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MISSOURI MEDICINALS

A REFERENCE GUIDE OF MISSOURI PRAIRIE NATIVE PLANT MEDICINE

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PREFACE

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KRIS MATTERN

About the Author

Born in Kansas City, Missouri, I consider myself a “prairie native.” I always loved digging in the dirt, playing in the streams, and helping my mother with the garden when I was young. I loved helping her prepare food in the kitchen, and dragging my wooden wagon of seeds around the yard to randomly plant any seed I could. A few decades later, I am still very much that little girl digging in the dirt and seeing what I can grow. In order to understand our organic bodies, you really do have to understand the dirt that we come from. It’s the dirt, after all, that keeps us alive.

Like most Americans, I grew up with a heavily commercialized food industry and a steadily growing pharmaceutical industry all around me. We don’t think to question it. It’s just “normal” when it’s all you’ve ever known. A series of life events, including some serious health issues, led me down the path of learning more about herbal medicine, homeopathy, and medicinal uses of plants. My eyes were opened to this entire world that I didn’t even know was all around me. Suddenly dandelions became a blessing and I still get excited when I find a wild broadleaf plantain in my yard. Plant medicine changed my life forever for the good.

Do not get me wrong. I am not telling anyone to stop seeing a doctor. I very much believe in modern medicine. Five years ago, I had to undergo several surgeries during a health crisis. I feel so lucky to live in a place and time where surgeons could remove a life-threatening issue in my body and put me back together again. I would definitely not be breathing life into this body if it had not been for modern medicine. I am profoundly grateful. I still go for my regular checkups and talk to my doctor about all my herbal teas, medicines and even bring in samples of the things I make. Yes, I get some funny looks sometimes, but for the most part, I have found my doctors to be incredibly receptive. I ended up talking to several different doctors in several different disciplines, just looking for answers. Each of them helped to broaden my perspective.

On my journey through critical health issues, I was desperate to find healing by any means necessary. I have two kids and so much good still to do here on this big ball of mud. I refused to give up. I took a dive into ancient medicines including Native American medicine and Chinese medicine, which both theorize that humans are microcosms of the larger surrounding universe, and are interconnected with nature and subject to its forces. Balance between health and disease is a key concept intimately connected to our human emotions.

Traditional Chinese Medicine (TCM) is based on the principle that mental and physical well-being are intricately intertwined. When ailments occur, TCM practitioners seek to untangle the mind and body imbalances that contribute to a person’s physical and mental health condition using a variety of treatments including food, herbal medicines, therapeutic massage, bodywork, and meditation. My eyes were opened to all the things that made me so sick in the first place. There were several underlying emotional traumas that aligned perfectly with the Chinese Medical explanations for what I was going through. I became innately aware of the importance of treating the whole person, mind, body, and soul, and finding the mysterious link that ties them all together. Above all else, know thyself. This is a Greek aphorism and a core principal towards spiritual liberation. Regardless of philosophical tradition, it certainly does seem to apply here. Know thyself.

As soon as I got my health back on track and my feet back under me again, I had a new lease on life, and I don’t take that lightly. I joined the board of directors for Missouri River Relief and then joined the Osage Trails Chapter of the Missouri Master Naturalist program. I chose to create this reference guide as my Missouri Master Naturalist Capstone Project to complete my certification. When people ask me what I’m going to do with my certification, my natural response is, “save the world, obviously.” This reference guide includes ten of my favorite Missouri prairie native medicinals, however, this is in no way an all-inclusive list. I made this first volume in hopes to make many more. Thank you for letting me share my journey with you, and a huge thank you to my family and friends for all you do and more. If you have a Missouri medicinal plant that you would like to share for the next volume, please email me your ideas and suggestions at kris.mattern@gmail.com.

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ABOUT PLANT MEDICINE

Foraging Safely

Many medicines we have today are derived from plants. In current clinical practice, an incredible 80% of antibiotics, cardiovascular, immunotherapy and anticancer drugs, originate from plants. Most doctors are probably unaware of this because complementary and alternative medicine (CAM) has not traditionally been taught at medical school. Plants provide a fantastic source of naturally occurring, biologically active substances, many of which have proven therapeutic effects. Ethnopharmacology is the study of medicines which derive from naturally occurring substances found in plants and fungi as used in traditional cultures. As human beings, we cannot exist without medicines. Many research teams are turning their attention to researching traditional medicines, which derive from natural sources, such as plants, rather than synthesising new chemical compounds from scratch.

Herbal medicines are generally considered to be safe and effective agents. Therefore, people more and more turn to herbal medicine because they believe that plant remedies are free from undesirable side effects. However, medicinal plants can be toxic intrinsically or when taken in combination with other preparations. Herbal products are usually not evaluated for purity and consistency of active compounds, they also often contain contaminants. Furthermore, it is believed that if a drug is effective, it will not totally be safe and will have side effects. Therefore, herbal medicines as drugs may have side effects, too. More research on adverse reactions on available herbal preparations should be encouraged and public education on the good and bad effects of herbals need to be emphasized. Health care professionals should remain vigilant for potential interactions between herbals and prescription medications.

Despite the shortage of knowledge about the pharmacological efficacies and safety of herbals, sales of tested and untested preparations are on the rise. Of primary concern is the quality, safety and reliability of the products available in the marketplace, since prior to

marketing safety and efficacy are not guaranteed and no monitoring of the potency or safety of the herbals is required. This is in contrast to the requirements for pharmaceutical products prior to registration.

Plants have important roles in the development of modern medicines. It is estimated that about 65% of modern medicines are directly or indirectly derived from plants. However, herbs are not non-toxic just because they are natural. Medicinal herbs contain powerful, pharmacologically active compounds. While some herbs appear to be fairly safe, all medicines should be used with caution. Although the safety beliefs of the population about the herbs are partially true, however, inclusion of incorrect and toxic species, allergens, insect parts, heavy metals such as mercury, lead and arsenic, whether intentional or by mistake, have been cited as the causes of herbal adverse reactions or toxicities.

Public should also be made aware of the side effects of medicinal plants and patients should be asked about their use of herbal products in order to evaluate the potential interact with concurrent drugs.

The safety of herbal products is important because the majority of these products is self-prescribed and is used to treat chronic conditions. Otherwise, most patients consuming herbal preparations are not aware of the potential side effects. Therefore, these preparations may cause complications. Basically, people who consume medicinal products are be classified into four groups:

- a. Those people who use herbal products for therapeutic purposes while dismissing the efficacy of modern medicines.
- b. Those people who use herbal products more than conventional medicines for therapeutic purposes. These patients may do so only after realizing that modern medicine has nothing more to offer in treating their health problems.
- c. Those who use modern medicines more than herbal products for therapeutic purposes. This group usually constitutes the majority of world population.

d. Those people who do not believe in the efficacy of herbal medicines and use only modern medicines. This group of people, unfortunately are unaware of the role of herbals in drug development.

The first reason for herbal use is people's belief in herbs for health maintenance and to treat certain ailments. The second reason is the relatively cheaper cost of herbal products which is important for the lower income group. The third reason for the use of herbals is that herbals are natural and this group of users believes that anything natural is safe. The fourth reason is the belief herbal products do not contain chemicals and that chemicals, are linked to more adverse effects and toxicity, and hence are more harmful.

It should be noted that the number of reports about the adverse effects of herbal products is now increasing due to increased use and increased awareness among the consumers and clinical practitioners. Patients consuming herbal preparations should be aware that herbs might cause toxic reactions. Certain groups of the population should be extra cautious as they are more susceptible to herbal adverse reactions or toxicities. They include pregnant and nursing women; some compounds in herbs can cross the placenta and are clearly linked to birth defects or other problems in newborns. Infants, children and elderly people are much more sensitive than adults to the effects of all medicines including herbs.

In conclusion, findings by many researchers have reinforced the idea that consumption of natural medicines may not be without risk. More research on adverse reactions on available herbal preparations should be encouraged and public education on the good and bad effects of herbals need to be emphasized. Health care professionals should remain vigilant for potential interactions between herbals and prescription medications. Herbal supplements can interact with conventional medicines or have strong effects. Take

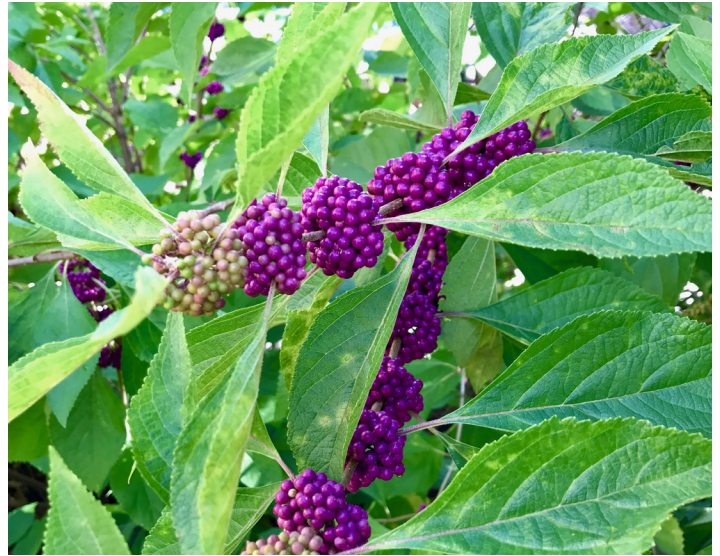
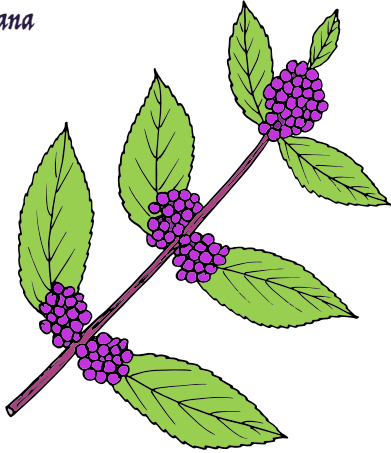
precautions when choosing herbal medicines and supplements. Follow these tips to form safe foraging habits.

