



Land-Based Living Through The Seasons In Southern Appalachia

Compiled from the life experiences of Natalie Bogwalker
with contributions from Chloe Lieberman

WILD ABUNDANCE

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Dear Reader,

We've been living close to the land in Southern Appalachia for quite a while now. The seasonal rhythms guide our work and play, in the garden, orchard, kitchen, and woods. Here we offer you a special yearly calendar, gleaned from our experiences. It's full of timely tasks around the homestead, plus wild and woodland harvest seasons, suggestions about how to prepare for the colder months, and other tidbits too, like recipes and how-to's.

Each month has a special moon-name, based on what's happening around here during that particular cycle. Following the waxing and waning of the moon, rather than simply the names and dates on a calendar, is an older and more earth-based way of tracking time. That's why each month is called a "moon," to invite you to tune into the natural rhythms of the world around you.

Each "moon" is associated with a Gregorian month-name too (so you know what time of year we're talking about), but none of these activities have predetermined start and end dates. Working with the land, by nature, is fluid and flexible. You must be receptive to the particularities of where you're at, what the weather's doing, and other factors like when the berries decide to ripen and how much rain we happen to have on a given year. So, as you use this calendar, please also observe and listen to the land around you. What we offer here are suggestions and reminders to help guide you along your way.

Cheers —
with a cup of sumac "lemonade" in summer
and chaga chai in winter,

The Wild Abundance Team

March

New Growth Moon



Sochan leaves

Wild and Woodland Harvest

- Harvest and cook daylily and sochan greens
- Coppice nitrogen-fixing trees and shrubs; use what you cut as mulch to feed fruiting trees and shrubs.
- Harvest and enjoy chickweed in salads and pestos (see “The Glories of Chickweed” for more info)
- Check on stinging nettle patches, harvest new growth (now through flowering)
- Continue tapping maples trees and making syrup when nights are freezing
- Harvest logs for shiitake inoculation before buds swell; store in a cool, shady spot. It’s best to harvest them about 2 weeks before you plan to inoculate with mushroom spawn.



Baby peas

Annual Garden

- Gather potting soil, pots, watering containers, heat mats, lights (if you use them): everything you'll need to get seeds started.
- Fill in cover crop in tomato/squash beds. Since these crops won't get planted until the weather really warms up, it's nice to re-sow cover crops (like cold-hardy peas and oats) in any bare spots where you plan to plant tomatoes and squash later.
- Cut down cover crop where you plan to plant soon. Mulch over or turn in what you cut so that it decomposes in time for annual plantings.
- Sow kale, chard, spinach, asian cabbage, and peas (if you haven't already). Kale, chard and asian cabbage can either be direct-sown or seeded in pots/flats, then transplanted. Peas and spinach do better when they're direct-sown right where they'll grow in the garden.
- First sowing of cilantro (sow every 2-3 weeks through fall for continuous harvest)
- Sow carrots and beets (cover during below-freezing nights, and keep moist). These two need to be direct-sown into the garden, they really don't like to be transplanted.
- Plant potatoes for early crop (new potatoes)
- Plant oats for spring cover and medicine making.



Newly emerging beets

- Start tomatoes, peppers, eggplants, basil, and tulsii in seedling trays in a heated space (i.e. greenhouse, on heat mats, in a sunny, warm window of your house)
- Begin garden log/journal
- Feed garlic with urine/compost tea/side dressing
- Weed and mulch garlic

Orcharding

- Mulch fruit trees with yummy nutrient dense mulch (mowings, trimmings, animal bedding, coppiced-branches as mentioned above, etc.)
- Prune any fruit trees that may have been forgotten in the winter
- Graft new fruit trees, or graft new varieties onto your fruit trees.
- Plant berries and trees you didn't get to in the fall

Food Preservation

- Dry stinging nettle leaves for tea and soups (ongoing spring activity until nettles flower)

The Glories of Chickweed:

Uses, Cultivation, Recipes, and More



Stellaria media, Stellaria pubera

Family: Caryophyllaceae/Pink family

Harvest time: Spring and fall

Uses: Food, medicine

Medicinal Uses of Chickweed

Herbal actions: laxative, demulcent, refrigerant, anti-inflammatory. A poultice of chickweed can be especially useful topically for inflammation, abscesses, and anything itchy. Internally, it's a gentle laxative and is soothing to the digestive tract. Not surprisingly, this cooler-weather plant is also cooling to the system.

Chickweed Nutrition

Chickweed is pretty packed with nutrients, especially for such a diminutive plant. It contains vitamins A, D, B complex, C, rutin (a bioflavonoid), calcium, potassium, phosphorus, zinc, manganese, sodium, copper, iron and silica. In comparison with spinach, chickweed holds up extremely well. It's got just as much iron, along with other nutrients. So, when you're trying to eat your daily dose of nutrient-dense leaves, consider this weedy wonder along with the better-known greens.

Ethnobotanical History and Harvesting of Chickweed

There are many species of this awesome plant. The one that we use the most, common chickweed (*Stellaria media*) is native to Europe. At this point it's naturalized in North America and grows virtually everywhere in this continent too. Chickweed has a long history of use as a nutritious edible green by both humans and animals. The ancient Greeks even wrote about using chickweed, and it was also commonly consumed in ancient Ireland.

Star chickweed (*S. pubera*) is native to our rich cove forests here in southern Appalachia. Although this species is less abundant, it's perhaps even tastier, and more choice than the common variety. During many of our [Wild Edibles Foraging Adventures](#), we've feasted upon heaps of salad, primarily composed of star chickweed.



Chickweed (left) and red dead nettle courteously inhabiting a garden pathway

Habitat and Cultivation

Natalie willed this wonderful weed into the Wild Abundance garden, and now it comes up without fail in early spring and with her winter cover crops. Chickweed flourishes under row cover with the kale and in the paths, which are protected by raised beds to their sides.

You can transplant chickweed into your garden; just dig up a clump and nestle it in a corner, or wherever you want it. It's a funny thing to desire a weed in a garden so very much, but chickweed is a very well-behaved and generous one. In fact, it doesn't seem to compete with cultivated plants, and it yields a tremendous amount of healthy food. Generally chickweed likes a nice combo of moisture and sun. It will thrive in spring-time, die back during the hotter months, then reappear when things cool down. In the wild, European chickweed tends to appear on forest edges. Native "star" chickweed pops up in the forest, as it appreciates more dense shade.

Chickweed Salad

For the salad:

- 6 c** leafy (as opposed to stemmy) chickweed, rinsed, and chopped very finely ($\frac{1}{4}$ inch lengths) across the stem
- 1-2 c** sweetly ripe autumn olives, redbud flowers, locust flowers, or dried cranberries
- $\frac{1}{2}$ c** queso fresco or soft goat cheese
- $\frac{1}{4}$ - $\frac{3}{4}$ c** blackwalnut pieces, roasted sunflower seeds, or soaked and roasted pecans

Dressing:

- $\frac{1}{3}$ c** fresh basil or monarda spp (bee balm, etc) leaves
- 1 c** olive oil
- 2 T** lemon juice
- $\frac{1}{8}$ c** honey
- 1 $\frac{1}{2}$ t** salt

Chickweed Pesto

6 c packed fresh chickweed

5-20 cloves garlic

*(depending on size and intensity of the garlic
and your personal taste)*

1 c olive oil

1 T sea salt

1 c toasted black walnuts, sunflower seeds,
english walnuts, or pecans

Zest from 1 lemon

(make sure it is organic because you are using the skin)



Harvest chickweed with a knife to avoid dirt; rinse and swing to dry. Make pesto in batches; add half of olive oil first to food processor or blender, then add garlic, then salt, and finally the greens. Eat fresh, store at room temp for up to a week, or freeze for up to 4 months.

Freeze in ice-cube trays, and empty into ziploc bags so that you can defrost just the right amount of pesto.

RAMP MOON



Wild Abundance apprentices harvesting wild ramps

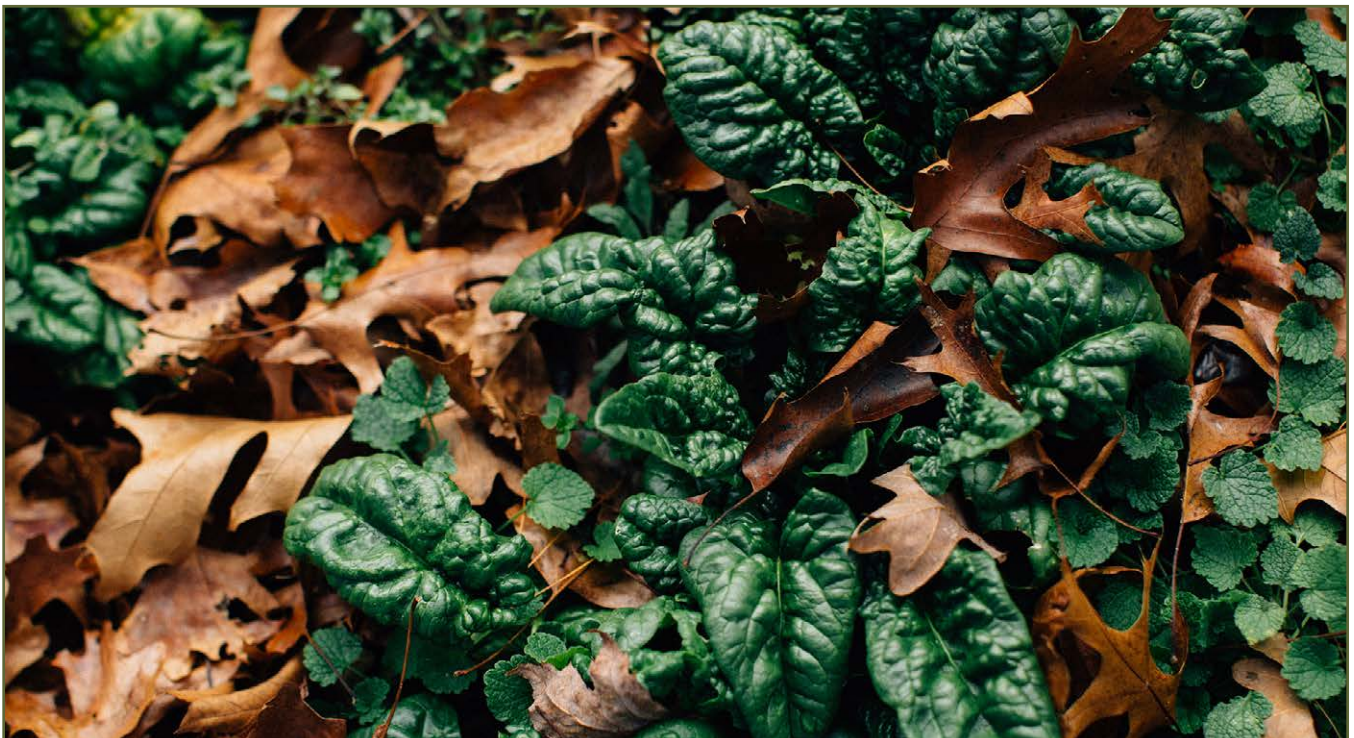
Wild and Woodland Harvest

- Gather ramps (wild leeks). These pungent beauties are very slow growing perennials. Many people harvest the whole plant, digging up the bulb and roots, along with the luscious leaves. We advocate for a more thoughtful approach: cut the leaves right above the bulb (the tiny onion-looking part just below the soil), then the plant will stay alive and sprout new leaves next year.
- Harvest poke when it is less than knee-high (See “How to Make Poke Salad” for more details on preparing this spring treat)
- Gather sapling poles for trellising tomatoes and beans in coming months, if you plan to trellis/stake with poles
- Eat salads of ramps, chickweed, basswood leaves, green briar tips, oxeye daisy greens
- Continue harvesting stinging nettles and now woods nettles too.

- Pluck hemlock tips (bright green part) and eat in salad or infuse into tea. Make sure to avoid harvesting from trees treated with pesticides.
- Gather redbud flowers; eat in salad or brew into mead
- Harvest oxeye daisy buds/flowers; eat in salads or pickle
- Pick some elder flowers (leaving plenty for the bushes to make berries), bread and fry into fritters, make mead or liquor, or dry for cold-season teas.

Annual Garden

- Plant potatoes (for early crop).
- Sow chard, spinach, parsnips, beets, carrots, and kale directly into your garden beds (unless you have a slug issue, in which case transplants will likely fare better. The roots should be directly sown either way)
- Sow more cilantro
- Cut cover-crops in tomato and squash beds if they're growing there, or enrich the soil as needed and cover with mulch to get ready for planting soon!



Spinach under leaf mulch

- Sow oats if you haven't already
- Transplant onion starts/sets into garden
- Harvest and enjoy greens of winter cover crop peas...yum!

Orcharding

- Prune suckers. These are the shoots that sprout up from the base and along the trunks of trees.

