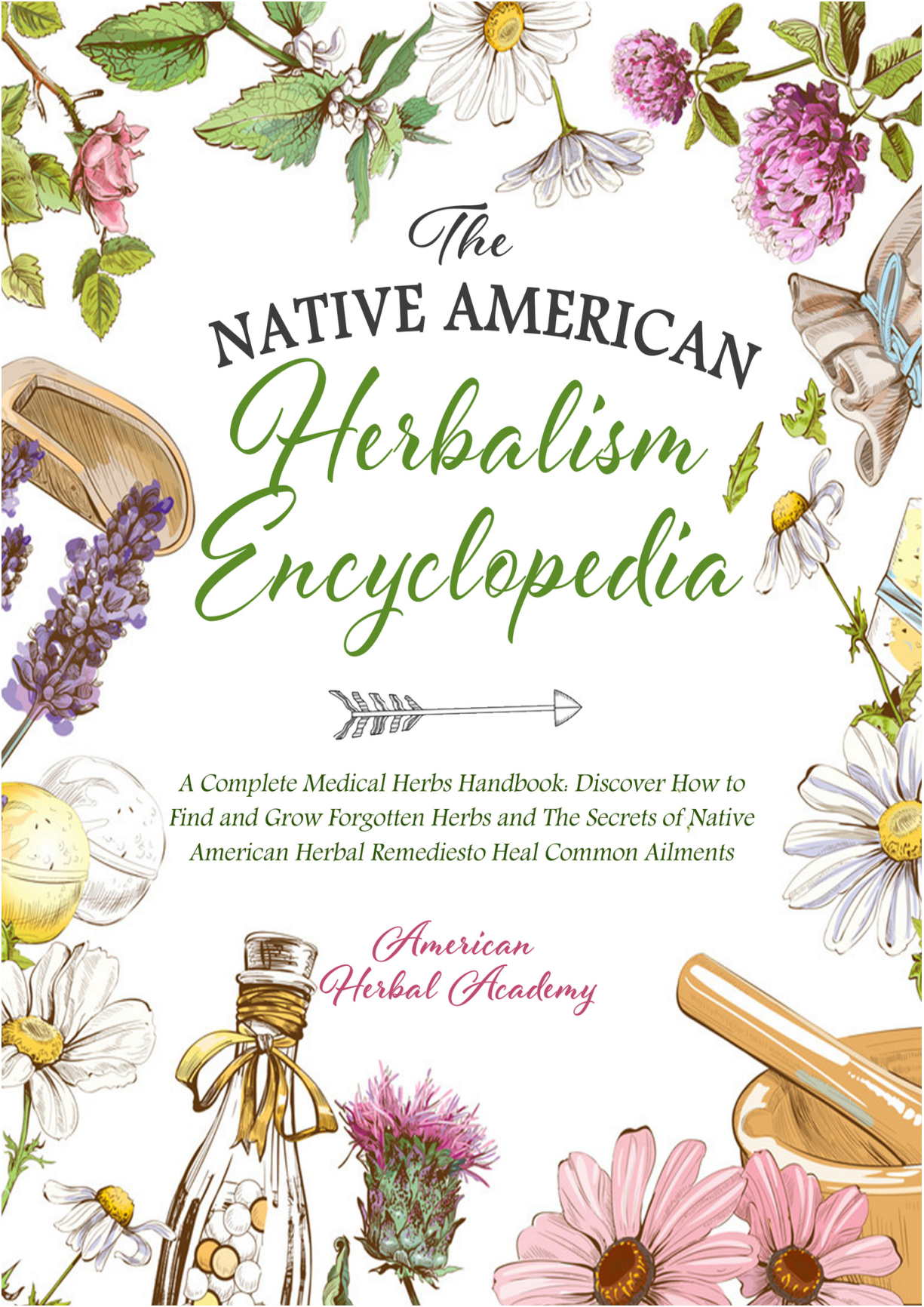


The
NATIVE AMERICAN
Herbalism
Encyclopedia



A Complete Medical Herbs Handbook: Discover How to Find and Grow Forgotten Herbs and The Secrets of Native American Herbal Remedies to Heal Common Ailments

*American
Herbal Academy*



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Introduction

W

e live in a country where the cure for virtually any disease and ailment is within our grasp. In our forests, meadows, plains, and gardens grow small, seemingly insignificant flowers and herbs, plants that we don't look twice at, and trees of which we don't even bother to learn the name. Yet, they are the key

to a better, healthier, and more sustainable way of life.

Our forefathers, more attuned with nature than we could ever imagine to be, understood that and took carefully and sparingly the gifts that Nature offered to heal themselves and grow stronger. We have lost that knowledge.

Only starting from the 1970s, a renewed interest in botanic medicine has uncovered the depth of the Native American knowledge of plants and their healing powers. The research has not only helped herbalists, but physicians and scientists as well that re-discovered substances that the Native Americans people knew about for hundreds of years.

This book is meant as a short but complete introduction to the most common Native American herbs, their traditional and modern use. The book is completed by a list of simple and effective recipes for the most common ailments.

You don't need to put at risk the delicate natural balance of your body by taking drugs and medications, if an easily available natural solution is just outside your door. Harvest carefully or grow your own herbs, learn to know your body and what works best for you, communicate with the nature surrounding you, and you will in a small way bring back a culture that for too long as been treated as inferior.

This book will teach how to find and treat the herbs the way the native American tribes did: from the forest to your herbalist table, but you will have to find your way to listen to your body and the plants around you. Let's start this amazing journey together, keep reading!



“ Everything onthe earth has a purpose, every disease an herb to cureit, and every persona mission. This isthe Indiantheoryofexistence .” Mourning Dove [Christine Quintasket] (1888-1936) Salish CHAPTER ONE

Native American Medicine and Modern Uses

ince the 1970s and ever more so today, there is a growing interest in the medicinal uses of herbs and plants for complementary medicine in the U.S. Particularly, both amateur herbalists, professional healers, and physicians, have become aware of the use of herbs by Native American medicine. Many of the botanicals sold as dietary supplements today, have been used for centuries for the same purposes by Native American societies.