- Do not self-diagnose. Always speak to your healthcare professional about any symptoms you may have, regardless of your choice in medicine.
- Educate yourself.
- Learn as much as you can about the herbs you are taking by consulting your doctor and contacting herbal supplement manufacturers for information.
- Work with a professional. Seek out the services of a trained and licensed herbalist or naturopathic doctor who has extensive training in this area.
- Be alert for allergic reactions. A severe allergic reaction can cause trouble breathing. If such a problem occurs, call 911 or the emergency number in your area for help.
- When foraging medicines in the wild be 100% sure you know what you are foraging before harvesting.
- As with all foraging, do not take more than you need.
- Don't harvest in questionable areas, especially if you live in a city, toxic areas can be abundant. Toxic areas include areas sprayed with pesticides, dog parks, busy roadways, near any roadway treated with salt or chemical icemelt.
- Don't forage plants that appear unhealthy.
- Don't forage alone. Two sets of eyes are always better than one and can help to ensure that you are safely foraging.
- Always consume small quantities to ensure that you are not allergic to anything first. Wait at least 24 hours after small sampling before consuming in larger / more frequent quantities.

NCBI, PMC, US National Library of Medicine, National Institutes of Health, Rafieiian-Kopaei M. Medicinal plants and the human need, Kazemipoor M, Radzi CW, Cordell GA, Yaze I. Safety, efficacy and metabolism of traditional medicinal plants in the management of obesity, Haq I. Safety of medicinal plants. Pak J Med Res. Int J Chem Engl Appl., Nasri H, Shirzad H. Toxicity and safety of medicinal plants, J HerbMed Pharmacol, Philomena G. Concerns regarding the safety and toxicity of medicinal plants - an overview. J Apple Pharmaceut Sci., Society of Diabetic Nephropathy Prevention, Johns Hopkins Medicine, The French Culinary Institute, Institute of Culinary Education, Open Access Government: The role of plants in drugs and medicines (2020), Journal of Traditional and Complementary Medicine – Dietary therapy and herbal medicine for COVID-19 prevention: A review and perspective – July 2020. Study.com – Ethnopharmacology – Definitions and Examples, Evidence-Based Alternative and Complementary Medicine – New Perspectives on How to Discover Drugs from Herbal Medicines: CAM's Outstanding Contribution to Modern Therapeutics – March 2013.

AMERICAN BEAUTYBERRY

callicarpa americana



American beautyberry (*callicarpa americana*) is a native shrub of North America. It can be found growing naturally in Missouri woodlands and along the edges of forests, in low, rich bottomlands, at the edges of swamps, in piney woods, and in coastal woodlands. In Greek, the genus name *Callicarpa* means callos, "beauty," and *carpos*, "fruit."

CLASS: Shrub (4' - 8' tall, 4' - 6' wide)

COMPOSITION: Open and airy

LIGHT PREFERENCE: Full sun

BLOOM: June - August

FLOWER COLOR: Pink

FRUITS: Late summer - October (bright purple)

LEAVES: 3" - 6" elliptic with tooth margins

SOIL: Grows well in most soils, drought tolerant

This plant offers many ecosystem services. The seeds and berries are an important food source for many songbird species of America, including American robin, brown thrasher, northern bobwhite, purple finch and eastern towhee. It is also an important food source for armadillo, foxes, possums, raccoons, squirrels and white-tailed deer. Additionally, it is a nectar source for butterflies and has fragrant foliage. It is a wonderful choice for homeowners supporting native insects and wildlife.

According to the USDA, The Alabama, Choctaw, Creek, Koasati, Seminole and other Native American tribes relied on the American beautyberry for various

medicinal purposes. Many people today still use the leaves for a mosquito repellent. While they are edible, most people do not like to eat them raw. They taste medicinal and are not terribly sweet. People also rubbed crushed leaves on their skin as an insect repellent, as well. This folklore has continued to be passed down from generation to generation in some parts of the country. The National Center for Natural Products Research at the University of Mississippi has put this folklore to the test and found in lab studies that there is some validity to its power to ward off ticks, ants and mosquitoes.

It can be a relatively short-lived shrub at about 10 to 15 years, but many volunteer plants can be found from seeds distributed by birds and squirrels — you will often find plants growing in colonies. Not much maintenance is required. Wait until spring before pruning any dead branches or cut the entire plant back to 6 - 10 inches in late winter. Or it can be left to grow in its most native, spreading loose form that makes it so graceful and unique.

PROPERTIES: antibacterial, anti-fungal, anti-insect growth, antiviral, astringent, anti-inflammatory, antioxidant, anti-algal, diuretic (root bark)

HISTORIC MEDICINAL USES: malaria, rheumatism, dysentery, hepatitis, fever, headache, indigestion, treatment of skin cancer, tumors of the large intestine, useful to help treat bleeding in the lungs and stomach

INSECT REPELLENT SPRAY

INGREDIENTS:

2 cups Beautyberry leaves, chopped
Boiling water
Witch Hazel
1 ounce Coconut Oil
1/2 teaspoon vegetable glycerin (optional)
20-40 drops of your favorite essential oil (optional)
Small spray bottle

DIRECTIONS:

Place chopped leaves in a jar and add enough boiling water to cover them. Cover the jar and let stand 4-6 hours. Strain out the leaves and add to the spray bottle until the spray bottle is half full. Add witch hazel until the spray bottle is about 3/4 full then add coconut oil. If using essential oils, add those now along with the vegetable glycerin. Let sit for a few hours before use to allow the Witch Hazel to infuse into the mixture. Shake well before use.

SKIN REPAIR HEALING SALVE

INGREDIENTS:

3 cups boiling water
1 cup Beautyberry leaves, chopped
2 tablespoons beeswax or emulsifying wax
1/3 cup Grapeseed Oil
1 teaspoon Vitamin E Oil
10 drops Lemongrass essential oil
10 drops Citronella essential oil

DIRECTIONS:

Gently simmer chopped leaves for 20 minutes, covered. Pour the water into a jar while straining out the leaves. Melt the bees wax and the grapeseed oil by putting them in a glass canning jar and place the jar in a pot of water on medium heat. As soon as the wax is melted, remove the jar and add Vitamin E oil. Add 1/2 cup strained water (make sure it is still warm) to the wax/oil and mix well until it becomes creamy. Add the citronella and lemongrass essential oils, cover and shake well. If you see any separation between the water and oil as it cools, shake more until it is well emulsified. Even the bark or wood of beautyberry may be used for a couple of topical purposes. The inner bark can be

soaked and applied directly to rashes or skin wounds, providing a soothing sensation while also promoting healing. The bark can also be pulverized and used in a poultice to help protect the open wound from becoming infected. There are also some claims that making an ointment using the crushed bark and the fruit from the flowers will aid in promoting rapid healing of bruises.

Boiling the root of the beautyberry shrub can also provide relief for a couple of health problems. Making a poultice that contains the root is said to bring down fever in a short period of time.

AMERICAN BEAUTYBERRY ROOT TEA

INGREDIENTS:

Bark from the roots
Leaves fresh or dried
Ripe berries
1 cup of boiling water

DIRECTIONS:

Bring 8 ounces of water to a boil. Mixed in the mixture of diced root bark, leaves and berries. Simmer mixture for 20 minutes. Strain the tea and serve hot. You can refrigerate for up to 1 week.

AMERICAN BEAUTYBERRY JAM

INGREDIENTS:

6 cups of berries, free of stems and leaves
8 cups of water
4 cups of raw honey
1 package of pectin

DIRECTIONS:

Bring the mixture of 8 cups of water and 6 cups of berries to a boil. Cook covered for 20 minutes. Uncover and smash the berries with a large wooden spoon. Cover and cook for 20 minutes more on low to medium heat. Strain mixture to remove seeds. Continue to boil until the mixture is reduced to only 4 cups. Add only one cup of sugar and entire package of pectin. Bring to boil. Add remaining sugar, bringing to a hard boil for 60 seconds. Remove from heat and pour into mason jars. Seal the mason jars and process in boiling water for 10 minutes. Allow to cool then refrigerate.

Sources: LSU Ag Center, Richard Bogren, Heather Kirk-Ballard, USDA Plants Database, National Center for Natural Products Research, University of Mississippi, NCBI, US National Library of Medicine, National Institutes of Health, Missouri Wildflowers Nursery, Medicinal Herb Info, Futurity: Beautyberry Compound Aids Antibiotic Against MRSA, Meony University: Beautyberry leaf extract restores drub's power to fight superbug, Plants for a Future: Callicarpa americana, Beautyberries' powers go beyond good looks, Foraging: American Beautyberry, Weeds and Deeds: American Beautyberry, A Common Plant the helps fight MRSA and Repels Mosquitos and Ticks, Foraging: Mark Vorderbruggen, Emory University, Prepper Gardens

BEE BALM

Monarda spp

Wild bergamot



The bee balm plant is a North American native, thriving in woodland areas. Also known by its botanical name of *Monarda*, bee balm is very attractive to bees, butterflies, and hummingbirds. The bee balm flower has an open, daisy-like shape, with tubular petals in shades of red, pink, purple, and white. Bee balm plants are perennial, coming back year after year to add cheerful color to your garden. Bee balm is spicy, warming, stimulating, and diffusive. While its taste is similar to thyme and oregano, it assuredly has its own special flavor. The flavor can also vary widely between species or even within the same species growing in different locations.

