

Michigan Spring Mushrooms



You can find this presentation and
other resources at:

<https://mimyco.org>

Ludington - July 12th - July 14th, 2024

RUSTIC Campout

What does RUSTIC mean?

- No bathrooms (fox holes or BYOB)
- No shower/water (bottled water)
- Bring your own food, water and shelter
- FIND MUSHROOMS
- Hangout by the campfire(s)



Friday

Setup camp day and do your own thing

No "official" events

Saturday

8AM - 9AM Breakfast

9AM - 12PM Foray 1

12PM - 1PM Lunch

2PM - 5PM - Foray 2

5PM - 7PM - Dinner/Evening hangout/Camp highlights

9PM - 11PM - NIGHT FORAY!! BRING YOUR UV LIGHTS!

SUNDAY

8AM - 9AM - Breakfast

9AM - 10AM - ID table

10AM - 12AM - Goodbyes/Forays



Introduction to Fungi

A fungus is a network of mycelium that is spread out around its food source

Mushrooms only have one purpose, to propagate the species through the release of billions of spores which are spread by the wind, bugs, animals, etc



Puffball releasing its spores



Armillaria rhizomorphs



Mycelium on dead wood

Fungal Relationships

Mycorrhizal - mutual symbiotic relationship where both fungi and plant exchange resources (Maples... don't)

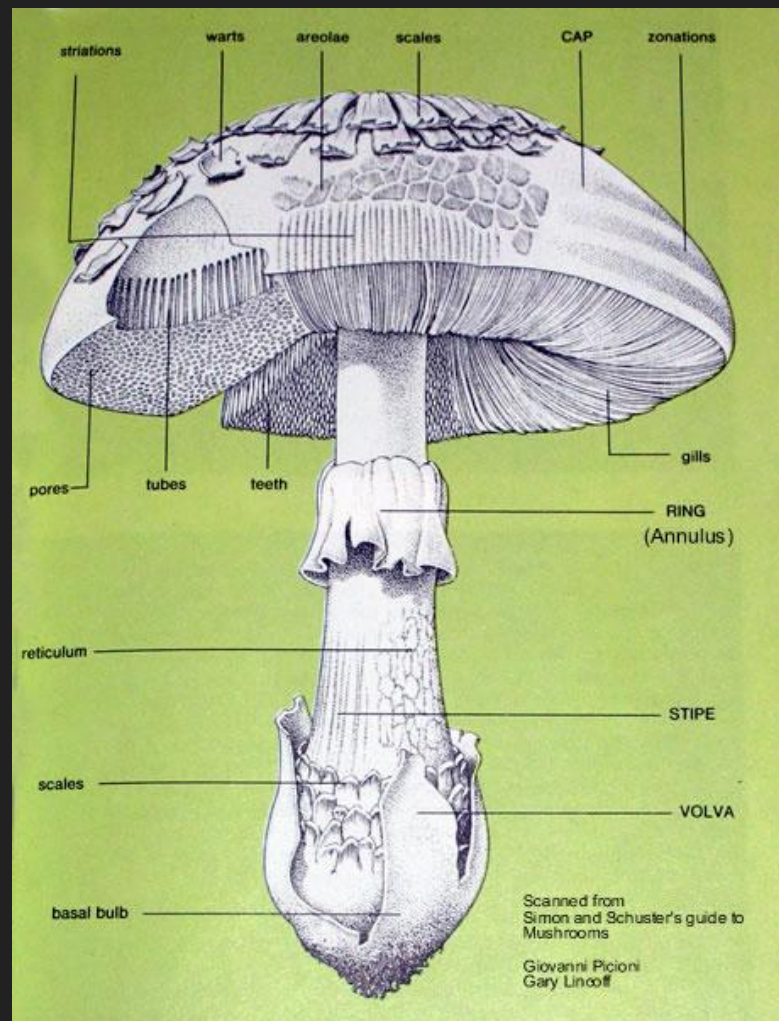
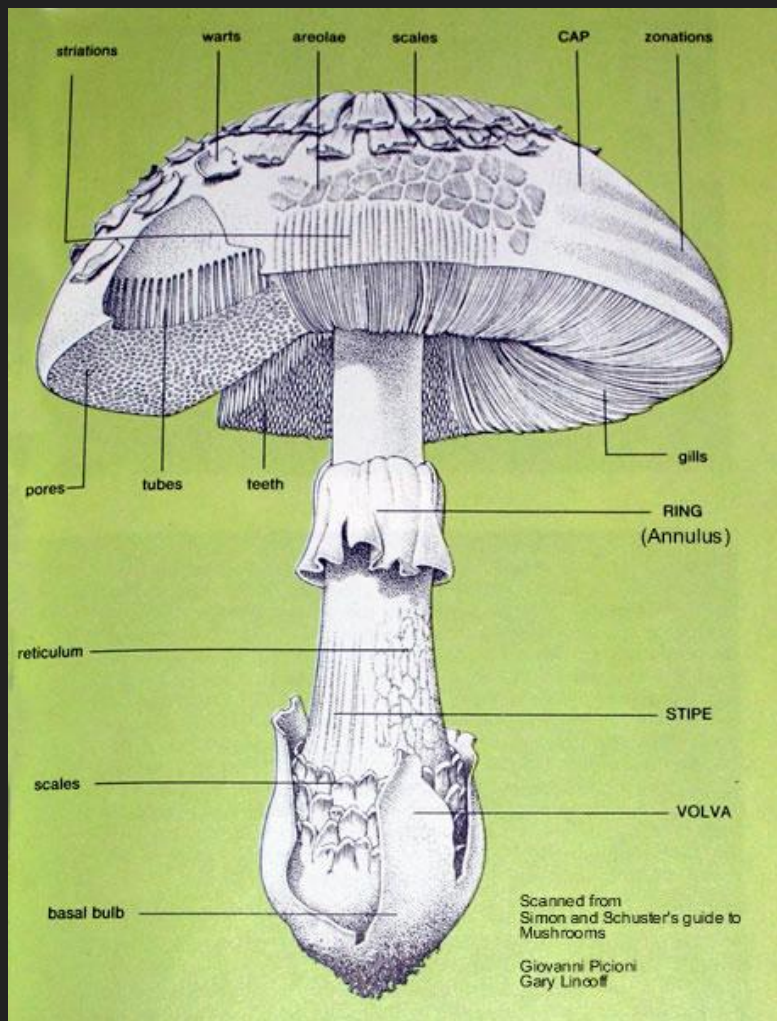
Saprobe - breaks down dead or decaying matter

