

Autumn Roots, Barks & Berries: Day-Long Field Workshop



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PLEASE READ: *The information in this handout has not been approved by the FDA and does not in any way intend to diagnose or prescribe. Always consult with your health practitioner before taking any remedy.*

Above this, I also recommend that you...

1. *Research an herb in at least three good sources before ingesting it (see website for sources),*
2. *Listen to your body/intuition to determine if an herb resonates or doesn't resonate with you.*
3. *Take proper steps to ensure that any wildcrafted or cultivated plant is what you think it is, AND*
4. *Check with your pharmacist for herb-drug interactions if you take prescriptions.*

In early Autumn, we greedily harvest edible and medicinal berries, competing with the birds for the harvests. The first frosts sweeten rosehips and autumn olives, but they allow greater opportunity for the birds and rot to have their way. It's a lesson in the push and pull of nature, the same way the season itself is either warm or cold, drenched or crisp, changing daily. You may go out one day and find the berries are, in fact, all gone.

Barks are more accommodating. You can indeed harvest them at any time of year, as long as you know how to identify the plant during all its seasons. Fall is the prime time, though. The sap and energy move freely through the trunks in autumn as the leaves fall away and the trees and shrubs prepare for dormancy. A few lingering leaves aid the budding herbalist in identification, and colors like yellow birch leaves act like spotlights as we scan the horizon for our coveted medicines.

As the cold weather takes hold and beats back the perennials and biennials, their leaves begin to change color and fall away. Sap, energy, vitality, and nutrients are sent down to the plants' roots, and autumn is the also the prime time for harvesting almost any medicinal root (although spring harvests may also be serviceable). Be careful of plants like *Aralia nudicaulis* that quickly disappear in impending winter, leaving the herbalist no trace of above ground plant to guide the digging.

HARVESTING & PROCESSING

Bark

When ~ We typically harvest the bark of a shrub or tree when the leaves are falling off or are absent. Tree bark – especially the inner bark we use medicinally – is the most energetic in spring when the sap is flowing and in fall when the energy of the trees is shifting within the bark from the leaves to the roots. In a pinch, you can harvest small amounts of bark from most plants as needed in summer or winter, but it's not usually the preferred time.

How ~ The inner bark is the part most often used medicinally. This layer is typically green and sometimes aromatic, between the protective outer bark and structural inner wood. If you harvest large limbs of trees, you'll need to remove and discard the outer bark. However, I prefer to harvest twigs and younger branches up to one and a half inches in diameter. The outer bark is young enough that I don't need to worry about separating and removing it. First, prune the twigs and/or branches from a healthy tree or use branches from fresh trees that have recently fallen from natural causes. (Never harvest bark directly from a living tree; this can damage or kill it.) Then use a knife to peel off the bark (both outer

and inner); you can use the inner wood for crafts or toss it into the woods to decompose – this isn't the part we're using. For smaller twigs, you don't need to shave the bark at all. Just chop the twigs up.

Berries

When ~ We usually harvest fruit when it's ripe, which is often in late summer or fall but depends on the specific plant. Most fruits are best harvested at peak ripeness, but some fruits like rosehips and autumn olives are better once frost has sweetened them. Fruit quality can vary from location to location (more or less flavorful, juicy, sweet, bitter, astringent...). For edible raw fruits, taste a few first to ensure a good batch.

How ~ For larger fruits, remove them individually by pinching or twisting and pulling the fruit off of the plant. (Small clusters can be harvested together, stems removed at home.) Avoid piling too many tender fruits in one container, which can bruise and spoil them. Use shallow baskets or cardboard trays to collect and transport fruits. When harvesting small- to medium-sized berries, tie your harvesting bucket around your waist or neck for two-handed picking. With shrubs and small trees, make a "berry hook" (a long rod with a hook on one end – to gently hold the branch down – and a loop of rope tied to the bottom to hold in place with your foot), a trick I learned from foraging expert Sam Thayer. Don't force branches down if they don't bend easily. Unless you're harvesting an invasive plant like autumn olive, mindfully leave some fruit unpicked to help the plant reproduce and feed wildlife. Wash your fruits gently in cold water, drain well, and pat dry. Freeze whole berries in a single layer on a baking sheet for a few hours, then transfer them to a bag. Small berries –elderberries, blueberries, hawthorn, and small rosehips – can be dried whole for tea and snacks. Cranberries and larger fruits dry better if you cut them in half or slices. To make a fruit leather, mash, puree, or run your fruits through a food mill strainer (cooked or uncooked), and dry them on parchment paper or special mats. (For roll-able, chewy leather, you'll need to include high pectin fruit like applesauce or added starch.) Most fruits require higher drying temperatures (130-140°F); a dehydrator with a controllable thermostat is handy. Fruits and berries can be tinctured fresh or dry (same directions for bark), or can cook and mash them with just a little water, pour it all into a jar, then add enough alcohol to maintain at least 25 percent alcohol content.

Roots

When ~ Most medicinal roots are harvested in fall, once the plant has begun to die back. They are sometimes also harvested in the spring before energy returns to the leaves and flowers. If the plant is a biennial, we generally harvest it in the fall of the first year or the spring of the second year—ie: once the plant has some age to it but before it gives all its energy to the second year flower (burdock, yellow dock, etc). Many perennials get stronger roots as time goes on, for example ginseng.

Be mindful, though, of slow-growing native perennial roots since they may be much older than you realize. Perhaps even older than you are! Trilliums have an estimated life span of 70 years, ginseng of 60 years, lady's slipper for 40 years. These plants do not bounce back from harvest. Is that medicine worth losing a plant that old? These native perennials deserve our respect and honor. On the other hand, weedy species—often biennials—like burdock, yellow dock, dandelion, Queen Anne's lace and blackberry roots can generally be harvested without too much concern for harming the species. Some are downright invasive. No one will mind if you hack away at a Japanese knotweed or barberry, and then covet the root for medicine.

