SPRING MUSHROOMS



TEXT AND PHOTOGRAPHS BY DAVE BRUMFIELD DESIGNED AND ILLUSTRATED BY DANETTE RUSHBOLDT



INTRODUCTION

For much of the year, any walk through the woods reveals an assortment of fascinating mushrooms, each playing an important role in the forest ecosystem.

This guide serves as a reference for some of the mushrooms* you may encounter while hiking in the Metro Parks. It is arranged in four sections: mushrooms with gills, mushrooms with pores, morels and others. Each mushroom is identified by its common and scientific name, a brief description, where and when it grows and some fun facts.

As you venture into the woods this spring, take a closer look at the mushrooms around you. Our hope is that this guide will help you to identify them, develop a better understanding of the role they play in nature and inspire you to further explore the world of mushrooms.

Remember, mushrooms can be very tricky to identify – it's best to avoid eating any found in the wild, as many varieties are dangerous or even deadly to consume.

Happy Mushrooming!

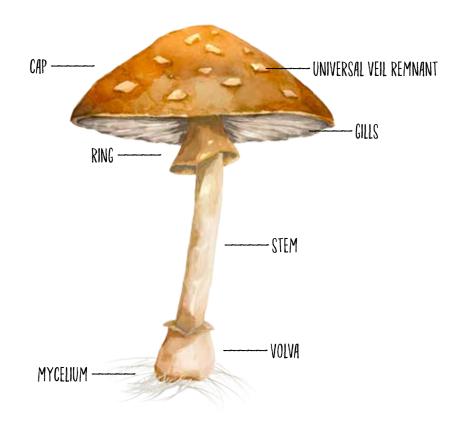
NATURALIST DAVE BRUMFIELD

* Due to recent DNA studies and current taxonomic uncertainty, some scientific names may have changed.

GLOSSARY OF TERMS

FRUITING BODY The reproductive structure of a fungus; typically known as a mushroom
FRUTING The reproductive stage of a fungus when a mushroom is formed
FUNGUS A group of organisms that includes mushrooms and molds
HYPHAEThread-like filaments that grow out from a germinated spore
MYCORRHIZAL Having a symbiotic relationship between a plant root and fungal hyphae
PARASITE Fungus that grows by taking nourishment from other living organisms
POLYPORE A group of fungi that form fruiting bodies with pores or tubes on the underside through which spores are released
SAPROPHYTE A fungus that grows by taking nourishment from dead organisms
SPINES Small "teeth" hanging down from the underside of the cap of a mushroom
SPORE A microscopic, reproductive unit of a fungus, similar to a seed in an apple

STRUCTURE OF A MUSHROOM



CAP	Supports and protects the gills; color and shape depend on stage of growth and species.
	The lower surface of the cap, composed of blade-like layers stacked side by side. Spores are produced and released by the gills; other mushrooms have pores, teeth-like structures or some other means of spore dispersal.
	The mass of thread-like hyphae found in soil and other substrates; it absorbs nutrients from the substrate. When conditions are right, mushrooms develop as the fruiting body of the mycelium.
RING	As a mushroom matures, a partial skin covers the edge of the cap to the stem. The ring is what is left when the mushroom cap grows and stretches the skin to breaking.
STEM	The structure that holds the cap above ground; not all mushrooms have a stem.
UNIVERSAL VEIL	A tissue surrounding the developing mushroom button (it is like the shell covering an egg).
VOLVA	. If the mushroom has a universal veil, what is left at the bottom of the stem wher

the veil is broken is the volva; common in Amanita species.

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DEER MUSHROOM (Pluteus cervinus)





ANTLER-LIKE structures called *cystidia*PROJECT from the GILLS, giving this MUSHROOM its COMMON name.



magnified view

WHERE DOES IT GROW?