CLASS: Plant (2.5' - 4' tall, 18" - 24" wide)

COMPOSITION: Open with tubular petals

LIGHT PREFERENCE: Full sun - part shade

BLOOM: May - June

FLOWER COLOR: Pink, purple, scarlet, lavender, white

SOIL: Well-draining soil, neutral

Bee balm was used by many Native American tribes long before it became popular with European settlers. The Blackfoot used the plant's leaves as antiseptic for skin and mouth infections, while the Cherokee and the Teton Dakota used the herb for stomach ailments. The leaves and flower heads were used by the Chippewa and Meskwaki as a cold remedy and by the Ojibwa for soothing fevers and convulsions. Bee balm is used in modern herbal medicine to expel gas, to relieve nausea, in menstrual cramps, and as an expectorant to soothe sore throats. Bee balm is strongly anti-fungal,

lending itself to combating topical infections as well as imbalanced gut flora. Bee balm hydrosol was shown to be effective against filament formation and growth of candida and other fungal systems.

Growing bee balm is fairly easy as long as you plant it in full sun and keep the soil moist, but make sure it is a well-draining area with good air circulation. The bee balm plant is susceptible to powdery mildew, appearing as a gray, powdery dust on the buds and leaves in moist, cool weather. It is recommended to leave *Monarda* up through the winter because they provide food for songbirds like the American goldfinch. You can cut down in the spring once day time temps are consistently in the 50's. Divide bee balm every 2-3 years to ensure its vigor. Pick bee balm flowers frequently to encourage flower production. Deadheading, or removing spent flowers, will also promote a new flush of blooms.

PROPERTIES: antimicrobial, soothing, antispasmodic, nervine, antiseptic, thymol, antibacterial, anti-fungal

HISTORIC MEDICINAL USES: Colds, flu symptoms, indigestion, bloating, nausea, headaches, fever, menstrual cramps, coughs, scrapes, stings, rashes, anxiety, stress, upset stomach, yeast infections, seborrhea, dandruff, cradle cap urinary tract infections, bacterial infections, poultice to slow bleeding

BEE BALM TEA

INGREDIENTS:

1 tablespoon of dried flower petals and leaves or 2 tablespoons of fresh flower petals and leaves
1 cup Boiling water

DIRECTIONS:

Use tea / root ball for dried / fresh flowers. Add 1 cup boiling water in tea cup. It takes a bit longer to steep than standard black tea, around 15 minutes.

BEE BALM OXYMEL

INGREDIENTS:

1/3 cup bee balm flowers and leaves
1/3 cup honey
1/3 cup apple cider vinegar

DIRECTIONS:

Combine everything in a glass jar and stir well. Put a lid on the jar and store in a dark cabinet for 1 month. Shake jar periodically (once daily or every other day). At the end of the month, strain and store the liquid in another clean labeled jar. For sore throats, take a tablespoon as necessary. To support the immune system during a cold, adults should take up to 3 tablespoons per day.

BEE BALM SALVE

INGREDIENTS:

Bee balm flower petals (fresh or dried)
Beeswax

DIRECTIONS:

Start by making an infused oil using bee balm flower petals. Fill a jar with bee balm flower petals leaving about 2 inches of head space at the top of the jar - you can use a mortar and pestle to grind the petals down and allow more of the herbal constituents to infuse. Fill the jar with your choice of oil (grapeseed, olive, hemp, or jojoba oils are great for infusing bases) leaving at least 1 inch of head space. Place the jar with your oil and herb mixture in a warm, sunny windowsill and allow to infuse for 3-6 weeks. Basic ratio for salve is 1 ounce of beeswax to 8 ounces of infused oil.

BEE BALM TINCTURE

INGREDIENTS:

1 jar filled with bee balm petals
Neutral alcohol such as vodka

DIRECTIONS:

Since bee balm has nervine properties that help calm the nervous system, an established way to reap the benefits is as a tincture. Fill a jar with bee balm and cover with a neutral alcohol such as vodka. Store in a cool dark place for at least a month and then strain.

BEE BALM SALAD TOPPERS

INGREDIENTS:

Bee balm petals

DIRECTIONS:

To add color, nutrition and flavor to summer salads, try adding a few bee balm petals. The delicate herbal flavor compliments micro-greens and leafy green salads beautifully and can help with a variety of prevention methods for menstrual cramps, bloating, nausea, indigestion and urinary tract infections.

BEE BALM MOUTHWASH

INGREDIENTS:

1/8 oz dried bee balm
(about 2-3 tbsp flowers and leaves)
8 oz boiling water
2 teaspoons salt

DIRECTIONS:

Place dried bee balm and 2 tsp salt into a heat-proof bowl/container. Pour boiling water over the top and allow to steep for twenty minutes. Strain the liquid into a sterilized container with a lid or seal. Let it chill in the fridge for an extra soothing treatment. Bee balm leaves are edible and have a citrus mint scent and taste. Used as a mouthwash, bee balm is a treatment for sore throats and mouth sores. The leaves were chewed on battlefields and used for this purpose. To ensure it keeps, add a bit of bee balm tincture to prevent spoilage.

BLUE ASTER

Symphyotrichum laeve

Smooth blue aster

Smooth aster

Asteraceae



The word “aster” comes from Greek which refers to multicolored, star-like blooms which adequately describe these charming wonders. Asters are one of the last flowers in bloom for the summer season, with many blooming well into fall. They are prized primarily for their late season beauty in a landscape that has begun to wither and die-back prior to winter, but there are other uses for aster plants. If the natural site of an aster does not immediately reveal a plant’s identity, there are plenty of other characteristics to be learned; and given asters’ tendencies to hybridize, field identification could occupy many seasons. In Rafinesque’s Medical Flora, it’s stated that aster is an abundant genus with nearing 100 species (Rafinesque, 1828).

CLASS: Plant (3’ - 5’ tall)

COMPOSITION: Open / Airy / Dense

LIGHT PREFERENCE: Full sun to partial shade

BLOOM: August - October

FLOWER COLOR: light purple with yellow centers

FRUITS: Dry seed with a tuft of light brown hair

LEAVES: Up to 4” long and 1.5” wide, smooth, semi-waxy

SOIL: Dry mesic to wet mesic

Smooth Blue Aster is a nectar and pollen source for honeybees, bumblebees, other native bees, butterflies, and skippers. Tree sparrows and white-footed mice eat the seeds while ruffed grouse and wild turkey eat both the leaves and seeds. Various herbivores, beetles, and caterpillars feed on the foliage. It is also used in prairie restoration and roadside plantings.

The Native American people harvested wild aster for a multitude of uses. The roots of the plant were used in soups and young leaves were cooked lightly and used as greens. The Iroquois people combined aster with bloodroot and other medicinal plants to make a laxative. The Ojibwa used an infusion of aster root topically to aid with headaches. Portions of the flower were also used to treat venereal diseases. Eating aster plants is no longer a common practice, but it does have its place among indigenous people. Today, while the edibility of aster flowers is not in question, they are more commonly used added to tea blends, eaten fresh in salads, or used as garnish.

Smooth Blue Aster spreads via underground rhizomes and seed. Asters should be harvested in full bloom in the early morning after the dew has dried. Cut the stem about 4 inches from above the soil level. Hang the stems upside down in a cool, dark area until the plant crumbles easily. The flowers will become white and fluffy but are still usable. Store the dried aster leaves and flowers in a sealed glass container out of sunlight. Use within one year.

PROPERTIES: decongestant, antispasmodic, relaxing to the lungs, antibacterial, antipyretic, volatile oils

HISTORIC MEDICINAL USES: digestive support, ease cough, immune system support, headaches, venereal disease, bloating, stomach ache, wheezing, diarrhea, pain, poison sumac

BLUE ASTER TINCTURE

Herbal tinctures are herbs whose healing, vital properties are extracted using either alcohol, glycerin or vinegar. These agents act as a solvent and this solvent is called a Menstruum. Alcohol is often used because it can result in a more potent tincture. Alcohol acts as a solvent for many herbal compounds. It can more readily extract resins, waxes, fats, volatile oils, and other healing and assistive plant compounds, etc. For adults or children, where taking an alcohol tincture is unwanted due to the alcohol... some people opt for glycerin or vinegar tinctures. (Not white vinegar!)

INGREDIENTS:

- Dried Blue Aster leaves and petals
- Glass container with tight-sealing lid
- Raw Apple cider vinegar

DIRECTIONS:

Fill the glass container full of dried blue aster petals and leaves. Pour apple cider vinegar over the herbs, until they are completely submerged. Cap the container tightly. Label your tincture with the contents and the date you started. Store the container in a cool, dark place. Each day, shake the bottle to agitate the contents. After two weeks, pour the solution into stopper bottles, straining it through a kitchen strainer or cheesecloth to remove bits of dried herb. You don't need to strain all the tincture at once; you can strain just enough to fill one or two stopper bottles, leaving the rest in the jar to use as you need more. Store the stopper bottles in a cool, dark place until you need them. Vinegar tinctures have a one-year shelf life. After this time, discard the old tincture and create a fresh tincture.