How ~ Dig the root up with a garden fork, shovel, or a stick designed to help pull the dirt away from the root to unearth it. Return the soil to good condition, and if you are leaving behind tops, chop them up and spread them out – You want the land to look relatively undisturbed once you're done. Scrub your roots clean under cold water. A potato scrubber works well. Dry thoroughly with a towel, and chop it up into smaller pieces with clippers or a knife to dry or otherwise process into medicine. Some roots are impossible to break up once dry. Roots may need to be dried in a dehydrator or open oven on a low setting.

Extra: Evergreens & Resins

When ~ Evergreens and resins can be harvested at any time of year, and spring is probably the most popular time, when fresh new tips have grown and resin is running. But any time of year will do, so we often make evergreen medicines in fall and winter when our more seasonal herb work has passed.

How ~ Prune off young branches of needles for use as medicine – this is the most primary part of evergreens used. They can be dried (gently, so you don't lose the aromatics) or used fresh. Evergreen bark may also be used (they're generally very high in tannins) for some medicines. Resin can be collected, but be aware that it is the plant's band-aid, so harvest gently. Hard, dried pieces of resin might be broken off. Or if branches are snipped, you may want to collect the resin that drips from them. Be ready for a sticky mess!

Wildcrafting 101: Check out my tips at http://www.wintergreenbotanicals.com/Virtual_Herb_Walk.html

Recommended Books & Guides: http://www.wintergreenbotanicals.com/Recommended_Reading.html
But my favorites are Newcomb's, Peterson's, and Dwelley's for wildflowers and Audubon, Peterson's, and Dwelley's for trees (and shrubs).

SELECTED HEALING PLANTS OF AUTUMN

Elderberries (*Sambucus canadensis*, *S. nigra*)

Elderberry syrup is by far a tastier remedy than echinacea; however, its uses are different. We use elderberry for the first achy, feverish signs of the flu. It can also be used for a cold. In order for a virus to truly wreck havoc on your body, it needs to get into your cells to replicate. Elderberry makes the outside of your cells more resistant to viral replication. Elder flowers can also send a flu virus packing by spiking the fever response. Fevers fight viruses because as your body warms, iron becomes less available in the bloodstream. Viruses need iron, so this lack of iron helps kill the virus. Use: Elderberry is most effective as a syrup. It can also be taken in a liquid extract, liquid capsule, capsule, tea, lozenge, dried berry, or jam. Take as directed on the label. Elder flowers are often combined with other herbs like yarrow and peppermint to make you sweat (diaphoretic) and spike a fever. Use caution in any fever over 102 degrees. Gypsy Cold Care tea by Traditional Medicinals is an excellent diaphoretic tea for those who don't want to do their own blending. Cautions: All parts of the elder plant have mild cyanide-like compounds. Cooking (berries) or drying (berries or flowers) is necessary to avoid poisoning.

Cultivation & Harvesting: Harvest flowers in the spring/summer at their peak, berries in the fall when they are deep blue. You can cultivate elder shrubs/trees in a moist, sunny area. Elder grows wild in our area—usually in poison ivy patches on roadsides and the edges of swamps. Make sure that you have correctly identified your elderberry plant as *Sambucus canadensis* before harvesting. Red elderberry is considered toxic, but it is easy to differentiate.

Black Birch (*Betula lenta*) & Yellow Birch (*B. alleghaniensis*)

Although there are many birches and birch-relatives in the forest, these are the only two trees I know if that pass the "scratch & sniff" test: they both smell like wintergreen, with black (aka sweet) birch being stronger in scent and activity. The bark of yellow birch is shiny and peels on older trees whereas black birch is rough, and younger black birch stems are technically darker, but I have a notoriously difficult time differentiating the two species in their younger years. No matter; they can be used similarly for a nice cup of tea. If I'm seeking to make stronger medicinal remedies, I take care to really key out and get the more potent and delicious black birch. The sap of both trees can be tapped like maple to boil down a wintergreen-y syrup. Use: British herbalist Julie Bruton-Seal extols the virtue of birch sap as a gentle cleansing tonic for spring. The aspirin-like compound methyl salicylate is responsible for the wintergreen scent and flavor of these birches. As such, birch tea and tincture can be used as a mild aspirin substitute for pain and fevers. I enjoy combining it with white pine or hemlock tree needles and peppermint as a

brisk winter tea, and I really enjoyed a birch-ginger kombucha made by Darcey Blue French. Birch essential oil may be diluted and applied topically for pain, but take care not to overdo it (see cautions). Bruton-Seal also harvests the late spring/early summer birch leaves for use in tea (spring detoxification, kidney and urinary support, gout, arthritis, and skin issues) and oil (cellulite, detox massage, aches and pains, skin issues). Michael Moore used the fresh leaves in tea for irritated bronchial mucosa in winter (similar to cherry bark) and “lung grunge.” David Winston talks of the Cherokee use of birch in ritual baths to cleanse warriors coming home from war as they adapted back to normal society. The flower essence is used to bring sweetness and graciousness back into your life so that you can give freely of yourself again. **Caution:** Use caution with birch if you’re allergic to aspirin; you could also be allergic to methyl salicylate. Both wintergreen and birch essential oils are among the most toxic essential oils due to concentrated methyl salicylate. I enjoy birch bark as an occasional tea with comfort, but if I’m using it regularly in a pain formula, I keep it to 5-15% of the total formula to be safe. If you’re using the essential oil topically, be sure to dilute it well and use sparingly. I wouldn’t use it with children, pregnant women, or anyone with kidney weakness. The leaves are far less concentrated and unlikely to pose these problems. Note: The evergreen **Wintergreen Leaves (*Gaultheria procumbens*)** can also be harvested and have similar use as Black Birch, though perhaps a slightly higher risk of toxicity in high amounts or long term use.