Food Preservation

- Dry or sauté and freeze ramps
- Make pesto with your own creative mixtures of wild green
- Freeze prepared cooked poke
- Make redbud blossom and elderflower meads
- Dry nettles (stinging and woods)
- Add oxeye daisy buds/blossoms into kimchi/sauerkraut, or pickle them in vinegar like you would artichoke hearts



Oak logs with a beautiful spring flush of shiitake mushrooms

Other April Activities

- Make time to walk in the woods and observe the amazing spring ephemerals
- Lay in the sun and smell the blossoms
- Inoculate mushroom logs. There are lots of kinds of delicious and medicinal mushrooms that you can grow on logs, but our favorites are shiitakes and oysters.
- Harvest mushrooms on logs that were inoculated in previous years

Pokeweed:

How to Prepare Poke Sallet (a.k.a. Poke “Salad”)



Pokeweed is a nutritional powerhouse, but be careful, it can also be toxic to humans if it's not prepared correctly. This voluptuous weed is extremely high in vitamin A, and also has significant amounts of vitamin C, iron and calcium. Pokeweed is one of the first plants to sprout in the springtime. Because of that, it's traditionally eaten to get people through the season until more wild and cultivated foods emerge. It also has lymphatic cleansing properties and helps the body with “spring cleaning. The best time to harvest pokeweed for food is before the plant reaches knee height (well before it flowers).

The common name, poke, comes from a word for “blood” or “dye” in a language indigenous to North America (probably Powhatan or Virginia Algonquin). That's because pokeweed's bright berries can be used to make dye when they're ripe.

Poke salad or poke sallet?

Pokeweed is always eaten cooked. In fact, raw poke can make you sick or even kill you. It's especially dangerous for children and older folks. Even though that sounds scary, don't worry; we're going to walk you through how to render this tender plant into something safe and delicious. The term "poke salad" is actually a misnomer. Even though that's what a lot of people call the most common pokeweed dish, its true name is poke sallet or poke salat. That's because poke has been eaten for so long by our European ancestors here in North America. The word sallet comes from an older form of English. So, now you know: "poke salad" is actually poke sallet.



How to Make Poke Sallet (Poke “Salad”)



1. Start two pots of water on the stove (covered), one the size to fit the poke that you have harvested, one at least 3 times this size
2. Coarsely chop poke shoots
3. When water has come to a boil in the small pot, and is close to or is boiling in the big pot, add poke to small pot. Stir, so that all poke is submerged
4. Cook for approximately 2 minutes, or until water returns to a boil
5. Place lid over small pot in such a way that it stops greens from escaping as you pour off water, or use colander to drain water, then put greens back in small pot
6. Pour already boiling water from big pot over poke in small pot, cook for approximately 2 minutes, or until water returns to a boil



7. Repeat steps 4 and 5 one to three more times, depending on flavor preference, and tolerance of (and desire for) the lymphatic cleansing and poison ivy relieving effects of pokeweed

Optional: add salt and the traditional combo of bacon grease and molasses

After processing in such a manner, greens should still be bright green and appear vital. Enjoy!

If you're excited about feasting on wild plants, and learning how to prepare them for nourishing food and also medicines, check out our [Wildcrafting Class](#).

POPLAR MOON



Berry basket made of tulip poplar bark

Wild and Woodland Harvest

- Harvest a hickory tree or two for inner bark to make chair bottoms, basket rims, and lashing.
- Gather and dry basswood leaves
- Harvest basswood coppice for friction fire wood, bark, and leaves
- Coppice medium-sized Tulip Poplar trees to harvest poplar bark for building



Tulip Poplar (Liriodendron tulipifera) bloom



Daylily blossom

and baskets, and wood for carving and kindling.

- Cut sochan flower stalks to maintain harvest of greens
- Harvest lamb's quarters greens and steam/boil/sauté
- Eat purslane raw or cooked in salads or pesto.
- Harvest flower clusters from black locust trees, enjoy in salads, as iced tea, and in liqueurs
- Pluck daylily buds to eat raw, and steam or sauté, or throw into fermented veggies
- Keep your eyes out for chicken of the woods and other delectable mushrooms

Annual Garden

- Make fermented "tea" out of woods nettles and/or stinging nettles and comfrey. Apply to crops as a fertilizer/mineral supplement.
- Plant potatoes (later crop)
- Sow squash, gourds and cucumbers in 6" pots, or sow seeds directly in the garden (once the soil is consistently warm)



Oxeye daisy blossoms

- Sow beans directly in the garden (1st sowing for snap beans, main crop for dry beans)
- Sow okra
- Transplant tomatoes, basil, peppers and eggplants into the garden
- First sowing of field corn (stagger sowing based on length of season needed and to avoid crossing of different varieties, if you plan to save seed). It's also time to plant sweet corn if that's what you're growing
- Select good-looking, smaller sized sweet potatoes from last year to "slip out," or secure a source for sweet potato slips (see "How to Grow Sweet Potato Slips," below)
- First sowing of sunflowers (for beauty and/or seeds); repeat every 2-4 weeks until mid-July for continuous flowering.
- First sowing of dill directly in the garden (repeat every 2-4 weeks for continued harvest and to make sure you have dill when it's time to pickle cucumbers and beans).

Orcharding

- Notice and treat any early signs of diseases
- Mow/cut grass/weeds in orchard and lay clippings at bases of trees periodically throughout the growing season as mulch.

Food Preservation

- Pickle and/or dry basswood leaves
- Make wild fermented pickles (sauerkraut-inspired) of basswood leaves, hemlock tips, daylily buds, oxeye daisies, and asian cabbage
- Continue making/freezing wild pestos

Other

- Go to the forest frequently to observe dramatic changes
- Go through stores of preserved foods from last year and finish eating anything that is coming on again soon
- Birth and beginning of milking for many dairy animals



How to Grow your Own Sweet Potato Slips



Sweet potato slips are the surprisingly diminutive tuber sprouts that grow into sprawling, productive sweet potato plants.

Unlike potato potatoes (a.k.a. Irish taters or white potatoes, *Solanum tuberosum*), you don't just cut up sweet potatoes (*Ipomoea batatas*) and plant them in the ground to grow more of them. Sweet potato slips are baby vines that emerge from a stored sweet potato under the right conditions. When they're big enough, you gently break sweet potato slips off of the mother tuber and plant them in the ground, like you would a baby tomato or kale plant.

Growing your own sweet potato slips is fun and rewarding. It's not too difficult and you can save money by doing it. When you grow your own sweet potato slips, you can maintain heirloom varieties for yourself and your friends. To learn more about plant propagation, heirloom food crops, and how to increase your self-sufficiency, check out our [Earthskills and Permaculture Immersion](#).

Supplies for growing sweet potato slips

- Sweet potatoes
- Slipping medium (potting mix, sand, peat-moss, etc.)
- Containers for tubers and slipping medium (trays, tubs, planters, etc.)
- Heat source (heat mat, heater, greenhouse)
- Moisture

Sweet potatoes to use for growing slips



First and foremost, you will need sweet potatoes to grow your own sweet potato slips. Ideally you grew some last year or know someone who did. You can grow sweet potato slips from tubers that you buy at the store, but occasionally these are treated with sprout-inhibitors to make them keep longer on the shelf. If so, your slip-growing efforts could be thwarted.

The ideal size of sweet potatoes for growing slips is not the same size that is ideal for eating. Smaller tubers, about 2 inches in diameter, are your superstar slippers. They will actually end up making more sweet potato slips (about 10-15 each) than larger tubers. Those are better off popped in the oven and then smothered with butter.

Moisture-holding “slipping medium”



Next on the list of supplies is a slipping medium. This is a fancy term (so fancy I actually made it up) for whatever moisture-holding stuff you nestle the tubers into as they're growing sweet potato slips. Potting mix or peat moss work really well. Some people prefer to use sand because it's cheap and super easy to pull the slips out. A combo of sand and peat moss would probably work well, too.

You can grow sweet potato slips in soil, but there is a chance it will harbor fungus that can lead to your tubers rotting. In our experience, sawdust is not a great slipping medium because it dries out too quickly. We also don't recommend growing sweet potato slips from tubers semi-submerged in water. They will sprout, but the likelihood of rot is higher, and it's quite cumbersome and can be messy.

Containers for growing sweet potato slips

You'll also need trays or tubs or some kind of shallow vessel to contain the tubers and slipping medium. Sweet potato slips reach down for moisture and up toward the sun. Containers that are 2-3 inches deep are ideal so they don't have to reach far. You don't need to completely cover your tubers with the slipping medium. It's purpose is to keep them moist. Make sure whatever containers you use don't have holes in the bottoms; you want the moisture to stay put.

Seedling trays without perforation work well. Shallow plastic totes will do, too. We've seen folks use disposable aluminum baking dishes with good success. Chances are you've got something lying around that will be perfect for growing your sweet potato slips.

Heat and moisture are the key ingredients

Heat and moisture tell the tubers to go ahead and start producing sweet potato slips. So, you'll want to create a nice "tropical vacation" environment for them. The ideal temperature for growing sweet potato slips is 75-85 degrees Fahrenheit, and the ideal humidity is 90%. Once you've got your tubers nestled in their medium in their containers, put them in a place that will stay in that temperature range.

We use heat mats for this purpose, because we already have them on hand for starting seeds and we don't yet have a greenhouse. If you have a greenhouse that stays that warm, lucky you! That's the place to grow your sweet potato slips. In the past, we have created a little tent out of greenhouse plastic around our trays of slipping tubers and put a space heater inside it. If you're just doing a small amount, placing the whole operation on top of your refrigerator might just be warm enough (try it and tell us how it goes!).

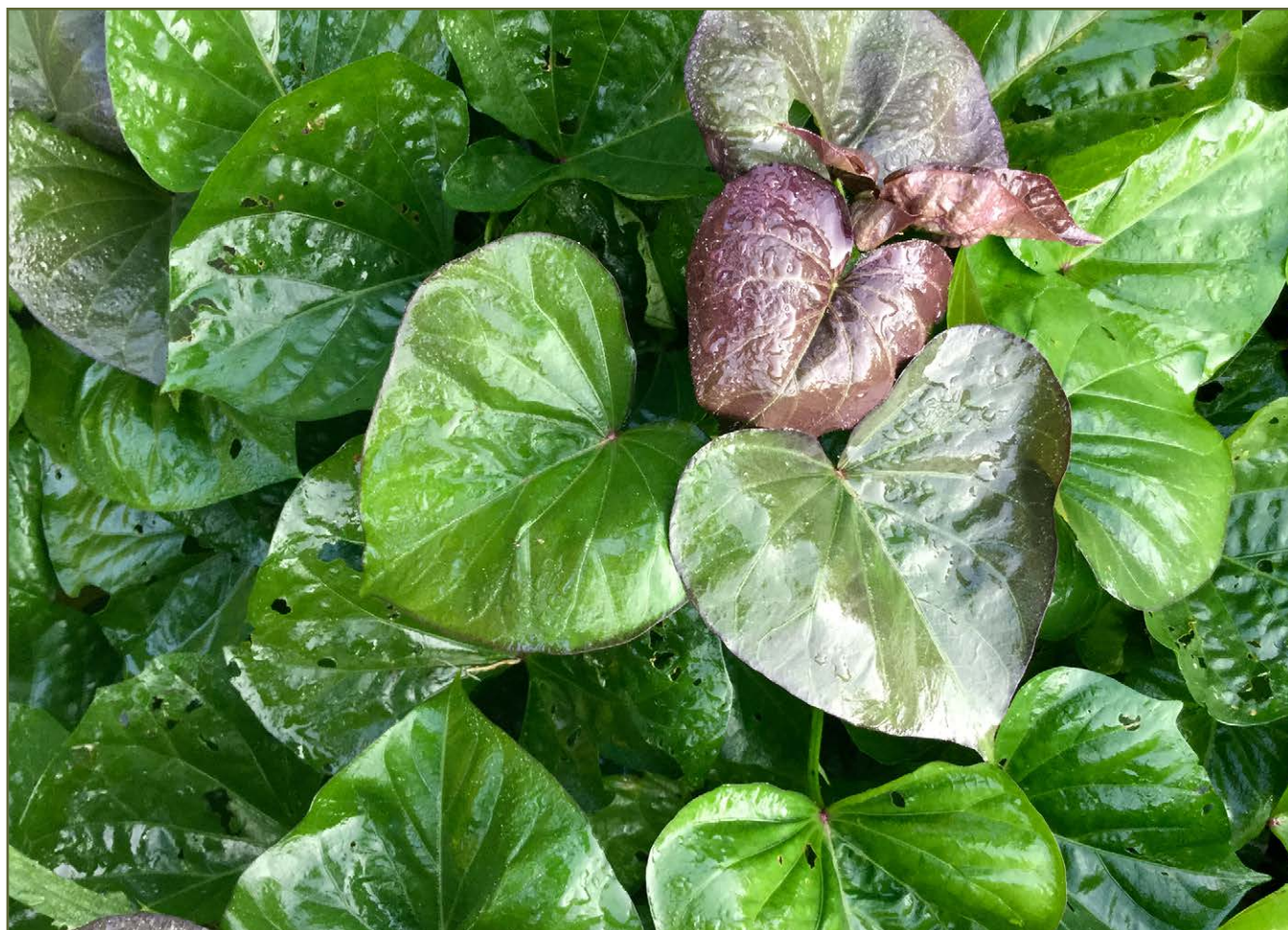
Now for the moisture. You can spritz your sweet potato slip operation several times a day if you're the kind of person who will remember to do that. We usually create an envelope of greenhouse plastic around the trays to create a mini-greenhouse effect, then water them once or twice a day. In a proper greenhouse, you might be able to get away with once-a-day watering or less, depending on your greenhouse.

Planting your sweet potato slips

After about 4 weeks in the optimal conditions, your tubers will likely yield numerous sweet potato slips. Hooray! Plant propagation always feels like a miracle, even after years of doing it.