However, the commercialized supplements represent only a small fraction of the more the 2500 different plant species that have been discovered and used for their medicinal properties by Native Americans.

We shall focus on the most common plants and their properties. This book is meant as an introduction to the native American herbal medicine and this chapter provides a brief explanation to the capital importance of the discoveries made by indigenous inhabitants of the North American continent for modern medicine. It's an interesting perspective for an amateur or novice herbalist to know the history of the plants he/she wants to use both in traditional medical practices, as well as the current use in modern medicine and drugs. However, if you want to jump right into the herbal dispensatory, you may skip this chapter and read on the basics of herbology in the next chapter and on the plants themselves in the third chapter.

Short summary on Native American medicine

Our original Americans lived a life of natural dependence in the forests, plains, and coastal regions. Depending on the area, the Indians used wild species as plant food.

When weather and season permitted a variety of game and fish were utilized as food, clothing, instruments and decoration.

Berries of all kinds were eagerly gathered in the spring and eaten by everyone as a spring medicine or for specific treatment in haemorrhage and pain due to haemorrhage, high fever and convalescents, and as a general blood builder.

Cranberries were a favourite autumn food and were also considered as blood and liver boosters. Blackberry roots were used as an astringent.

Nuts were a main source of high nutrition and they used them for making nut bread, crushing them and adding water for nut milks.

Acorn and dandelion roots were roasted, pounded and sprinkled over other cooked roots. Pond lily roots are one of the most widely known food roots on the continent, and were eaten from eastern Canada to the Pacific coast.

Milk weed roots were gathered while the dew was still on the leaves and a root sugar prepared from them. The white portions of hardwood ashes were used for salt, also certain leaves. Apples and other fruits and vegetables were stored in barrels and buried in winter pits. Some were sliced, strung and dried for later use.

Yucca leaves and Quillaja bark provided soap and shampoo. Although this Indian way of life has vanished, it should be remembered that a considerable number of its elements have been taken over and appropriated by the European colonizers. These included growing of corn, squash, pumpkins and tobacco. The use of canoes and snowshoes and

perhaps still more important and half understood idealization of what is assumed to be an Indian way of life. The happiest state for a human is when his/her food is also his/her medicine. The Indians at one time were a people of complete accord, for they practiced it daily in many ways.

From the earliest days all Europeans were impressed by the robust stamina of the Indians in every location. The original artist and photographer, as previously mentioned also favors the alert, brave, strong and, in many ethnic groups, handsome Indian in every standard of beauty. Technical study confirms their physical endurance. Archaeology in most cases cannot find any of our modern-day bone deficiency, cavities, arthritis, tuberculosis, etc. Reviewing the scene from another point of view, our studies on the earliest travelers and missionaries also found the Americans very healthy and comparatively free of disease. From our available sources, we can find only eightyseven different sicknesses spoken of.

It was uncommon for them to have the fatal cancer, TB and heart conditions, all of which have progressed in our time. The figure of eighty-seven sicknesses is really out of date and primitive as compared to our modern list of over 30,000 diseases which is growing every day.

Indian women of early history were exceptionally strong. They would often become mother and doctor at the time of delivery and in a few hours resume their daily activity, as their mothers did in the past.

In fact, the first Americans were their own physicians. Civilization has taught us to build empires for Life Insurance Companies, medical research, welfare, old age organizations, etc.

In comparison, the Indians' protection came from Nature, the "Mother Earth" being the most important. They learned to treat lives with plant life, the medicine from the earth.

After the white man, came they were suddenly introduced to a new way of life which brought them the white man diseases for which they had built no immunity, and thousands died. Self-sufficiency was destroyed as the Indians became dependent on civilized ways

The Indians were never at a loss to know which plant was best, or the time it should be gathered to heal them of diseases. They knew how to treat their complaints of physical, surgical and midwifery with a skill that surpasses the medical teachings.

They used vapour baths for many ailments.

Patients were put into sweat lodges of almost stifling amounts of moist heat to eliminate toxic conditions. Fractured bones were held in splints made of a number of rods tied together at the ends, and covered with leaves and bound with deer skins.

Herb roots were pounded fine and used as a poultice for bad cuts and sprains. Sore eyes were treated with a wash consisting of an infusion of a certain root. Our cocaine and novacaine come from ingredients found in the coca plant, the nature healer used to alleviate pain. In this way the original Americans were their own physicians.

The Indian art of healing was ceremonial in nature. To us their rituals seem strange and without meaning. They knew physical health often failed without the aid of spiritual means. Dancing, chanting, etc., was conducted, according to conditions, or severity of the patient. Today our get-well cards, entertainment troupes, flowers, prayers are less physical but given in the same manner—to support the spirit. Their health and spiritual source was so

closely connected with natural surroundings, they of course were inspired by the significance of nature and to the Sun, Moon, Stars, Rain, Wind, etc., that encouraged it.

Despite all the hardship in their memory and legend, sickness and disaster as was associated with European history and of the status of the Bible did not exist. The Old World was entangled with feelings of inferiority, guilt and sin. The New World belief is not about punishment and sickness, but heroic actions of everyday life.

Training as an Indian healer began very early. Selection was from the family or from signs of devotion, wisdom and honesty. It was more than a career, as is of our time, he was elected by ability. Trusted with all secrets, rituals, habits and legends of their people, while attending all ceremonial celebrations and critical meetings of the people he was at the side of their leader.

The trainee must know and remember the many herbal species, their properties and uses. They knew their limitations and that flowers of the garden are not an agent against the fate of death, but there are flowers for sickness and health and flowers to prolong life. All medical plants in the area were used. The flora and fauna differed in each locality, but each knew their immediate supply. Modern medicine and natural healing still practice their theory.

Both used strong steam to create perspiration, isolation of communicable diseases, fasting for health, physiological moments, special diets, and of course herbs.