Evergreens Needles:

White Pine (*Pinus strobes*), Hemlock Tree (*Tsuga canadensis*) & Spruce (*Picea*)

White pine is our predominant pine and evergreen in Central/Southern New Hampshire, in part because it is well adapted to (and amplifies) our acidic soil. It has long horsetail-like needles that grow on the branches in bundles of five. Its species name “strokes” is an ancient name for an incense-bearing tree, most likely for the aromatic resin that exudes out of injuries to protect the tree. Straight white pines are important for lumber and exceptional pines were once marked as “King’s Pines” for British Navy floorboards. On younger trees, each whorl of branches signifies one year of growth. It can be used somewhat interchangeably with the also common hemlock tree needles (which is NOT the same as the incredibly toxic parsley family wildflowers known as poison hemlock and water hemlock), as well as balsam fir (*Abies balsamea*), and certain species of spruce. **Medicinal Activity of the Needles:** Young bright green needles are a good source of vitamins C and A, and they make a tasty infused tea for camping trips and bonfires. The needle tea has value for lung congestion. The needles are slightly antiseptic but also quite astringent from the tannins. These tannins are also useful for diarrhea and any weepy membrane condition. The tea has a mild diuretic and expectorant action as well. Needles can be harvested year-round but the best needles are the bright new growth in late spring. To make a tea steep a handful of pine needles in 1 pint of near-boiling water, covered, for 15 to 30 minutes, strain and drink. Young pine needle growth can be collected, chopped roughly, and simmered in honey to make an aromatic cough syrup. (See directions in Balsam Fir, below.) **Medicinal Activity of the Pitch & Essential Oil:** Warmed pine resin can be placed on a splinter, boil, sore, or insect bite to help draw out the irritant. It increases circulation locally (which may cause a productive throbbing) and acts as an antiseptic. Soaked into a warm cloth, it can be placed on sore joints and muscles to relieve pain, or to the chest for pneumonia. A few drops of essential oil added to a bath or inhaled as a steam is similarly useful and convenient. Collect the sap from freshly broken twigs and limbs and store in a glass container that can be gently warmed once the sap has formed a thick, sticky, dry resin. This resin can also be placed on smoldering charcoal for incense. The fresh woody smoke is believed to clear negative energy from an area. **Cautions:** Although pine contains similar aromatics and healing properties as the other aromatic evergreens (fir, hemlock, spruce), it is more irritating to the kidneys and digestive system, making it less useful, says Michael Moore. Turn to the other trees if you are using the remedies regularly or have any kind of kidney inflammation. Also note that not ALL evergreens are used similarly. Juniper and thuja have somewhat different actions, thuja is slightly toxic, and yew is more toxic.

Dandelion leaf & root (*Taraxacum officinalis*)

Both parts of this plant have bitter flavors and slight detoxification actions, which lend themselves to digestion and liver blends. Bitter teas and foods stimulate digestion by encouraging more digestive juice production: saliva, stomach acid, enzymes, bile production, and bile excretion. They indirectly stimulate peristalsis and, thus, can be moderately helpful for constipation (indirect laxative). Both parts of the plant are also diuretic, though in different ways. This happy, persistent weed is one of our first edible greens to poke through post-winter dirt. **Use:** Spring and early summer **leaves** are bitter but delicious (more so than in fall) and make a nice addition to spring salads, stir fries, sautés, soups, and vegetable juices. Strong flavors like garlic, toasted sesame oil, lemon juice, and fresh orange juice stand up to the bitterness of the greens to create great-tasting dishes. Dandelion leaf is one of our best natural volume diuretics, meaning it makes you pee more. It is also high in potassium, important when on any diuretic because increased urination leaches potassium from the body. It is used solo or in formulas for high blood pressure, edema, and to stimulate liver and kidney detoxification. Dandelion leaf is rich in other minerals, like calcium and magnesium, which makes it a nutrient-rich choice for food and tea. It combines well with nettles, alfalfa, peppermint, spearmint, and red clover in tea—you may not want to use a lot of dandelion, though, due to its bitter flavor. Dandelion **root** is high in inulin, a type of fiber common in daisy-family plants. The root can be eaten but is usually just used in tea, providing a pleasant bitter, chocolate-y flavor to tea. It is most nutritious dried raw, but many people like to gently roast the dried chopped root. The resulting tea is similar to coffee in color and flavor. It is drunk for pleasure, to regulate blood pressure, blood sugar, liver health, edema, and arthritis and blends well with burdock, chicory root, and possibly also cinnamon bark. It may moderately reduce cholesterol by stimulating bile. It is a mild digestive stimulant and mild laxative. My teacher Michael Moore said that the inulin in dandelion, burdock, and chicory root is particularly helpful as a sodium-leeching diuretic (whereas the leaves are a volume diuretic). It appears to do this by inhibiting sodium reabsorption in the kidneys. He says that other inulin-rich roots do not work the same. Michael also used a slurry tincture (1 oz chopped fresh root in 2 oz 50-95% alcohol, blended further in the blender, left unstrained) by the spoonful for allergies. The root is strongest when harvested in autumn, after a few frosts. (Inulin levels in the root go from 2% in spring to 40% in the fall.) However, you can harvest it at any time if you are impatient. Our winter freeze increases the medicinal properties of dandelion root. In my southwestern herb class, our final field trip brought us to 10,000 feet to harvest winter-frozen dandelion. (I left them to my warm-climate classmates and headed home to NH that day.) The **flowers** are surprisingly sweet and not bitter. You can use them in cooking, baked goods, fry in tempura, or infuse them in olive oil (to use topically for muscle pain and acne, reportedly). **Cautions:** Dandelion is contraindicated in gallbladder disease, bile duct inflammation, acute GI inflammation, and intestinal blockage.

Yellow Dock (*Rumex crispus*, *R. obtusifolius*)

This is another common weed. You'll find it in yards, along roads, and in abandoned fields. The biennial produces curly leaves similar to horseradish (broad dock, a potential substitute, has wider leaves like burdock). In its second year, it puts up seedy flowers that turn to rust as summer goes on – this will help you find stands and can also serve as a reminder for its iron-rich purposes. The root will have a yellow hue. **Use:** This bitter, yellow root is a digestion and bowel stimulant. It has both laxative and binding properties, and is often recommended as a gentler laxative than senna or cascara. Herbalists also use it for the liver, including improved fat absorption, chronic skin conditions like acne, and liver congestion. It has a modest amount of iron and also may improve the release of stored iron from the tissues into the bloodstream. While you could drink it in tea (1 tsp per cup hot water, simmered, or in a blend), it's rather nasty tasting. Most people prefer liquid extract (tincture) or pill. Vinegar and syrups may be better for the iron-rich uses. It blends well with blackstrap molasses to improve the flavor and increase the iron/nutrient content. **Cautions:** High doses can cause rebound constipation due to the herb's tannin content. It is rich

in oxalates; do not use if you have a history of oxalate kidney stones unless under the guidance of a practitioner.