• Grows (fruits) on rotting logs and stumps; saprophytic

HOW TO IDENTIFY IT

- Cap is light brown to grayish-brown, 11/4 to 4 3/4 inches wide
- Stem (stipe) is white, 2 to 4 inches long
- Gills are free, white at first, turning pinkish to flesh-colored at maturity

FUN FACTS

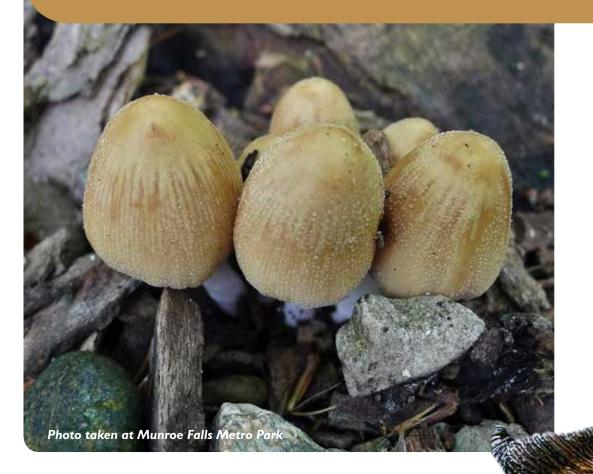
- The gills of this mushroom have a radish-like smell.
- This is one of the first mushrooms to appear in spring.



Fruiting Time

an feb. mar apr may jun jul aug sep oct nov dec

MICA CAP (Coprinellus micaceus)



I'M MELTING!

MICA CAPS belong to a GROUP of mushrooms known as INKY caps because as they MATURE the gills DISSOLVE into a black inky-like LIQUID.

WHERE DOES IT GROW?

• Fruiting body grows in clusters around stumps and buried wood in lawns; saprophytic

HOW TO IDENTIFY IT

- Cap is tan to honey brown, 1 to 2 inches across;
 convex or bell-shaped; radially lined to the center
- Gills are attached, whitish-gray, turning black, close
- Stalk is 1 to 3 inches tall, smooth, hollow and fragile, whitish in color

FUN FACTS

• Young mica caps have tiny particles that often glisten in the sun resembling the mineral mica from which it gets its common name.



MICA the MINERAL

OYSTER (Pleurotus pulmonarius)



A SIMILAR looking
MUSHROOM is

Pleurotus ostreatus,
but it USUALLY fruits in the
FALL and winter and the
CAPS are more
BROWNISH in color.



Pleurotus ostreatus

WHERE DOES IT GROW?

• Fruits on dead or living trunks, stumps and logs of deciduous trees; saprophytic

HOW TO IDENTIFY IT

- Caps are lung-shaped to fan-shaped and smooth, typically grows in overlapping clusters, color varies (white, cream, gray or brown), 2 to 8 inches across
- Gills descend down the stalk (decurrent), white to cream, later turning a yellowish color

FUN FACTS

 The mycelia of oyster mushrooms can kill and eat nematodes (small roundworms) and bacteria, making them one of the few carnivorous mushrooms!

I'M SO HUNGRY



PLATTERFUL (Megacollybia rodmani)



This MUSHROOM is often
CONFUSED with the
DEER mushroom
(Pluteus cervinus). If you
check mature GILLS,
P. cervinus has PINKISH gills
that are free from
the stem.

WHO'S WHO?

WHERE DOES IT GROW?

• Grows alone to several on and near dead logs and stumps or on the ground from buried wood; saprophytic

HOW TO IDENTIFY IT

- Cap is smooth and brownish-gray, often streaked with dark, radial fibers, 2 to 5 inches across
- Stem is 3 to 5 inches tall, white and smooth, sometimes white shoestring-like rhizomorphs are present at the base
- Gills are white, attached and well-spaced; edges become ragged with age

