAPP

Size: Shaggy mane is usually found growing 4–6 inches tall. It is distinctive enough that, with a little practice, you can easily distinguish it from other white, potentially poisonous mushrooms that grow in open areas.

When and where: While this mushroom is most commonly found in the fall (September–October) and growing in large numbers along roadsides and in lawns, it can also be seen in the spring and growing in other interesting places like wood-chip piles and hard, disturbed ground.

Habit: Often seen in large numbers of scattered individuals.

Cautions: Until you become familiar with shaggy mane, be sure to look for the developing ink or make a spore print to confirm that is has black spores. Beware — many white mushrooms that are not shaggy mane also grow in the same habitat.

Cooking hints: Pick only young, fresh specimens. If you want to store them, cook them as soon as you can after harvesting, then refrigerate. Once picked, they will begin to dissolve into inky liquid in just a few hours. Sauté mushrooms in butter and season with nutmeg or garlic. Add to scrambled eggs or chicken dishes as well.

Coral Fungi

Artomyces, Ramaria

Other common names: Club fungi, antler fungi

Description: These fungi appear as clumps of branching stems that point upward, giving a coral-like structure. Most are tan, whitish, or yellowish, and a few are pinkish or purple.

Size: The clusters may grow up to 8 inches tall.

When and where: Coral mushrooms grow in wooded areas on the ground or on decaying logs. They can be found in spring and summer (June–September).

Habit: Coral fungi typically grow as single or scattered individuals.

Crown-tipped coral *Artomyces pyxidatus*

JON RAPP

Cautions: While no serious poisonings from coral fungi have been reported, some similar-looking mushrooms also referred to as coral fungi are known to cause gastrointestinal upset, and some people may be particularly sensitive. Avoid coral fungi that taste bitter, bruise brown when handled, or have gelatinous bases. A look-alike mushroom is the jellied false coral (*Tremellodendron pallidum*), which has tough branches, unlike the brittle branches of true coral mushrooms, which break easily.

Cooking hints: The mushroom tips and upper branches are most tender. Sauté and add to vegetables or white sauce.

Coral mushroom *Ramaria* sp.

CLIFF WHITE

Morels

Morchella

Description: The most widely recognized edible mushrooms in Missouri, morels have a honeycombed cap with black to brownish-black ridges and yellowish-brown pits. The stem is sometimes enlarged at the base and is completely hollow. The caps on morels are elongate and conical with vertically elongated ridges and pits. Spores are white to cream-colored and located inside the pits.

Size: The size of morel mushrooms can vary, ranging from 2–12 inches tall.

When and where: Morels are found on the ground in a variety of habitats, particularly in moist woodlands and in river bottoms. They are often associated with ash trees, dying elms, and apple trees, although they are found elsewhere under both hardwoods and conifers. Morels typically appear from March to early May.

Common morel *Morchella americana*

CLIFF WHITE

There are three common species of morels:

- The common morel (*Morchella americana*): When young, this species has white ridges and gray to brown pits and is known as the "white morel" or "gray morel." As it ages, both the ridges and the pits turn yellow-brown. At this stage, it is often referred to as a "yellow morel." If conditions are right, the yellow morel can become a giant morel, which may grow up to a foot tall.
- The black morel or smoky morel (*Morchella angusticeps*): The ridges are gray or tan when young but darken with age until nearly black. The pits are brown and elongated. These morels are best when picked young. Discard any that are shrunken or have completely black heads.
- The half-free morel (*Morchella punctipes*): This is the only morel that does not have the bottom of the cap fused to the stem. The cap of the half-free morel is attached at about the middle. These

Black morel *Morchella angusticeps*

NOPPADOL PAOTHONG

Morels continued

morels have small caps and long, bulbous stems. They also may be confused with the wrinkled thimble-cap (*Verpa bohemica*), which has a cap that is free from the stem except at the top. Fortunately, the wrinkled thimble-cap is edible in moderation.

Habit: Found as scattered individuals.

Cautions: Like all wild edible mushrooms, morels must be thoroughly cooked and not eaten raw. Beware of the poisonous false morels (see Page 34).