BLUE ASTER COUGH SYRUP

Each ingredient in this homemade cough syrup has unique properties to help tackle the symptoms of sore throats and lingering coughs that come with a winter cold. Apple Cider Vinegar helps a cough by restoring the body's pH factor, which becomes more alkaline during a cold. Lemon juice is loaded with Vitamin C and cuts through phlegm. (Not for babies or toddlers.)

INGREDIENTS:

- Apple Cider Vinegar
- Lemon Juice
- Ground Ginger
- Cayenne Pepper
- Honey
- Water

DIRECTIONS:

The recipe instructions are super simple — combine all the ingredients in a glass jar with a lid and shake it up! Store it in a jar, preferably a tinted glass jar, in the refrigerator. Be sure to give this homemade cough remedy a good shake before administering it. You want the ingredients to be properly mixed before taking a dose, otherwise you might not reap all the benefits. Also note that you shouldn't make ingredient substitutions. If you swap out some of the ingredients, this natural cough syrup may not work.

BLUE ASTER TEA

Traditionally the aster root has been used for centuries in Chinese medicine, but the leaves and flowers of asters are edible, too. Either dried or fresh, the flowers and leaves of the Aster plant can be eaten. However, they are most commonly used nowadays in herbal teas, fresh in salads, or used as garnish. It has several health benefits and has traditionally been used in the treatment of weak skin, pain, fevers and diarrhea. However, it is slightly astringent on the tongue, which means it can leave your mouth feeling dry.

INGREDIENTS:

- Blue Aster Root - cleaned, minced and dried
- Blue Aster dried petals
- Ginger root (optional for added stomach support)
- Honey (optional)

DIRECTIONS:

Steep in boiling water to ease cough, wheezing, support immune system, relieve headaches, bloating, stomach pain, and diarrhea.

Wild Seed Project, Gardening Know How - Amy Grant, AlternativeHealing.org, herbody.com, Meghan Pivarnik, mcdonald, n.d., Emily-Jane Hills Orford - Homestead Stories: Beautiful Wild Asters Galore, Wildflower.org, Amy Workman and Dan Shaw, BWSR.State.MN.US, www.friendsofthewildflowergarden.org, minnesotawildflowers.info, illinoiswildflowers.info, plants.usda.gov, wildlettecgal blog archives, Amy Jeanroy, The Spruce Eats, Good Life Eats, Katie Kick

BLUE SAGE

Salvia azurea



Blue sage is a member of the Mint family (*Lamiaceae*). "*Salvia*" is a name that means "healer," referring to this ancient name for a sage with medicinal properties. The species name "*azurea*" is Latin for "sky blue." Blue sage is a common name that refers to several different plant species. The name "sage" refers to this plant being traditionally used as medicine for pain.

CLASS: Vascular plant (5' tall)

COMPOSITION: Open / Airy / Dense

LIGHT PREFERENCE: Full sun - Full Shade

BLOOM: Late summer through early fall

FLOWER COLOR: Blue

FRUITS: n/a

LEAVES: opposite leaves, widely spaced

SOIL: limestone, calcareous, sandy loam, clay loam

This fragrant, perennial plant is a favorite plant of pollinators. A variety of insects visit the flowers, but bumblebees and butterflies seem to be the most attracted to the flowers. Characteristic of the genus *Salvia* is the atypical pollination mechanism. Two stamens occur at the end of a stalk that acts as a lever, so when insects land on the flower, their backs become dipped in pollen. The unique structure of the stamens is believed to be the driving force in the diversity of this large genus. Also, the floral characteristics of this genus suggests it is a monophyletic group, but recent DNA analysis show it is actually a product of convergent evolution.

Native Americans have harvested smudging plants for thousands of years. The tradition of using *Salvias*, *Lamiaceae* and other native North American plants, as ceremonial smoke or in smudge pots for cleansing and purification continues within the Native North American culture today; The Chumash of the central and southern coastal regions of California, the Plains Indians, eastern groups like Cree, Ojibwe and Cherokee all use smoke for smudging and local plants for burning. Sage is used to create a protective field around a space.

All *salvias* have medicinal qualities. Besides being used for smudging, sage leaves can be made into a tea. The Chumash have a very precise way of making tea from sage varieties. Sage contains over 160 distinct polyphenols, which are plant-based chemical compounds that act as antioxidants in your body. Some of the acids in sage are linked to impressive health benefits, such as a lower risk of cancer and improved brain function and memory. One study found that drinking 1 cup (240 ml) of sage tea twice daily significantly increased antioxidant defenses. It also lowered both total cholesterol and "bad" LDL cholesterol, as well as raised "good" HDL cholesterol.

PROPERTIES: tonic, nervine, vasodilatory, diuretic, antiseptic, anti-fungal, pesticide, magnesium, zinc, copper, vitamins A, C, E, and K, antioxidant, chlorogenic acid, caffeic acid, rosmarinic acid, ellagic acid, rutin antimicrobial, antiviral

Sage comes in several forms and can be used in a variety of ways. Fresh sage leaves have a strong aromatic flavor and are best used sparingly in dishes. Memory and thinking skills (cognitive function). Taking sage by mouth seems to improve memory and thinking skills in healthy adults.

High levels of cholesterol or other fats (lipids) in the blood (hyperlipidemia). Taking common sage three times daily for 2 or 3 months reduces low-density lipoprotein.

Symptoms of menopause. Taking common sage extract by mouth for 4 weeks improves some symptoms of menopause, especially hot flashes, night sweats, and sleep problems.

Here are some ways you can add fresh sage to your diet:

- Sprinkle as a garnish on soups or eggs
- Mix into a stuffing in roast dishes
- Add chopped leaves to sauces
- Dried sage ground as meat rub
- Seasoning for roasted vegetables

PRECAUTIONS

PREGNANCY OR BREAST-FEEDING: Taking sage during pregnancy is likely unsafe because of the thujone found in some sage species. Thujone can bring on a menstrual period, which could cause a miscarriage. The thujone in sage might also reduce the supply of breast milk.

SEIZURE DISORDERS: Common sage contains significant amounts of thujone, a chemical that can trigger seizures. If you have a seizure disorder, don't take sage in amounts higher than those typically found in food.

SURGERY: Common sage might affect blood sugar levels and interfere with blood sugar control during and after surgery. Stop using common sage as a medicine at least 2 weeks before a scheduled surgery.

SAGE OXYMEL

INGREDIENTS:

- 1-2 cups of fresh garden sage
- 1-1.5 cups raw honey
- 2-2.5 cups white balsamic vinegar

DIRECTIONS:

An oxymel is a mixture of honey and vinegar, used as a medicine. Its name is often found in Renaissance pharmacopoeiae. To make a sage oxymel, pick the sage herb from the garden. Remove any damaged leaves and discard. Allow the sage to wilt for a few hours to overnight. Chop the sage finely with a sharp knife, including all but the coarsest stems. Set aside.

Clean and sanitize a wide mouth quart jar. Place the sage in the jar. Pour 1 cup of honey over the sage. Stir with a spoon to fully mix the sage leaves with the honey. The jar should be about 1/3rd full of herbs and honey. Heat vinegar in a saucepan until it is just about 110°F. Don't overheat. Warming the vinegar allows it to mix more readily with the honey and herbs already in the jar. Pour the vinegar over the herbs and honey. Stir to fully blend the ingredients. The jar should be full. Place a tight-fitting lid on the jar and set it aside. Remember to label and date the jar.

Your sage oxymel is ready in two weeks. But you can leave it for a month or two, allowing the flavours to meld further. When you are ready, heat the jar slightly in warm water to make it free-flowing. Strain the herbs out of the oxymel, reserve the liquid. This will keep at room temperature for 6 months or refrigerated for up to a year. If you notice any mold, discard it. Both vinegar and honey are preservatives.

Serve it by the spoonful for sore throat, coughs, colds, fevers, indigestion, or upset. Take as often as needed. I like to mix a spoonful in a cup of hot water and sip it slowly for relief of sore throat and that under-the-weather feeling. Other herbs that are healing for colds and flu and can be added to sage oxymel to good advantage include bee balm, rosemary, hyssop, horehound, yarrow, mullein, oregano, and marjoram.

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BUTTERFLY MILKWEED

Asclepias tuberosa L.

Monarch's delight

Pleurisy root

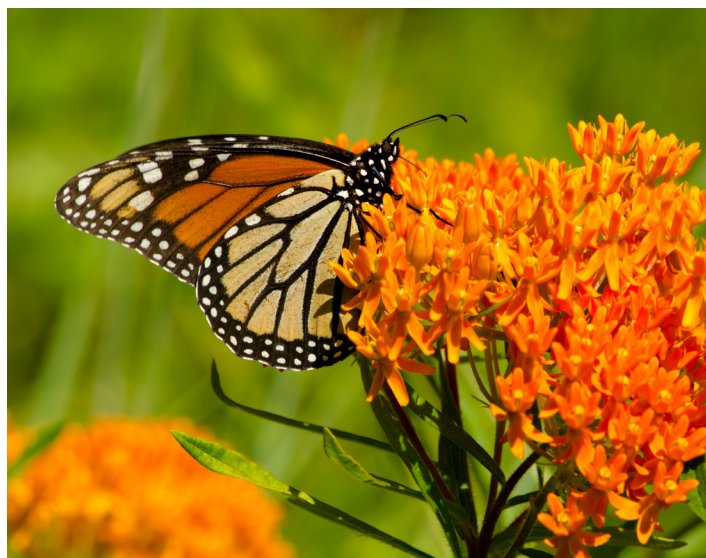
Orange swallowwort

Orange milkweed

Colic root

Wind root

Orange-root



Butterfly weed is a member of the milkweed family. The genus name *Asclepias* is named after the Greek god of medicine Asklepios. The species name *tuberosa* refers to the tuberous (knobby and with swellings) roots. Unlike other species of milkweed butterfly weed does not contain the characteristic thick milky sap but instead has a watery translucent sap. This wildflower does not transplant well as it has a deep woody taproot. It is easily propagated from seed. Collect the seed from the pods as they just begin to open. Butterfly weed seed need a three-month cold stratification. Therefore, it is best to plant the seed in autumn and they will easily germinate the following spring.

