Natural Dyeing with LOBSTER MUSHROOMS

Ecology of Color

Welcome to the world of

NATURAL DYEING WITH MUSHROOMS

This guide will walk you through making a wide range of colors on natural textiles with just one humble mushroom.

The Lobster mushroom is a prolific grower and generous with the color it has to offer. By manipulating a few key processes, we'll create pinks, oranges, purples, & maroons.

Jump in and let's start making!

Safety

With some practice, the Lobster mushroom is easily identified and is often consumed as an edible mushroom. As with all wild foraged items, please do your due diligence to identify and use safe practices.

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LOBSTER MUSHROOMS

(HYPOMYCES LACTIFLUORUM)

Surprisingly, Lobster mushrooms are not one, but TWO species of fungi. The dye producing orange color we see is a parasitic fungus (Hypomyces) which attacks several different species of mushroom (often Russula and Lactarius mushrooms).

They can be found in a range of colors, from mostly white with a little orange to deep oranges with pink and purple patches. Mature mushrooms with more color will yield more dye.

COLLECTING LOBSTER MUSHROOMS

A local mushroom guidebook will be your best reference for information on locating and identifying mushrooms. Lobster mushrooms begin popping up in the Pacific Northwest in the summer and continue to grow through the fall. Common in conifer forests, the Lobster mushroom can be spotted from mountain tops to public parks.

If you find one mushroom, take a good look around; it probably has some friends near by. Once you identify a patch, you will likely have similar success in subsequent years.

If you are not interested in foraging, these can be found seasonally in some grocery stores or purchased dried from online sellers.

PREPARING YOUR MUSHROOMS

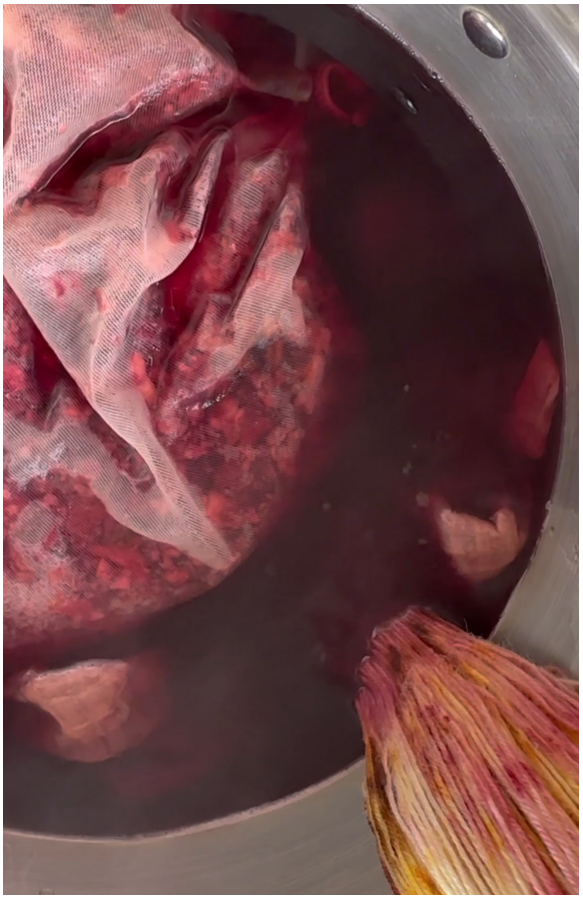
Once your mushrooms have been collected, you may work with them fresh or dried. You will need only the exterior, orange portion of the mushroom. You can slice off the orange portion and discard the white inner portion. There is no harm in slicing up the entire mushroom, it just takes up more room in your dye pot.

If you choose to dry your mushrooms, a dehydrator will work best. Once your mushrooms are dehydrated, store them in a dry location with adequate air flow. If even a small amount of moisture remains in the mushrooms and they are sealed in an airtight container, you can get mold.

PREPARING YOUR TEXTILES

Lobster mushrooms can be used to dye a wide range of natural materials, such as wool, silk, linen, cotton, hemp, and other plant fibers. Protein fibers (wool and silk) will require a mordant, while plant fibers (linen, cotton, & hemp) will require a two-step process using tannin & mordant.

There is an abundance of information on preparing and mordanting your materials online. All standard methods and mordants will work for lobster mushroom dyeing.



AMOUNTS TO USE

The amount of mushrooms you use can be highly variable. A 1:1 weight of fiber to dried mushroom ratio will yield a rich color, but you can also approach your amounts more intuitively.

More mushrooms will give more color. A single, small textile will take on more color if it doesn't have to share the dye with other textiles.

Use what you have available and do a little experimenting with the amounts.

MAKING A DYE BATH

Place your dried or fresh lobster mushrooms in your dye pot. Placing the mushrooms in a mesh strainer bag will simplify the process and make for an easy cleanup.

Fill your pot with water, add your mushrooms, and bring to a low simmer.

As the water warms, you will begin to see color develop.

Add a generous pour of household ammonia. About 1/2 cup of ammonia for 2 cups of dried mushrooms. You can check the pH (target of pH 9) but the color of the dye bath is a sufficient indicator. The color of your dyebath should change to a deep magenta.