Cooking hints: Sauté them in butter or try them creamed. If you find a lot, you can dry them for later. A traditional way of preparing morels is to roll them in cracker crumbs or corn meal and deep-fry them.

Half-free morel *Morchella punctipes*

JIM RATHERT

Chanterelles

Cantharellus

Description: Chanterelles are shaped like small funnels or trumpets with wavy cap edges. Most are bright orange or yellow, although one, is a reddish-orange color. Some fresh chanterelles have a pleasant, fruity fragrance. To make sure you have a chanterelle, cut the mushroom in half long-wise to reveal the center part of the mushroom. Chanterelles will be completely white in the center. Chanterelles do not have true gills. Instead, most species have a network of wrinkles or gill-like ridges running down the stem. The ridges have many forks and cross veins and are always blunt-edged, unlike true gills which are sharp-edged and knifelike. The spore print is pinkish-yellow to cream.

Size: Depending on the species and growing conditions, chanterelles can vary in size from ½–6 inches tall and ½–6 inches wide.

When and where: Chanterelles are found growing on the ground in grass or leaf litter in hardwood forests during the summer and fall (May–September). They are never on decaying wood or trees, which can be buried, giving the appearance of growing on the ground. Chanterelles

Common chanterelle *Cantharellus cibarius*

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Chanterelles continued

are especially common when the weather has been hot and humid.

Habit: Chanterelles are usually found in large numbers of scattered individuals.

There are four common species of chanterelles in Missouri:

- Common chanterelle (*C. cibarius*): One of the larger species of chanterelle, this mushroom can grow as much as 6 inches tall and wide. It has ridges on the underside of the cap that run down the stem.
- Smooth chanterelle (*C. lateritius*): This mushroom looks very similar to the common chanterelle but is smooth or has very shallow wrinkles on the underside of the cap instead of ridges.
- Tiny chanterelle (*C. minor*): Ridges on the underside of the cap are well developed, but it will only grow up to 1 ½ inches tall. The stalk consists of a larger proportion of the total length when compared to the common chanterelle.
- Red chanterelle or cinnabar chanterelle (*C. cinnabariunus*): This is the only reddish-orange colored chanterelle. Look for all the same identifying characteristics including vase shape, ridges, and white center.

Smooth chanterelle *Cantharellus lateritius*

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Cautions: All chanterelles are edible. **However, there are some poisonous mushrooms that look similar**. Jack-o'-lantern mushrooms (*Omphalotus illudens*) and big laughing gym (*Gymnopilus spectabilis*) are two poisonous mushrooms that can be mistaken for chanterelles. These look-alikes have true gills, orange inner flesh or orange to rust-colored spore print, and usually grow in tightly compacted clusters instead of scattered individuals. Chanterelles are susceptible to overharvest. Don't pick more than half, or you might not find them in that location again.

Cooking hints: Chanterelles are tough and need long, slow cooking. When properly prepared, their flavor is excellent. Sauté slowly in butter until tender, season with salt, pepper, and parsley, and serve on crackers or polenta.

Cinnabar chanterelle *Cantharellus cinnabariunus*

CHRIS EVANS, ILLINOIS WILDLIFE ACTION PLAN, BUGWOOD.ORG

Bearded Tooth

Hericium erinaceus

Other common names: Lion's mane, hedgehog mushroom

Description: A round, beardlike mushroom that is an unbranched mass of long, hanging, toothlike spines. Bearded tooth is white when young but yellows with age. A stalk is not present; spines hang evenly from a central base. The spore print is white.

Size: A bearded tooth mushroom may grow quite large, as much as a foot across. Each spine is ½–2 inches long.

When and where: Bearded tooth is found growing on trunks of living hardwood trees and on fallen trees and logs during late summer and fall (August–November).

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Habit: Single to several individuals.

Cautions: Only young, white specimens should be eaten; older, yellowed ones are sour. Although it is a distinctive mushroom, comb tooth (*Hericium coralloides*) is a closely related species that is more open, with branched spines. Fortunately, comb tooth is also a good edible when young and white.