CLASS: Perennial plant (1' - 3' tall)

COMPOSITION: Coarse bushy forb with straight hairy stems

LIGHT PREFERENCE: Full sun

BLOOM: May - September

FLOWER COLOR: Orange, yellow

FRUITS: n/a

LEAVES: alternate and simple (2" - 4" long)

SOIL: Dry

Every year 100 million Monarch butterflies make an extraordinary journey, some of them traveling all the way from Canada to the Transvolcanic Mountains in Mexico, where they will spend the winter. In the spring they will mate and head north once again. This migration has been labeled an "endangered phenomenon." Milkweed is the larval host plant to the monarch caterpillar. They have an obligate relationship with this family of plants. No milkweed = no monarchs.

Native Americans harvested fibers from the dried stems that were made into ropes, belts and used in weaving cloth. The roots were used to treat bronchial and pulmonary condition, as well as to treat diarrhea and other stomach problems. Many tribes used various parts of the butterfly weed as food. In colonial America, dried leaves of butterfly weed and skunk cabbage were made into a tea to treat chest inflammations thus giving butterfly weed an alternative name: pleurisy root. Pleurisy root was listed in the American Pharmacopoeia and the National Formulary until 1936.

The seeds, young stems, and flowering buds are all edible. The root of this plant is used for pulmonary conditions, and the stems can be broken and applied to warts and sores. Some Native American legends tell of the roots being used as a body wash for lifting and running strength. Also used as a drug in chant lotion, and as a ceremonial emetic.

PROPERTIES: diaphoretic, anti-rheumatic, antispasmodic, alterative, diuretic, stomachic, escharotic (salves produce a thick scab to rid the body of toxins), expectorant, astringent, carminative, laxative, anti-pleuritic, anti-syphilitic, emetic, tonic, lithotriptic, detoxifying, sudorific, cathartic

HISTORIC MEDICINAL USES: dry coryza, indigestion, colic, gas, diarrhea, dry coughs, pleurisy, rheumatic pains, dysentery, swelling, rash, cough, fever, asthma, eczema, whooping cough, croup, bruises, swelling

PRECAUTIONS

Caution is advised, as large doses of Butterfly Weed are emetic and purgative. The pleurisy root is not to be taken by women who are pregnant; this plant can act as the hormone estrogen and cause chaos with the baby. It also contains a chemical that can lead to heart problems, or cause complications with individuals taking heart medications.

PLEURISY ROOT TEA

INGREDIENTS:

Dried, chopped butterfly milkweed roots
Water
Honey (optional)

DIRECTIONS:

A pleurisy root tea can be made by lightly simmering one teaspoon of the dried, chopped root in one pint of water for 10 to 15 minutes. One cup of this tea can be drunk twice per day. This tea has been used to treat allergies, congestion, cough, fever and rheumatoid arthritis.

ALCOHOL-FREE BUTTERFLY MILKWEED TINCTURE

INGREDIENTS:

Finely cut, dried roots
Glycerin-based, alcohol-free herbal extract (glycerite)

DIRECTIONS:

Glycerine (or glycerol) is a natural component of all fats and oils. When fats are digested in the body, they are broken down into fatty acids and glycerine. Hence, glycerine is a non-toxic, natural food substance. It is also a good solvent of herbal constituents and a preservative. To top it off, glycerine is also sweet tasting but does not cause blood sugar problems. Fill jar about halfway full with finely cut, dried butterfly milkweed roots. Then pour a bit of boiling water over the herbs to help release nutrients. Fill to the top with glycerite. Cover and put in slow cooker that is lined with a towel and filled with water. Run on low for three days (72 hours). The mixture should be dark from the roots. Remove and use cheesecloth to strain. Then pour the finished glycerite into a glass jar and cover tightly. Keep refrigerated.

BUTTERFLY MILKWEED HERBAL SKIN CREAM

INGREDIENTS:

4 oz finely cut, dried roots
1 cup Almond oil
1 oz beeswax
1 cup distilled water or rosewater
Essential oils (if desired)
blender or immersion blender
Double boiler
Quart-sized mason jar
Crock pot

DIRECTIONS:

Finely chop or powder your dried herb and add to the mason jar. Cover with the oil, and stir gently to distribute the herb throughout the oil. Put the cap on the mason jar, and place the jar in a water bath in either a crockpot or a stock pot on the stove (if using the stock pot method, place a mason jar lid ring under the jar with your oil in it so the glass is not directly on the metal of the pot). Gently heat the water and oil for 3–5 days, trying to keep the oil temperature around 110 degrees. The “warm” setting on a crock pot is ideal.

After 3–5 days, remove the jar and let the oil cool slightly so it's not too hot to the touch, and then strain your oil through muslin, cheesecloth, or an old and clean t-shirt to remove the dried herbs. Combine the oil and beeswax in a double boiler and gently heat until the beeswax melts. Blend on high speed and slowly add the water to the oil at the center of the vortex in a smooth, thin stream. You may not use all the water, and that's okay. Watch the mixture for when it turns white and develops a thick consistency. The blender will start to stutter as the cream becomes too stiff to take more. If you'd like to add essential oils, you can gently fold in 1–2 drops now. Tea tree, lavender, and/or sage essential oils are great companion oils for this recipe. Pour your cream into the glass containers, using a spatula to get all of the cream out of the blender. Cap and store in a cool, dry place. Creams will last up to a month, and that can be prolonged by storing in the refrigerator.

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ECHINACEA

Echinacea pallida

Echinacea paradoxa

Echinacea purpurea

Purple Coneflower



Echinacea, also known as the purple coneflower, is a member of the asteraceae (daisy) family and an herbal medicine that has been used for centuries, customarily as a treatment for the common cold, coughs, bronchitis, upper respiratory infections, and some inflammatory conditions. Coneflowers are commonly found in sunny open roadsides, prairies, and meadows, though they can also sometimes be found in open woodlands with filtered sunlight. Echinacea is an incredibly drought resistant genus when compared to other forbs, and can be found in places where most plants have issues thriving. Grow Echinacea with other flowers, herbs and vegetables including eggplant, broccoli, brussell sprouts, cabbage, cauliflower, chillies, peppers and tomatoes.

CLASS: Herbaceous perennial (up to 4' tall; 12" - 36" wide)

COMPOSITION: Tall and open, sometimes floppy

LIGHT PREFERENCE: Full - partial sun

BLOOM: July - September

FLOWER COLOR: Pink / purple

FRUITS: n/a

LEAVES: alternating ovate to lanceolate, 3" - 8" long

SOIL: Dry, well-drained soil

Archaeologists have found evidence that Native Americans may have used echinacea for more than 400 years as a general "cure-all." It has a large number of common names and has been used by at least 15 tribes in the region for a variety of ailments, including coughs, colds, inflammation, rabies, snakebite, sore throats, toothache, worms, and as a painkiller. In

addition it was used to treat animals, especially horses for saddle wounds. Throughout history people have used echinacea to treat scarlet fever, syphilis, malaria, blood poisoning, and diphtheria. Although this herb was popular during the 18th and 19th centuries, its use began to decline in the United States after the introduction of antibiotics. Echinacea preparations became increasingly popular in Germany throughout the 20th century. In fact, most of the scientific research on echinacea has been conducted in Germany. In recent years there has been a renewed interest in the herb due to purported benefits for the immune system. Echinacea is viewed as one of the herbal supplements that show the most promise as far as its positive immune system effects are concerned.

Echinacea has an earthy taste accompanied by a tingling sensation. The tingling effect is caused by compounds it contains called alkamides. Flowers are gathered in full bloom and roots of 3 to 4 year old plants are harvested in the late summer or early autumn.

PROPERTIES: polysaccharides, glycoproteins, alkamides, volatile oils, flavonoids, ketoalkenes, caffeic acid derivatives, antioxidant, antibacterial, antiviral, larvicidal

HISTORIC MEDICINAL USES: immunostimulatory, anti-inflammatory, alleviation of cold symptoms, antianxiety, antidepressant, cytotoxicity, antimutagenicity, flu, sore throat, bronchitis, upper respiratory infections, gingivitis, canker sores, yeast infections, ear infections

ECHINACEA TEA BLEND

A hot cup of echinacea tea a few times a week can help stimulate the immune system. Echinacea also contains compounds that have been shown to attack yeast and fungi directly, which means echinacea tea may also boost healing from yeast infections.