As a healer to all people he was above tribal restriction, he cared for the wounded or needy. The Indian healer was an artist in the best tradition of Hippocrates' principles.

Native American herbal medicine and modern health supplements:

Seven of the most widely sold herbal supplements were used by Native Americans, such as black cohosh (*Cimicifuga racemosa*), blue cohosh (*Caulophyllum thalictroides*), elderberry (*Sambucus species*), and juniper

(*Juniperus communis*). Some pharmaceuticals were originally discovered in the course of investigations of botanicals that were used by Native Americans for medicinal purposes.

Examples are taxol, obtained from Pacific yew tree (*Taxus brevifolia*), and etoposide phosphate, a derivative of podophyllotoxin, which is a constituent of May apple or American mandrake.

Both are currently used for the treatment of various diseases. Plants play an important role in the medical practices of many, if not all, Native American peoples. Plants are used not only in the diagnostic and therapeutic process, but also in the physical and ritual purification procedures that commonly precede ceremonies and in the act of healing itself.



The 7 top-selling botanicals in the U.S., their uses by Native Americans, and their current uses

Common name (*Latinname*)

Ginseng
(*Panax
quinquefolius*)

Family

Araliaceae

Garlic

(*Aliumsativum*)

Liliaceae Native American tribes

Cherokee, Creek, Delaware,
Fox, Houma, Iroquois,
Mohegan, Pawnee, Penobscot,
Potawatomi
Cherokee

Echinacea

(*Echinacea*
purpurea, *Echinacea angustifolia*, *Echinacea pallida*)

Asteraceae Cheyenne, Choctaw,

Dakota, Delaware, Fox Kiowa, Montana, Omaha Pawnee, Ponca, Sioux, Winnebago

Goldenseal

(*Hydrastis*
canadensis) St John's wort
(*Hypericum*
perforatum) Evening primrose (*Oenothera biennis*)

Ranunculaceae Cherokee, Iroquois, Micmac

Hypericaceae Cherokee, Iroquois, Montagnais

Onagraceae Cherokee, Iroquois, Ojibwa, Potawatomi

Cranberry (*Vaccinium macrocarpon*)

Ericaceae Montagnais

Native American indications

Tonic, expectorant; for fevers,
tuberculosis, asthma, and rheumatism; as a strengthener Current indications

Immune function and stress

Stimulant,

carminative, diuretic,
expectorant, mild cathartic; for scurvy, asthma, and prevention of worms Pain relief; for coughs and sore throats, fevers, smallpox,
mumps, measles,
rheumatism, and arthritis; antidote for poisons and venoms Tonic; for fever, whooping cough, and pneumonia For fever, coughs,
and bowel
complaints

For premenstrual and menstrual pain, obesity, and bowel pains

For pleurisy

Cardiovascular health and
cholesterol lowering

Immune function

Immune function

Antidepressant

Antioxidant status: premenstrual and menstrual pain

Health of urinary tract

Of the >17000 plant species that constitute the North American flora, > 2500 members of the vascular taxa and > 2800 of all taxa were used—and to some extent continue to be used—for medicinal purposes by various Native American societies. The gathering of information about the use of particular

plants as medicine has been in progress for at least a century. The resulting data were compiled in book form in 1986 and, more recently, in an Internet database (<http://www.umd.umich.edu/cgi-bin/herb>).

Yet, ethnobotanists continue to uncover additional medicinal plants and uses of the plants already included in these databases.

Specific uses of medicinal plants by Native Americans have been reported and, interestingly, the same plant parts were often used by many different tribes in diverse areas of North America. Analysis of the plants used as medicines by the original North American residents showed that the choice of medicinal botanicals was by no means random, but highly selective, as evidenced by the extensive use of some plant families and the virtual avoidance of others.

Several lines of evidence suggest that Native Americans took botanicals as medicine in the sense that Western science uses that term: for example, Native Americans used different plant parts for the treatment of various ailments, combined several botanicals for specific therapeutic purposes, and recognized toxic plants both as actual poisons and for medicinal purposes.

However, we should also emphasize that a spiritual component is also involved in the use of plants for the treatment of particular symptoms, because it is the power, the “spirit,” of the plant that is believed to have the therapeutic effect. For a plant to have “power,” certain rules have to be observed in collecting the plant.

Even if we could be tempted to ascribe such rites to the religious aspect, rather than the purely therapeutic; it is interesting to note that similar instructions are reported from such geographically and culturally distinct tribes as the Iroquois of the Northeast and the Salishan of the Northwest (Vancouver Island).

In both tribes, the importance of collecting plants in the morning is stressed, tree bark is to be taken from the eastern side of the tree, an offering of tobacco is to be made, and prayers need to be said. Such details regarding the collection procedure or, perhaps more important, the precise plant part used and the method of its preparation, are

not always reported.

Despite the availability of many of these botanicals in health food stores and, to an increasing extent, in supermarkets and pharmacies, scientific research regarding efficacy and safety is limited. Most medicinal botanicals have not been investigated to any great extent, and rarely has the focus of such research been specifically on medicinal botanicals used by Native Americans.

Fortunately, however, some of the species used medicinally by Native Americans are also native to other parts of the world (eg, *Sambucus nigra*, *Sambucus racemosa*, and *J. communis*); others were introduced to European settlers by indigenous North American populations and have subsequently become popular in Europe such as *Echinacea* species and *Lobelia inflata*. Intentionally or accidentally, settlers from other continents, in turn, brought some of their native botanicals, resulting in the eventual use of some foreign species by Native Americans (eg, *Urtica dioica* and *Tanacetum vulgare*). For example, *U. dioica*, stinging nettle is a native of Europe and Asia, its extensive use by Native American societies throughout North America suggests that the plant and its medicinal use spread rapidly after its introduction. Various parts of the stinging nettle were administered externally and internally by numerous Native American societies for a variety of purposes, including as a general tonic (ie, what we would now consider an immunostimulant) and as a treatment for fevers and rheumatism.