Cooking hints: Slice, parboil until tender (taste a piece to test), drain, and serve with cheese sauce.

Oyster Mushrooms

Pleurotus ostreatus, P. pulmonarius

Description: A gilled whitish, grayish, or tan cap with a stubby, off-center stalk. The cap is shell-shaped, semicircular to elongated like an oyster and has a smooth, sometimes wavy margin. The gills are narrow, and their attachment descends along a short, thick stalk. Spores are white to grayish-lilac. Two species are referred to as oyster mushroom, and both are edible. Both species look alike. *P. ostreatus* is pale to dark brown and favors cooler weather in spring and fall, while *P. pulmonarius* is white to pale tan and appears in the warm summer months.

Size: The cap is 1–8 inches wide with a stalk up to 1¼ inches long and ¾ inch wide.

When and where: Oyster mushrooms grow year-round and always on wood. They sometimes appear to be growing out of the ground, but they are attached to tree roots beneath the soil surface.

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Habit: Usually found growing in large clusters of overlapping, shelflike caps.

Cautions: Because there are a number of similar-looking species that grow on wood, confirm the identification of oyster mushrooms by making a spore print. Most species that get misidentified as oyster mushrooms are not dangerous, but they may be woody or unpleasant tasting. Watch out for the small black beetles that sometimes infest this mushroom.

Cooking hints: Dip in beaten egg, roll in cracker crumbs, and fry.

Boletes

Boletaceae

Description: Bolete mushrooms resemble a hamburger bun on top of a thick stalk. Instead of having gills or ridges on the underside of the thick, spongy cap, they have a tightly packed network of downward-facing tubes that form the pore surface. There are over 200 species of boletes in North America. The caps are usually brownish or reddish-brown, while the pores may be white, yellow, orange, red, olive, or brown.

Size: Boletes can grow up to 10 inches tall with caps 1–10 inches wide.

When and where: These mushrooms are found growing on the ground near or under trees during summer and fall (May–November).

Habit: Individuals are found growing scattered, not in compacted groups.

Cautions: Boletes are considered a good, safe, edible group for beginning mushroom collectors. However, you should observe these cautions:

Ash tree bolete *Boletinellus merulioides*

DAVID STONNER

- A few boletes are poisonous. To avoid these, don't eat any boletes that have orange or red pores or that bruise blue. "Bruising blue is not for you."
- Some boletes, while not poisonous, are very distasteful. Confirm the identification using several field characteristics and sample a small amount of the cooked mushroom. If it's bitter or otherwise unpleasant, throw it out.
- Before cooking the mushroom, check to see if the cap is slimy. Sometimes an outer layer of slime develops as the mushroom ages or once it is harvested. This layer can cause diarrhea and will need to be removed before cooking.
- Boletes decay quickly. Be sure to eat boletes the same day you collect them.
- Check for bugs, often found within the cap of the mushroom.

Cooking hints: Remove tough stems, and peel off the pore layer in all but the youngest specimens. Sauté in butter and add to any cheese dish. Dried boletes are also good in soups.