Wild Black Cherry (*Prunus serotina*) & Chokecherry (*P. virginiana*)

What wild cherries lack in perfectly plump fruit they make up for in medicinal amaretto-like bark. Wild (aka black) cherry forms the backbone of many a cough syrup and was probably the origin for cherry-flavored cough drops. Chokecherry offers an abundant substitute for the backyard herbalist. They both enjoy disturbed, open ecosystems and can be found along roadsides, yards, and abandoned lots. The bloom early in spring (following the pin-cherry), first the low-growing, egg-leafed chokecherries and then the taller, narrow-leafed (with fuzzy midveins) black cherries, both with clusters of white flowers hanging down like gooseneck blossoms. They are weak trees that attract a variety of diseases and hosts, particularly tent caterpillars and black knot, which can help you identify a stand. In fall you might also be lucky enough to find drooping clusters of fruit on your wild cherries (darker blue/black for black cherries, reddish for chokecherries). These vary in edibility as they are a bit astringent and tart, but they were an important food crop for Native Americans and are a fall favorite for bears. Of course, opt for healthy-looking branches to harvest, which are generally the younger plants. If you're harvesting in another season, opt to harvest after the plant has flowered. I recommend the "scratch & sniff" test as part of your identification: the scratched cherry bark smells like tobacco and amaretto. **Use:** Cherry bark is famous for coughs. It helps calm an irritated cough reflex and is best for those annoying, incessant, unproductive coughs. (Opt for horehound in wet, productive coughs.) It nicely quells various respiratory spasms and irritations, lending a hand for folks who live with excess wood smoke and hypersensitive lungs. I like to combine wild cherry bark with another cough remedy: honey. I generally make the tincture of freshly dried cherry bark and then bottle it half and half with honey. Reportedly, cherry bark loses potency once cooked. Freshly made cherry bark tincture (from recently dried bark) tastes divine. (I'm less impressed with that made from store-bought cherry bark, which tends to be less flavorful and more astringent, perhaps because it's older and coming from aged trees.) It blends well with other lung herbs like mullein leaf, elecampane root, and yerba santa leaf. Although I haven't used it in its way, cherry bark was used by the Eclectics as a mild cardiovascular sedative for palpitations and the like. Different cherry species yield different flower essences, but a common theme is illumination, clarity, and calm. **Caution:** Cherry trees (especially pits and bark) contain small amounts of cyanide-related compounds. These are most problematic in bark/twigs consumed in their wilted state (ie: by livestock) and potentially problematic in extracts made from the pits. It's a rare but potential risk for people; however, I was taught to harvest bark after the trees flower and to thoroughly dry the bark before further processing it as medicine to eliminate any concerns. Note: Black and chokecherries are the primary medicinal wild cherries. Pin cherry grow around here, too, and are not the primary medicinal species used, though some Native Americans have used it.

"Bitter Berberines":

Goldenseal (*Hydrastis canadensis*), Goldthread (*Coptis*), & Barberry (*Berberis*)

These herbs come from different plant families but have a common primary constituent: berberine. This bright yellow alkaloid concentrates in the roots and has potent antimicrobial and astringent properties. It is the basis for goldenseal's claim to fame as an herbal antibiotic (along with goldenseal's similar constituent, hydrastine, but this is controversial). **Use:** All the herbs are used for boggy, inflamed membranes and bacterial, fungal, and protozoa infections. Small doses are used to stimulate and tonify tissues, especially in the GI. High doses are used for infection, internally and topically. In the case of allergies, these herbs help to dry up weepy eyes and nasal passages. They may help with fungal and bacterial infections behind sinusitis. They can also be added to a neti pot wash for allergies and sinusitis, or as an eye wash for conjunctivitis. Really, berberine is not a systemic antibiotic but instead is antimicrobial on contact. This includes use in the nasal passages (neti or nasal spray), eyes (eye wash), skin (topical wash or infused oil), and most famously for the digestive tract (tea, tincture, or capsule).

When taken internally, it also has bitter, alterative, and digestion-enhancing effects, as well as almost immediate drying, almost anti-histamine like effects. Most commonly taken as capsules or tincture. Tea is possible but will taste disgusting. Berberine is BITTER, stains yellow, and is hard to disguise. A squirt of glycerine or regular tincture can be put into a neti pot. Choose organic when buying goldenseal or cultivate your own because it is an ecologically threatened plant. Our local *Coptis*, goldthread, is also at risk of being over harvested; but Chinese *Coptis* is a larger, cultivated plant from Asia. Oregon grape (*Mahonia*) and barberry (*Berberis*) are less threatened sources of berberine. Barberry is the only invasive one of the bunch, growing in thorny dense thickets with small, oval berries apparent in fall and winter, small creamy white flowers in spring. The berries are popular amongst birds, who have done well to spread this out-of-control landscape plant. It is just becoming problematic in New Hampshire but is rampant in areas of Massachusetts. Don't feel bad digging up this plant, but please do not plant it in your yard. Watch for and remove spring seedlings, which have a unique heart/spade-shaped leaf and yellow root. For all of these plants, the roots are the primary part used but leaves and stems hold similar, albeit weaker, properties. Leaves will extract better in oil than roots. **Cautions:** These plants may lower blood sugar and blood pressure, particularly in high doses. Do not use berberine-rich plants while pregnancy or nursing. Long-term use of berberine is controversial due to its antibacterial effect. For ecological/ethical reasons, use only organic cultivated goldenseal (which when properly priced can cost \$100-300/lb) or seek out invasive stands of barberry. Goldenseal is the preferred berberine plant for allergy and immune complaints, but the others are worth using as substitutes.