Parasitic - consumes the tissues of other living organisms (bugs, trees, etc)



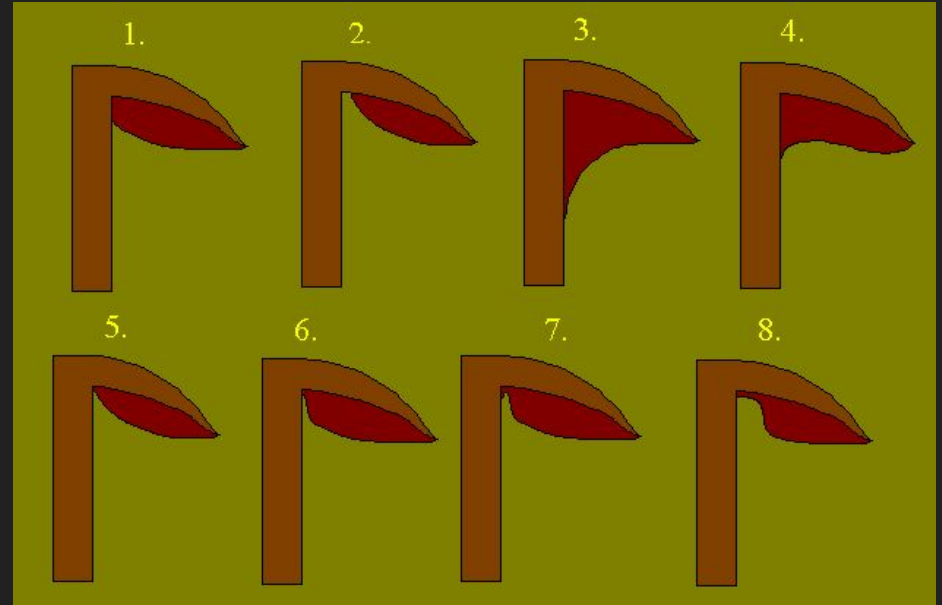
Habitat

- Time of year - Spring, Summer, Fall, Winter
- Forest, wetland, grassland, hills, drainage areas, fields, cow pastures, flood areas, river bottoms, etc
- Other organisms in the area - trees (deciduous or coniferous), flowers, moss, etc.
- Substrate - log, terrestrial, dung, wood chips, etc.
- Precipitation!!
- South and West side of hills heat up faster and hold moisture for less time than the North and East sides



Gill Attachments

- 1) Adnate or broadly attached - gills that are broadly attached to the stipe
- 2) Free - gills that do not attach to the stipe
- 3) Decurrent - gills that run down down the stipe



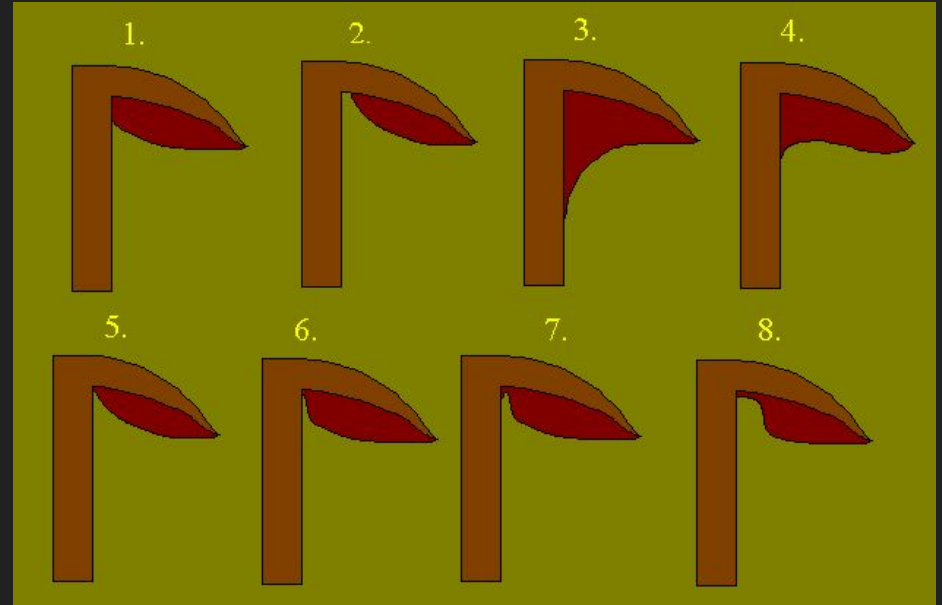
Gill attachments from www.mushroomthejournal.com

Gill Attachments

4) Subdecurrent / slightly decurrent - gills are attached and run slightly down the stipe