Old man of the woods *Strobilomyces floccopus*

CLIFF WHITE

Chicken of the Woods

Laetiporus

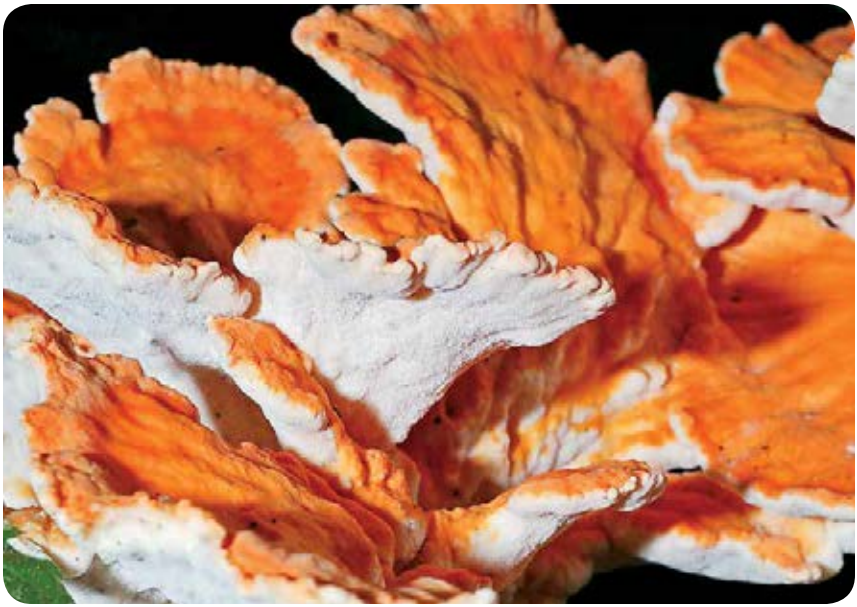
Description: The bright-orange caps of these mushrooms make them the easiest edible to spot. The caps do not have a stalk and are flat and shelflike, with a fleshy texture. Young mushrooms have vibrant color but fade to a peach or salmon color with age. The spore print is white.

Size: Chicken of the woods can range in size from 2–12 inches wide.

When and where: This mushroom is found on dead or dying hardwood trees, stumps, buried roots, or living trees. It can be found in summer and fall (May–November) and rarely found in the spring, depending on weather conditions.

Habit: Chicken of the woods is usually found growing in large clusters of overlapping caps.

Chicken of the woods *Laetiporus cincinnatus*



JON RAPP

There are two species of mushrooms commonly referred to as chicken of the woods:

- *L. cincinnatus*, also called chicken mushroom, has a white pore surface.
- *L. sulphureus*, also called sulfur shelf or chicken mushroom, has a sulfur-yellow pore surface.

Cautions: The distinctive color and growth pattern of chicken of the woods makes it difficult to mistake it for any other mushroom. However, it does cause a mild allergic reaction (swollen lips) in some people. If you're eating it for the first time, cook and try a small amount to determine if it will cause an allergic reaction.

Cooking hints: Cook only the tender outer edges of the caps because the inner portions are tough and woody. Be sure to gather only the young, fresh mushrooms with vibrant color. As the mushroom ages and the color fades, it will turn tough and woody. Slice and simmer in stock for 45 minutes, then serve creamed on toast. When cooked, this mushroom has the texture and often the taste of chicken and can be used as a chicken substitute in casseroles, enchiladas, and more.

Hen of the Woods

Grifola frondosa

Description: This mushroom resembles a large ruffled chicken sitting at the base of a tree. The caps are spoon-shaped and grayish brown on top and white beneath. They form large clusters with a short, off-center stalk. The spore print is white.

Size: A single clump of hen of the woods can grow to an enormous size (up to 3 feet wide) and weigh up to 100 pounds.

When and where: Hen of the woods are found growing on the ground at the base of trees and stumps. They are most often found at the base of oak trees during the fall (September–November) and in hardwood forests with mature and aging trees. Once you find hen of the woods, be sure to return — it often repeatedly grows in the same spot.

Habit: Grows as a single large, circular cluster.

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Cautions: Many gilled mushrooms grow in large clumps; however, hen of the woods does not have gills, making it easy to distinguish from other similar-looking mushrooms. Hen of the woods has no poisonous look-alikes, but there are some similar species of pore fungi that are tough and inedible. If what you have tastes leathery or otherwise unpleasant, you probably didn't pick a hen of the woods mushroom.

Cooking hints: Use only the fresh, tender portions. Simmer in salted water until tender (requires long, slow cooking), and serve as a vegetable with cream sauce, add to soup, or chill after cooking and use on salads.

POISONOUS MUSHROOMS

For more details, visit mdc.mo.gov/field-guide.

Every mushroom hunter should be familiar with the three most dangerous groups of fungi. These are the **amanitas**, the **false morels**, and a catch-all category known as **little brown mushrooms (LBMs)**. Mushrooms in these groups cause virtually all the fatal mushroom poisonings in the United States, with amanitas alone accounting for 90 percent of mushroom-related deaths. Avoid eating any mushroom resembling these three categories. The pictures and descriptions on the following pages will help you identify them.