Echinacea Root (Echinacea angustifolia, E. purpurea, and other species)

Deciding what to take—and when—can be tricky. Take echinacea, for example. This humble little coneflower was the first to burst onto the herbal medicine scene over the past decade, and for many people it was the “gateway herb” to more natural remedies. Many people just took it all winter long in small doses to ward off colds, some people just took it when they felt the tickle of a cold, while others waited until the worst stages of a cold or flu to go and buy it. And it seemed to work, more or less. During the past five years, there has been a movement in the media and medical literature to prove that herbs *don't* work. (Some of these studies were actually funded by pharmaceutical companies.) We're also hearing more about the dangers of taking herbs. All the information is useful, but confusing and misleading. (Let's keep in mind here that more than 100 thousand people a year die from correctly prescribed pharmaceutical drugs each year.) In the case of echinacea, different types of preparations from different species of echinacea have been used. In a slew of studies from Europe, it was discovered that most of the echinacea used in research was probably adulterated with a completely different herb. Some of the research was on injections of fresh echinacea juice—not a form many of us are likely to try. Other studies used too small of a dose, and still others used placebos like alfalfa that have moderate immune properties of their own. It boils down to the following: **Use:** Echinacea is most effective taken at the first sign of the cold, in high doses, frequently, until the cold has passed. Herbalists have long used echinacea this way with success. Echinacea is less useful once a cold has become full-blown, although it does help move lymph along. The herb should not be used daily throughout the cold season; it just doesn't work. At the first sign of a cold, take 1/2 to 1 teaspoon of the fresh root or root/herb tincture every 30 to 60 minutes for a few days until the cold has passed. Dried echinacea (tea, powder capsules) is less effective than fresh echinacea (fresh tincture, liquid herb capsules), though they still have some value. *Echinacea angustifolia* root is the strongest species and part of the plant; however, the leaves, buds, seeds, and flowers of *E. angustifolia* and *E. purpurea* are also useful. (*E. purpurea* is weaker but more easily grown and available.) Echinacea's use goes beyond that as a cold herb. It is also a fantastic lymph-moving herb and perhaps also a liver stimulant, earning it a reputation as an alterative, blood cleanser, and skin herb, as well as a useful plant to “mop up” the after effects of a bad infection – any battle results in some dead bodies left on the battle field and some general extraneous chaos, in this case your lymphatic system is a primary battle field. **Tip:** Get more out of your echinacea—and improve its flavor—by squirting the echinacea tincture into ginger tea or honey. Ginger is also helpful during colds, warms the body, and

improves circulation. **Ethics:** *E. angustifolia* is hard to grow and has become threatened in the wild due to over harvesting and habitat destruction. *E. pallida* is also difficult to grow. Opt for organically cultivated *E. angustifolia* and/or *E. purpurea*, or common garden coneflower.

Cautions: Use caution with echinacea if you have an autoimmune disease like lupus, rheumatoid arthritis, or multiple sclerosis. Some people experience a flare-up when taking echinacea because it appears to increase similar immune system response. Use caution with echinacea in pregnancy. Clinical pregnancy studies are rarely done on herbs because no one wants to mess with unborn children. One well-designed study was done that found no increased birth defects in infants whose mothers took echinacea during pregnancy. However, there was a very slight increase in miscarriages in the echinacea group. Echinacea may reduce the effectiveness of pharmaceutical drugs. **Cultivation & Harvesting:** Harvest flowers and buds at their prime in the summer, roots that are four years old in the fall. As mentioned, *E. purpurea* is the easiest to grow and the showiest, although green thumbs may have luck with the more medicinal *E. angustifolia*.

Rosehips (*Rosa* spp)

Rosehips are a delight of autumn, decorating the landscape with beautiful red berries that supply high doses of vitamin C and bioflavonoids that help support our immune health, connective tissue, and nutrient absorption. Any wild or old variety of rose with “good hips” can be used, but the most famous are dog rose (*Rosa canina*), seaside rose (*Rosa rugosa*), and cinnamon rose (*Rosa majalis*) which produce abundant, tasty hips. I also invite you to play around with invasive and tiny yet sweet and abundant multiflora (*Rosa multiflora*) hips, just take care not to compost the seeds or otherwise reintroduce it to the wild. **Use:** In tea, they blend nicely with hibiscus and other red and fruity herbs. Combining it with other nutrient powerhouses like nettles (minerals) and calendula (carotenoids) result in a very vitamin-y scented and flavored tea. Consider making jams and jellies, syrups, cordials, and other fun herbal foods with rosehips. Some hips taste better than others and will generally be sweeter once kissed by frost. Pressed rosehip seed oil is an antioxidant-rich beauty ingredient but probably too difficult to make at home. Of course, the rose petals are also lovely in tea and as an astringent remedy for boggy tissues, aging skin, bleeding, and diarrhea. Different types of roses (of which there are hundreds!) yield different flower essences. A common theme is taking time out of an overly busy life to enjoy and “stop and smell the roses.” **Cautions:** Roses are amazingly safe and basically a food. That said, don’t use sprayed roses. The hairs inside the hips can irritate the throat: remove before drying, dry whole, and/or strain well to avoid it.

Extras...

Immune:

- **Astragalus Root** (*Astragalus membranaceus*): This is a great long-term immune tonic for autoimmune disease and any time you want to prevent infection. It’s not recommended in an acute infection. Wait for four years before harvesting the root. It’s great in tea and soups as well as tinctures, capsules, etc., and it blends well with medicinal mushrooms, adaptogens, and spices.
CULTIVATED
- **Mullein Leaves & Root** (*Verbascum thapsus*): All parts of mullein (a biennial) hold value, and in autumn you can still find happy leaves from first year plants. Be sure that you do not have lamb’s ear, comfrey, or foxglove leaves, which can bear some resemblance (foxglove being deadly!). The leaf is wonderful for dry, irritated lungs and coughs, impending respiratory infections, etc., and it blends well with elecampane, cherry bark, and other lung remedies. The root is a lesser-known remedy but can be harvested (leafy first year plants). I do not have personal experience with the root yet, but it has a reputation for toning bladder tissue, healing Bells Palsy, and moistening and lubricating the joints. More details at <http://www.herbcraft.org/mullein.html> WILD or CULTIVATED
- **Elecampane Root** (*Inula helenium*): Balsam-ous expectorant for many lung concerns and digestion
CULTIVATED