Therefore, what little research exists on species used by original North American inhabitants predominantly comes from other countries where the same species were used, often for the same therapeutic purposes as those reported by Native Americans. Research on botanicals used by indigenous populations has generally been confined to in vitro screenings of individual plants or their constituents for their antibacterial, antiviral, or anti-inflammatory activities. The fact that a botanical was traditionally used for wound healing, fever, infection, edema, or rheumatic disease is

taken as an indicator that the plant should be tested for its anti-inflammatory properties. One of such species that has been studied more thoroughly is *Echinacea*. *E. angustifolia*, the narrow-leafed purple coneflower, has long been used by Native Americans for pain relief and wound treatment, as an antidote against various poisons, and for symptoms associated with the common cold. It was introduced by Native Americans to European settlers, who subsequently took what they thought was *E. angustifolia* back to Europe.

It turned out, however, that the species introduced in Europe was *E. purpurea*, another native American plant used for medicinal purposes by the Choctaw and Delaware.

E. purpurea has since become one of the most popular medicinal botanicals in Europe and the United States. For medicinal purposes, besides *E. purpurea* and *E. angustifolia*, a third species, *E. pallida*, is commonly used. What the American consumer calls *Echinacea* can be any one of the 3 above-mentioned species or a combination of 2 or even of all 3 of them, which should of course be indicated on the label.

Furthermore, many *Echinacea* preparations, including one of the best-known European brands that has been used in numerous studies (*Echinacin*), are extracts of both root and above-ground parts, whereas in other instances the root alone or the above-ground parts alone are used.

There are substantial differences in the chemical compositions and the biological activities not only between different *Echinacea* species, but also between their roots and aerial parts.

It is noteworthy that *E. purpurea* does not contain echinacoside, the substance used frequently for standardizing *E. angustifolia* and *E. pallida*

extracts. Further differences arise from the extraction procedure. For example, the polysaccharides to which many of the stimulatory effects of *Echinacea* species on the nonspecific immune system have been attributed are likely to be present in aqueous, but not in alcoholic, extracts.

In addition, in the United States, *Echinacea* is often sold in combination with goldenseal (*Hydrastis canadensis*); combinations with other medicinal botanicals are common here and in Europe.

Echinacea is one of 12 commonly used herbs that physicians need to be aware of and knowledgeable about (48). At least 3 different species of *Echinacea* are sold under that name, yet the literature is often reviewed without regard to what particular species was used.

Moreover, differences arising from different extraction procedures, solvents, and plant parts used are ignored, and little distinction is made between data obtained with purified polysaccharides and those obtained with crude extracts.

The consumption of botanical supplements in the United States has been increasing at a rapid rate and this trend is expected to continue. In many cases, the original indications of the putative beneficial effects of botanical supplements appear to have come from their use by Native Americans. Yet, scientific research is still confined to only a handful of the hundreds of substances sold in health food stores. Not only that, but the few studies on the effects of Native American medicinal botanicals have been conducted in experimental animals, and there are even fewer reports of clinical trials. Nonetheless, what little scientific data have been gathered tend to confirm that many of the plant species contain bioactive constituents that are effective in treating the very ailments for which they were used by Native Americans.

Particularly noteworthy are the indications that some of these medicinal botanicals might be useful in the treatment of chronic inflammatory diseases such as rheumatoid arthritis and SLE. The therapies currently available for both of these conditions are often quite ineffective and are almost invariably accompanied by serious adverse effects. It would, therefore, be highly desirable to find less toxic alternatives, and some medicinal botanicals might be a suitable solution.

Much of the current research appears to focus on attempts to isolate and characterize bioactive principles. However, it should by now be clear that isolated chemical constituents of plant extracts seldom have the same effect as does the complex mixture of bioactive molecules present in whole-plant (or plant part) extracts. In view of the increasing popularity of botanical supplements and anecdotal and empirical evidence of their uses, new scientific approaches for investigating these supplements need to be developed to allow research to move away from the reductionist principles that have been applied to their study so far.



CHAPTER TWO

Medicinal Plants DIY

H

erbalism is not a magical or spiritual practice, it is *science*. Our ancestors knew a lot more about health and the human body than popular culture gives them credit for, and the practice of herbalism is the collected wisdom of centuries of trial and error. There are still

some aspects of herbalism we haven't yet explained with science, but it's not "magic." Herbalists work with plants because the vitamins, minerals, and organic chemicals that plants create to keep themselves healthy can keep humans healthy, too.

The beneficial properties of herbs as medicines will often depend upon the greenness or ripeness of the plant. The time for cutting and digging is essential to the peak susceptibility of its known attributes. Whether it be summer, winter, spring or autumn, the timing must be in accord with the plant's protocol.

For instance, Cascara, or Sacred Bark, after it has been stripped in the proper season from the tree and made into a powder or tincture is more valuable and

effective with age. Nettle is a great herb in its earliest stage of growth, but will prove less valuable with age. Another great essential of a plant which is to be selected for its medical qualities is its environment. If indigenous to the locality or country wherein it is found, it is the proper one to select.

Plants that are introduced from other countries are lessened, or deprived, of their virtues, unless they meet in their new home all the essential conditions possessed in their native place. It must be apparent to all that herbs are liable to suffer from soil, climate, etc., and from these conditions will vary the medical properties attributed to them. When giving a medical herb be informed as to its proper curative effect upon the system.

Because herbs are so complex, it's not accurate to think of them as "weak" or "gentle" drugs. They fit into a complete system of health care that is not the same as the mainstream Western model. The holistic herbal model prioritizes early preventive care, and when illness happens, it focuses on supporting and strengthening the body's own response mechanisms. Therefore, it is vital to know how to best source and treat these plants, if we want to approach herbalism as a serious practice.



2.1 Sourcing Herbs

We should not think in terms of "use" in reference to herbs whenever possible. To "use" something implies exploitation.

We should view herbs as teachers, allies, and friends, not mere resources to be exploited, as the Native American tribes did, as the ritualized crafting of the herbs shows.