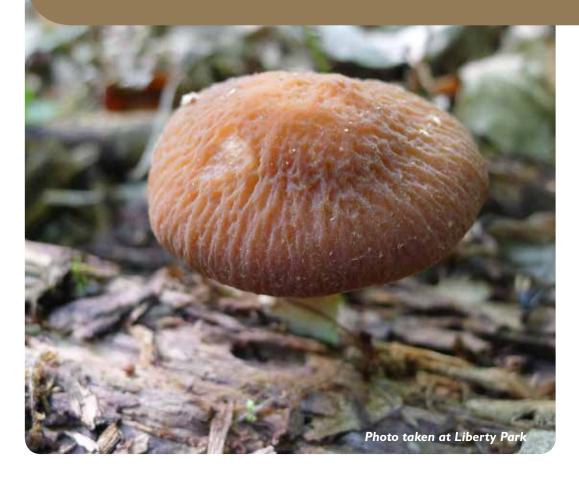
FUN FACTS

• This is one of the largest mushrooms seen in the spring.



DEER MUSHROOM (Pluteus cervinus)

WRINKLED CAP (Psathyrella delineata)



Psathyrella delineata
has a TENDENCY to
CHANGE colors as it
DRIES out, sometimes
resulting in TWO-TONED
specimens.



WHERE DOES IT GROW?

• Fruiting body grows on decaying deciduous wood, scattered or in groups; saprophytic

HOW TO IDENTIFY IT

- Cap is brown to rusty brown, 2 to 4 inches across, surface is wrinkled, usually with a raised rounded knob in the center of the cap (umbo)
- Gills are attached and light brown, darkening with age
- Stem is 3 to 5 inches tall, whitish, darkening and hollowing with age

FUN FACTS

• Other common names: Crumble Cap, Corrugated Cap, *Psathyrella* or Wrinkled *Psathyrella*.

Delineata means
"WITH VISIBLE LINES"
referring to the
WRINKLED lines on
the CAP.



BIRCH POLYPORE (Piptoporus betulinus)



MUSHROOMS IN HISTORY

OTZI, whose frozen MUMMIFIED body was found in 1991 in the OETZTAL ALPS, had some BIRCH polypore among his POSSESSIONS, possibly for TREATING intestinal parasites.

WHERE DOES IT GROW?

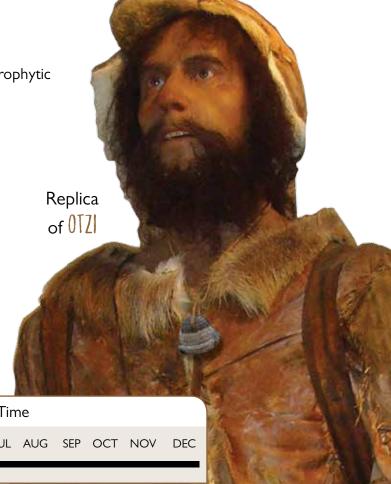
• Fruits on living and dead birch trees; parasitic and/or saprophytic

HOW TO IDENTIFY IT

- Cap is semicircular to kidney-shaped, white and firm, turning light brown with age, 1 to 10 inches wide
- Pore surface is white, graying with age

FUN FACTS

• *Piptoporus betulinus* has the nickname "razor strap fungus" because the tough leathery strips of the fruiting body were excellent for sharpening blades.



Fruiting Time

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

CINNABAR-RED POLYPORE (Pycnoporus cinnabarinus)



LIVING LIFE GERM FREE!

The FRUITING
bodies of Pycnoporus
cinnabarinus have
been FOUND to
possess
ANTIBACTERIAL
properties.

WHERE DOES IT GROW?

• Fruits on dead deciduous wood, especially oak and cherry; saprophytic

HOW TO IDENTIFY IT

• Cap is a red-orange color, semicircular and flat; upper surface is dull orange, smooth to bumpy, 1 to 5 inches wide; the fertile surface (underside) is a bright red-orange color. The fruiting body can be solitary or grouped, sometimes overlapping.