When the slips are around 6 inches long, they are ready to break off of the mother tuber and plant. You will see roots coming out of the bottom of the slips. Don't worry too much about keeping these intact and attached. Sweet potato slips will sprout roots from any node. In fact, if some of your slips have gotten exceedingly long, you can cut them at a node and have a two-for-one.

Sweet potatoes continue to enjoy the “tropical vacation” atmosphere for their whole lives (they're originally a tropical crop). Wait until it's good and warm to plant them in the ground, and make sure they have plenty of water. Good luck, and splendid slipping to you!



June

BERRY MOON



Wild and Woodland Harvest

- Harvest Tulip poplar bark
- Get Tulip Poplar baskets into form
- Harvest understory wineberries
- Harvest from wild/feral juneberries, mulberries, cherries, plums
- Eat salads of flowers (yucca, daylily, daisies)



*A happy harvest of our native Reishi mushroom (*Ganoderma tsugae*)*

- Harvest appalachian reishi for medicine.
- Harvest black raspberries

Annual Garden

- Prune tomatoes, stake onto poles or trellises (see “How to Stake Tomatoes,” below)
- Pull/cut garlic scapes
- Transplant winter squash out into garden/field (if you started them in pots)
- Plant sweet potato slips
- Direct sow 2nd sowing of summer squash/zucchini
- Sow sorghum for molasses.
- Cultivate, weed, and mulch



Orcharding

- Harvest junerberries (serviceberries), strawberries, wineberries, mulberries, cherries, plums, raspberries, blueberries; fill belly, and preserve for later
- Prune raspberries that are getting a little too tall to support themselves later, sure up trellising

Food Preservation

- Preserve berries by freezing, drying, and transforming them into luscious and antioxidant-rich meads/wines and mouth-watering preserves.
- Make pesto with garlic scapes, or pickle them
- Blanch and freeze lamb's quarters and other greens for winter consumption

How to Stake Tomatoes



It's that time of year when garden vegetables and weeds alike are growing inches overnight. If you're like us, tomatoes are a darling in your garden, but it can be tricky to keep these wily vines in check. There are lots of ways to stake or trellis tomatoes and keep them contained. Here are some of our favorites.

Why stake tomatoes?

Before we get into how to stake tomatoes, let's backup and ask why. In the wild, tomato plants (*Solanum lycopersicum* and other species) don't have a friendly primate following them around, making sure they don't sprawl all over the ground. That's because they're naturally vining plants. Where their stems contact soil, they can grow adventitious roots. This means they can get more water and nourishment, or, if a vine breaks, it can make it on its own as a whole new plant. When tomato fruits rot, resting on the ground, their seeds spread and make more tomato plants.

So why do we want to give tomatoes a lift by staking? Well, because we have different goals for the tomato plants than they have for themselves. Our main objective is more



sweet, juicy tomato fruits. Whereas their main goal (at least biologically; I've never been able to ask a tomato plant existential questions) is to perpetuate themselves as tomato plants.

When we stake tomatoes, we're getting them to give us more of what we want because:

- Staking keeps the fruits from rotting on the ground
- Picking is easier when fruit is elevated
- Lifting the plants up allows for more airflow (which reduces fungal and other diseases)
- Less soil contact = fewer chances of late blight and other diseases
- Staked tomatoes are trained to stay in their own space and not crowd their neighbors
- It's easier to prune tomato plants that are staked
- Mulching is much easier under elevated plants

How to choose a tomato staking method

Just like everything in the garden (and life), there isn't just one way to support your tomato plants. How to stake tomatoes depends on several factors. When you're deciding how to stake your tomatoes, ask yourself these questions:

- How many tomato plants are you growing?
- Are your tomato varieties determinate (bushy) or indeterminate (tall, viney)?
- What is your climate like?
- What materials do you have on hand?
- What's your budget for staking tomatoes?

If you're growing just a few tomatoes, any of the options below will do. But if you've got a big field of 20+ plants, cages are probably impractical. When you're dealing with determinate varieties of tomatoes, staking can be less beefy and cages more flimsy, whereas indeterminate varieties need strong support.

Here in the Southeast, we get a lot of summer rain. Our climate is loved by all manner of fungi, including those that destroy tomatoes. Because of this, we need to choose a system that allows for maximum airflow around our tomato plants. The "Florida weave" (see below) isn't our best bet. If you live in a drier climate, it might be more ideal. To learn more about how to understand your unique conditions, and make the best gardening choices for where you're at, join us for our [Permaculture Design Course](#).

Lots of materials that you might have lying around could be helpful in staking tomatoes. Some examples are old pieces of wire fencing, bamboo poles, string, wire, even old panty hose (to rip into strips and use to tie tomatoes to their stakes)! Things like T-posts and UV resistant rope can be helpful, but aren't necessary if they're out of your budget.

How to stake tomatoes - 5 different methods

These 5 methods have different advantages and disadvantages. It's even possible that you will use more than one of them if you have tomatoes planted in different locations or are growing several different varieties. Trying out more than one method from year to year is worth it so you can determine which works best for you.

- Tomato cages
- Wooden stake (with optional tripod variation)
- String trellis
- Fence panel
- Florida weave

Tomato cages

Tomato cages are those round wire contraptions you see for sale at garden stores. You can also make your own out of wire fencing rolled into a cylinder. If you choose this option, make sure that there is room to get your hands through the fencing to prune and pick your tomatoes. Cages are ideal for smaller gardens (including tomatoes in pots), determinate varieties, and in cases when a generally bushier growth habit is desirable. This means less airflow and more chance of fungal disease, but potentially more fruit per plant. Tomato cages are bulky and can be a pain to store. Homemade ones can be unrolled for easier storage. Using tomato cages to stake your tomatoes means the least amount of work tying plants onto their support throughout the season.

Wooden stakes (with optional tripod variation)



This is the tomato staking method that really involves stakes! You will need one tall (8'+ for indeterminate varieties), one strong wooden stake (2"x2") or one piece of stout bamboo for each plant. Bury the end of the stake deep enough into the soil so it is stable. Use string or wire or strips of old panty hose to tie the tomato plants to the stake. You'll need to prune off any suckers and maintain one central leader or "trunk" for this method to work.

For extra strong stakes, set them up as tripods, with the tops fastened together and the buried ends at an angle. Our beloved founder and director Natalie Bogwalker uses this method. And she sure grows some beautiful and delicious tomatoes!

String trellis

Tomatoes grown in greenhouses are most often supported by string trellises. However, this method of staking tomatoes can be used outside, too. In essence, it's just like staking with wooden or bamboo stakes, but the string becomes the stake. Each tomato plant has a string coming down to it from a bar, wire or rope suspended above. Then, as the tomatoes grow, you simply twine them around the string in a spiral motion.

There's no need to tie the plants to anything with more string, which is handy. With this method, you also will need to prune off suckers and maintain a single leader or "trunk." The key to a good string trellis is to make sure it's strong and secure. In the past on our farm, we've used T-posts with stout bamboo poles attached to them to support a thick, UV-resistant rope. We anchor the rope at either end of the row with more T-posts, pounded at an angle, and tension it using a variation of the trucker's hitch. If you have a greenhouse, you've already got a strong structure to work with.



Fence panel tomato trellis

So-called hog panels, or cattle panels, are sections of fencing made from thick, galvanized rods welded together. Flimsier "welded wire" fencing is also available, but it may flop over or sag when your tomatoes are juicy, ripe and heavy. To use this method of staking tomatoes, simply pound T-posts or wooden fence posts into your row of tomatoes and attach the fencing with string or wire. After that, you can simply tie or weave your tomato plants onto the fencing as they grow. An advantage of this method is that you can choose to prune either for a central leader or for 3 or 4 leaders. In either case, you will still want to prune off subsequent suckers.

Florida weave

Large-scale commercial growers almost exclusively use this method of staking tomatoes. Why? Because it's cheap, fast, and doesn't require any regular maintenance like suckering or pruning.

The basic approach is to pound wooden stakes in between each tomato plant (sometimes you can get away with putting your posts between every 2 plants, if you have a shorter row). As the tomatoes grow, weave string along the rows horizontally, sandwiching the plants between the string and winding it tightly around each post to hold tension and keep it up. Some of the leaves and fruits will get squished in the weaving process if you're not careful, and it's much harder to prune plants in a Florida weave. In dry climates, or if you have lots of tomato plants and not a lot of time, this can be a good choice.

July

SWIMMING MOON



Wild and Woodland Harvest

- Harvest and sauté or steam/boil milkweed flower buds
- Check elderberries and harvest when ripe

Annual Garden

- Choose a few nice summer squashes/zucchini to let mature and produce seed (if you're growing only one variety).
- Harvest garlic, clean and dry



- Start seeds for fall crops (kale, broccoli, cauliflower, cabbage) in flats or pots
- Harvest onions (if they're ready). Generally speaking, when the green tops of onions begin to turn brown and fold over, and you can see the top of the orb of the onion emerging from the soil, your onions are ready to harvest.
- Cultivate and weed

Orcharding

- Harvest saucing apples
- Harvest more wineberries, raspberries, blueberries

Food Preservation

- Pickle and fermentation mania! Green beans, carrots, beets, zucchinis, cucumbers, milkweed buds, etc. (See “A Tale of Two Pickles,” below)
- Make sauce with yellow mealy sauce apples that start ripening at end of month

Other

- Go swimming every day it doesn't rain
- Start making/buying hay for the winter if you are keeping ruminants (cows, goats, sheep, etc.), or horses.



Milkweed buds

A Tale of Two Pickles - Lactofermentation vs. Vinegar



Aren't pickles fun? They're such a great way to preserve the harvest, plus they're a place to experiment with flavor combinations. Not to mention, pickles of all kinds make great snacks and accompaniments to meals.

Here we explore two very different ways to turn vegetables into pickles: lacto-fermentation and vinegar pickling (with a hot-water bath to preserve them). We don't stop with vegetables though, read on to discover some of the unconventional morsels we like to throw in the pickle jar.

What is pickling?

According to the Merriam-Webster dictionary, a pickle is "an article of food that has been preserved in brine or in vinegar; specifically : a cucumber that has been so preserved." The origin of the word pickle is a little murky. In fact, it's been postulated that

it may be the last name of medieval Dutch fisherman who came up with the process. But pickling has been around much longer than that. According to an article from PBS, people were pickling cucumbers in the Tigris Valley in 2030 BC! Wherever there are seasons of bounty and of lean times, human beings have made pickles to help get them through.

What gets pickled?

Vegetables are by no means the only foods that get the pickle treatment. However, cucumber pickles and sauerkraut (lacto-fermented cabbage) may be the most popular. Both limes and green mangoes are very common fruit pickles in India. Meat can be pickled too. For example: corned beef, pickled pig's feet, and herring in wine sauce. Even whole, hard-boiled eggs can find themselves floating in brine. Feta is a common kind of cheese that gets pickled in its own tangy whey, plus generous salt.

Lacto-fermentation vs. vinegar pickling

Using vinegar or salty brine are two of the most common ways to pickle. In the case of salty brine, beneficial bacteria eat the sugars in the vegetables on their way to becoming pickles. As a result, lactic acid is released, turning the saltwater into an acidic solution; this process is called lacto-fermentation. For vinegar pickles, salt is almost always added too. So, what's the difference between these two sour-salty solutions?



A few of our favorite unconventional pickle ingredients:

oxeye daisy buds and flowers, milkweed pods, garlic scapes, hemlock tips, daylily buds, basswood leaves, and wild mushrooms.



The presence of probiotics, or beneficial bacteria, is the main difference between lacto-fermentation and vinegar pickling. Lacto-fermented pickles are cultured, and full of probiotics. Additionally, sealing vinegar pickles in a hot water bath is very common. When we do this, we cook both the pickles and the brine. As a result, we can store the pickles at room temperature in their sealed jars for a long time without spoiling. Check out our infographic below for a comparison of some of the pros and cons of these two ways to pickle.

A TALE OF TWO PICKLES

LACTO- FERMENTATION VERSUS VINEGAR (HOT WATER BATH)



Beneficial (probiotic) bacteria increase vitamin and enzyme content and add to gut microbiome

Don't keep long in warm temperatures, flavor constantly changing, susceptible to mold if stored improperly

Zingy tang, more interesting flavors and variability from batch to batch, can be an acquired taste

Easy to make a big batch with one or two crocks/jars/buckets

If something is off, it's easy to tell; funky lacto-fermented pickles look/smell/taste bad



High heat processing reduces vitamin content

Long, stable shelf-life with little to no change in flavor

Familiar "grocery store" pickle flavor, easy to create consistent results with the same recipe, can be boring

A large batch requires lots of jars/lids/rings and can mean many rounds of processing

Most common dangerous contaminant, botulism, is flavorless and odorless

Great pickle recipes

Pickle diversity is as vast as human culture. Here are two basic recipes to get started, from two awesome books on food preservation. There are tons of other pickling books out there. We especially encourage you to explore recipes for pickles and preserves from India, Ukraine, Germany and Japan. Those are among the pickle loving cultures who have perfected many piquant delicacies. If you want to learn pickling hands-on, and glean our favorite recipes, join us for the [Earthskills and Permaculture Immersion](#).