5) Adnexed or narrowly attached - gills are narrowly attached to the stipe

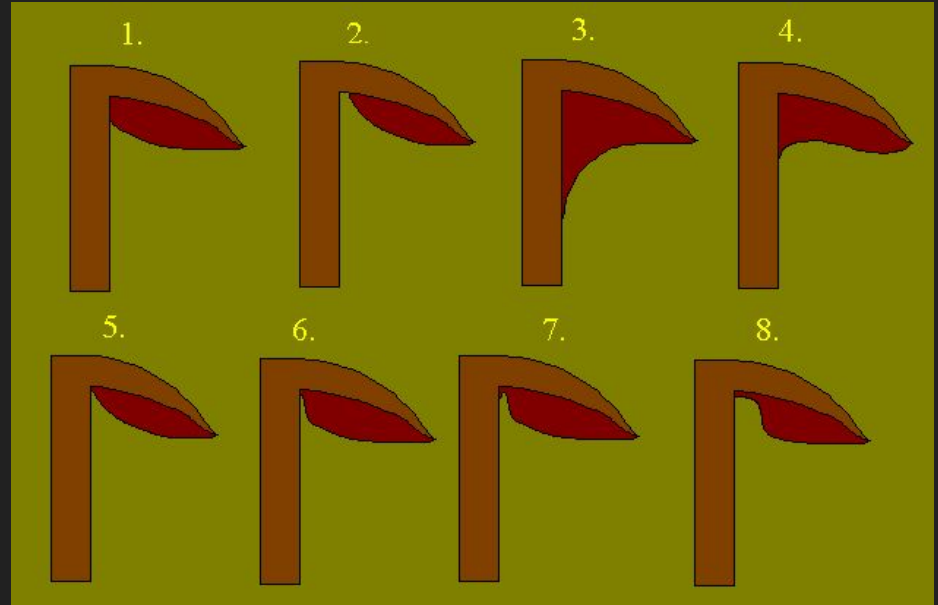
6) Emarginate - gills are notched abruptly before attaching to the stipe



Gill Attachments

7) Sinuate / decurrent by a tooth - gills are smoothly attached before running slightly down the stipe

8) Adnexed? Emarginate?



Gill attachments from www.mushroomthejournal.com

Macro characteristics for identification



Cap



Spore bearing surface with stipe connection



Cross section



Location and Date



Habitat



Lactarius cf. deliciosus
infected with *Hypomyces*
sp.
Isle Royale National Park
8/21/2023



Lactarius cf. deliciosus
infected with *Hypomyces*
sp.
Isle Royale National Park
8/21/2023



Lactarius cf. deliciosus
infected with *Hypomyces*
sp.
Isle Royale National Park
8/21/2023



Cantharellus sp.
Yellow Chanterelle
Isle Royale National Park
8/19/2023



Cortinarius violaceus
Violet Cort
Isle Royale National Park
8/23/2023



Cortinarius violaceus
Violet Cort
Isle Royale National Park
8/23/2023



Cortinarius violaceus
Violet Cort
Isle Royale National Park
8/23/2023



Hydnellum peckii
Bleeding tooth fungus
Isle Royale National Park
8/23/2023



Cortinarius sp.
Isle Royale National Park
8/23/2023



Cortinarius sp.
Isle Royale National Park
8/23/2023

Morchella angusticeps “black morel”

Ecology: mycorrhizal; found under hardwoods, especially ash and tulip trees; March - May

Cap: 3-8 cm high; elongated body and pointed or bluntly pointed apex; pitted and ridges; pale when young with dark ridges and browning to yellowish pits at maturity

Stipe: 2-8 cm high; 1-3cm wide; mealy with granules or nearly bald; hollow





Morchella americana “white/yellow morel”

Ecology: mycorrhizal; alone, scattered or gregarious; under hardwoods ash, dead or dying elm, apple trees, conifers, etc

Cap: 2-11 cm tall; 1-6 cm wide; egg shaped; convex or blunt conical apex; pitted and ridged; attached to stipe directly; hollow

Stipe: 2-12 cm high; 1-10cm wide; whitish to pale yellow or brown; bald of finely mealy with granules; hollow





Morchella punctipes “half-free morel”

Ecology: mycorrhizal; alone, scattered or gregariously; hardwoods; March to May

Cap: 2-5 cm tall; 2-5 cm wide; conical; pitted and ridged; pits arranged vertically; brown to black ridges and yellow brown to brown pits at maturity; attached halfway up the cap; hollow

Stipe: 1-15 cm tall; 1-5 cm wide; white to watery brown; mealy with granules but sometimes bald; hollow





Morchella punctipes
Yankee Springs
Recreation Area, MI
5/5/2024

Morchella diminutiva

Ecology: mycorrhizal; alone, scattered or gregarious; under ash, tulips and hickories; April to May

Cap: 2-4 cm tall; 1-3 cm wide; conical; pitted and ridged; attaches directly to stipe