INGREDIENTS:

- 1/4 cup loose leaf dried echinacea or 1/2 cup fresh homegrown echinacea
- 1 teaspoon lemongrass dried
- 1 teaspoon mint dried
- 8 ounces boiling water
- 1 teaspoon honey (optional)

DIRECTIONS:

Mix all herbs together and pour about 8 ounces of boiling water over the herb. Allow the mixture to steep for about 15 minutes. Some of the hot water will absorb into the plant material, leaving you with just the right amount to fill a standard size 6-ounce mug. To make a great cup of echinacea tea, you'll need to add in other herbs to improve the flavor and ideally increase the medicinal benefits. Lemongrass, peppermint, ginger, and cayenne are great flavor masking herbs that help open your respiratory system.

ECHINACEA DECOCTION

INGREDIENTS:

- 1/4 cup echinacea root, dried and finely chopped
- 1/4 cup dried dandelion root
- 2 tablespoons sweet cinnamon bark chips
- 1 tablespoon dried sassafras bark
- 1 tablespoon dried ginger root

DIRECTIONS:

Blend all ingredients together. Place 2 tablespoons of root blend into a small saucepan. Add 2 cups of cold water. Slowly heat to a simmer. Cover and gently simmer for 15-20 minutes, being careful not to boil. Strain into a teapot or directly into mug for serving. Makes 2 servings. If you prefer a stronger flavor, this blend can be simmered for an additional 10 - 20 minutes. You can brew a larger batch and refrigerate the strained decoction in a mason jar for 2-3 days.

ECHINACEA COUGH SYRUP

INGREDIENTS:

- 1/2 cup echinacea root, dried and finely chopped
- 1/2 cup licorice root, dried and finely chopped
- 3/4 cup honey
- 4 cups distilled water
- 1/2 tablespoon cinnamon
- 2 tablespoons fresh ginger root, minced

DIRECTIONS:

Place the echinacea, licorice, cinnamon and ginger into a pot of 4 cups of distilled water. Heat water until boiling, then reduce to a simmer for 45 minutes (the longer it simmers the more goodness you'll get out of the herbs). Reduce the water by half. Sift out the herbs from the water by using a French press or cheese cloth. Pour into a jar and let it cool until warm. Add the honey and stir. Take 1-2 tablespoons 2-3 times a day at the first sign of a cold or flu and continue taking as needed.

ECHINACEA HEALING BALM

INGREDIENTS:

- Echinacea flowers and leaves (4-5 flowers, dried)
- 3.5 ounces sunflower oil
- 1/2 ounce beeswax
- 10 drops lavender oil (optional)

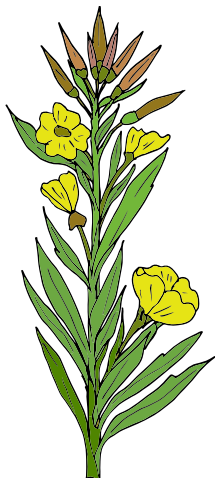
DIRECTIONS:

Crumble up the dried leaves and flowers with your fingers and place in mason jar, then pour the sunflower oil over the herbs, adding more oil if needed, to make sure the plant matter is completely covered. Cover the jar with a lid then set aside for 4 to 6 weeks to infuse, shaking jar periodically. Use cheesecloth to strain the infused oil mixture and weigh out 3.5 ounces. Combine the infused oil with the beeswax in a canning jar or heatproof container. Set the jar into a small pan of water to create a double boiler system. Place the pan over medium-low heat until beeswax is melted. Let cool for a few minutes before adding any essential oils. Mix well and pour into jar or tin for storage. Place directly in freezer for at least one full day. Shelf life is at least 9 - 12 months depending on exposure to sunlight.

EVENING PRIMROSE

Oenothera biennis

Evening star



Oenothera biennis, commonly called Missouri evening primrose or evening star, is an upright, Missouri native plant which occurs on limestone glades and bluffs and rocky prairies in the Ozark region south of the Missouri River. Usually found on limestone glades, bluffs, and rocky prairies in the Ozarks, but this favorite hardy native wildflower is also a popular plant for gardening and in roadside beautification projects.

CLASS: Herbaceous perennial (3' - 5' tall, 2' - 3' wide)

COMPOSITION: Upright

LIGHT PREFERENCE: Full sun - light shade

BLOOM: June - September

FLOWER COLOR: Yellow

FRUITS: Winged seed pods

LEAVES: Alternate, and toothed and lobed

SOIL: Dry, well-drained soils; clay and rocky tolerant

Flowers are solitary, very large (up to 4 inches wide), 4-petaled, and bright lemon yellow. Often there are many blooming at once, making this a very showy plant. The flowers last only a day, usually opening in late afternoon and staying open until the next morning. Flowers that open at night are usually pollinated by night-feeding bees and moths, and thus supply nourishment to those species. Some moth caterpillars feed on evening primroses as a main food plant as well. All parts of the evening primrose are edible for humans.

Native Americans valued evening primrose both as a food and a medicine. They applied a poultice made

from the plant to bruises to relieve swelling and made a tea from the root to ease coughs. European settlers took their cue from native peoples, using evening primrose to treat wounds, coughs, sore throats, and digestive upsets. In the 1980s, evening primrose soared in popularity when researchers discovered that its seeds are a gold mine of GLA, a compound rarely found in plants. If the body is working properly, it converts omega-6 fatty acids into GLA. But many factors can inhibit this conversion, including advancing age; a diet compromised by excessive saturated fats, trans fats, or alcohol; zinc deficiency; and some medical disorders.

Evening primrose oil supplies a direct source of GLA to the body, bypassing the need for conversion of omega-6s and helping to restore healthy levels of prostaglandins. More compelling is research supporting the use of evening primrose oil for diabetic neuropathy, a common complication of long-term diabetes that causes nerve damage in the legs, feet, arms, and hands.

PROPERTIES: Gamma-linolenic acid (GLA), anti-inflammatory, linoleic acid, potassium, phosphorus, palmitic acid, oleic acid, stearic acid

HISTORIC MEDICINAL USES: cough, wound care, sore throat, digestive support, poly-cystic ovarian disorder, premenstrual syndrome, fibrocystic breast pain, eczema, rheumatoid arthritis, diabetes, blood pressure, cholesterol, ADHD, ulcerative colitis, prostaglandin production, acne, menopause, bruises, hemorrhoids

EVENING PRIMROSE OIL SUPPLEMENT

Evening Primrose Oil (EPO) is cold-pressed from the seeds of the *Oenothera biennis* botanical. It takes as many as 5,000 evening primrose seeds to produce one capsule of oil. Evening Primrose Oil has traditionally been referred to as the 'King's Cure-All' due to the belief that its 'majestic' benefits and 'honorable' properties made it fit for Kings and Queen's to apply medicinally. When taken by mouth: Evening primrose oil is likely safe for most people when taken in doses up to 6 grams daily for up to 1 year. It might cause mild side effects including upset stomach, nausea, diarrhea, and headache in some people.

When buying any store bought oils or supplements, source top quality, 100% pure oils. This is so important. Choose a brand whose oils are either certified organic, or from a company that that is GMP-certified and independently verified to meet highly-rated manufacturing standards.

EVENING PRIMROSE ROASTED ROOT VEGETABLES

Common evening primrose root has a delightfully peppery tasty, like a strong turnip, so keep that in mind when you go to prepare it. This winter root meal is great for cough, sore throat, PMS and digestive support.

INGREDIENTS:

Evening primrose root (fresh)
Potatoes
Carrots
Parsnips
Large onion
Garlic
Olive oil
Curry, cinnamon, fennel, star anise, clove (optional)

DIRECTIONS:

Clean and peel/scrub vegetables well. Cut into 2" chunks. Coat with olive oil. Keep them separate and sprinkle with spices (e.g. sprinkle the parsnips with curry, the carrots with coriander seed powder and the potatoes and evening primrose roots with cinnamon, fennel, star anise and clove spice mix). Quarter or dice the onion depending on your preference. Separate

the garlic into cloves and mince. Preheat the oven to 425 °F. Place all ingredients on a baking tray and bake for about 30 – 50 minutes on a high shelf. For added flavor, sprinkle a few sprigs of fresh sage and rosemary towards the end of baking. Salt and pepper to taste if desired. Best served warm.

EVENING PRIMROSE ANTI-AGING FACE SERUM

INGREDIENTS:

2 tablespoons jojoba oil
1 tablespoon evening primrose oil
1/2 tablespoon rosehip oil
5 drops frankincense essential oil
5 drops lavender essential oil
5 drops helichrysum essential oil
2 drops essential geranium

DIRECTIONS:

Mix all of the ingredients together into a dark glass bottle. Use every morning and night on face, neck and chest after cleansing. 3-4 drops should be all you need.

EVENING PRIMROSE HEALING OINTMENT

INGREDIENTS:

90 grams almond oil
45 grams coconut oil
30 grams shea butter
20 grams evening primrose flowers, dried
60 drops of essential oils
*recommended: tea tree, lemon and lavender

DIRECTIONS:

Dry evening primrose flower petals for 1 week and gently shred. Add the almond oil and dried flower petals to a sealable jar. Macerate for 1 month away from light; shake occasionally. Strain the flower pulp using a cheesecloth. Using a double boiler method, place a glass bowl on a pot of gently simmering water. In the glass bowl, add the coconut oil and shea butter. Once melted, allow to cool slightly, then combine with the evening primrose-infused almond oil and essential oils. Stir the mixture well, pour into a dark colored glass jar, then place mixture into the freezer for at least one day. Use as needed to promote healing for skin ailments, wound care, eczema, acne, bruises, etc.