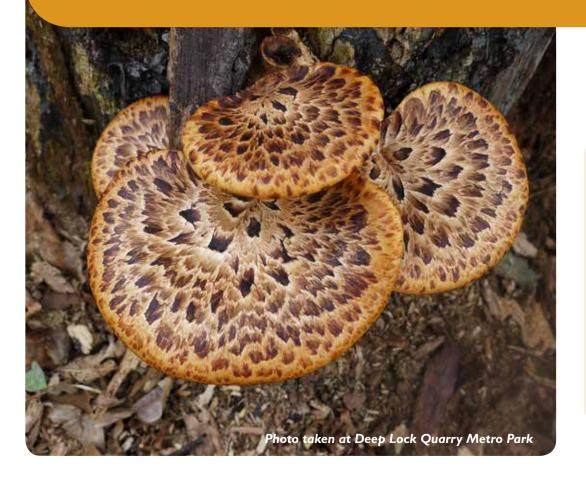
FUN FACTS

• The genus name *Pycnoporus* means "dense pores;" *cinnabarinus* refers to the bright red-orange color (cinnabar).



GERM-FREE ZONE

DRYAD'S SADDLE (Polyporus squamosus)



GIDDY UP

Dryad's SADDLE is one of the FIRST mushrooms to APPEAR in spring. It STARTS as a SMALL nub the size of the tip of your little FINGER and quickly GROWS to look like a SADDLE.

WHERE DOES IT GROW?

• Fruits on a variety of hardwood stumps and logs (saprophytic) or living trees (parasitic)

HOW TO IDENTIFY IT

- Caps are 2 to 12 inches wide, often overlap, circular to fan-shaped, covered with large, red-brown scales on top.
- Stalk is stub-like and lateral, 1 to 3 inches long
- Pores are yellowish-white in color, large and angular

FUN FACTS

• In Greek mythology, a Dryad is a tree nymph who watched over a particular tree. The "saddle" was the place where she sat while protecting her tree, thus the name Dryad's saddle.

I GOT YOUR BACK



AKA: Pheasant's back

HEXAGONAL-PORED POLYPORE (Neofavolus alveolaris)



WHO NEEDS FLOWERS WHEN YOU HAVE ME?

April SHOWERS often BRING more than just May FLOWERS. While enjoying WOODLAND wildflowers be sure to LOOK for this BEAUTIFUL little polypore.

WHERE DOES IT GROW?

• Found on dead twigs and branches; saprophytic

HOW TO IDENTIFY IT

- \bullet Caps are orange-yellow, fan shaped, $1\!\!/_{\!2}$ to 4 inches wide
- Large hexagonal, cream-colored pores

FUN FACTS

 Depending on the field guide you are using, it is also known as Polyporus alveolaris and Favolus alveolaris.



MILK-WHITE TOOTHED POLYPORE (Irpex lacteus)



WHERE DOES IT GROW?

• A common wood-rotting fungus that grows mainly on dead branches and tree trunks; saprophytic

HOW TO IDENTIFY IT

• Fruiting body grows flat against the branch, is whitish with pore surface extending outward. The pores eventually break up into irregular shaped tooth-like projections, except on the edge. As the mushroom ages, the pores turn a yellowish color.

FUN FACTS

• *Irpex lacteus* is one of many "resupinate" crust fungus; that is, they lie flat on their substrate, usually hanging upside-down on a horizontal surface such as the branch.

This WHITISH

MUSHROOM is

also known as

Polyporus tulipiferae

because of its

ASSOCIATION with

one of its HOSTS,

the TULIP tree.

ILOVE

THIS TREE!

Fruiting Time

MUSTARD-YELLOW POLYPORE (Phellinus gilvus)





EASY TO SEE
HOW THIS
MUSHROOM
GOT ITS
COMMON
NAME.

WHERE DOES IT GROW?