Stipe: 1-7 cm tall; 1-2 cm wide; equal; bald or finely mealy with granules; hollow





Morchella diminutiva
Yankee Springs
Recreation Area, MI
5/5/2024

Cerioporus squamosus “pheasant back”

Ecology: saprobic and parasitic on hardwoods; silver maple, box elder, elm; alone or in clusters

Cap: 5-30 cm across; 1-4 cm thick; kidney shaped; depressed; brown to blackish scales

Pores: running down the stipe; whitish to creamy to yellow at maturity

Stipe: 2-8 cm long; 1-4 cm thick; usually off-center or lateral



Flammulina velutipes “enoki”

Ecology: saprobic on hardwoods, especially American elm

Cap: 1-7 cm; convex becoming flat; moist and sticky when fresh; grows in clusters

Gills: broadly or narrowly attached to stipe; white to pale yellow; crowded or close

Stipe: 2-11 cm long; 3-10 mm thick; tough; yellowish brown to orange brown when young becoming blackish when mature



Stropharia rugosoannulata “wine cap”

Ecology: saprobic; growing scattered or gregarious; wood chips or flooded stream beds; spring to fall

Cap: 4-13 cm; convex becoming flat; sticky when fresh to glossy and dry; wine red to reddish brown; margin can have ragged partial veil remnants

Gills: attached; close to crowded; short-gills frequent; whitish when young becoming purple-black

Stipe: 8-16 cm long; 1-2 cm wide; equal or with enlarged base; white to brownish with age; ring; base has white mycelial threads



Pleurotus populinus “oyster”

Ecology: saprobic; shelf-like clusters; dead and dying wood; poplars

Cap: 4-17 cm; broadly convex becoming flat or somewhat depressed; kidney shaped; whitish to pinkish or tan; incurved margin when young

Gills: decurrent; close; short-gills frequent

Stipe: usually absent or rudimentary



Verpa bohemica

Ecology: mycorrhizal; under hardwoods; early spring

Cap: 2-4 cm high; 1-3 cm across; nearly conical or bell shaped; wrinkled or folded

Stipe: 8-22 cm long; 1-3 cm wide; creamy white to dull yellow; discoloring orangish when handled; hollow but stuffed with spongy white tissue



Verpa conica

Ecology: mycorrhizal; hardwoods

Cap: 2-4 cm high; 1-3 cm wide; convex or thimble shaped; tan to dark brown; tacky when wet; smooth or wrinkled at maturity

Stipe: 3-12 cm long; 1-2 cm thick; creamy white to yellowish; concentric bands of fibrils; hollow but stuffed with spongy white tissue



Gyromitra korfii

Ecology: saprobic; hardwoods; spring

Cap: 3-10 cm tall; 4-10 cm wide; blocky and squarish; broadly wrinkled; tan to brown

Flesh: whitish; brittle; chambered

Stipe: 3-8 cm high; 2-6 cm wide; pale tan to whitish; bald; ribbed or wavy





Gyromitra korfii
Crystal Valley, MI
4/20/2024

Gyromitra brunnea

Ecology: saprobic; hardwoods; spring

Cap: 3-9 cm high; 5-10 cm wide; 2-5 lobes raised and pinched together in saddle formation; tan to reddish brown; loosely wrinkled; lobes usually joined in seam-like bands;

Stipe: 2-9 cm tall; 2-5 cm wide; pale tan to pure white; bald; discoloring brown or gray when handled

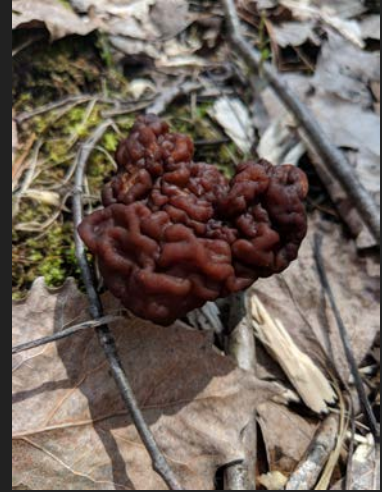


Gyromitra esculenta

Ecology: saprobic; spring; primarily under conifers

Cap: 4-8 cm tall; 3-12 cm wide; irregular and convoluted in shape; brainlike; lobed; wrinkled; bald; tan to reddish brown; darkens in sunlight to black; finely mealy