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OZARK WITCH HAZEL

Hamamelis vernalis

Winterbloom



Ozark witch-hazel is a shrub, often sending up sprouts from the base, or a small tree that grows well in gravel and rocky dry streambeds, at the bases of rocky slopes, and along streams, and rarely on wooded hillsides in rocky draws. The name “witch-hazel” in Middle English, “wyche” meant “yielding” or “pliable” and was used as the name for wych elm (*Ulmus glabra*), also called wych hazel, a tree with easily bendable twigs. The same common name was eventually transferred to the members of genus *Hamamelis*.

CLASS: Deciduous shrub (8' - 15' tall)

COMPOSITION: Large, dense

LIGHT PREFERENCE: Full sun - partial shade

BLOOM: January - April (rarely in December)

FLOWER COLOR: Orange to dark red, sometimes yellow

FRUITS: September - November; hard, woody elliptical capsule ½" long for discharging seeds

LEAVES: Alternate, simple (3" - 5" long), oval, new leaves are bronze to reddish purple changing to green

SOIL: Rich, moist, well-drained, acidic

Deer eat the shoots and leaves. Beaver, squirrels, and rabbits sometimes eat the bark. Turkey and grouse eat the seeds and flowers. A variety of insects eat the leaves, developing seeds, or other parts. In the Ozarks and elsewhere, forked switches of this plant and its close relatives have long been used by “witch wigglers” or “water witches” (water finders) to find the best places to dig wells. Missouri’s great folklorist Vance Randolph described this fascinating ritual in the Ozarks. Native Americans have long used the twigs and bark of witch

hazel as a medicinal herb, both internally and topically, for a wide variety of ailments. The fresh leaves of the plant contain high concentrations of tannin, which makes them very astringent.

The twigs and leaves of witch hazel can be gathered throughout the growing season, but are most potent in the springtime when the sap is running and the leaf growth is fresh. Both can be gathered by cutting small, leaf-bearing branches from mature trees. Strip the leaves and trim the twigs into smallish sections of about 1 inch (2.5 cm). For thicker twigs or branches, you can strip the outer bark using a small knife. All parts can be used fresh or dried in baskets or on screens for later use. Witch hazel preparations sold in drugstores are made from a steam distillation of the twigs, preserved with alcohol. They are much weaker than a standard tincture or tea. Topically, witch hazel is applied as a compress to heal varicose veins, hemorrhoids, bruises, and sunburns. The strong tea, applied as a wash, is a folk remedy for poison ivy. Because witch hazel is an astringent and is mildly antibacterial, it is often used as a toning remedy for the face.

PROPERTIES: Tannin, astringent, anti-inflammatory, mildly antibacterial

HISTORIC MEDICINAL USES: bruises, sprains, skin irritations, sore throat, diarrhea, intestinal bleeding, colds, coughs, bruising, postpartum hemorrhaging, sinus congestion, bleeding gums, gingivitis, varicose veins, hemorrhoids, sunburn, poison ivy, tumors

OZARK WITCH HAZEL ASTRINGENT

INGREDIENTS:

- 4 tablespoons witch hazel bark
- 4 cups distilled water

DIRECTIONS:

Prune one pound of fresh twigs from shrubs as soon as they have flowered. This practice produces the strongest tonic. Strip off the leaves and flowers (save these for sachets) and chop the twigs into a coarse mulch using either a mechanical mulcher or pruning clippers. Place the chopped twigs into a two-gallon stainless steel pot. Soak witch hazel bark in water for ½ hour, and then bring to a boil. Reduce to a simmer, then cover and cook for at least eight hours; add water as needed to cover the mulch. Allow the mixture to cool to room temperature. Pour the witch hazel tonic through a funnel containing a cheesecloth filter and into clean plastic squeeze bottles or other suitable, tightly-capped containers. Use the tonic within a week unless it is kept refrigerated. You can preserve your tonic for long-term room temperature storage by adding nine ounces of vodka or grain alcohol to 23 ounces of tonic. Apply topically with a cotton ball. Do NOT use internally! Keep out of the reach of children.

WITCH HAZEL HOME REMEDIES

While I love the magic of witch hazel, I don't love the smell of it. I recommend adding other essential oils and/or rose water to round out the fragrance of the witch hazel extract.

GLOWING TONER

Add your witch hazel to a 2oz spritz bottle. I love using rose witch hazel for this! Top it off with a few drops of lavender essential oil for a beautiful skin toner.

ACNE TREATMENT

Combine witch hazel with a little bit of melaleuca (tea tree) oil on a cotton ball and apply to problem areas.

RAZOR BURN

Apply to skin after shaving to help prevent razor burn and ingrown hair.

LINEN SPRAY

Add to a 2oz spritz bottle along with a few drops of your favorite essential oil and spritz anytime you want to freshen your air or linens. I love combining cedarwood and orange essential oils for this recipe.

JEWELRY CLEANER

Use a toothbrush to apply witch hazel to give your jewelry a shine.

HAIR DETANGLER / SOOTHER

Add alcohol-free witch hazel to a 2oz bottle with a few drops of lavender, cedarwood and rosemary. Apply to damp hair and work into scalp for healthy hair. Add peppermint and tea tree oils to promote hair growth.

BRIGHTENING TONER

Add lemon juice to your witch hazel astringent to reduce sun spots, dark spots, age spots, and acne scars, shrink pores, tighten bags under eyes, and prevent breakouts. 2 tablespoons of lemon juice, 1 tablespoon of witch hazel, plus 6 tablespoons of purified water. Mix well and apply with cotton ball once or twice daily.

HOMEMADE "TUCKS" COOLING PADS

Add a couple of drops of lavender essential oil to about an ounce of witch hazel. Mix well, then dip round cotton pads in the solution. Place them in the freezer for an hour or so, then use as needed.

REDUCE VARICOSE VEIN SWELLING

To reduce pain and swelling from varicose veins, prop your legs up, soak wash cloths in Witch Hazel and lay them on your legs to reduce pain and swelling from varicose veins. The Witch Hazel will help to tighten the veins, relieving the discomfort temporarily.

SOOTHE BUG BITES AND REDUCE ITCHING

With its anti-itch and anti-inflammatory properties, Witch Hazel is ideal for treating bug bites. Apply the Witch Hazel with a cotton ball directly to the bite. It also works to soothe bites from fleas, flies, and insect stings. This can also reduce itching and swelling from poison ivy and poison oak.

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ROSE VERBENA

Glandularia canadensis

Verbena canadensis

Vervain



The name, “*verbena*,” comes from the Latin for a plant sacred to the gods, and it was one of the plants customarily burnt in worship ceremonies. Long considered a member of the genus *Verbena*, this species is currently placed into the genus *Glandularia* based on a number of factors, including chromosome data that were unavailable to botanists in previous decades. Because it was so long known as *Verbena canadensis*, it still appears under that name in many guidebooks and manuals. This native plant is great for rock gardens, edging, and in containers, where it forms masses and spreads as a ground cover.

CLASS: Herbacious perennial ground cover (1' - 2' tall)

COMPOSITION: Sprawling, groundcover

LIGHT PREFERENCE: Full sun - part shade

BLOOM: March - November

FLOWER COLOR: pink-purple, magenta

FRUITS: n/a

LEAVES: 1½–3" long and ¾–3" across, opposite

SOIL: Mesic to dry, well-drained

A number of bees, butterflies, and skippers drink nectar from the flowers, and the seeds may be consumed by mice and birds. Seeds that are carried away but not eaten might be dispersed this way. The plant, however, can still spread vegetatively by rooting where the stems touch the ground.

The use of rose verbena for medicinal, ceremonial, and superstitious purposes goes back thousands of years. During the Middle Ages, vervain was often used

in magicians' and witches' potions. In folk medicine, vervain was used for protection, but was also used as an aphrodisiac, earning it the name *herba veneris*, or “herb of love.” Warriors would carry its leaves into battle to protect them from their enemies. In the Shawnee Tribe tradition, rose verbena is one of the herbs used to foster beneficial visions. The Aztecs and other Native American tribes used vervain roots and vervain flowers as a diuretic and as a natural treatment for headaches, circulatory issues, and insomnia.

Historic herbalists used water in which rose verbena has been stewed and soaked in linen cloths to draw out infection, and even worms, from wounds. More recently, vervain has become known for its effect in treating infections in the airways. Vervain is particularly well suited for acute and chronic inflammation of the sinuses and respiratory tracts, because it acts as anti-inflammatory as well as an expectorant.

PROPERTIES: anti-inflammatory, antispasmodic, antipyretic, diuretic, astringent, antibacterial, astringent, cardioprotective, antimicrobial, anxiolytic, sedative

HISTORIC MEDICINAL USES: arthritis, gout, bruises, burns, itching, rash, skin conditions, insect bites, tooth and gum inflammation, common cold symptoms, headache, sinus complications, circulatory issues, swelling, jaundice, kidney stones, liver support, urinary tract infections, cramping, pain relief, gall bladder disease, digestive problems, constipation, diarrhea, gas, ulcers, insomnia, depression, anxiety, sleep aid

PRECAUTIONS

Rose verbena is a uterine stimulant. Because of its labor-inducing effects, you should not use this plant if you are pregnant. In fact, midwives use rose verbena for its effectiveness in encouraging labor. Even though rose verbena does not have any well-researched side-effects or drug interactions, you should not take vervain in large doses. If you find the taste of rose verbena tea to be unappealing, there are many commercially available forms of rose verbena supplement. Large doses may cause diarrhea or vomiting.