Beautiful beets, ready to harvest and pickle

Sour Beets (lacto-fermented)

(From “Wild Fermentation” by Sandor Elix Katz)

Timeframe: 1 to 4 weeks

Ingredients (for 1/2 gallon):

- 5 pounds beets
- 3 Tablespoons salt
- 1 Tablespoon caraway seeds

Process:

1. Grate the beets, coarsely or finely based on your preference
2. Sprinkle the grated beets with salt as you go
3. Add the caraway seeds and stir to incorporate
4. Place the juicy, salt, caraway-y beets into a crock, food-grade plastic bucket, or large glass jar, pack in tightly to squeeze juice from the beets and press out any air bubbles
5. Place a weight atop the beets and make sure all of them are submerged
6. Cover with a cloth to exclude bugs
7. Check after a few days, it will get more sour over time and be “done” in 1-4 weeks depending on temperatures
8. When you deem it done, pack into clean jars and store in the refrigerator.

“Dilly” Green Beans (vinegar pickles)

(From “Putting Food By” by Janet Greene, Ruth Hertzberg, and Beatrice Vaughan)

**Ingredients (for 7 pint jars):**

- 4 pounds whole green beans
- 1 1/2 crushed, dried red pepper
- 7 fresh dill heads or 3 1/2 teaspoons dried dill seed
- 7 cloves of fresh garlic, peeled
- 5 cups vinegar
- 5 cups water
- 1 cup minus 1 Tablespoon salt (“pickling,” Kosher, or sea salt, not iodized table salt)

Process:

1. Sanitize your jars by steaming, boiling, or in a dishwasher
2. Fill clean, still-warm jars to the shoulder with clean, trimmed green beans

- 3.** In each jar, place 1 dill head or 1/2 tsp dill seed, 1 garlic clove, and 1/4 tsp crushed pepper
- 4.** Heat together the water, salt and vinegar to a boil
- 5.** Pour brine over the beans, filling each jar 1/2 inch from the top
- 6.** Process in a hot water bath canner for 10 minutes after water returns to a simmer
- 7.** Remove and let cool, then double-check seals

August

ELDER MOON



Wild and Woodland Harvest

- Harvest elderberries, wild blueberries
- Look for and collect wild mushrooms, including chanterelles and lobster mushrooms

Annual Garden

- Remember to save seeds of the best tomatoes
- Sow fall and winter crops: turnips, cabbage, daikon, carrots, beets, kale, spinach
- Start sowing winter cover crops (Austrian winter peas, rye, rape, vetch, etc.)



A selection of wild mushrooms

- Harvest last of onions during a sunny spell and cure/dry
- Pull out plants that are finished, tidy up garden, move into winterizing mode

Orcharding

- Harvest peaches, raspberries
- Prune raspberries
- Propagate brambles by layering (put a rock and some dirt over a cane to encourage rooting of that cane)
- Feed fruit trees with diluted urine or manure



Pressing apple cider

Food Preservation

- Make elderberry syrup, mead/wine (See “Elderberry Syrup,” below)
- Can peaches, and/or make peach mead
- Dry, freeze, make jam, make mead with wild blueberries
- Press apple cider to drink, freeze and/or ferment
- Dry apples
- More pickling and fermenting with all the bounty
- Process tomatoes: dry, freeze, can salsa, italian tomato sauce, enchilada sauce, tomato paste, etc.
- Make and freeze gazpacho

Other

- Make sure insulation is functional for water systems
- Clean out, build, find, rodent-proof storage facility for winter crops

Elderberry Syrup Recipe, plus Elder Botany and Lore



Days are long and hot, the garden is booming, and the wilds are abundant with berries and fruits. Now is not exactly cold and flu season, but it is the time to pull out our elderberry syrup recipe. Why? Because very soon the wild and cultivated elderberries will be heavy with fruit and ready to harvest. Here's our basic recipe, some ideas for customizing yours and an elderberry profile so you can get to know this amazing plant a little bit better. The berries aren't quite ready yet, but now is a great time to scope out bushes because their bright-white flowers are still blooming. They make the bushes easier to find in the sea of green plants.

Getting to Know Elderberries

There are actually more than 25 species of elderberries that grow all over the world. All are shrubby plants with pinnate leaves arranged oppositely and with flowers and fruits that come in clusters. Here in North America, we have about 10 kinds, of many different colors and characteristics. When we're making magical medicine to fight colds and flus, however, black elderberries are what we're after.

Plant Family: Adoxaceae (formerly Caprifoliaceae)
Latin name: Sambucus nigra (European black elder), Sambucus canadensis (American black elder)

Harvest time: Flowers: Late April to early June; Fruit: July to August (varies from year to year, depending on weather); Leaves: Spring to fall.

Parts used: Flowers and fruit for food and internal medicine; leaves for topical medicine; hollow stalks for flutes and spyles to tap maple trees.



Medicinal Uses of Elderberries

Elderberries are considered “nature’s medicine chest” by many herbalists. Their flowers are used in the treatment of colds and flus, along with any inflammation of the upper respiratory tract. After the flowers come the fruits, which are the most widely used part. These are helpful in preventing and treating influenza (the flu) and for protection against all kinds of other viral infections. Lesser known as a medicine, elderberry leaves can be used (externally) to treat bruises and sprains.

According to David Hoffman, in his book *Medical Herbalism*, elderberries (both the flowers and fruits) have been shown to decrease the chances of contracting the flu and to shorten its duration if you happen to get it. Additionally, people who take elderberry during a flu will be less likely to use over-the-counter drugs for symptom relief, according to a study in the *Journal of Internal Medical Research*.

Culinary Uses of Elderberries

Along with being powerful healers, elderberries (and flowers) are delicious. When made into jams, jellies and relishes, elderberries impart a regal purple color and a rich, tart flavor. Similarly, elderberry juice (even just a splash) will transform drinks into tantalizing fuschia elixirs.

Elder flowers can be eaten, too, but are more commonly used for flavoring in syrups, sodas and liqueurs. If you want to just eat the whole cluster of small flowers on their stems, battered and fried is the way to go. Otherwise, steep the fresh or dried flowers in hot water or alcohol – or ferment them with a wine or mead. St. Germain is a deliciously floral French liqueur made from elderflowers purportedly harvested from the French countryside and brought to the distillery by bicycle. Very fun and very fancy!



Elderberry Culture and Folklore

With a name like “elder,” you know this plant has a storied relationship with people. In fact, all over Europe, elder trees are associated with some kind of spiritual power. In Celtic traditions, they’re thought to house protective spirits. Because of this, people are known to hang branches above their doorways or in their bedrooms. It’s believed that when you cut down an elder, its spirit – the “elder mother” – is released. Depending on how you approached your harvest, including what songs you sang or forgot to sing, she may be friendly or angry.

Elderberry Syrup Recipe



Removing elderberries from their stems

This basic recipe for elderberry syrup comes from our dear friend and mentor, Juliet Blankespoor, at the [Chestnut School of Herbal Medicine](#).

Ingredients

- 1 part elderberry tincture
- 1 part elderberry honey
- 1 part elderberry decoction

Begin by making the elderberry tincture. It will need at least 2 weeks to macerate (i.e., “hang out,” with the alcohol extracting medicinal compounds from the berries).

- Fill a quart-sized mason jar halfway with de-stemmed elderberries.
- Pour in enough 190 proof (95%) alcohol to fill the jar. If you can’t find alcohol that strong, use the strongest you can find; anything above 150 proof will still yield a shelf-stable syrup.

- Seal and store in a dark place, shaking daily (or daily-ish; if you happen to miss a day, don't fret).
- After 2 weeks – or longer (it won't go bad) – strain out the berries, and voila, there's your tincture.
- You can use a cheesecloth-lined potato ricer (or simply a cheesecloth, squeezed with your hands) to extract the last bit of tincture that's inside the swollen berries.

Next, make the elderberry honey.

- Juice 4-5 cups of de-stemmed elderberries, reserve 2 cups of juice. To do this, you can use a press-style juicer like a Champion or Green Star. Or, you can squish the berries with your hands or a wooden pounder; then strain out the solids using a cheesecloth.
- Add the 2 cups of elderberry juice to 3 cups of honey. Gently warm this mixture (a double boiler works well), stirring often, until all the juice has evaporated and you are left with 3 cups of honey.
- If you have more than 3 cups of honey, the mixture contains more water than perfectly-balanced honey (which does not spoil); the added moisture can lead to mold. This isn't a problem if you're going to make your elderberry syrup right away. But, if you're going to store the honey for any length of time, it must not have extra moisture.

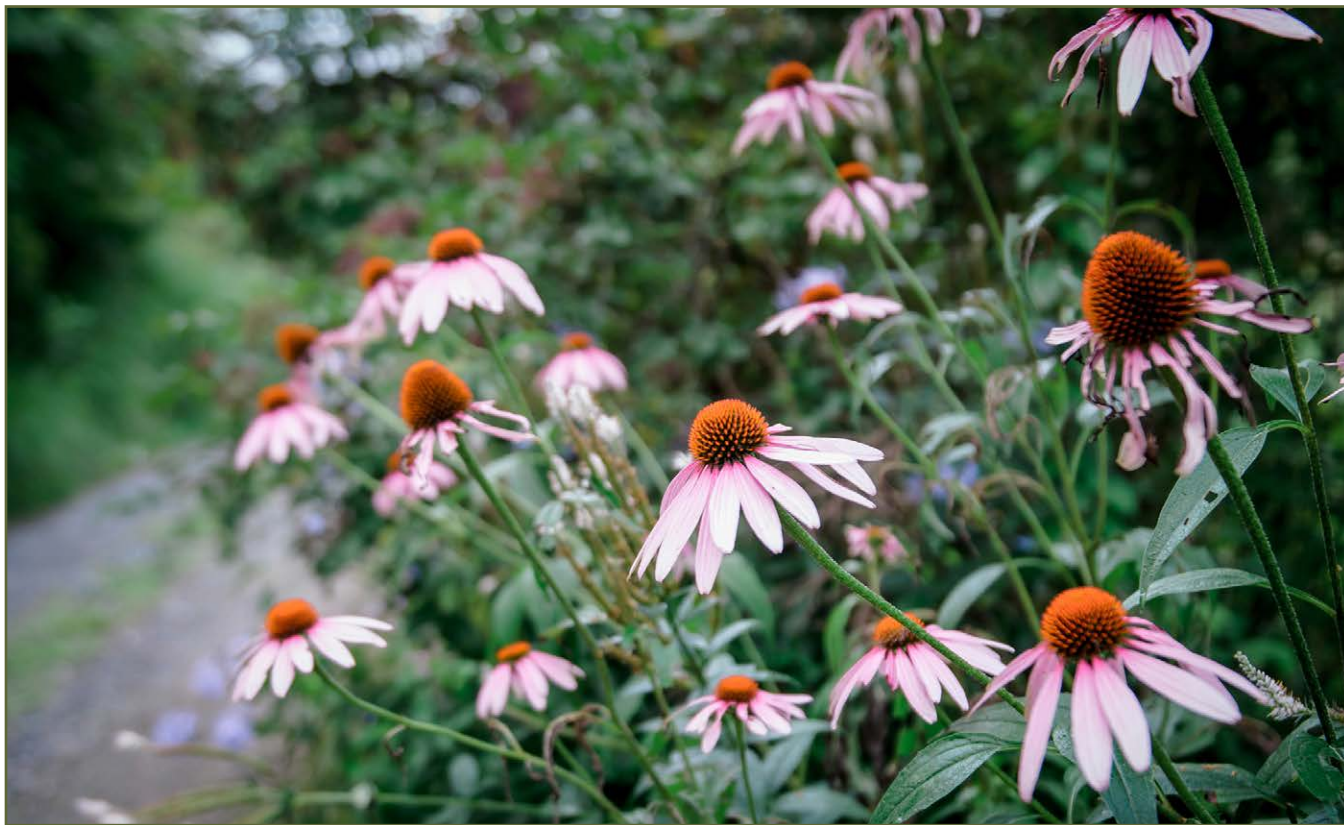
Finally, make the elderberry decoction. The word “decoction” simply means a strong tea that has been simmered and not just steeped in hot water. Chances are, you've made a decoction before, whether or not you used this fancy term.

- Mix together 3 cups of de-stemmed elderberries and 3 cups of water in a pot.
- Cover and bring to a boil; then lower the heat to a lively simmer.
- Let simmer for about 1 hour; then strain out the solids and you are left with your decoction. Let it cool somewhat before proceeding to blend your syrup. This is because a very hot temperature will cause evaporation of some of the alcohol, throwing off your final product.

Once you have made the three ingredients, blend them together in a glass jar and shake until the syrup is uniform. Because of the alcohol content, this elderberry syrup recipe produces a shelf-stable product; there is no need to refrigerate it. If you want to learn how to make this and other herbal preparations, join us for our [Wildcrafting and Medicine Making Class](#).

Recommended (adult) dose is 1 teaspoon, 1 to 5 times per day.

Elderberry Syrup Recipe Variations



Echinacea is another great immune-boosting herb to add to elderberry syrup

From this basic elderberry syrup recipe, you can branch out and customize your syrup depending on your particular needs and what you've got on hand. For example, you could substitute some of the tincture, honey or decoction with the same type of extraction of another herb. Using other ingredients that are also immune-boosting and/or antiviral will make your medicine even more powerful. If you have a bottle of reishi tincture, or a bunch of lemon balm lying around, these are both great additions. Echinacea, ginger and osha are other fine additions. If you stick to the basic ratio of 1 part tincture, 1 part honey, 1 part decoction, your elderberry syrup will still be shelf-stable.