Stipe: 3-9 cm long; 1-4 cm wide; yellowish tan to rose to tinged like cap; roundish; bald



Galerina marginata “funeral bell”

Ecology: saprobic on rotting wood; alone to clusters to gregarious

Cap: 1-5 cm; convex to nearly flat; sticky when fresh; bald; honey yellow with orangish hue becoming cinnamon to brownish orange; often fading creating two-toned appearance; sometimes veil remnants

Gills: broadly attached; close to nearly distant; short-gills frequent; yellow to rusty brown; covered by white partial veil when young

Stipe: 2-8 cm tall; 3-8 cm wide; ring or ring zone or none; white fibrils when young; whitish to brown





Galerina marginata
Redbird State Recreation
Area, IN
4/8/2024



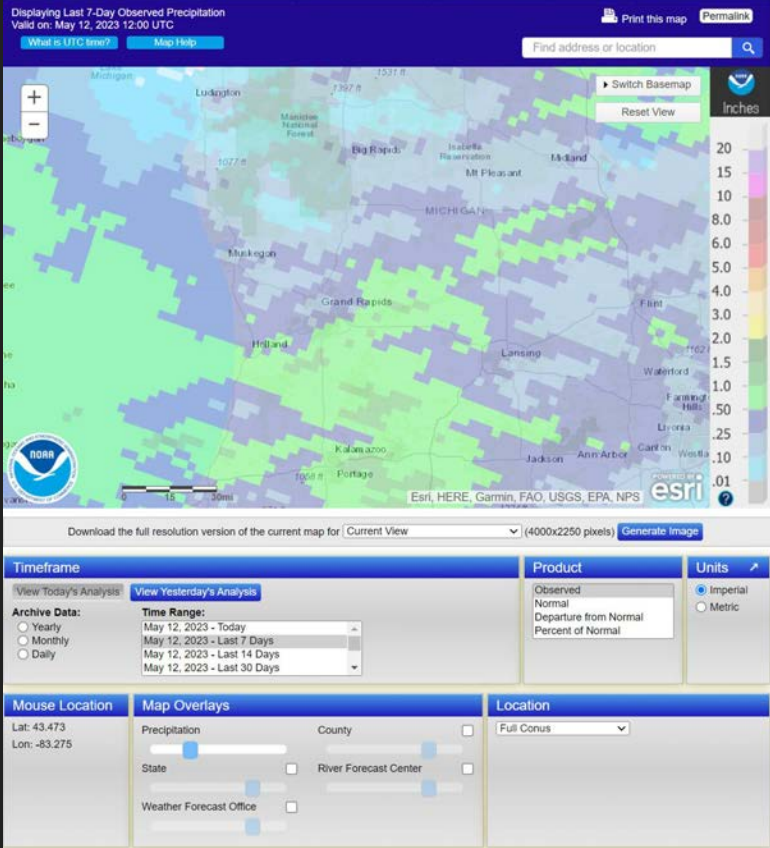
Galerina marginata
Redbird State Recreation
Area, IN
4/8/2024

Precipitation Maps

Moisture is a large part of finding mushrooms, they're not very abundant when it's dry. Thankfully the National Weather Service provides a way to check precipitation levels and can be found at

<https://water.weather.gov/precip/>





Tree Maps

Mi-HUNT can be used to see what kind of trees have been recorded in certain parts of Michigan

Navigate to the website and agree to their terms of service after reading them

In the top left of the screen click the “Layers” icon and then click the checkbox for “MiHUNT Cover Types“

<https://www.mcgi.state.mi.us/mi-hunt/#acceptTerms>



search address, city, etc...