There are also hundreds of other mushrooms that will cause anything from a mild stomachache to severe physical distress, including vomiting, diarrhea, cramps, and loss of coordination. Two common poisonous mushrooms of this type, the jack-o'-lantern and the green-spored lepiota, are described here. Although the symptoms of poisoning from these mushrooms may be alarming, they usually pass in 24 hours or less with no lasting effects. You should, however, notify your doctor immediately if you suspect mushroom poisoning of any kind.

Amanitas

Amanita

Description: This is a large group of mushrooms that can be difficult to tell apart. Memorable names include destroying angel, fly agaric, yellow patches, blusher, grisette, ringless panther, death cap, and fool's mushroom. Several members of this group contain amanitin, one of the deadliest poisons found in nature. One cap of a destroying angel

Destroying angel *Amanita bisporigera*

DAVID STONNER

(*Amanita bisporigera*) can kill a person. Each amanita starts as an egg-shaped "button" that can resemble a small puffball mushroom. The button breaks open as the mushroom grows. Fully developed amanitas are gilled mushrooms with parasol-shaped caps that may be white, yellow, red, or brown. They also have the following characteristics:

- A saclike cup surrounding the base of the stem. This is called a volva. It is often buried just beneath the soil surface, and it may not be obvious.
- A ring on the stem. Amanitas are known to have this feature, but it is not always present. Some amanita species lack a ring on the stem, or it is no longer present as the ring may not persist.
- White gills and white spore print. Both the ring and the volva may be obscure or destroyed by rain or other disturbance. For this reason, **beginning mushroom hunters should avoid all parasol-shaped mushrooms with white gills and white spore print**.

Size: The sizes of amanita mushrooms vary greatly, depending on species and growing conditions.

When and where: Amanitas are usually found on the ground in woodlands and open places in summer and fall.

Habit: These mushrooms grow as scattered individuals.

False Morels

Helvella and ***Gyromitra***

False morels have also been called red morels, elephant ears, Arkansas morels, and elfin saddles. They should be considered poisonous, although many people have enjoyed eating them and some even consider them a favorite edible wild mushroom. However, false morels have definitely caused serious illnesses and deaths. They contain various

False morel *Gyromitra caroliniana*

JIM RATHERT

levels of gyromitrin, a toxin that when consumed, is hydrolyzed into the toxic compound monomethylhydrazine (MMH). This compound causes diarrhea, vomiting, severe headaches, and can occasionally be fatal. Because of different cooking techniques and different individual sensitivities, false morels sicken some people but leave others seemingly unaffected. However, the toxin is known to accumulate in the body overtime, perhaps delaying effects of the toxin.

Description: At brief glance, false morels look can look like true morels (*Morchella*) but there are rather obvious differences between them. The cap surface of false morels has lobes, folds, flaps, or wrinkles, but not pits and ridges like true morels. Their caps appear to bulge outward instead of being pitted inward like true morels. False morels also do not have a hollow center like that found inside a true morel.

Size: False morels typically range in size from 2–8 inches.

When and where: These mushrooms are found in spring, summer, and fall in woodlands. They are most commonly spotted in the spring when more people are in the woods looking for true morels.

Habit: False morels are found as scattered individuals on the ground.

Little Brown Mushrooms (LBMs)

Like the LGBs (little gray birds) in bird-watching parlance, LBMs is a catchall category. It includes all small- to medium-sized, hard-to-identify brownish mushrooms with spores of all colors. They are found in all seasons and in all habitats. Many LBMs are harmless, while some are mildly to severely poisonous. The innocent-looking little mushrooms of the genus *Galerina* are probably the most dangerous of the LBMs. They

Deadly galerina *Galerina autumnalis*

JON RAPP

contain the same toxin as amanitas but luckily have caused very few deaths. Galerina mushrooms grow in clusters on wood and have a brownish spore print.