• A bracket fungus that grows singly or in overlapping clusters on dead wood of hardwood trees, occasionally on conifers; saprophytic

HOW TO IDENTIFY IT

- Caps are fan-shaped or semicircular, up to 6 inches wide and 1 inch thick. The upper surface is velvety at first, reddish-brown with a yellow margin, darkening with age.
- Pore surface is brown or purplish-brown to reddish-brown

FUN FACTS

• Gilvus means "pale yellow."



BLACK MOREL (Morchella angusticeps)



I'M A WINNER!



MORELS are among the most highly PRIZED edible FUNGI.

WHERE DOES IT GROW?

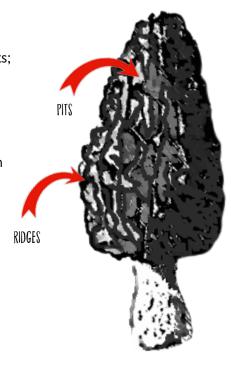
• Fruits singly or in groups in mixed woodland forests; thought to be both saprophytic and mycorrhizal

HOW TO IDENTIFY IT

- Outer ridges of the honeycombed cap are blackish color, inner pits are yellowish color
- Cap attached to stem, up to 6 inches tall
- Stem is cream colored and hollow

FUN FACTS

 The black morel is one of the first morels to appear in spring.



The main
FEATURE

differentiating
M. angusticeps
from OTHER morels
is the fact that
its RIDGES are
darker than
its PITS.

Fruiting Time

an feb. mar apr may jun jul aug sep oct nov de

FALSE MOREL (Gyromitra esculenta)





At first GLANCE this mushroom LOOKS like one of the edible MORELS (black/yellow). Unfortunately, THIS MUSHROOM can be quite POISONOUS.

WHERE DOES IT GROW?

• Fruits alone or in groups on the ground in woodlands; saprophytic, possibly mycorrhizal

HOW TO IDENTIFY IT

- Caps are wrinkled and brain-like, reddish-brown in color,
 1 to 5 inches wide
- Stem and cap are 2 to 5 inches high; usually filled with cotton-like fibers, whereas true morels are hollow when cut top to bottom.

FUN FACTS

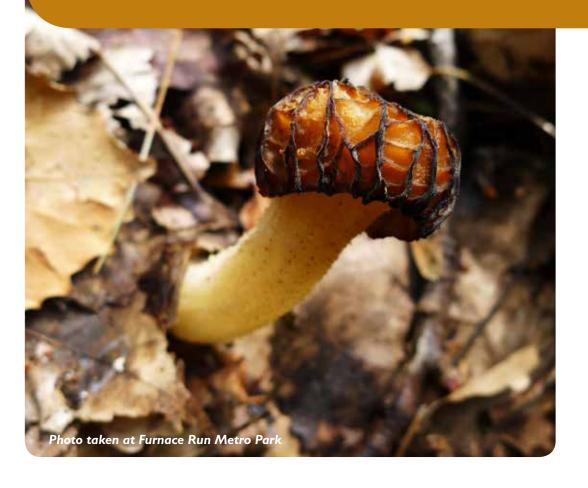
• G. esculenta contains the toxin gyromitrin, which when eaten changes into monomethylhydrazine (MMH), a propellant used in rocket fuel.

AKA: THE BRAIN MUSHROOM

So use YOUR brain and LEAVE this one ALONE!



HALF-FREE MOREL (Morchella punctipes)



As its NAME suggests, the TOP HALF of the CAP is attached to the stem, the BOTTOM HALF hangs free like a SKIRT. In yellow and BLACK morels, the LOWER edge of the cap is ATTACHED to the stalk.

I'M FREE!

WHERE DOES IT GROW?