We don't use our human friends to help us move or plan a party—we work together with them. We feel the same way about plants, and try to reflect that in the way we speak and write about them. This is one small aspect of an ongoing effort to respect plants as living, independent organisms with their own needs and desires. While plants don't perceive or act on the world the same way we do, they are nevertheless alive and responsive to their environments. (The books *What a Plant Knows*, by Daniel Chamovitz, and *The Hidden Life of Trees*, by Peter Wohlleben, are excellent explorations of plant sense and sensitivity.) It's our responsibility as stewards and caretakers to make sure we take only what we need, minimize waste, and actively restore plant habitats and populations so these beings can continue to share their gifts with us for generations to come.

Buying

High-quality herbs are high-quality herbs, regardless of their source. Where you live, that might be a local health food store, a small local farm, or even your neighbor's garden. You may even have an herb shop in your town. You might be surprised to find that your grocery store has good-quality herbs, too, especially those frequently sold as produce. Or you may live somewhere with limited access to herbs, in which case you should find a reputable online

retailer.

You'll also find that the price of herbs can vary greatly, depending on where you purchase them. Cheaper is not usually better! Local small producers often have to charge more for their herbs and herbal products, but the quality is also often much higher.

Experiment with small batches first, so you learn which producers have the best quality; that will help you know whether it's worth the money.

There are a few things to keep in mind when sourcing herbs: soil quality, growing practices, and how the herbs are dried or processed.

If the soil where the herbs are grown is contaminated with heavy metals or other pollution, this is likely to be in the plant matter. It's important to know where the herbs were grown, so you can determine whether the soil was clean. This can be a problem for herbs grown anywhere, but especially those grown in places that don't have regulations about soil pollution. Some larger herb retailers, such as Mountain Rose Herbs, test their herbs to make sure they are free of soil-based contamination.

You might be disinclined to purchase herbs grown in urban farms, but don't write them off: Talk to the producers and ask about their soil. Most urban farms bring in clean soil and use water filtration to make sure their produce is safe.

Growing practices are also important. How were insects managed? What kind of fertilizer was used? Were the herbs grown in a greenhouse or outdoors? Were they grown hydroponically or in soil? All these things have pros and cons, but the bottom line is the result: If the herbs have vibrant color and strong aromas and flavors, then the

quality is good.

The drying and processing step can be tricky, too: High-quality herbs can be ruined if they're dried at too high a temperature or stored improperly. You'll know this is the case if there is significant browning in the dried herbs.

This is the same browning you would see on a living plant that had a brown, dried leaf—it looks un-vital. Let's use St. John's wort as an example: This plant should have some brown when it's dried, but its brown color is a deep-red mahogany. That's very different from the brown-black color of basil leaves that have gone bad in your refrigerator.

The latter is the one to avoid.

The bottom line is, know who you're buying your herbs from. Ask about their growing practices, about the soil and water, and about their processing practices. Not only does this help you make good choices, but it also helps build community between the people who grow our herbs (and food) and those of us who consume them. When we understand more about where our herbs come from, we value them, our farmers, and our environment more.

Wild Crafting

Although it's alluring to think about hiking out into wild places and harvesting your own herbs, most times, the best advice we can give is, actually, not to do this.

There are some very abundant and fairly safe herbs to wildcraft, but overharvesting is a serious problem for our wild herbs, and when so many can be organically cultivated, it is really much better to do that instead of taking plants from the wild.

Some herbs should be avoided altogether, because they are at risk of extinction from overharvesting and habitat destruction. Many plants, especially woodland plants, require healthy forests to grow in and can't be cultivated. Some of these plants, such as goldenseal, osha, and black or blue cohosh, are very popular and are still being sold. However, just like vegetables, there are many herbs with similar qualities, so there's no need to purchase these atrisk plants. You can learn more about at-risk herbs and those that should be avoided at the United Plant Savers website, unitedplantsavers.org.

Some popular herbs should also be avoided because their sale exploits the people and communities they come from. In general, when there's a new trendy "superfood" from some far-off place, we avoid it. Maca is an example: Touted as a plant that will give you more energy, and that is also quite delicious, people flocked to it. But maca is a subsistence food for the indigenous Peruvians living at high altitudes, and the more that industrialized nations purchase, the more expensive it becomes: Local people can no longer afford to eat it. Issues like this are complicated, but when it comes to exotic superfoods, it's always good to remember we have our own superfoods right here. Plants such as cranberries, nettle, and dandelion leaves don't have the exotic appeal, but they're every bit as super!

However, it is very rewarding to find wild plants and work with them, so here are some guidelines for doing so safely—for you, for the plants, and for the ecosystem they are a part of!

Growing

No matter how urban your surroundings, you can grow your own herbs. There are many herbs that will grow happily in a pot near a sunny window—you don't even need a yard! If you've never grown any kind of plant before, or if you've ever described yourself as having a "brown thumb," don't worry: Growing plants is just like any other thing you want to do. Spend a little time on it each day, and soon enough it will seem easy. Some herbs are definitely easier to grow than others. Mint, catnip, sage, and yarrow are easy ones to start with and can be found as seedlings or seeds at your local garden center. Mint and catnip are very easy to grow indoors as well. All are perfectly happy to live in pots if you don't have a yard or if you don't have safe soil to grow in. You can have your soil tested with your local Extension Office—they'll send you a testing kit and provide results about soil safety as well as tips about the best type of fertilizer to use with the type of soil you have—all for about \$10. Your local Extension Office also offers classes and advice about gardening in your area, as well as many other services, for free or at a low cost. (You can search "county extension office" to find the one near you).

Most of the herbs you will end up using are worth growing yourself, although proper wild crafting is the best choice, it is quite time-consuming. Here are 11 plants you might consider growing yourself. They are mostly quite easy to grow, especially from a plant rather than seeds, if you don't have a green thumb or time to grow your plants from seeds or seedlings. They are all quite common and inexpensive.