- **Garlic & Onions Bulbs** (*Allium* spp): Pungent antimicrobial roots for the immune system and cardiovascular tonics CULTIVATED or Sensitive WILD
- **Horseradish Root** (*Armoracia rusticana*): Pungent antimicrobial and circulatory stimulant for digestion and sinus drainage CULTIVATED/Somewhat Invasive
- **False Solomon's Seal Root** (*Smilacina racemosa*), Astringent, respiratory and digestion relaxer for coughs and other troubles. WILD/Sensitive
- **Ginsengs** (*Panax* spp), at risk & **some Aralia** spp: All-body tonic for energy and other body systems. WILD/Sensitive & CULTIVATED/Difficult to Grow

Liver:

- **Burdock Root** (*Arctium lappa. A. minor*), like dandelion, stimulates detoxification to help the liver, lymph, and kidneys cleanse the body, blood, and skin. Also diuretic, which helps with water retention and possibly also high blood pressure and kidney issues. Burdock has a sweeter, more pleasant flavor than dandelion and more of an affinity for moving lymph. It is a nice tonic and food herb; you may even find it fresh in natural food stores (as burdock) and Asian markets (gobo) in the produce aisle. WILD
- **Chicory Root** (*Cichorium intybus*): Similar to but weaker than dandelion & burdock. Roasted and used as a coffee substitute. WILD/Somewhat Invasive
- **Blackberry Root** (*Rubrus* spp): Astringent for diarrhea and in formula chronic, weepy/boggy GI issues. WILD

Pain, Relaxation & Connective Tissue

- **Japanese Knotweed Root** (*Polygonum cuspidatum*) This “new” herb, may be helpful for Lyme, acting as an anti-inflammatory and immune modulator. It's very high in the antioxidant resveratrol. WILD/Invasive
- **Solomon's Seal Root** (*Polygonatum multiflorum*), Helpful for muscular-skeletal problems with ligaments, tendons, muscle injury, etc. WILD or CULTIVATED/Sensitive
- **Valerian Root** (*Valeriana officinalis*): Aromatic sedative for sleep, CNS sedation, skeletal muscle relaxation CULTIVATED/Somewhat Invasive
- **Cramp & Viburnum Bark** (*Viburnum opulus*) & *Viburnum* spp: Smooth muscle relaxer for uterine muscles, cramps. Spring or fall. WILD or CULTIVATED

Skin & Gut

- **Comfrey Root** (*Symphytum officinale, S x uplandicum*): This controversial but easy-to-grow garden plant is slimy, soothing, and promotes rapid healing of tissue and bones when applied internally or externally. Unfortunately, it can be over-eager in its healing – it doesn't fight infection and could seal one in, it may encourage proud flesh scars, and you would want to be sure a bone was set properly before taking comfrey. But, the greatest controversy lies in the toxic pyrrolizidine alkaloids (PAs) that can be present in all speices and parts of comfrey. In general, there will be more pesky PAs as you go from old leaves to young leaves to roots, and these PAs pose a rare but real risk of cumulative liver damage. I would not use roots internally ever, but they are a valuable topical remedy. The healing allantoin is best extracted with heat and water, but you can use a decoction tincture method to capture it in a preserved form to use directly on the skin or mix into creams and liniments. CULTIVATED/Somewhat Invasive
- **Marshmallow Root** (*Althea officinalis*): Think of this mucilaginous (slimy) root for soothing mucus membranes and irritated tissue anywhere inside or outside of the body, especially the GI tract, skin, and throat. CULTIVATED or WILD
- **Witch Hazel Bark** (*Hamamelis virginiana*): This astringent bark is most often used topically to tighten and tone tissue, fight infection, and soothe irritation. Common uses include bug bites, acne, cellulite, hemorrhoids, varicose veins, and cuts and scrapes. You can use it as a tea (to make a bath,

soak, or compress), topical tincture (just 25-50% alcohol), or try making your own distilled witch hazel extract. Use the infused oil, tincture, and/or shelf-stable distilled witch hazel to make a cream..
WILD

- **White Oak Bark** (*Quercus alba*): Strong astringent for topical use and acute internal conditions. Spring/fall. Other oaks may be substituted. WILD
- **Alder Bark** (*Alnus spp*): Kiva Rose has a lovely monograph on alder on her website. It increases circulation and bloodflow while tightening, toning, and healing tissues. It has application with gut damage, immune infections, toothache, and more. WILD More at www.animacenter.org/alder.html

Urinary

- **Joe Pye Weed/Gravel Root** (*Eupatorium purpureum & maculatum*): Traditionally used for cystitis & UT/prostate irritability, subacute calcium/oxalate urinary gravel (with caution since it may not work!) WILD

Antioxidant Berries

- **Blueberries** (*Vaccinium spp*): The benefits of the well-researched European bilberry transfer easily to our American blueberry species. Besides being delicious, the berries strengthen capillaries and blood vessels (supporting eye health, vision, varicose veins, hemorrhoids, etc.), fight urinary tract infections, keep the brain sharp, and can help normalize blood sugar. Freezing or cooking the berries amplifies the pigments' bioavailability. Eating the fresh fruit normalizes bowel movements for some. Try it as a food, fruit leather, tea ingredient, juice, syrup, or cordial. WILD or CULTIVATED
- **Hawthorn Berries** (*Crataegus spp*): The berries (as well as spring-harvested leaves, flowers, and twigs) of this common shrub strengthen and tonify the heart in almost every way imaginable. It should be taken in significant doses, regularly, for a long period of time. It strengthens the heart muscle, relaxes and strengthens blood vessels, relieves palpitations and angina, improves circulation, and may even repair damage caused by heart disease and congestive heart failure. It's generally safe but may increase the effects of digoxin and blood pressure medications. Try it as a tincture, cordial, tea, fruit leather, syrup, powder, and in food. WILD or CULTIVATED
- **Autumn Olive Berries** (*Elaeagnus umbellata*): I expect these plentiful gold-flecked red berries and will soon reach "superfruit" status. They're tart, slightly sweet, and astringent, resembling raspberries and pomegranate in flavor. Some trees are sweeter, and the flavor improves after a frost or two. The berries are four to 17 higher in the antioxidant lycopene compared to both cooked and raw tomatoes, holding promise for preventing prostate cancer. Eat them raw, as fruit leather, juiced, tinctured, or processed into a tasty cordial. Don't plant this invasive shrub. If you live east of the Mississippi, look for a stand already growing on the edges of quiet back roads, fields, and neighborhoods.
WILD/Invasive

"At risk" & "to watch" plants to be mindful of: Goldenseal, black cohosh, trillium, lady's slipper, ginseng, spikenard, bloodroot, blue cohosh, wild echinacea (not *purpurea*), gentian, goldthread, mayapple, stone root, partridgeberry... For more, visit www.unitedplantsavers.org. Cultivation, www.newfs.org.