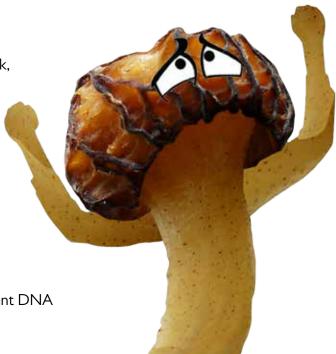
• Fruits singly or in groups on the ground in woodlands, near oak, beech and tulip; saprophytic

HOW TO IDENTIFY IT

- Cap is yellowish-brown, honeycombed, $\frac{1}{2}$ to $\frac{1}{2}$ inches tall, top half attached to stem; the rest is free, hollow
- Stalk is whitish to ivory, 2 to 4 inches, hollow

FUN FACTS

• This mushroom used to be called *Morchella semilibera* but recent DNA studies have shown *M. semilibera* to be a European species.



YELLOW MOREL (Morchella esculentoides)



In 1984, Minnesota DECLARED the yellow MOREL its state MUSHROOM.



SHOULDN'T OHIO HAVE ONE TOO?

WHERE DOES IT GROW?

• Fruits singly or in groups in mixed woodland forest, especially under dying elms and living white ashes and cottonwoods; also under tulip poplar, oaks and hickories; saprophytic and mycorrhizal

HOW TO IDENTIFY IT

- Cap is honeycombed with yellow to yellow-brown ridges and pits, completely hollow, attached to stem, up to 7 inches tall
- Stem is a whitish-cream color and hollow

FUN FACTS

• Morels are a delicacy around the world and many people will pay a high price to have them.

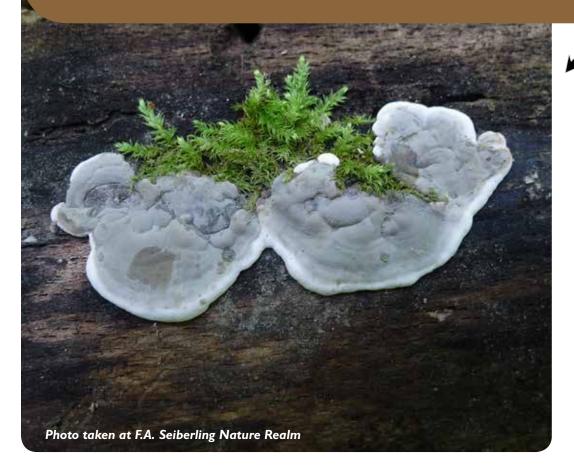
A TRUE morel will be HOLLOW inside from the TIP of the CAP to the bottom of the STEM.



Fruiting Time

an feb mar apr may jun jul aug sep oct nov deg

CARBON CUSHION (Kretzschmaria deusta)





WHERE DOES IT GROW?

• This mushroom grows on the base of living hardwood trees. It is a decay fungus that usually attacks weakened trees, eventually killing them. It continues to decompose the tree once it has died. Parasitic and saprophytic

HOW TO IDENTIFY IT

• Fruiting bodies form sheets of irregular shapes that cling to the substrate. New fruiting bodies formed in the spring are whitish-gray and, as they mature, they become bumpy and black.

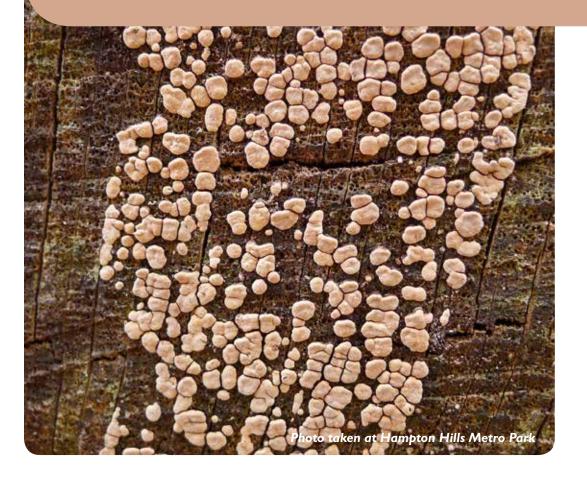
FUN FACTS

- The species name *deusta* means "burned" in reference to the blackened appearance of the fungus at maturity.
- Also known as the brittle cinder fungus.