1. Garlic: infection fighter, stimulant
2. Rosemary: cancer-fighting antioxidants, stimulant
3. Basil: antioxidants, infection fighter
4. Mint: stimulant, digestive
5. Lemon balm: relaxing tonic for mild depression, irritability, anxiety
6. Fennel: anti-inflammatory, analgesic, appetite stimulant, anti-flatulent
7. Lovage: respiratory and digestive tonic, anti-bronchitis
8. Oregano: antiseptic, anti-flatulent, stimulate bile and stomach acid, anti-asthmatic
9. Cilantro (coriander): to treat flatulence, bloating and cramps; breath sweetener
10. Horseradish: perspirant, stimulant
11. Thyme: tea for preventing altitude sickness, antiseptic, inhalant (anti-asthmatic), stimulant

Just like with herbalism, the best way to get started growing herbs is just to start! Buy a seedling, put it in a pot with some good dirt and a little water, and check on it every day. Plants are living beings, and you'll learn to "hear" your plant's communication in the same way you learn to understand what your cat or dog is trying to tell you!

2.2 Preparation

Herbal preparations

Modern technology provides superior ways of distilling, extracting, purifying, and standardizing herbal extracts that are beyond the scope of this book. But let us define some terms in this book.

Tea: Prepare tea (also known as an infusion or tisane) by pouring hot water (just off the boil) over fresh or dried herbs. Typically, the soft parts (leaves and flowering parts) of the plant are infused. Examples: green teas, black teas, herbal teas. Amount: One teaspoon dried herb to 1 cup of water; 4 teaspoons of fresh herb to 1 cup of water.

Decoction: A liquid made by simmering or boiling herbs in water. Decoctions pull water-soluble chemistry from the hard parts of the plant: the stems, seeds, bark, and roots. Example: Garlic soup. Amount: Simmer one teaspoon dried herb to 1 cup of water; 4 teaspoons fresh herb to 1 cup of water. Simmer for at least 5 minutes, strain and use.

Percolation: Percolation is a process like making coffee: Water or alcohol is dripped through a damp mass of powdered herb. Example: Dripping hot water or alcohol through cayenne powder. Put a drop to your lips.... Zowie! Amount: Drip 100 milliliters of liquid through 10 grams dried herb; and then repeat the process over and over to increase concentration.

Tincture: Chopped herbs, blended in alcohol. Other chemicals can be used in place of alcohol, such as apple cider vinegar or glycerin. The maceration (blending of the chopped herb) can be accomplished in a blender. Example: Dilute a volume 190 proof alcohol (Everclear 95% alcohol) with an equal amount of water to get approximately 50 percent alcohol.

Then chop fresh cut Echinacea flowers into small pieces, place in a blender,

and cover with 50 percent alcohol, then macerate.

Let the maceration rest in the refrigerator for four hours, then strain and bottle. Amount: When making a tincture with a dry herb, typically a 1:5 ratio is used—that is, 1 ounce of the dried herb is macerated and blended with 5 ounces of 50 percent (100 proof) alcohol. With fresh herbs a 1:2 ration is often used—1 gram to every cubic centimeter of 50 percent (100 proof) alcohol.

Double Extraction: For a double extraction, first fill a container such as a 1-quart canning jar (or like container) with a cup of macerated (ground) Echinacea leaves and roots (or other plant material to be extracted). Completely cover the maceration with 8 ounces of 50 percent diluted Everclear (add an equal volume of water to an equal volume of Everclear to get 50% alcohol concentration). Then cover. Allow blend to sit for a few days (up to 2 weeks) in a darkened cupboard or refrigerator, shaking twice a day. Strain off the liquid—a pair of pantyhose is an effective strainer—and then run it through an unbleached coffee filter. Squeeze out the remains in the filter when it has stopped dripping. You now have a “single extraction.” Now take the Echinacea mash (marc), cover it with water, and simmer for thirty minutes to make a decoction, adding water as necessary. Strain and then blend the decoction with the tincture, making a stronger “double extraction.” To maintain an alcohol concentration of at least 25 percent (50 proof) add no more water to the second extraction than the original amount of the 50% alcohol used to make the initial extraction. That is, if you poured 10 ounces of 50% alcohol over the herb in the first step, do not add more than 10 ounces of water for the second extraction.

Fomentation: Prepare a decoction or infusion of herbs (see decoction and infusion above), then dip a cotton cloth into the preparation and wrap the warm, wet cloth around an injury. Example: Dip a cloth in a mild cayenne extraction and apply it to an arthritic joint. (Note: This application will redden the skin and may irritate.) Amount: Enough to cover area to be treated.

Poultice: Pound and macerate fresh herbs and apply the moist herb mass directly over a body part. Example: Put a warm, wet, and pounded mass of plantain over a pus-filled wound. Amount: Large enough amount to cover area to be treated.

Powder: Powders are prepared by drying and finely grinding the herb, then loading the powder into 00 capsules (1gram capsule, or 1,000 mg). Example: Many over-the-counter dried herbs are powders sold in capsules. Amount: A typical dose may be one 500- to 1,000-milligram capsule.

Oils and salves: These can be prepared with dried or fresh herbs. First the herb is cooked in oil to extract the active principle, then the oil is thickened or hardened with beeswax. Example: The aerial parts (flowers, leaves, and stems) of yarrow are covered with oil and simmered then blended with warm beeswax. The blend is cooled, and the resulting salve is applied as a wound treatment. Amount: With yarrow I lightly pack a pan with fresh leaves and flowers and cover with olive oil or lard (studies suggest lard is better absorbed through human skin than plant oils).

Essential tools

It doesn't take fancy equipment or rare, expensive ingredients to make high-quality herbal preparations. Most of what you'll need is probably already in your kitchen.

Mason jars. These are the herbalist's best friend. Because they're made of heat-resistant glass, you can pour boiling water right into them to make tea. They're also handy for making tinctures, storing herbs, and more. Quart- and pint-size jars are the most versatile, though for storing dry herbs you may want larger jars. Many store-bought foods (sauerkraut, salsa, etc.) come in mason jars—just hand wash or run them through the dishwasher and dry to reuse them.