To make elderberry syrup for kids, elders, or anyone wishing to avoid alcohol, simply omit the tincture. Instead, use 2 parts decoction and 1 part honey. You can also add other herbs to this modified syrup; just make sure that they are gentle enough for more sensitive systems (elderberry itself, thankfully, is wonderful for children). The alcohol-free version of this elderberry syrup recipe will not be shelf stable – but will keep in the refrigerator for a month or more. Another option is to freeze the syrup in ice-cube trays. Depending on your ice-cube tray, one thawed cube will contain 1 to 3 days worth of medicine.

September

APPLE MOON



Wild and Woodland Harvest

- Harvest feral apples and pears
- Prune ginseng leaves to circumvent poachers (use leaves for tea and medicine... they've got the same properties as the coveted and slow-growing root!)
- Check on persimmons, autumn olives and paw paws to see if they're ripe, harvest when ready
- Keep looking for mushrooms
- Begin to collect black walnuts; green fruit/outer layer for dye and medicine, nut for food
- Find wild beaked hazel groves and harvest when nuts are ripe
- Begin harvesting wild "air potatoes" (*Dioscorea bulbifera*)



Annual Garden

- Prepare areas where you are planning to plant next year: clear and sheet mulch or cover crop them
- Dig holes for squash mounds before ground freezes and hunting season begins (to place animal parts in as future fertilizer)
- Sow cover crops
- Harvest winter squash before first frost (when skin cannot be broken with fingernail and pressure) - cure in warm, dry conditions
- Harvest sweet potatoes before first frost - cure in warm, moist conditions
- Select and/or secure garlic seed stock
- Set up winter covering if you choose to do so (row covers, etc.)
- Harvest field corn when it is dried down in the field
- Harvest sorghum cane, press and cook molasses

Orcharding

- Harvest lots of apples and pears
- Harvest some varieties strawberries and raspberries
- Harvest cultivated hazelnuts/filberts and chestnuts when ready

Food Preservation

- Press cider to drink, ferment, freeze, can
- Dry apples, can applesauce and apple butter, bake apple pies
- Dry pears; make pear sauce
- Make mead, cyser, and pyser with excess fruit and honey
- Start sauerkraut, kimchi, and other lacto-fermented winter veggies

Other

- Buy straw and/or collect dried leaves for winter apple and garlic storage
- Practice shooting if you plan to hunt
- Clean out chimneys



Freshly dug-up sweet potatoes, with their vine

How to Make (and Use) Earthen Paint

Earthen paint (a.k.a. aliz) is a fabulous way to reduce the presence of toxins in your home. Not to mention that it's beautiful and improves the "vibe" of a space (the energy of clay tends to be calming and grounding). Plus, it's so safe that children, elders, or other folks who wouldn't want to mess with synthetic paints can join the fun and get involved.

How to Make Natural Earthen Paint

To make your own earthen paint, you only need a few simple ingredients: aggregate (see below for an explanation), white powdered clay, wheat paste (recipe follows), and water—plus pigments as desired. Basically, you mix all the ingredients together thoroughly, and voila! That's your paint. Applying this kind of paint is a little different than brushing on latex or other standard paints. We'll get into that a little bit later.

A 5-gallon bucket is a great vessel to mix your earthen paint. Use a paint mixer attached to a power drill to combine everything thoroughly. We make and apply earthen paint during our [Natural Building and Tiny House Workshop](#), so join us if you want hands-on experience.



Natural Earthen Paint Recipe

- 2 parts aggregate (see below)
- 2 parts white powdered clay (White China or Kaolin works well)
- 1.5 parts wheat paste (recipe follows)
- 1.75 to 2.25 parts water
- Pigments as desired

Aggregate

Aggregate can be made from a variety of materials. A combination of glass-blowing sand and mica dust is best for smooth paint that doesn't shed. That's because this kind of sand has way smaller particles than regular play sand. Mica dust will give your wall a beautiful shimmer when it's properly burnished.

Use all glass-blowing sand and no mica as your aggregate for your first coat. Then, use 3 parts glass-blowing sand and 1 part mica dust for your final coat. This gets translated into 1.5 parts glass-blowing sand and .5 parts mica for your overall paint recipe, although you will mix two separate batches.

Regular play sand will also work as an aggregate in earthen paint. Both mica dust and glass-blowing sand are more expensive than this coarser option, so your choice may depend on your budget.

How to Make Wheat Paste for Earthen Paint

1 part bleached white flour

1 part cold water

5 parts boiling water (in a pot)

Use bleached white flour. Don't be tempted to use whole grain flour; don't use spelt flour, or teff, or buckwheat. This might mean making a special trip to the store, but it will be a trip worth taking. You aren't going to eat this wheat paste. Whole grain flours just won't work in paint. In fact, making paint might be one of the better uses for this so-called food product, which offers very little in the way of nutrition.

- Boil your 5 parts of water. Keep it actively boiling throughout the process.
- Whisk the flour with the cold water in a separate bowl or bucket until you have a very smooth paste with zero lumps.
- Now drizzle the flour/cold water mixture into the actively boiling water that is still on the stove. Whisk as you drizzle (it's easier with 2 people).
- Cook for about 5 minutes, stirring, until your wheat paste starts to get slightly clear.
- At this point, you should have lumpless wheat paste. If you do have lumps, strain them out and discard them.

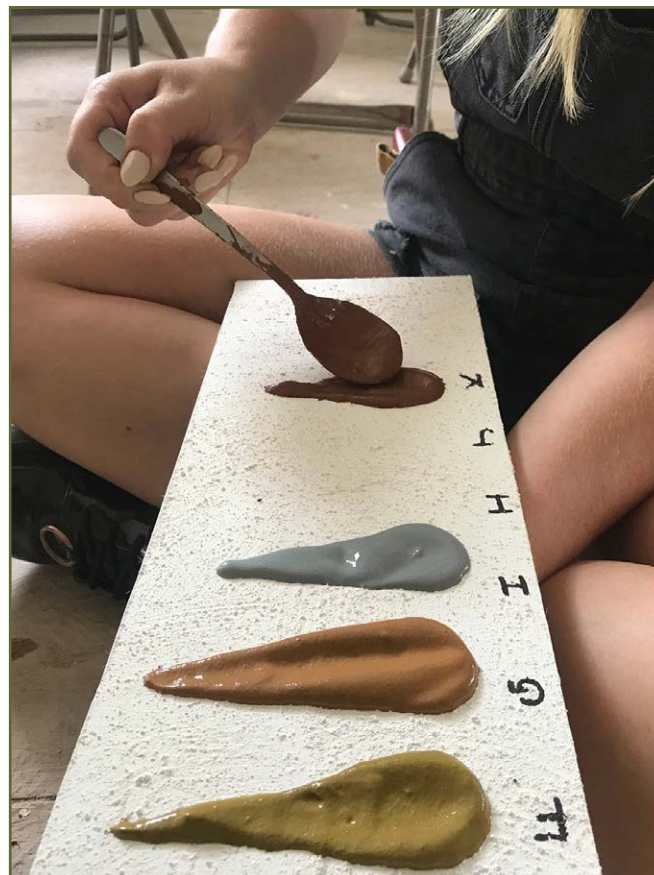
Pigments (Colors!) for Natural Earthen Paint

Many different natural pigments can give color to earthen paint. Of the many powdered metals that work well, iron oxides are the easiest to find and they are completely non-toxic. Iron oxide and rust are synonymous, so you are basically working with a wide variety of colors of rust when you choose this group of pigments. From iron oxides, you can mix up all sorts of colors, most of which come out in various shades of yellow, brown, red and black. Even though we've managed to get some colors that look somewhat blue and green from iron oxides, many folks say that they look pretty gray. Perhaps beauty really is in the eye of the beholder, as it's said.

How Much Pigment to Use

How much pigment you use to color your paint is up to you and depends on the color you are going for. In order to test your pigment mixes, you can make samples in one cup sizes. A general rule of thumb is to use somewhere between 1 teaspoon (t) and 2 Tablespoons (T) of a given pigment per cup (c) of paint.

There happen to be 16 Tablespoons in one cup and 16 cups in one gallon. This ratio is very convenient when you're testing natural paint pigment mixes. That's because it means you'll get the same color by using 1T of pigment in a 1c sample as you will when you mix 1c of the same pigment with 1 gallon of paint. Furthermore, there are 3t per 1T. So, if you use 1t of pigment per cup of paint for your sample, you will use 1/3c pigment per gallon of paint.

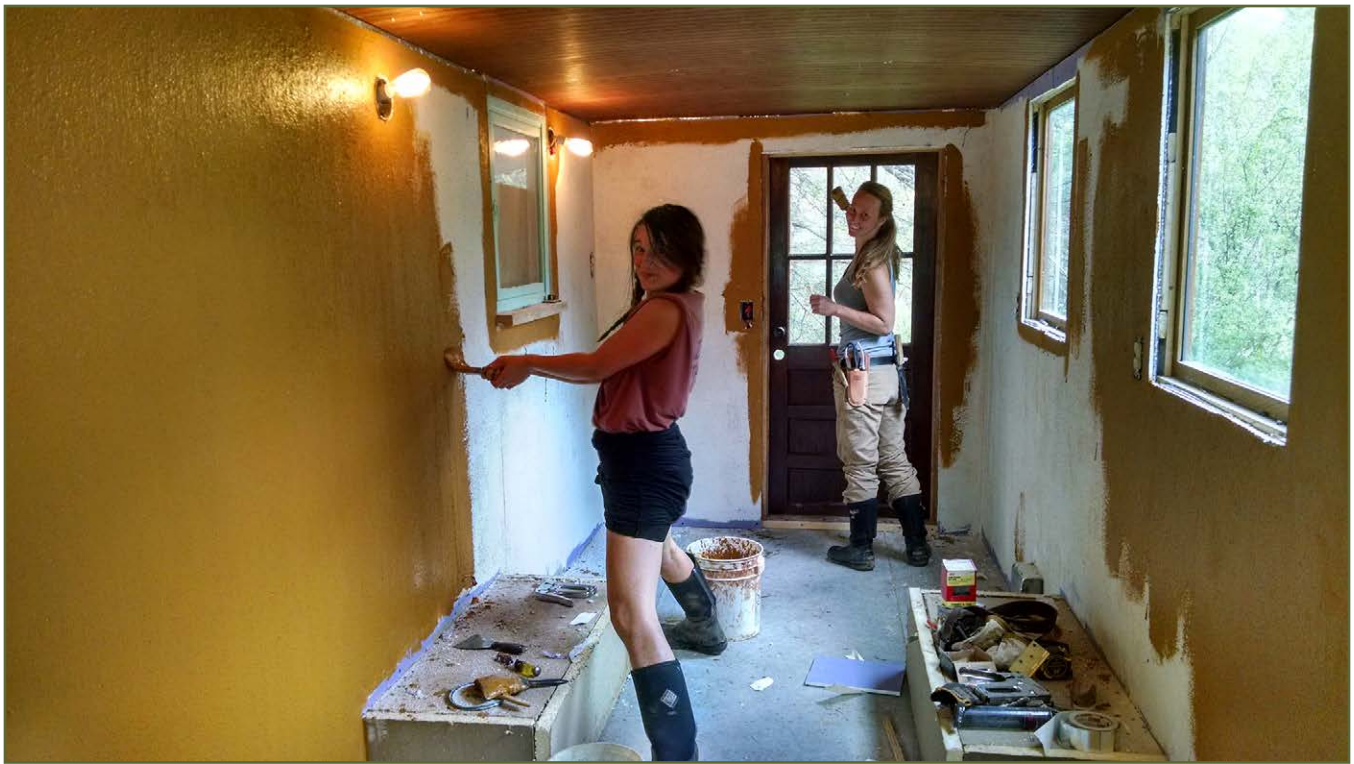


One of our favorite pigment recipes:

- 1 gallon paint
- 2 c red iron oxide
- 1/3 c yellow iron oxide

This is equivalent to the sample amount:

- 1 c paint
- 2 T red iron oxide
- 1 t yellow iron oxide



What Surfaces Can Earthen Paint Be Applied To?

Natural, earthen paint can be used on a variety of surfaces. Earthen walls, plaster walls and drywall are the best choices, but it's worth a try on others. If you're not sure it will work, just mix up a small sample batch and do a test patch. To apply earthen paint to drywall, start with a layer of paint primer mixed with glass-blowing sand; make sure to let it dry before applying the earthen paint. Preparing the wall like this will help the paint to stick much better.

How Permanent Is Earthen Paint?

Earthen paint will come right off the wall if it's wiped down with a thoroughly wet rag. In similar fashion, if it's kept dry and not abraded much, it will stay on the wall. Given the impermanent nature of earthen paint, it can be helpful to store a quart or two of your color in the freezer. That way, you can touch up as needed, and match the exact color of your paint in the future. Also, we don't generally recommend using earthen paint in bathrooms, or in some kitchens. This is because the paint will more easily rub off of the wall in rooms where there is a lot of moisture (like the steam from a shower, or from a lot of cooking, if you've got poor ventilation in your kitchen).

How Many Square Feet Will a Gallon of Earthen Paint Cover?

One gallon of paint will cover about 55 square feet.