Basic Herbal Medicine Techniques

Drying & Storing Your Herbs

It is generally not necessary to clean leaves and flowers before drying—simply pick off icky parts. (If necessary wash gently in cold water, put through the salad spinner, and towel/air dry.) Roots should be scrubbed with a potato scrubber. They may be chopped for better

drying. On warm, sunny days, loosely place the herb in a brown paper bag, fold shut, and leave in the car for 1 or more days until dry (check daily). Keep in mind that it will be more difficult and will take longer to dry herbs this way in fall. A dehydrator may work better or hanging herbs near the woodstove (or someplace warm and

dry). Roots and berries may dry better in a dehydrator or on a cookie sheet in the oven on the lowest setting. Store dried herbs in glass in a cool, dark, dry place. Leaves and flowers should last at least 6 to 12 months. Berries, barks, and especially roots may last up to a couple years.

Herbal Teas: Infusion (Steep) for Leaves, Flowers & Berries

The infusion method is best for delicate parts of a plant, leaves and flowers. When you make tea from a teabag, you're making an infusion. Use 1 tsp to 1 Tbsp of dried herb per cup of water. Cover and let steep for 5-20 minutes, strain, and drink. Larger amounts of herb and longer steeping times make stronger tasting teas, less herb and time makes a lighter tea.

Herbal Teas: Decoction (Simmer) for Barks, Roots & Berries

The decoction method is best for harder parts of herbs, roots, bark and seeds. These parts of the plant often make a week tea if only allowed to infuse; simmering/decocting gets their properties out faster. Use 1 tsp to 1 Tbsp of dried herb per cup of water. Simmer for 5 to 20 minutes, strain, and drink. Larger amounts of herb and longer steeping times make stronger tasting teas, less herb and time makes a lighter tea.

Herbal Honey – Hot Process

Chop up your fresh or dry herb. If the herb is very juicy, you may want to wilt the herb in a hot location (out of direct sun) for a day. Per 1/2 cup of chopped herb (volume), add 2 cups of honey (volume). Bring to a gentle boil, shut off, and let cool. Repeat at least once and up to 3 times each day for 3 days. After the last heating, pour the warm mixture through a strainer and into jars. This works well for tasty and aromatic herbs, such as lemon balm, anise hyssop or mint, as well as those used as expectorants or cough/cold remedies such as bee balm, thyme, ginger, fresh spring pine branches. Should be shelf stable for up to one year. Watery honeys will go bad more quickly.

Herbal Honey – Cold Process

Loosely pack your jar with chopped fresh or dry herb. Cover with honey. Let sit for about one month, and strain. You may want to warm it

slightly before straining. Push the herb against the strainer with a spoon to remove as much honey as possible. Should keep for about one year on the shelf. Watery honeys will go bad more quickly.

Fresh Herb Tincture (1:2, 40-50 or 95% alc)

Chop up fresh herbs or roots, and stuff them in a mason jar until you can't fit any more. Fill the jar to the brim with whole grain alcohol or high proof vodka or brandy. A day later, top the jar off again. Leave the jar in a dark place for one month or more. Strain it out with a fine mesh strainer and muslin or cheesecloth to squeeze out the last bit. Most herbs do well with a fresh tincture: lemon balm, echinacea, valerian... Should keep for up to 10 years on the shelf.

Dry Herb Tincture (1:5, 40-50% alcohol)

Powder your herb in a food processor if it isn't already in powder form. Per 1 oz (weight on a kitchen scale) of herb, add 5 ounces of 80 or 100 proof vodka or brandy. (Do NOT use whole grain alcohol unless you dilute it with distilled water.) Combine your ingredients in a mason jar and shake your mixture as often as possible, aiming for 2xs/day. Let sit a month or more, then strain the mixture with cheesecloth, then again through a coffee filter-lined strainer. This is most often used for herbs that are primarily available dry: cinnamon, chocolate, Chinese herbs. Cherry bark should only be used dry (semi-toxic fresh). Should keep for up to 10 years on the shelf.

Decoction Tincture Method

This is a variation on a dry tincture. Some herbs, especially roots, extract better with heat (ginseng family), others do better with more water ("slimers" like comfrey root – for topical use - and high polysaccharide herbs and mushrooms). Simmer your roots for 1-3 hours in a little water. When done, pour the hot mixture into a mason jar and add alcohol, cap, and let sit (macerate) for at least 1 month, shaking daily (once it has cooled). Ultimately you'll want at least 30% alcohol to prevent your formula from growing mold and bacteria. Keep this in your measurements. For example, per 1 ounce herb (weight), simmer in 3 ounces of water, then add 2 ounces of whole grain alcohol. Or, per 1 ounce

herb (weight), simmer in 1 ounces of water, then add 4 ounces of high proof vodka. Should keep for up to 10 years on the shelf.

Herbal Vinegar (alcohol-free)

Use about the same basic technique as a fresh or dry tincture, but use vinegar instead. Plastic cap! Vinegar eats metal. Should keep for up to 2 years on the shelf.

Herbal Cordial

First you'll generally need to make simple syrup (simmer 2 cups sugar with 1 cup water until dissolved), but you can also substitute maple syrup or honey. Loosely fill your jar with fresh plant and/or fruit – or fill 1/3 to 1/2 way if using dry material. Cover with equal parts sweetener and really good quality vodka. Shake and taste daily. Strain when it tastes good, which could be just a few days or a month or more.