Heat at a low simmer for 1 to 2 hours. Due to the evaporating ammonia, it is best to work in an outdoor and well-ventilated area. Do not breath in the dye pot vapors.

ADD YOUR TEXTILES

Once your mushrooms have simmered in the ammonia and water solution, you should have a rich, magenta-colored dye bath. You are now ready to add your mordanted textiles. Your materials will need to be able to move around freely in the dye pot, so do not overcrowd.

Wet your textiles thoroughly before adding to the dye bath.

Squeeze out excess water and gently submerge into the dye bath.

Add another, smaller, pour of ammonia to the dye bath -about 1/4 cup for 2 cups dried mushroom.

Gently stir your dye pot every few minutes. *Be extra gentle with wool, especially unspun wool, as it will begin to felt from the agitation of stirring.

Simmer for 1 hour, turn off the heat, and allow the textiles to cool in the dye bath.

Remove textiles, gently squeeze out excess liquid, gently rinse, and hang to dry.

MODIFYING COLORS

The pigment in lobster mushrooms is pH sensitive, producing different colors in acidic and basic environments. The pigment is also reactive with iron (ferrous sulfate).

MODIFY WITH PH

Acidic:

Create an acidic solution by adding 1/2 cup white vinegar to 2 quarts of water. Submerge your wet, dyed textiles in the vinegar-water solution. Remove and rinse once satisfied with the color. Additional vinegar can be added to the solution if necessary. Small amounts of vinegar can contaminate your other dyed textiles, and care should be taken to keep the vinegar far away from your other materials.

Neutral/Basic:

When you remove your textiles from the dye bath, their color will be somewhere between a neutral and basic pH. You can leave the textile as it is, or you can further shift it towards the basic pH range by submerging in an ammonia bath.

Basic:

Create a basic solution by adding 1/2 cup ammonia to 2 quarts of water. Submerge your wet, dyed textiles in the soluton. Once you are satisfied with the color, remove them and rinse very well to remove the ammonia.

MODIFY WITH IRON

Ferrous sulfate can modify the color of lobster mushroom dye on protein (wool & silk) and plant (cotton, linen, hemp) fibers. Because plant fibers are prepared to dye with tannin, they will develop a grey color resulting from a tannin and iron interaction. Protein fibers, not prepared with tannin, will show the reaction of the iron with just the lobster mushroom pigment. Small amounts of iron will contaminate your textiles and work area. Be mindful of containing the iron to your desired area.

Iron bath:
Fill a container with clean, hot water. *This container should not be reused for anything other than iron water. A recycled plastic or glass container will work great.

Add 2-4 percent of the weight of fiber of ferrous sulfate and stir until dissolved. Wear gloves. The iron will turn your cuticles black and dry out your skin.

Place your wet, dyed material into the warm iron water.

Stir gently. Watch the color develop and remove once satisfied. I typically leave mine for 3-4 minutes.

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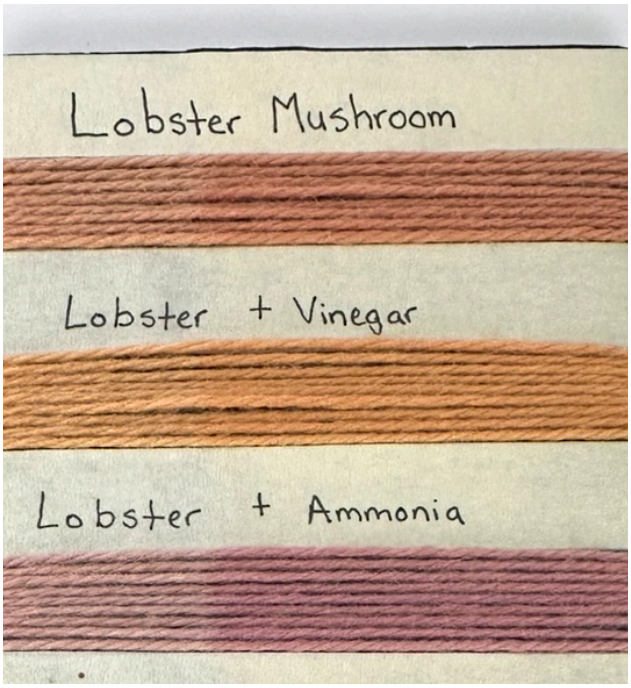
WASH & CARE

After dyeing, rinsing, and drying your textiles, you may wish to wash them before use.

To wash your naturally dyed textiles, use a pH-neutral deteregent with a gentle handwash and hang to dry.

Excessive washing may strip away the color, as will prolonged sun exposure.



LIGHTFASTNESS

All natural dyes are prone to fading with UV exposure. You can test natural dyes for lightfastness by exposing a portion of the dyed textile to prolonged natural sunlight, as pictured here.

By reducing sun exposure and washing less often in a pH-neutral detergent, you can significantly extend the life of your color on textiles.

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Hello! I'm **ALISON WEBB, PH.D.**

I'm an Ecologist and artist living in the Pacific Northwest. As a forager of natural pigments, I know every plant, mushroom, and rock I work with tells a story of ecological relationships and connection. My mission is to tell the story of ecology and color while building community and nourishing our inner artist. Thanks for joining me!

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