Moist Substrate = Happy Substrate

Moisten your wall before you apply each coat of earthen paint. A spray bottle works great to do this. Your next coat will stick much more effectively if it's applied to a moist surface.

Burnishing Earthen Paint

It's essential to burnish natural, earthen paint in order to create a beautiful final wall that does not shed. To do this, wait for your final coat to dry to "leather hardness" (not quite dry). Then, gently rub your wall with a large yellow household sponge that is clean and moist. This process will lay down and clean any mica that may be contained in the final coat, causing it to shimmer beautifully. There is no reason to burnish any coat except the final one.

A Note About Trim

Make sure there is some sort of baseboard trim in the room that you want to paint. If you don't have baseboard trim, the wall is much more likely to shed, especially as you sweep or vacuum.



October

FOREST ON FIRE WITH BEAUTY MOON



Wild and Woodland Harvest

- Gather feral keeper apples
- Harvest wild persimmons (see “American Persimmons: Facts and Recipes,” below) and paw paws
- Harvest black walnuts, beaked hazelnuts, chestnuts
- Harvest autumn olives and staghorn sumac



chestnuts drying on a dehydrator rack



Annual Garden

- Plant garlic
- Mulch and tidy up
- Pull up irrigation/hoses and store for the winter
- Orcharding
- Gather keeper apples
- Plant and transplant berries and trees
- Collect leaves for mulch

Food Preservation

- Store apples in wooden boxes with straw in cool place in house- not in root cellar with root crops

- Make persimmon fruit leather and freeze raw persimmon “pudding” (see “American Persimmons: Facts and Recipes,” below)
- Make and can/freeze autumn olive chutney
- Freeze and/or dry chestnuts

Other

- Gather and prepare hunting clothes (if you plan on hunting)
- Practice Shooting (if you plan on hunting)
- Make sure firewood is accessible to house



American Persimmon: Facts and Recipes



Habitat and Cultivation tips for American persimmon

Botanical name: *Diospyros virginiana*

Common names: American persimmon, 'Simmon, Sugar Plum

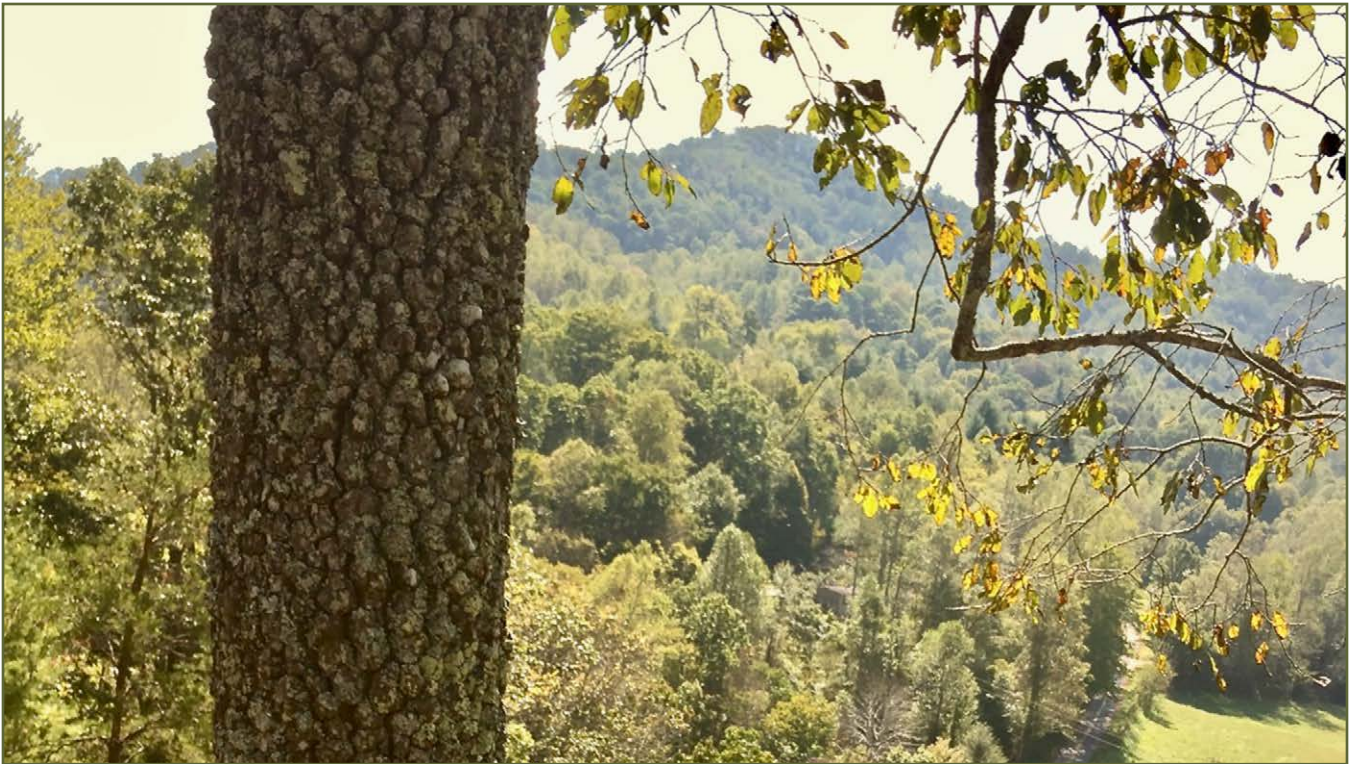
Family: Ebenaceae (Ebony family)

Harvest time: October-November

Uses: Food...so sweet!

American persimmons are generally found fruiting at elevations between 700 and 2700 feet. They seem to prefer well drained soil, but are also found near creeks. These opportunistic trees do grow in forests, but they yield much more fruit when grown in the open.

During the autumn, just after the leaves have fallen, while driving down country



American persimmon trees have distinctive bark

roads, keep your eyes open! American persimmons are the distinctively delicate trees between 10 and 30 feet tall with bright orangey-pink fruit the size of a golf-ball. They really make a beautiful show during a season when things are looking quite drab.

American persimmons are dioecious, meaning that there are male and female trees (rather than male and female flowers on the same tree). Wild Abundance director Natalie Bogwalker learned this by observing the trees on her property. She found one particularly large and beautiful specimen, but never saw it bare fruit. Nonetheless, there were a bevy of baby persimmons growing around it, so she figured it must be their mother. After 3 years of watching the large persimmon and finding nary a fruit, she grew suspicious. During this time she also noticed a much smaller American persimmon tree on her neighbor's property that was loaded with fruit every fall. Hmm. So, Natalie did some research and learned that persimmons spread from root suckers as well as from seed.

Special qualities

Another name for the American persimmon is "sugar plum" (ever heard of the sugar plum fairy?). This name is very indicative of the qualities of the American persimmon. In fact, they are shockingly and wonderfully sweet, plus they're about the size of a plum. As a result, eating just a few fruits can cause a sugar rush and a tingle to any sweet tooth.

American persimmons are only edible when they look like they're about to go rotten: the skin will be very wrinkled, and the fruit itself will appear quite mushy. Furthermore, the color will be a bright orangey-pink. If you try to eat the fruit before it's ripe, you'll have a quite memorable experience. Unripe American persimmons (like their Asian cousins) are quite astringent, enough to make your mouth pucker quite uncomfortably.

You won't find American persimmons in stores because they're difficult to transport and do not keep well. Asian persimmons can usually be found in grocery stores and farmer's markets in the fall. This is because the fruits are larger and have a longer shelf life. American persimmon trees are a bit hardier than their Asian cousins, which may not survive winters at higher elevations. Each year in the fall, we harvest and enjoy many American persimmons with our [Permaculture Apprentices](#).

Ethnobotanical History and Gathering Tips

American persimmon wood is dense and beautiful. It is, after all in the ebony family. Persimmon lumber, however, does not have significant commercial value because the trees do not tend to grow very big or very straight. Nonetheless, it does make lovely spoons, spatulas, and knife handles.

As mentioned above, American persimmons are ripe and ready to eat only when the fruit looks like it is about to rot. For fresh eating, it is important to let the fruit stay on the tree until it is ripe enough to fall. A good way to harvest American persimmons is this:

1. Clean up under the tree, tossing any fruit that has turned sour away from the tree, and putting any fruit that looks like it is about to turn, but has not yet turned into a bucket
2. Grab branches and shake, or get up in the tree and shake with your whole body. If the tree is ready, there will be a great avalanche of sweet fruit. Make sure not to look up when you shake, as you might end up with fruit, leaves, or little wood particles in your eyes.
3. Gather freshly-fallen fruits in a bucket. Never use bags to gather persimmons, as the fruit is so darned mushy that it makes a big mess when squished up in a bag.
4. Optional: put sheets, drop cloths, or tarps on the ground under the tree before shaking. It's best to stay away from old tarps, as the paint and plastic can be apt to stick to the fruit, rendering it inedible...and isn't this the whole point...to obtain the edible?

Favorite Fresh American Persimmon Preparation

Natalie never ever recommends cooking American persimmons. That's because what she loves about persimmons is the delightfully smooth texture, and unique sweetness. Indeed, when they're cooked, this texture turns boring, and the sweetness dissipates. Many recipe books suggest making a persimmon bread similar to a banana bread, or a cooked persimmon pudding. You can try these if you like, but we encourage you to experiment first with raw preparations that showcase the lovely uniqueness of these autumn treasures.

Raw Persimmon Pudding Recipe



- 6 c** very ripe American persimmons
- ½ c** heavy whipping cream, half and half, sour cream, or coconut milk
- ½ t** salt
- 0-5 t** honey or maple syrup, depending on desired sweetness
(totally optional!)
- ½ t** vanilla extract (optional)
- ¼ t** ground cardamom

In order to make persimmon paste, run persimmons through a Foley food mill using the plate with the largest size holes. Alternately, if you don't have a food mill, pick out all of the seeds from the persimmons by hand and mash up the remaining paste with potato masher or with your hands until it's shiny and smooth.

Combine all ingredients well in a bowl. Chill. Serve. Enjoy!

The pudding can be served on its own or with cookies: either shortbread, snickerdoodles, vanilla wafers, or with what are known as "galletas" in latin food stores.

American persimmon pulp can make a great addition to homemade ice cream, especially in combination with sassafras root.

Favorite American persimmon preservation methods



Wine/mead

Persimmon wine and mead are both awesome! Always sterilize persimmons before adding them to mead to prevent the mead turning to vinegar by some errant bacteria that has already started colonizing the ripe persimmons. To do this: pour almost boiling water over the fruit, then let the fruit and water cool before adding both to your brew bucket. Do not cook the fruit on the stove-top, as this will remove much of the flavor. A general recipe is to use one gallon of ripe persimmons per 5 gallon batch of wine or mead. It works well to add the persimmons to the primary fermentation. One or two cinnamon sticks, and a vanilla bean are delightful compliments to any persimmon ferment.

Persimmon Cordial

Put a cup of whole, ripe, persimmons in a jar, and pour moonshine on top. Optionally you can add a cinnamon stick, a vanilla bean, vanilla extract, a bit of wild cherry bark, and/or a quarter cup of evaporated cane juice, panela (the real evaporated cane juice that can be found in cones or cakes in latin food stores), honey, or maple syrup.

Drying American Persimmons

There are two great ways to dry American persimmons: whole, and as fruit leather. See below for details on both, and a story of magical appalachian dates!



Either a solar dehydrator (shown), or an electric or wood-fired drying system will work to dry American persimmons.

Whole dried American persimmons

A story from Natalie:

Once, years ago, my old land-mate, James Price, shared some dried persimmons that he had found that had happened to dry on the tree, in a year that happened to have a very dry fall. I found these sweet little treats to be much akin to medjool dates. I love dates, but we can't grow them in Appalachia, so I was willing to put some energy into figuring out the drying of the whole fruit.

When drying persimmons whole I have learned to break all of the rules. I had many bad experiments with trying to dry the ripe fruit. The dried fruit looked fine, but inside the skin the fruit had turned into a somewhat tasteless brown powder. I asked around about this, and someone, I wish that I could remember who, told me that to dry the fruit of a persimmon whole, one must start with unripe fruit. This seemed counter-intuitive to me, but I tried it.

I found a persimmon tree with low hanging branches, picked some light orange, but not yet ripe fruit, and put it on the drying racks above my wood stove. After a couple of weeks, the fruit had dried, and ripened as it dried. The result was very similar to the date-like treats that I had enjoyed off of a tree years before.

American Persimmon Fruit leather

In order to make fruit leather with persimmons, make a paste, the same as above in the persimmon pudding recipe. Then, spread it out onto parchment paper, and place it on drying racks above a wood stove, or on fruit leather sheets provided with most electric dehydrators. The flavor of persimmon leather can be a bit sweetly bland. A nice way to add depth to the flavor is to add in crushed Autumn olives, which lend a nice tartness to the finished fruit leather. Conveniently, Autumn olives are harvested at about the same time of year as American persimmons.