K. deusta is
PARASITIC on the
ROOTS and lower
trunks of LIVING
hardwod trees,
especially BEECH
and oaks.



CERAMIC PARCHMENT (Xylobolus frustulatus)



This CRUST fungus can COVER large portions of a LOG and RESEMBLES tiny pieces of CERAMIC tile.

SEE THE RESEMBLANCE?

WHERE DOES IT GROW?

• Grows on stumps and logs; saprophytic

HOW TO IDENTIFY IT

• Fruiting body is 1/8 to 3/4 inches wide, whitish to grayish sometimes pinkish-buff in color

FUN FACTS

- Ceramic parchment is a type of crust fungus.
- Found on decorticated logs (logs that have lost their bark), especially oaks, and helps add nutrients to the soil.



Fruiting Time

CROWN-TIPPED CORAL (Artomyces pyxidatus)



THERE'S ROYALTY IN THE WOODS



The CROWN-tipped coral is one of the FEW CORAL mushrooms that fruits on WOOD.

WHERE DOES IT GROW?

• Found on decaying wood, grows singularly or in groups; saprophytic

HOW TO IDENTIFY IT

- Coral-like mushroom, body width is about 2 to 3 inches, height 2 to 5 inches
- Fruiting body is branched, with crown-like tips
- Color, when fresh, is whitish to yellowish, turning brownish with age

FUN FACTS

- Crown-tipped coral plays an important role in breaking down tough, woody materials and returning nutrients to the soil.
- This mushroom was formerly known as Clavicorona pyxidata.



Fruiting Time

an feb. mar apr may jun jul aug sep oct nov deg

DEAD MAN'S FINGERS (Xylaria polymorpha)



Polymorpha means having MANY forms.
This is certainly TRUE of this UNUSUAL looking mushroom!



IT'S



STILL



ME

WHERE DOES IT GROW?

Grows in clusters on dead deciduous wood (sometimes buried);
 you will usually find it at the base of a stump; saprophytic

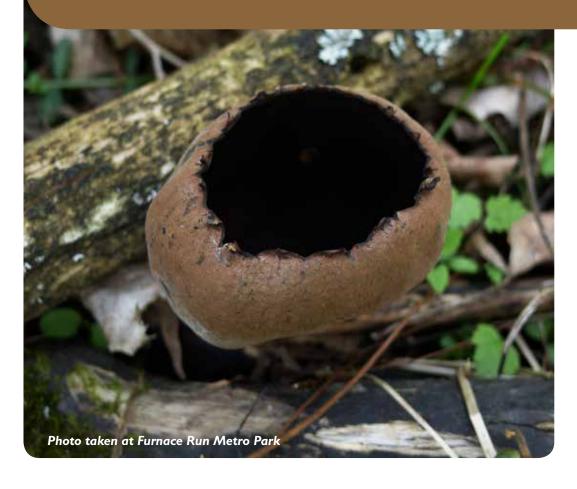
HOW TO IDENTIFY IT

• Fruiting bodies are club-like in shape (sometimes knobby looking) ½ to 3 inches high. In spring they are usually white to blue-gray in color, covered by powdery spores (asexual stage). At maturity they become black, covered in tiny bumps (sexual stage).

FUN FACTS

• Break open the fruiting body at any stage and the flesh is always white.

DEVIL'S URN (Urnula craterium)



The Devil's URN is known to FORCEFULLY DISCHARGE its spores in a PUFF when the air around it is DISTURBED. This white dust-cloud of SPORES from its CAULDRON-LIKE CUP has led some people to REFER to this mushroom as WITCH'S CAULDRON.

WHERE DOES IT GROW?

• Fruiting body grows singly or in clusters on sticks or rotting wood (sometimes buried); saprophytic

HOW TO IDENTIFY IT

• Cap is urn-shaped and 1 to 3 inches wide. The inner surface is fertile, smooth and dark brown to black, the outer surface is brown, darkening as it ages.