Wire mesh strainers. For straining tea or pressing out tinctures, you'll want strainers of various sizes. Start with a few single-mug strainers for making one cup of tea at a time, as well as a larger, bowl-size strainer for filtering larger amounts of herb-infused liquids.

Cheesecloth. This is handy not only for straining and squeezing herbs you've infused into liquid but also for wrapping the herbs in a poultice.

Measuring cups and spoons. Cup, tablespoon, and teaspoon measures are all helpful, as well as some graduated measuring cups with pour spouts, which allow you to measure down to a quarter ounce. **Funnels.** A set of small funnels is extremely helpful for getting tinctures and other liquids into

bottles with small openings.

Bottles. For storing tinctures long term, amber or blue glass bottles are best. The “Boston round” type is a favorite for tinctures and other liquid remedies, but any shape will do. Get in the habit of saving and reusing any colored glass bottles you come across—there are a number of kombucha brands that come in amber glass, for instance. One- and two-fluid-ounce bottles are most convenient for dose bottles, while storage bottles are usually 4 to 12 fluid ounces. For storage, use plain bottle caps, but you’ll need dropper tops for dose bottles. **Labels.** Label your remedies as soon as you make them. Address labels are sufficient for most purposes—even a bit of masking tape will do in a pinch.

Blender. For mixing lotions, breaking down bulky fresh plant matter, and other purposes, a standard kitchen blender will serve just fine.

Useful instruments

These tools make it easier to integrate herbs into your life, especially if you have a busy schedule, but they’re not as necessary as those preceding.

French press. This is our favorite tool for making herbal infusions. It allows the herb material to float freely in the water and exposes a lot of surface area for extraction (you just press down to easily dispense filtered tea), and it is simple to clean.

Thermos. When traveling or bringing your tea to work, a good thermos is an asset. There are versions that include a filter built directly into the lid, so you can put the herbs and water directly into the thermos together from the start.

Press pot. This is an insulated pot with a lever you press to dispense. People usually put coffee or strained tea into these, though we’ve found you can usually get away with putting herbs directly into the pot, pouring in boiling water, and letting it infuse in there. It’ll stay hot all day, and you just dispense it by the cup. (Hold a little mesh strainer under the spout to catch any herb bits that pass through the tube.) **Herb grinder.** A simple, small coffee grinder served us well for many years, but if you plan to make a lot of herb powders you may want a larger, dedicated machine.

Ingredients

Herbs and water alone will serve for a great many remedies, but some preparations require additional ingredients.

Alcohol. Tinctures are mixtures of herb extracts and alcohol. We usually use vodka or brandy. Apple cider vinegar. Always use this, rather than distilled white vinegar, for herb-infused vinegars, oxymels (a blend of vinegar and honey), and topical applications.

Honey. Choose local honey whenever possible, unprocessed/unfiltered if you can get it. Beware that some big-brand honeys have been found to be contaminated or even contain high fructose corn syrup. Liquid honey is easiest to use in herbal honey infusions, while thicker honey can be more manageable for first aid and wound care. **Oils.** You can use olive oil for most purposes, though in some instances you'll want a lighter oil, such as grapeseed or almond, or a thicker oil such as shea butter or cocoa butter. You can even use animal-derived oils, such as lard, tallow, or lanolin.

Beeswax. Salves require wax to thicken them. You can buy beeswax in rounds or chunks and cut it down for each use. You can also buy beeswax pellets, which can be easier to work with. **Witch hazel extract.** Look for a witch hazel extract made without alcohol, as this is most versatile—especially for first aid or wound care.

Rose water. Traditionally used for skin care, though also as a food ingredient. Rose water from the “ethnic foods” section of the grocery store is just as good as the higher-priced stuff in the health and beauty aisle. **Sea salt and Epsom salts.** For baths and soaks as well as nasal sprays and gargles, a bit of salt improves the medicine. **Gelatin capsules.** The “00” size is most frequently used when working with herbal powders to make homemade herb capsules.

Safety Tips

Label everything. If you don't know what you're taking, you can't be sure it's safe. Include details about all the ingredients in the remedy, as well as the date it was made.

Start small. Begin with small test batches and small doses when working with a new remedy. You can always scale up or take more later, but if an herb or preparation doesn't agree with you, it's best to discover that with a small amount.

Be cautious with pharmaceuticals. Herbs and pharmaceutical drugs (including both prescription and over-the-counter medications) can interact in many ways. Sometimes this is beneficial—positive herb-drug interactions may allow someone to reduce the dose of a drug or minimize its side effects—but it is a complicated subject and should

be handled very carefully.

We identify the major interactions to watch for in the notes that accompany each remedy, but it's always best to consult with a practicing herbalist familiar with this topic, or your health care provider, especially if multiple drugs are taken simultaneously.

Use your senses. Look at the herbs you're working with, and your finished product. Check for mold in your jar of infused oil, check for bits of packaging material in your shipment of dried herbs. Smell and taste your herbs and remedies to get a sense of their potency, and dose accordingly.

Make only what you need. If you get great results from a particular remedy and you want to have it on hand every day, great—go for it. But no one needs a gallon of nasal spray solution, and it'll go bad before you even get around to using it. Make only those remedies you need, and only as much as you need.

Begin with what's abundant. You will most likely start with herbs that are highly prevalent in the wild or grown commercially on a large scale. As you branch out into working with other plants, keep your focus on those that are local to you, and neither at risk nor endangered. Don't be tricked into thinking a rare, exotic herb will be the only one to solve your problem.

Get the herb to the tissue. Herbs need to be in contact with the affected tissue to help it. We can't always just drink some herbal tea and get good results. Choose a delivery method that helps your herbs get where they need to act. A few examples: If you're working with a respiratory problem, go with a steam; if you've got something on the skin, apply a soak or poultice; if it's trouble in the lower intestine, swallow some powder so it's intact when it gets down there.