November

DEER MOON



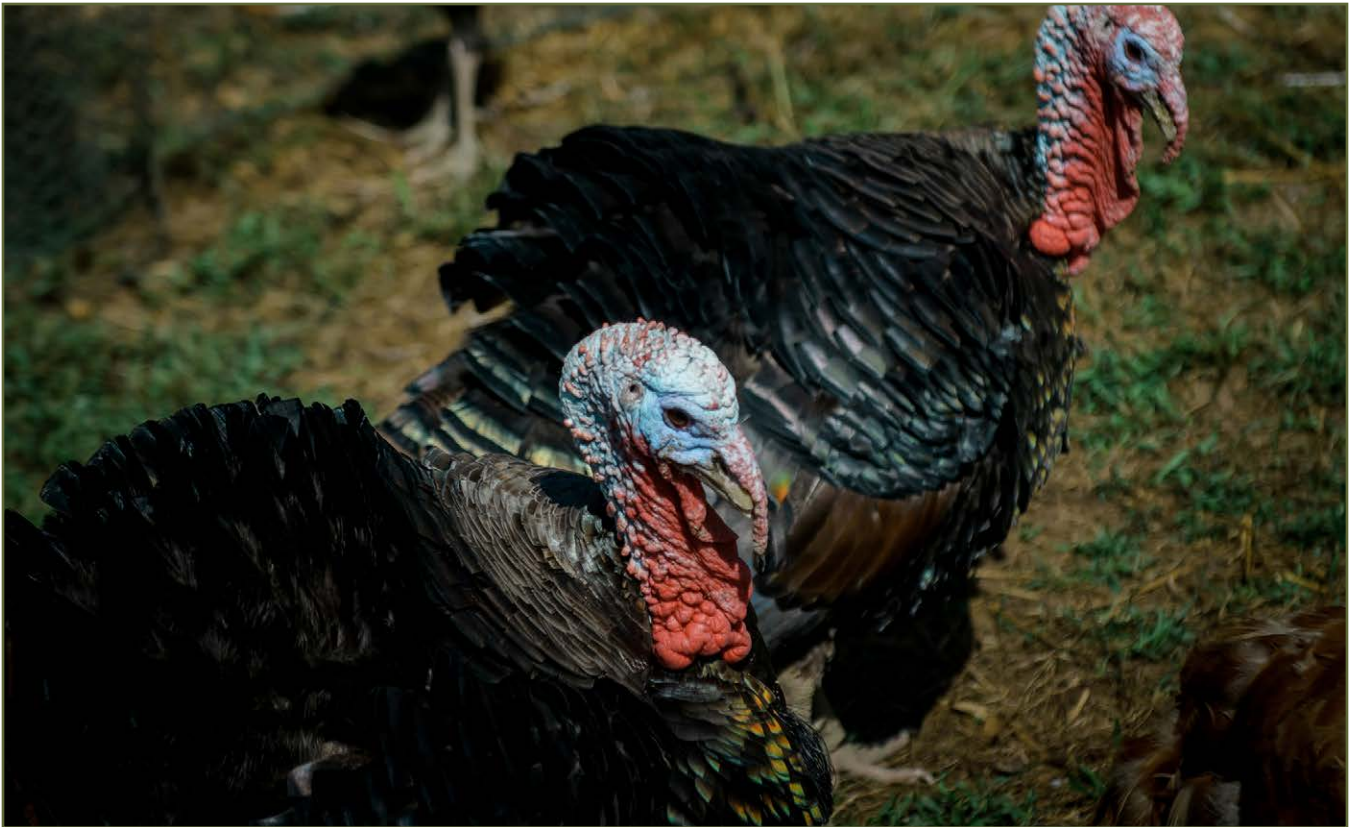
A deer hide with the fur on it

Wild and Woodland Harvest

- Hunt deer and wild turkey (check exact local seasons yearly)

Annual Garden

- Rest and reflect on the year
- Enjoy greens from inside row covers/hoop houses



Orcharding

- Dig holes where trees or shrubs are to be planted, put deer guts and hocks in holes to get them ready for spring planting
- Weed around the bottom of fruit trees and berries, mulch with carbon rich material (i.e. woodchips, dried leaves, old hay, etc.)
- Plant and transplant berries and trees
- Harvest pecans

Food Preservation

- Harvest, process, and smoke hogs
- Make jerky, and sausage.... put up and enjoy
- Harvest unripe persimmons on branch to dry
- Harvest ripe persimmons and deseed for fresh pudding and to dry

Other

- Get deer hides from hunters and/or game processors
- Relax, enjoy the long, luxurious nights
- Drink hot apple cider
- Review garden log/journal and make notes for next year



A group of hide tanning students scraping their hides

How to Tan a Hide, Naturally, in 10 Steps



So, you've gotten your hands on a deer skin and you want to turn it into leather. This is an exciting moment! We're going to walk you through how to tan a hide in 10 comprehensive steps with the wet-scrape brain tanning method.

Using all natural materials and getting a hide velvety soft and pliable is a lot of work. We've been turning animal skins into supple, eminently useful buckskin for fifteen years, and we've got the muscles to prove it!

You'll find other "how to tan a hide" resources out there that claim it's easy. Don't believe them. They are imposters. Brain tanning is, however, incredibly rewarding and we're excited to teach you about it.

Here's an overview of the steps involved in how to tan a hide by brain tanning:

1. Evaluate the hide and trim off edges
2. Remove the flesh
3. Soak in water or a bucking solution
4. Scrape off grain and membrane
5. Wring out moisture
6. Apply braining solution
7. Wring hide
8. Repeat braining and wringing
9. Soften your hide
10. Smoke to preserve softness

The whole process will take you a few days, so be prepared. It will also be somewhat messy and stinky.

Materials you'll need for brain tanning

- Deer hide: fresh, salted, frozen or dried
- Scraping beam made from a scraped and smoothed hardwood log, or a piece of PVC pipe with some sort of propping device
- Scraper: an old, dull planer blade works well. Make handles for it with pieces of hose or fabric wrapped with duct tape.
- A large garbage bag and belt or rubber apron
- One plastic bucket
- A good sharp knife (We prefer carbon steel as it is easier to keep sharp)
- Brains: one deer brain is just enough, but more is better. If you buy pig brains, get one pound. A dozen egg yolks will work in place of the brains, but brains are slightly superior.
- Fat: ¼ cup olive oil or rendered bear fat
- Staking post
- Cable: 5 feet of 1/8 inch steel cable and 2 cable clamps
- Three beading needles and beading thread
- Wringing beam: a pole lashed to 2 trees works well
- Wringing pole: a smooth strong stick of very hard wood 2-3 inches in diameter and 3-5 feet in length; broken tool handles work well for this.
- Punky (half-rotten) wood: 5-15 gallons of evenly punky wood, or a combination of punky wood and fir boughs.
- Your arms: strong, or ready to become strong

Preparing your hide: Evaluating, Trimming, Fleshing, Soaking

The first four steps we listed above prepare your hide to be worked. Begin by evaluating and trimming. Learning how to tan a hide is a lot of work, and it doesn't make sense to undertake this effort if you're starting out with a poor-quality hide. Examine the hide

for any holes. Lacerations that don't go all the way through the hide can become holes later. Look out for knife marks that penetrate into the gray layer between the flesh and skin. Unless all you want to make is lashing, a holey hide is not ideal.

Next, trim off any dangly bits and the very thickest part of the neck. These areas can be hard to work and it's best to just get rid of them right off the bat. Once your hide is deemed worthy and has been trimmed up, it's time to flesh. Spread your hide on the beam, making sure it's flat and not folded. We show you exactly how to make a scraping beam in our [online hide tanning class](#). Scrape a small area at a time with your scraping tool to remove all of the flesh.

Soaking a hide after fleshing is a process of controlled rotting. It loosens the hair and softens the membrane layer, which will be the next part you scrape off. You can either soak your hide in a creek (tied to a large rock or tree so it doesn't float away), or a bucket with a rock to weigh it down. If you're using a bucket, be sure to agitate the hide a couple of times a day. The soaking process will take between 2 days and a couple of weeks, depending on the temperature of the water. It's done when you can easily pull the hair out of the hide with a firm tug.



Using a dulled-down planer blade to remove the hair from a deer hide

Getting ready for your brain tan solution:

Scraping, Membraning, Wringing

Here's where the hard work begins! Animal skins have layers of different kinds of tissues above and below the thick part we turn into leather. Beneath the hair (which you will scrape off too) is a layer of grain that holds in the hair. This needs to be removed. It can be very tricky to get all the grain off as it is quite well attached to the hide and very hard to see. Using a careful, methodical approach is most likely to yield success. Scrape a small area at a time, with a good amount of force. We like to start scraping in the middle of the hide. It's easiest to remove the grain if you scrape from an area with no grain (that you've already scraped) into an area with the grain still attached. As you learn how to tan a hide, this part of the process will become more clear, but not necessarily physically easier.



Wringing a hide

For a much more detailed guide to scraping, check out our [online brain tanning class](#).

Now's your chance to take a break, if you like, because you can dry and store a hide at this stage. If you're getting tired, the weather's bad, or it's just taking longer than you expected, dry your hide and roll it up for later.

Whether you've dried your hide or ploughed on through, after scraping, it's time to membrane. Rehydrate a dry hide before this step. Using the same methodical approach, but way less force and meticulousness, scrape the other side of the hide to remove the membrane. It's the meat side that used to contain the deer's innards.

Now wring out as much moisture as you can. You don't want a crunchy, bone-dry hide. But neither do you want a dripping hide with dark, wet spots. It should be Goldilocks dry: soft and pliable, but just barely damp.

Brain tanning: Soaking your hide in brains, Softening and Smoking



"Braining" a hide in solution

It's time to get down with the brains of this operation. Real brains. The fat and lecithin in brains make them ideal for creating your "tanning" solution. If you don't have brains, you can always use egg yolks. They also have fat and lecithin, but don't quite have the magic or gross-ness of brains. Here's our recipe:

1-½ gallons very warm water (not so hot that it will burn your skin)

1 deer brain, or 1 pound of another kind of brains or 12 egg yolks, whisked or blended into very small particles

¼ cup olive oil, other oil, or rendered bear fat

Submerge your hide in this warm, oily solution and stir it around a bit to make sure the whole hide is saturated. Let it soak for a minimum of 15 minutes and as long as overnight (or somewhere in between). Then pull it out, hand wringing it to leave as much of the solution in the bucket as you can. Now, place your hide over the wringing pole and twist it up in a donut. Next, wring it out on the wringing pole, then soak it again, wring it again, soak it again, wring it again... Do this 2-4 times, depending on your stamina,

how big and thick your hide is, and what sort of mood you are in. The goal is to get the brain solution to penetrate through the whole hide.



Softening a hide

After braining comes softening. This is another labor intensive part of hide tanning. In order to avoid your hide becoming hard like rawhide, you must keep the fibers moving throughout this final drying. Begin by stretching the hide as though you were trying to pull it apart from side to side. Then try to pull it apart lengthwise. Don't forget the edges! Throughout the softening process you can stretch, cable, stake, bounce, rub, and smack the hide. These might sound like sexy dance moves. They're actually different techniques to keep those fibers moving as the hide dries.

When your hide is completely dry (and soft), it's time to smoke. Your hide, that is. This is the final step to make buckskin that will stay soft in all kinds of weather. While your white hide may seem beautifully soft before smoking it will become stiff and hard again as soon as water touches it. Keeping it soft is why you smoke it, and smoking will also turn your hide into a lovely amber color.



Smoking a hide

First, turn your hide into a pouch with one open end at the neck (temporarily), with the side that used to have hair on the inside. Use glue, staples, or stitching to do this. Then extend this pouch with a tube made of cloth that will fit snugly over the outlet of your smokey coals.

Use either an old wood stove, a metal can with holes poked in it, or a hole in the ground. Build a fire using nice hardwood for fuel. Let this fire burn for 30 minutes to an hour (or longer), so that a good-sized bed of coals accumulates. Transfer some hot coals into your wood stove, metal can or hole in the ground. At that point, add punky wood on top of those coals to create a lot of smoke.

Now, hang your hide and it's cloth extension over those same coals so the smoke is channeled up into it. Allow the smoke to penetrate fully, which can take 30 minutes to 3 hours, then flip your pouch inside out and smoke the membrane sides of your hide. When the smoke penetrates to the outside of the hide, you are done. Congratulations, you've successfully learned how to tan a hide!



A beautiful finished buckskin

December

FIREWOOD MOON



Wild and Woodland Harvest

- Cut and stack firewood for next year
- Make wreaths and baskets out of invasives climbing up trees: honeysuckle, bitter-sweet, and kudzu
- Split/gather kindling
- Coppice autumn olive and willow for basket materials

Annual Garden

- Take a break!
- Eat winter peas, chickweed, and kale out of hoops
- Peruse seed catalogs and/or evaluate saved seed stash

Food Preservation

- Periodically look through stored food; remove (and eat if possible) anything that is beginning to spoil

Other

- Go out of your way to enjoy the company of friends, family, and neighbors
- Make biochar
- Sharpen and repair tools (see “Taking Care of Your Tools, Taking Care of Yourself,” below)



Taking Care of Your Tools, Taking Care of Yourself



Caring for tools of all kinds

Our tools do so much work for us. The right tool for the job, in good working order, can turn hard work into a pleasure. Conversely, using the wrong tool, or one that is out of shape, can turn a simple task into a struggle. Taking time to care for your tools may feel like a luxury in a busy world, but you will be glad you did! Ultimately maintaining your tools will save your time, keep you safe, and bring ease to your work.

How to Sharpen Tools

Everyone knows that it's important to keep knives and axes good and sharp, but many other tools also benefit from, and work better with, a finely honed edge. No matter



what you are sharpening, be sure to clean the blade first. Grinding dirt and grit into metal is never a good idea. It's also a good idea to sharpen tools in an area with good light so that you can see what you are doing.