ROSE VERBENA TEA

The traditional application of medicinal rose verbena is in tea. The flavor of vervain tea takes some getting used to. Our modern palettes are less accustomed to bitter flavors and rose verbena is particularly bitter. Companion ingredients will help balance the flavor. Drink two to three cups daily, but for no longer than a week. You can drink vervain tea to treat any of the conditions listed previously, but it works particularly well for stomach ailments of all kinds. It will also strengthen your liver and kidneys.

INGREDIENTS:

- 1/3 ounce dry rose verbena pedals and leafs
- 1/3 ounce thyme
- 1/3 ounce peppermint
- Organic, raw, local honey (optional)

DIRECTIONS:

Add 2 heaping teaspoons of the herbal mixture per one cup of hot water. Allow to steep for ten minutes.

ROSE VERBENA WOUND POULTICE

A poultice is a direct way to apply herbs to the skin or wounds. Herbs are crushed into a pulp or made into a paste that is spread directly onto the surface of the skin, up to an inch thick, and held in place with gauze or muslin to protect the poultice from rubbing off. By changing the temperature of the poultice, the healing actions can be altered. A warm poultice will help to increase circulation to the area and a cold poultice will help soothe inflammation. The downside to poultices

is that they take a little more time to do their thing and are a bit messier than other topicals. It's best to do most poultices at night so the herb can work while you sleep. Herbs that pair well with rose verbena in a poultice include plantain leaves, calendula petals, dandelion leaves, and burdock root.

DIRECTIONS:

Determine which herbs you would like to use with your rose verbena petals and leaves, and estimate how much you will need. The amount of herbs to use depends on the size of the area that needs to be covered. Chop your herbs into fine pieces. Use mortar and pestle or blender to crush herbs until they become a pulp. Spread poultice on desired area of skin. Wrap the area with a layer of gauze or muslin to hold the paste in place.

ROSE VERBENA MOUTHWASH

Rose verbena has been used for several centuries to boost gum health. Reports show that even the Celtic people had used vervain as a mouthwash to treat their oral problems. Chewing the plant's roots was believed to strengthen one's gums and teeth.

INGREDIENTS:

- 1½ cups filtered water
- 2 teaspoons dried peppermint
- 2 teaspoons dried rose verena petals
- 2 teaspoons dried calendula
- 1 teaspoon fennel seeds
- ¼ teaspoon anise seeds
- ½ teaspoon sea salt

DIRECTIONS:

Bring 1½ cups filtered water to a boil. Into a heatproof jar or a teapot, pour boiled water. To container with boiled water, add peppermint, calendula, fennel seeds, anise seeds and cinnamon. (TIP: Alternatively, place herbs in a large tea ball or tea bag before immersing.) Let herbs steep for 30 minutes. Then, using a small fine-mesh sieve to strain herbs, pour infused water into a clean bottle or jar. Add ¼ tsp sea salt and stir to dissolve. As you get used to saltiness of your rinse, begin increasing salt to ½ tsp for more germ-fighting power. Store rinse in the fridge for 3 to 5 days. To use your herbal mouthwash, after brushing, swish a mouthful gently in your mouth and through teeth for 30 seconds.

Missouri Department of Conservation, Illinois Wild Flowers, Missouri Plants, USDA, Gardening Know How, Mary H. Dyer, Credentialed Garden Writer, The Herb Society of America, Kathleen Hale (2018), Healthy Hildegarde, Clemson College of Agriculture, Forestry and Life Sciences, Lady Bird Johnson Wildflower Center, Charles W Kane, Applied Medical Botany, Dr. Axe - Ancient Nutrition, Dorothy Garlough, RDH, MPA, National Library of Medicine, National Center for Biotechnology Information, Baylee Dental - Sara Vincent/Emax Health, Herbal Academy, The Herbarium, Agatha Novelle - DIY herbalism (2015)

TICKSEED COREOPSIS

Coreopsis lanceolata

Lanceleaf coreopsis

Lanceleaf tickseed

Sand coreopsis

Tickseed



Tickseed Coreopsis is a prominent glade perennial. The name comes from a combination of two Greek words: "koris," meaning bedbug, and "opsis," meaning view, or "resembling a bug" because its seeds somewhat resemble ticks. This plant is a member of the aster family, asteraceae. There are 6 species of Coreopsis recorded for Missouri. We also have 11 species in the genus Bidens (beggar's ticks), which can be confused with Coreopsis species. It grows natively in rocky prairies, glades, tops of bluffs, sandy open areas, and along roadsides and railroads. It is cultivated statewide and commonly escapes into natural habitats.

CLASS: Glade herbaceous perennial (2' tall)

COMPOSITION: Dense near ground, airy near flowerhead

LIGHT PREFERENCE: Full sun - part shade

BLOOM: April - June

FLOWER COLOR: Yellow

FRUITS: n/a

LEAVES: Narrow, deeply cut, opposite, 3"-4" long

SOIL: Dry, excellent drainage

The achenes (as the seedlike fruits of members of the sunflower family are called) provide food for birds and small mammals. Bees, birds, and butterflies are quite fond of coreopsis. It is a common component of pollinator gardens and native wildflower mixes.

The National Garden Bureau named 2018 the "Year of the Coreopsis," praising its sunny beauty, propensity for lending itself to creating gorgeous hybrids, and

prolific growth, especially in midwestern, southern, and southeastern states.

Coreopsis has long been used by Native American people for dye and as an herbal remedy. The Lakota people use it for tea. Traditional Cherokee medicine uses an infusion of the roots to help treat diarrhea. Cherokee, White Mountain Apache, and Zuni people make dye with the flowers, and traditional Navajo medicine enlists the plant's help in treating various reproductive issues.

Recent studies revealed the antileukemic potential of the yellow petals of *coreopsis lanceolata*. The total flavanoid content showed the inhibition of cell proliferation and possible induction of apoptosis in human leukemia. Phenols and flavanoids derived from *coreopsis lanceolata* showed protective effects against radical-induced oxidative damage and attenuated toxicity in cells. In a recent study, it was reported that compounds isolated from these edible flowers have high neuroprotective effects in various cells.

PROPERTIES: bioactive compounds (antileukemic), rare flavonoids, flavanone, chalcones, aurones, antioxidant, anti-inflammatory, phenolic compounds, anti-diabetic, anti-allergenic, acetylene compounds,

HISTORIC MEDICINAL USES: diarrhea, reproductive support, diabetes, allergies, cancer, balance metabolism

COREOPSIS TINCTORIA

Coreopsis tinctoria, commonly called plains coreopsis, garden coreopsis, golden tickseed or calliopsis, is an annual coreopsis that is native to the western U.S. (west of the Mississippi River). While it is closely related to tickseed coreopsis, its properties are slightly different. Both are medicinal.



Native Americans boiled the flowers to make a type of beverage, the roots were steeped into a tea that eased the symptoms of diarrhea and abdominal discomforts. Folklore indicates that the tea was also supposed to protect the drinker from being hit by lightning. The Zunni women believed that if they wanted a daughter, the tea would help conceive one as well. It grows up to 3 feet tall and requires companion plants for structure.

COREOPSIS FLOWER SUN TEA

INGREDIENTS:

- 2 teaspoons coreopsis petals and dried coreopsis root
- 2 teaspoons dried peppermint
- Spring water
- Organic, raw, local honey

DIRECTIONS:

Fill a clean glass jar with water. Do not use plastic. Plastic has toxins that would leech out into your water with the

heat of the sun. Add herb blend to root ball to infuse water. Set in sun for 4-6 hours. Remove root ball and add honey while the tea is still warm. Serve over ice.

COREOPSIS HERBAL SALVE

INGREDIENTS:

- Dried Coreopsis petals
- 1 ounce beeswax
- 4 ounces herbal infused oil
- 10-20 drops essential oil of choice (optional)

DIRECTIONS:

To make a salve, first craft your herb-infused oil(s). This can take anywhere from about a day to several weeks, depending on the method used. Use dried herbs in your infusions, as the lack of moisture content in the plant material can keep spoilage at bay. Place herbs in crock-pot and cover with carrier oil of your choice. (Olive, almond, and coconut are popular carrier oils). Gently heat the herbs over very low heat (preferably between 100° and 140° F for 1 to 5 hours, until the oil takes on the color and scent of the herb. Turn off heat and allow to cool. Once oil is cooled, strain using cheesecloth. Vitamin E oil at a concentration of up to 1% may also be added to prolong shelf life for oils to be used topically. The consistency of salves can easily be adjusted depending on your preferences. Use less beeswax for a softer salve and more beeswax for a firmer salve. Place beeswax in a double boiler and gently warm over low heat until the beeswax melts. Add herbal oils and stir over low heat until well-mixed. Remove from heat and add the essential oil(s). Quickly pour warm mixture into prepared tins, glass jars, or lip balm tubes and place directly into freezer for at least 1-3 days to slow phase separation and extend shelf life. Many herbs can be used for salve-making. Companion herbs include arnica flowers, burdock root, calendula flowers, cayenne powder, chamomile flowers, chickweed, comfrey leaf and/or root, echinacea herb and/or root, ginger root, goldenseal leaf and/or root, lavender flowers, myrrh gum powder (or myrrh essential oil), nettle leaf, oregon grape root, plantain leaf, St. John's wort, thyme leaf, and yarrow leaf and flowers.

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