Combo Methods

Feel free to combine half honey with half another solvent like vinegar or alcohol. The method would be the same as a cold process honey, vinegar, or tincture (keeping in mind the plastic cap if using vinegar). Oxymels (vinegar and honey) make a nice tonic, and combining alcohol and honey is like crossing a syrup, elixir, and cordial.

Darcey Blue French's Elder Syrup Recipe

This recipe comes from fellow herbalist Darcey Blue French from Brighid's Well Herbs in Maine (www.brighidswellherbs.com). Many elder syrup recipes call for cooking fresh berries, but this handy recipe uses dry berries (easily available in commerce). Darcey feels that heating the berries for a long time weakens the potency of elderberry. It's a 1:2 infusion of herbs preserved with honey and alcohol. You can take 1-3 tsp per day all season long, or 1/2 tsp hourly in acute illness. Note: I've adapted the original recipe by using the a larger amount of 100 proof vodka to make it shelf stable (for less alcohol, use regular vodka or brandy, half the amount called for here, and store it in the fridge) and cutting it down by 1/4 to make 8 oz total. You could also substitute sugar (a better preservative) for the honey, same proportion.

- 1/4 cup dried elderberries
 - 2 tbs dried elderflowers
 - 2 tsp ginger chips (or grated fresh ginger)
 - 1 tsp cinnamon chips
 - 4 oz boiling water
 - 2 oz 100 proof vodka*
 - 1/4 to 1/2 lemon, juiced
 - ~4 oz raw honey or sugar
1. Mix all the dried herbs together in a jar.
 2. Pour boiling water over the herbs, add the alcohol.
 3. Cap and let infuse 8 hours or overnight.
 4. In a muslin, jelly bag, or cheesecloth strain the herbs from the liquid. Squeeze gently to get as much fluid from the herbs as possible.
 5. Add the lemon juice.
 6. Measure out exactly how much liquid you have in a glass measuring cup.
 7. Add an equal amount of raw honey or sugar to the liquid. Mix well until sugar dissolves.
 8. Bottle and store

** This is for a shelf-stable syrup. For a fridge-stable syrup, you can use 1 oz of 80 proof vodka or brandy instead.*

Visit the Links page of www.WintergreenBotanicals.com for Local & Online sources for herbs, supplies, informative articles... upcoming classes, consults, and to **buy my book!**

Quick Guide to Common Wild Medicinals in New Hampshire

Antioxidant Fruits Autumn Olives Blackberries Blueberries Cranberries Dewberries Elderberries (cooked) Grapes Hawthorn Berries Raspberries Rosehips Strawberries Serviceberries	Mild Astringents Uterine & GI Tonic Bidens spp Herb Cinquefoil Leaf Purple Loosestrife Red Raspberry Leaf Rose Petals & Leaves Strawberry Leaf (Partridgeberry)	Digestion Artemisia (w/caution) Blue Flag (w/caution) Malva/Marshmallow Pineapple Weed Wild Mint	Goldthread Rt/Lf Barberry Rt/Lf/Twg Ground Ivy Lf Lobelia (w/caution) Hemlock Tree Mullein Lf/Flwr White Pine Needles/Resin Usnea Lichen
Nutritious See “Antioxidant Fruits” Dandelion Leaf Horsetail Lambsquarters Purslane Red Clover Flowers Sheep & Wood Sorrel Stinging Nettle Leaf	Strong Astringents Diarrhea & Topical Blackberry Root Canadian Fleabane Pearly Everlasting White Oak Bk(strong!) Witch Hazel (tpcl)	Wound/Skin Healers Chickweed Cleavers Elder Lf (topical/bruises) Goldthread Rt/Lf Jewelweed (poisonivy) Plantain Alder Leaf & Bark Self-Heal St. John’s Wort Flwr/Bud Sweet Fern (poison ivy)	Heart Tonic Hawthorn Berry/Lf/Flwr Dandelion Lf/Root Yarrow Lf/Flwr
Tasty Tea Rose Petals Red Raspberry Leaf Wintergreen Leaf Sassafras Root/Lf Wild Mint Leaf	Liver & Lymph Tonic/Detox Alder Bark/Catkin/Twig Artemisia (w/caution) Burdock Root Chicory Root Cleavers Greens Dandelion Rt/Lf Sassafras Root/Lf Wild Sarsaparilla Root Yellow Dock Root	Antifungal/bacterial <i>Topical & internal</i> Goldthread Lf/Rt Barberry Lf/Rt/Twg Thuja (safest topical) Oak Bk (safest topical) Usnea Lichen	Blood Sugar Balance Blueberries & Lf
Pain Relievers Black Birch Bark Bunchberry Leaves (dried) Elder Leaves (topical only) Wintergreen Leaves Solomon’s Seal Root St. John’s Wort (esp topical) Viburnum spp Bark	Diuretic Dandelion Leaf Horsetail Juniper Needle/Berry Nettle Leaf	Bug Repellent Yarrow Lf/Flw Sweet Fern	Mood/Relax Aralia spp Root/Berry Blue Vervain Leaf/Flwr Skullcap Leaf St. John’s Wort Flwr/Bud
Hemostatics Shepherd’s Purse Yarrow Leaf	Kidney/UT Support Joe Pye Weed Goldthread Rt/Lf Dandelion Leaf Nettle Leaf	Diaphoretics (Fever) Black Elder Flwr (dried) Boneset Lf/Flwr Yarrow Lf/Flwr	Women’s Health Partridgeberry Queen Anne’s Lace Seed/Flower Red Clover Flower Red Raspberry Leaf (Trillium Root)
	UT Infections Blueberry Leaves Cranberries Juniper Needle/Berry Uva Ursi Leaves (Mayflower Leaves)	Cough Suppressant Wild Cherry Bk (dry) White Pine	Men’s Health Autumn Olives Nettle Root Yellow Pond Lily Rt
		Immune/Resp/Allergy Aster Lf/Flwr Alder Bk/Catkin/Twig Elderberry (cook/ dry) Goldenrod Lf/Flwr	Most Deadly! Amanita Mushrooms False Hellebore, Aconite Foxglove Poison/Water Hemlock