Because they are difficult to identify, all LBM's should be avoided.

Jack-o'-Lantern

Omphalotus olearius

Description: A bright orange to yellowish-orange mushroom, the jack-o'-lantern is well named for its pumpkin color, appearance in the fall, and occasional illumination of a faint greenish glow that can be visible at night or in a darkened room. It has sharp-edged gills descending the stalk, and the cap is convex, becoming flat to funnel-shaped and sunken in the center. The color and funnel shape of the cap have caused some to mistake it for the edible chanterelle mushroom. An easy way to distinguish a jack o'-lantern from a chanterelle is to cut the mushroom length-wise down the middle. The inner tissue of jack-o'-lantern is orange while the inner tissue of chanterelles is white. The gills of jack-o'-lanterns are also narrow and sharp, unlike the folds and ridges on the pore surface of chanterelles.

MDC STAFF

Jack-o'-lantern mushrooms have caused many poisonings because of their attractive appearance and abundance. Although eating them has not been known to be life-threatening to healthy adults, they can cause mild to severe upset stomach.

Size: Jack-o'-lanterns are typically found 2–8 inches tall, with caps ranging from 2–8 inches wide.

When and where: These mushrooms are found in summer and fall (July–October) at the base of trees, on stumps, or on buried wood.

Habit: Considering growth habit is another way to decipher between jack-o'-lantern and chanterelle mushrooms. Jack-o'-lanterns grow on wood in large clusters that are so tightly packed they sometimes appear to be growing on top of each other. Chanterelle mushrooms grow as scattered individuals on the ground.

Green-Spored Lepiota

Chlorophyllum molybdites

These large, common mushrooms often appear in fairy rings on suburban lawns and cattle pastures. Perhaps because they look similar to the white mushrooms sold in grocery stores, they are one of the most commonly eaten poisonous mushrooms. Green-spored lepiotas cause violent gastrointestinal upset, including vomiting and diarrhea severe enough to require hospitalization.

LISA K SUITS

Description: The green-spored lepiota is parasol-shaped with a cream or tan scaly cap, and a large ring on the stalk. The gills are white to cream-colored and turn dingy green with age. The thick, white stalk enlarges toward the base and darkens when handled. The spore print is green.

Size: Green-spored lepiotas can become quite large, measuring up to 12 inches tall with caps up to 12 inches in diameter.

When and where: This mushroom is found in summer and fall (July–September) and can easily be spotted on lawns and pastures.

Habit: They can grow as single individuals or often appear in a fairy ring.

LISA K SUITS

ADDITIONAL SOURCES

One of the best ways to learn more about mushrooms is to participate in a mushroom club, such as the Missouri Mycological Society. For more information about the society and scheduled events and activities throughout Missouri, visit momyco.org.

Websites

- *Missouri's Online Field Guide*. mdc.mo.gov/field-guide
- *MycoGuide: Mushrooms of the Midwest and America*. mycoguide.com

Books

- *100 Edible Mushrooms*, by Michael Kuo. 2007. University of Michigan Press.
- *Edible Wild Mushrooms of Illinois and Surrounding States: A Field-to-Kitchen Guide, 1st Edition*, by Joe McFarland and Gregory M. Mueller. 2009. University of Illinois Press.
- *Missouri's Wild Mushrooms*, by Maxine Stone. 2010. Missouri Department of Conservation. Available at mdcnatureshop.com for $14 plus tax and shipping.
- *Mushrooms of the Midwest*, by Michael Kuo and Andrew Methven. 2014. University of Illinois Press.
- *National Audubon Society Field Guide to North American Mushrooms*, by Gary H. Lincoff. 1981. Alfred A. Knopf, New York (continuously reprinted).

DAVID STONNER

Collecting mushrooms in a flat-bottomed basket helps spread spores as you hunt, increasing the chances of finding more mushrooms in your favorite hunting areas next year.

NOTES

CURTIS E. YOUNG, THE OHIO STATE UNIVERSITY, BUGWOOD.ORG

Crown-tipped coral *Artomyces pyxidatus*

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