FUN FACTS

• This is one of the first mushrooms to fruit in the spring. The presence of this mushroom often signals it is time to start looking for black morels. Some even refer to it as the harbinger of morels.



SCARLET CUP FUNGUS



WHO'S WHO?

The PHOTO on the left shows a COMPLEX of scarlet cups. TWO species (Sarcoscypha austriaca and Sarcoscypha dudleyi) grow east of the ROCKY Mountains.

To positively identify them you MUST examine them under a MICROSCOPE.

WHERE DOES IT GROW?

• Grows singly or in clusters on decaying sticks and branches (sometimes buried) on the ground; saprophytic

HOW TO IDENTIFY IT

• Fruiting body is bright red and cup-shaped with a downy, white underside; 1 to 3 inches across

FUN FACTS

• This common mushroom is one of the first signs of spring in Eastern hardwood forests.



STALKED SCARLET CUP (Sarcoscypha occidentalis)





ONCE the stalked scarlet cup FRUITS you CAN begin to say goodbye to the MORELS for the SEASON.

WHERE DOES IT GROW?

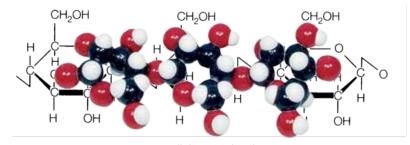
• This mushroom can be found on decaying hardwood sticks and twigs on the forest floor, especially in wet areas; saprophytic

HOW TO IDENTIFY IT

- Caps are bright red; ¼ to ¾ inches wide; the top fertile surface is smooth and cup-shaped
- Stem is white, ½ to 1¼ inches in length

CELLULOSE ... SCHMELLULOSE

You AREN'T too TOUGH for me!



cellulose molecule

FUN FACTS

• Sarcoscypha occidentalis is an important decomposer in forest ecosystems, helping to break down complex molecules like lignin and cellulose.

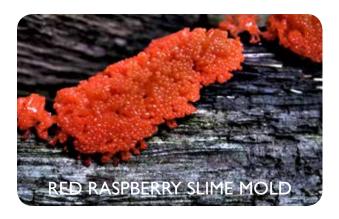
SLIME MOLDS

Slime molds are neither plant, animal *nor* fungus. At times they act like a single-celled amoeba, moving and feeding on bacteria and organic particles on rotting logs and leaves. As these cells fuse together, they form a mass known as plasmodium. The plasmodium moves about feeding like a giant amoeba. When food becomes scarce or environmental conditions become unfavorable, the plasmodium will begin to form fruiting bodies. These fruiting bodies come in a variety of sizes, shapes and colors and serve to produce and release spores. Because they resemble a fungus in this stage of their life cycle, they were once classified as fungi.

The following are examples of slime molds you might encounter at some time throughout the year.

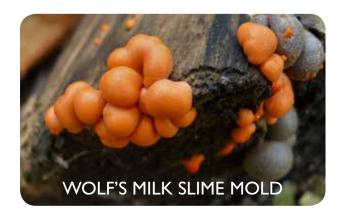


At the 1933 WORLD'S FAIR, Ripley's Believe It or Not had an EXHIBIT of hair GROWING on wood. This was ACTUALLY (Stemonitis fusca), chocolate tube slime or "TREE HAIR."



When REDDISH in color, this slime mold resembles RED raspberries.

SLIME MOLDS



AKA: "Toothpaste Slime Mold"
When COMPRESSED at a young stage, a
thick, pink, paste-like SUBSTANCE comes
out RESEMBLING toothpaste.



This mold comes in a WARIETY of COLORS ... just like the real deal.



Use your IMAGINATION and you can almost see NEMO swimming THROUGH this slime mold.



Easy to see how THIS mold got its common NAME ... just don't eat it.