One great tip for beginner tool-sharpeners is to use a marker to black out all along the edge that you will be honing. You will be able to see how evenly you are working by looking at where the ink is being removed as you sharpen. For blades with beveled edges, you need only sharpen the beveled side. After that, give a few gentle passes to the other side to remove the burr of metal that arises from sharpening. Removing the burr is an important final step even if you are sharpening both sides of a blade.

Learning from a teacher is the best way to gain tool-sharpening skills. This can be one-on-one with a friend, as part of an [earthskills training](#), or as a [permaculture apprentice](#).

Tools for Sharpening Tools

It's handy to have several different sharpening devices (tools to sharpen your tools!) so you can use the appropriate one for each job. A good whetstone is indispensable for straight-bladed cutting tools (knives, hatchets, pruners, loppers, even scissors).



This curved sharpening stone is made for a scythe, but can be used with any medium to large, curved blade

Having a set of three stones (coarse, regular and fine) is even better. Both natural and synthetic stones are available. Small, wallet-sized diamond stones are very convenient and usually affordable.

Curved blades, such as scythes, sickles, gouges, bent knives and hook knives, require special curved stones. The most common curved sharpening tools are long oval-shaped stones made for scythes, and conical diamond stones typically used for smaller blades.

A flat file works well for sharpening hoes, shovels and any other tools used to “cut” soil. Tougher, more crude files can handle the thicker, rougher metal of these tools better than a whetstone. Remember that the teeth on files all go in the same direction. Use force only as you push the file away from your body, then lift it for the return. An angle grinder is



A flat file is a great tool for sharpening garden tools like hoes and shovels



A whetstone is ideal for small to medium sized knives, like kitchen and utility knives

another very quick and effective option for sharpening these kinds of tools. Be careful if you choose this method as it can be easy to remove too much metal, plus it makes sparks!

If you have a chainsaw, keeping it sharp helps prolong its life, makes your life easier and is much safer. Each chain will have an appropriate size round file that can be used to sharpen it.

Keeping Wooden Handles Happy

Tool handles put up with a lot: sun, soil, rain, sweat. They can easily get brittle and splintery if they aren't well maintained. A good protocol for care of wooden tool handles is to clean them well, let them dry completely, then rub them thoroughly with natural linseed oil (without toxic drying agents) or walnut oil. For an extra-durable and smooth-but-grippy outer coat, you can rub beeswax up and down the handle. This is a great use for the nub of a beeswax candle. If splinters already exist, sanding them out before cleaning and oiling is best.

Taking Stock and Buying New Tools

Notice which tools are wearing out and may need to be replaced while you are caring for the tools you have. Also notice if there is a gap in your tool collection. Is there something you don't have that would make your life and work easier? Think about the tasks that you do most often and whether you are physically comfortable doing them. If the answer is no, there is likely a tool that could improve your life.

Good tools can be quite expensive, but they are worth it! It's usually not a great idea to buy tools at big-box stores or any other non-specific type of store. Even large home and garden store chains often have poor quality tools that are made in China. They make better lawn ornaments than actual workhorses. If you can afford new tools that were made in the USA or in Europe, they are the ones to choose. If your budget is tight, you can often find used, high-quality tools by perusing Craigslist, flea markets and garage sales. It just takes patience.

January

COPPICE MOON



Wild and Woodland Harvest

- Coppice mulberries, red maple, locust, and willow
- Cut and stack firewood for next year
- Thin forest where necessary and appropriate, mill logs of appropriate size into lumber

Annual Garden

- Work on garden plan and order/gather seeds



Orcharding

- Prune fruit trees to stimulate growth next year and remove suckers
- Pick up leaves to mulch berries
- Take cuttings of successful elderberries, pot
- Take divisions and pot: hazelnuts, autumn olive, thyme, sage

Other

- Sleep in
- Make maple taps from sumac or order metal ones
- Carve spoons
- Make sassafras, chaga, reishi, wildgingerroot, spicebush berry chai and becozy (see "Chaga Chai Recipe...And a Bit about Chaga," below for a simplified recipe)
- Inventory maple syrup equipment, repair or get more stuff if needed
- Write, read, sing
- Sharpen and repair tools

Chaga Chai Recipe...and a Bit About Chaga



Have you met chaga (*Inonotus obliquus*)? It's a medicinal "mushroom," although technically the part that we use is not a true mushroom. Chaga has been used for health maintenance and healing for millennia. It's an amazing medicine and happens to also have a pleasant taste. We love putting it into spiced winter "chai" tea blends. Check out our recipe below, plus a bit more about this fungal ally.

Where and how does chaga grow?

Chaga grows in the boreal region of the Northern Hemisphere. It's widely found and used in Russia, which is where the name chaga comes from. It's not super abundant there outside of Asheville in NC, but we've found significant harvests as close as West Virginia. Chaga is a parasite, mostly on birch trees, but also on alder, elm, oak, poplar and spruce. The part we harvest looks like a burn scar or burl, as it bursts out of the bark of trees, usually along their trunks. Even though it's technically parasitic, chaga doesn't usually kill or



A chaga sclerotium emerging from the trunk of a birch tree, with Wild Abundance founder and director Natalie Bogwalker, pregnant with her daughter Hazel

substantially harm the trees it grows on. In fact, it's possible that there's a symbiotic relationship between the fungus and its host, but we humans haven't figured that out yet.

If chaga isn't technically a mushroom, what is it?

The part of chaga that we harvest is a fungal storage organ called a sclerotium, also known as a "canker." Simply put, a sclerotium is like a potato, in that it's a place where the fungus stores energy (a potato is also an energy storage system, but for a plant). In the case of chaga, the sclerotium is a crusty, black mass that looks like a chunk of charcoal. Chaga appears black because it's incredibly high in melanin, the same compound that darkens human skin.



Dried, powdered chaga

Medicinal Properties of Chaga

Chaga's medicinal uses include the treatment and prevention of cancer, general immune support, digestive disorders and skin disorders and as an antiviral. It is fabled that in some traditional cultures in Russia, chaga tea was used to bathe newborn babies. Like many other medicinal fungi, chaga is rich in both polysaccharides and triterpenoids. Additionally, it's extremely high in antioxidants. Of note, chaga contains something called betulinic acid, which is unique to this fungus and is currently being studied for its ability to kill human cancer cells.

Chaga Chai Recipe

The flavor of chaga is mild, rich and not even close to as bitter as reishi – another widely known anti-cancer mushroom medicine. Dried, ground chaga powder can easily be added to many herbal teas and even to soup stock...but our favorite way to take it is in this yummy, warming winter spiced “chai.” Note that prolonged high heat can destroy some of the medicinal compounds found in chaga, so it's best to pour hot water over it and let it steep, rather than simmering the sclerotium. During our [Wildcrafting and Medicine Making Class](#) we explore how to make herbal preparations, like this infusion and more.

1 Tbsp	Chaga, chopped or crushed into small crumbles or powdered
1-5	dried Reishi slices, chopped (optional, reishi is a strong, bitter flavor not enjoyed by everyone)
1 Tbsp	Cardamom (decorticated black seeds, not the whole green pods)
3 Tbsp	Cinnamon chips (either use chips or chop up cinnamon sticks; powdered cinnamon will cause the tea to become goeey and mucilaginous)
1/4 tsp	Black Peppercorns
7	Cloves
1	thumb-sized piece of fresh Ginger, chopped
1 Tbsp	roasted dandelion root
1 Tbsp	dried burdock root (or 3 Tbsp fresh)



Simmer all ingredients except for chaga in 1/2 gallon of water for 2-4 hours. Then add chaga at the end, remove from heat and let steep (covered) for 20-30 minutes. Strain and add milk and/or honey if desired.

February

MAPLE MOON



Wild and Woodland Harvest

- Gather, split and stack firewood
- Tap maple trees, make syrup (freezing nights, above freezing days, see “How to Make Maple Syrup,” below)
- Do selective logging projects and firewood gathering on days when ground is frozen in forest
- Scope out living hardwood trees between 4”-6” in diameter to harvest for shiitake/mushroom logs sometime before buds swell (between now and early April)

Annual Garden

- Gather compressed leaves in ditches for garden mulch
- Order amendments and any new equipment/tools you need for the garden



- Fill in squash mounds; plant cover crop on them
- Make garden plan
- Sow onion and celery seeds in flats in heated space (greenhouse, heat-mat, etc) unless you plan to buy starts/sets

Orcharding

- Prune trees

Food Preservation

- Eat pickles, canned peaches, venison backstrap. Enjoy the foods and drinks you have preserved during the growing/harvesting seasons

How to Make Maple Syrup

To make maple syrup, collect sap from sugar maple trees (*Acer saccharum*) and cook it down. To do this, place small tubes (also known as “taps” or “spiles”) into shallow holes in the tree’s trunk; they direct the sap into buckets or other receptacles. After collecting it, place the sap in a large pot and cook off the water, thus concentrating the sugars. The result is sweet, delicious maple syrup.



What Maple Syrup Is Made Of?

Maple syrup is concentrated maple sap. It’s collected in the early springtime by drilling small holes in the living tree to the depth of the xylem. That’s the part of the inner bark that is very much alive and carries nutrients (dissolved in water) from the soil and roots up to the branches, where leaves will grow. Sugar is the main nutrient that both we humans and the tree’s leaves are interested in; it makes syrup sweet and fuels new growth. In addition to sugar, minerals travel up the xylem. These are what give maple syrup its particular “mapley” flavor.

Materials for Making Maple Syrup



- **Mature sugar maple tree** (or other sweet sap-bearing tree, see below for alternate species): The trunk should be at least 12” in diameter. Larger trees can support more than one tap.
- **Cordless drill:** Unless the tree is very close to a power source.
- **Spile (a.k.a. tap):** These can be purchased and are usually made of plastic or metal (we recommend metal over plastic), or you can make your own out of bamboo tops or sumac or elderberry stalks. If you make your own spiles out of natural materials, be sure to carve them

as close to round as possible to prevent leaks.

- **Hammer:** Any kind of hammer will do...you could even use a heavy stone in a pinch.
- **Bucket:** A lightweight container with a handle is ideal.
- **Large pot or trough:** To cook down the sap into maple syrup.

How to Make Maple Syrup in Seven Steps



Note: This is a photo of a black walnut tree being drilled, not a sugar maple. Cailen is one of our permaculture instructors.



Note: This is a photo of a black walnut tree being drilled, not a sugar maple.

- 1.** Select your tree(s), and observe the weather. Maple sap flows when nighttime temperatures are below freezing, and it warms up to above freezing during the day.
- 2.** Drill hole(s) into the maple trees you'll use to make maple syrup. Choose a drill bit that is very slightly smaller than your spile diameter – and very sharp! Drill into the tree 1.5" to 2" deep (about 1" past the rough bark). It's best to make your holes directly below a large branch and/or above a large root.
- 3.** Insert the spile (tap) by gently tapping it in with your hammer.

4. Hang the bucket on the hook that is part of the spile, or on a separate hook if your spile doesn't have one.
5. Gather sap once or twice daily, depending on the size of your bucket and the speed of the sap flow. It's ideal to collect sap in the evening, as it may freeze solid overnight if left out.
6. Cook sap in a large, wide pot or trough to remove water and concentrate sugars. This will take several days and cause a lot of steam. Stir the syrup toward the end as it gets thicker, and lower the heat to prevent burning. Traditionally "sugaring houses" were used for this purpose, so as not to steam up the kitchen and monopolize the stove inside the home.
7. Cool and bottle your syrup. It's ready when it tastes very sweet and heavily coats the back of a spoon. If your syrup isn't cooked down enough, it may mold, whereas if it's cooked down too much, sugar crystals will form as it cools.

When is maple syrup season?

Early spring is the time to make maple syrup. Sap flows when nighttime temperatures are below freezing and daytime temperatures go above freezing. In fact, ideal daytime temperatures for sugar maple sap flow are in the 40s. Other trees, such as sycamores, will still flow well in higher temperatures (up to the 60s). Watch the weather forecast carefully. Maple syrup will have off flavors if it's made from trees that are budding out. Watch the trees, and stop tapping for syrup when buds swell.

Are sugar maples the only trees that will make syrup?

There are several other kinds of trees, along with the sugar maple, that can be tapped



like this to collect sap for syrup. Other species of maple – such as red, silver, black and Norway – will also yield sweet sap. Some examples of other syrup-producing trees are hickory, birch, box elder, sycamore, butternut and walnut. These other species all have a lower percentage of sugar in their sap. Boiling times will be longer and yields smaller than with sugar maples. That's why sugar maples are used to make maple syrup commercially.

Is it worth making maple syrup from just one tree?

Even if you just have one good-sized sugar maple tree, it's totally worth making maple syrup. The average expected yield of sap per tap is 10 to 20 gallons. At about 2% sugar, that means it's reasonable to get more than a quart of maple syrup per tap. A large tree can easily handle 2 to 4 taps. So, tapping just one large sugar maple could provide a whole gallon of maple syrup!

Making maple syrup is a great way to tap into the power and life-force of trees (pun intended). It's also a good excuse to visit the forest each day during the cold time of year, when we are usually cooped-up inside. Children, who tend to love sweets, are usually excited to get involved in the annual ritual of making maple syrup. There's not much sweeter than making (and sharing and enjoying) your own homemade maple syrup.