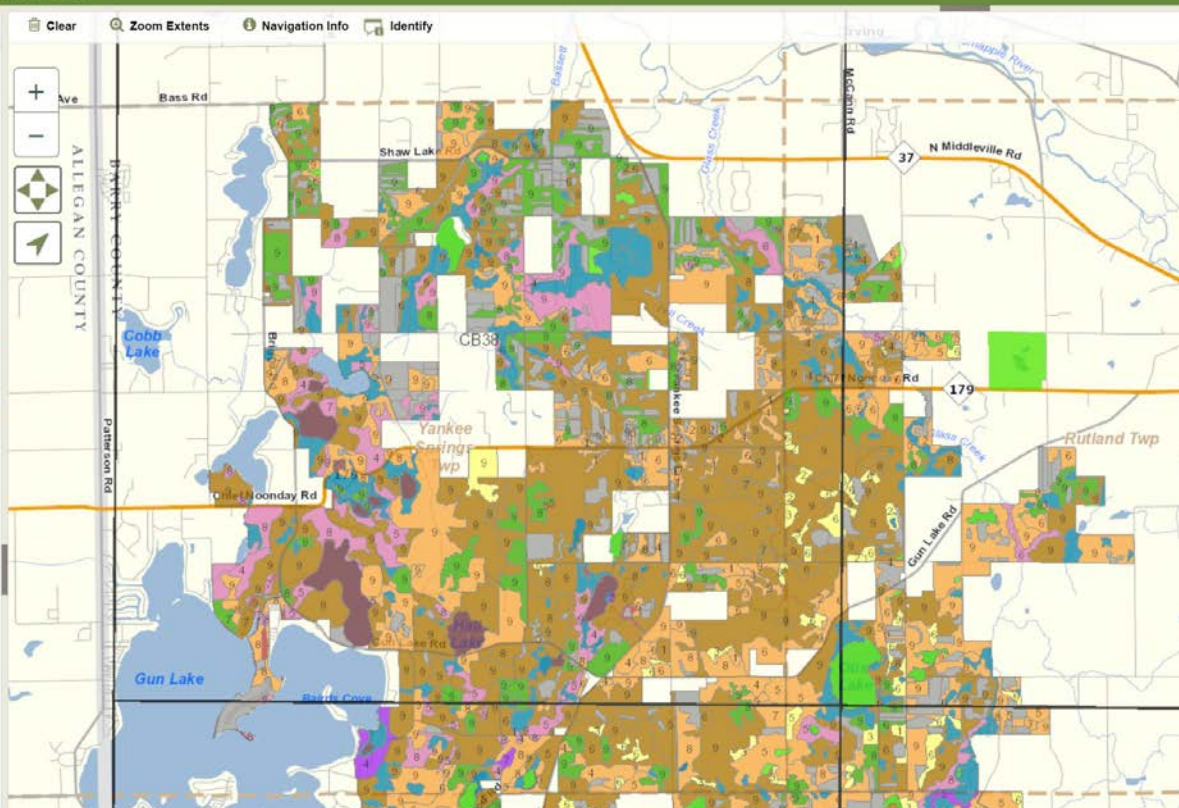
Layers

Street Hybrid Topo

2020 - Natural Color 2020 - Color Infrared

Toggle layer visibility by clicking the corresponding checkbox

- Town, Range & Section
- Trails
- MIHUNT Cover Types
- Area Forest Types
 - Cover Type Grid
- Cover Types
 - Aspen
 - Oak
 - Other Upland Deciduous
 - Upland Conifer
 - Grass/Shrubs/Crops
 - Wetlands/Bogs
 - Lowland Conifers
 - Lowland Deciduous
 - Rock/Sand/Soil
- Tree Size and Density Key
 - 1 - Low density sapling
 - 2 - Medium density sapling
 - 3 - High density sapling
 - 4 - Low density pole
 - 5 - Medium density pole
 - 6 - High density pole
 - 7 - Low density log
 - 8 - Medium density log
 - 9 - High density log
- Recreational Facilities
- Hunting Lands



Introduction to Basic Identification

<https://midwestmycology.org/identify/>

<https://boletes.wpamushroomclub.org/>

<http://www.mushroomexpert.com/studying.html>

<http://urbanmushrooms.com/index.php?id=69>