2.3 Drying and Storing

If you don't dry and store your herbs properly, they will quickly lose their effects. Fresh herbs can lose intensity very quickly, so if you don't need to use them immediately, dry them immediately after you've sourced them.

To dry herbs, separate the leaves from the stems and spread them in free, single layers on a spotless, leveled surface. Bulkier plants might be dangled from a line in a dry zone, for example, a warm storm cellar or attic. Flies and different bugs might be attracted by your hanging herbs, so you might need to cover them with a cheesecloth.

The time required for drying depends both on the herb and the earth in which it's being dried. Since herbs lose their strength so rapidly, the shorter the drying time frame the better.

For most herbs, it takes about seven days. An herb is adequately dry when it despite everything has a smell yet is sufficiently dry to break. On the off chance that it disintegrates totally when you handle it, you dried it excessively long.

Roots, which ought to be completely washed before drying, take more time to dry than leaves and flowers—for the most part around three weeks. Although you may have seen pictures of old homesteads with dried herbs hanging from the rafters, these days we have better storage methods to ensure your herbs stay fresh and last a long time.

The universal standard for storing basically any herbal product is mason jars. Whether dried herbs, tinctures, salves, elixirs—likely as not, herbalists put it in a mason jar. They come in all sizes; they're widely available, airtight, and inexpensive. The only thing they lack is color: dark-colored glass, such as amber or cobalt, prevents light from affecting the quality of the product you're storing. But those containers are more expensive, and, realistically, clear glass is fine as long as it's not in direct sunlight.

If stored in glass with a tight-fitting lid, you can expect dried herbs to last 1 to 5 years, and tinctures might last as long as 10 years.

Oils and salves have a shorter shelf life, because oils go rancid eventually—they may only last 6 months to 1 year. Lotions have the shortest shelf life, because when you mix oil and water, you have a perfect medium for mold. Lotions may only last 1 to 3 months, but you can extend their life by

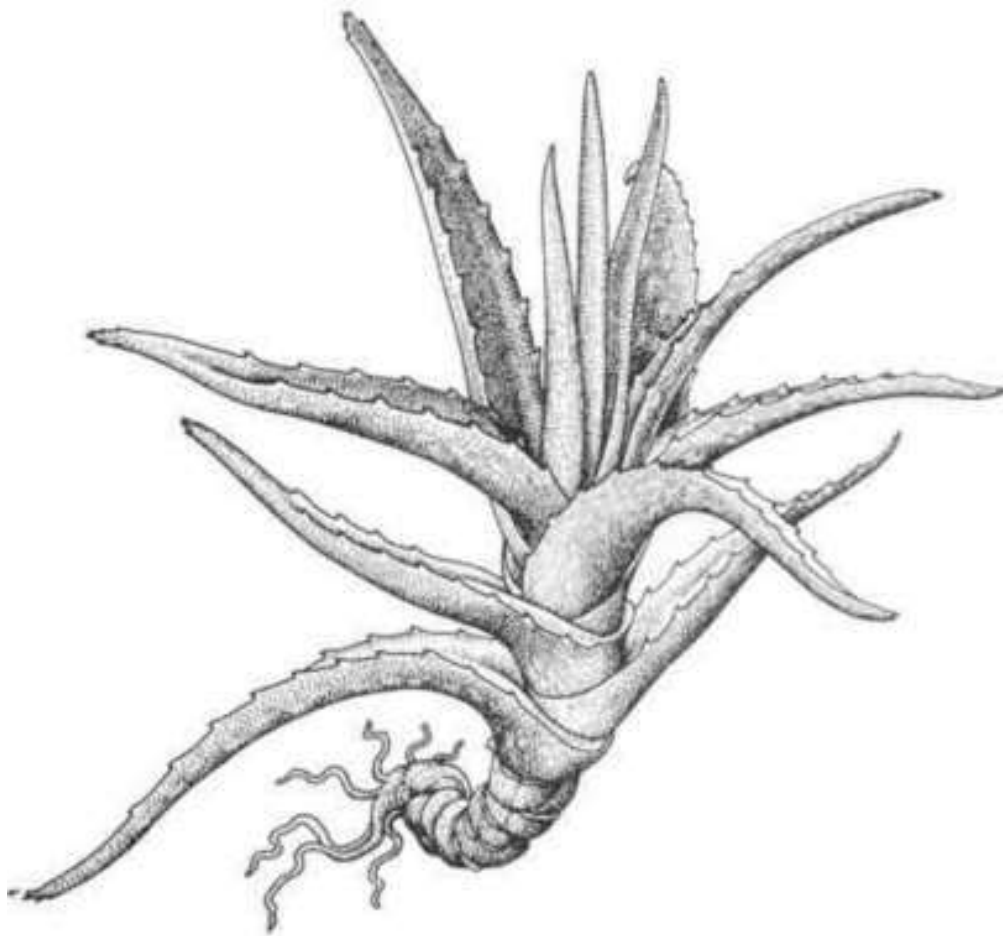
refrigerating them. The best way to detect if dried herbs or herbal products are still good is to use your senses: If it still smells strongly of the herb, if it still has bright vibrant color, if it still has potent flavor, it's still good.



CHAPTER THREE

44 Native American Herbs

Aloe



(Aloe vera)

Liliacee

Habitat: Aloe, a genus of nearly 200 species of mostly South African succulent plants. The properties of this plant were known to the ancient

Greeks and it has been gathered on Socotra for over 2,000 years.

Aloe thrives in warm regions and grows wild in Florida, U.S.A. It is much like succulent cactus in texture. Identification: The leaves are usually elongated, of a deep brown or olive color, frequently pointed, blunt, or spinetoothed, sometimes blotched or mottled.

The stem is commonly short with a basal rosette of leaves.

The red or yellow tubular flowers are found on a stalk in simple or branched clusters.

These properties change somewhat in the different varieties, some species being tree—like with forked branches: for example, *Aloe bainesii* grows to heights of 65 ft. and is 5 ft. wide at the base. Other species of Aloe are often cultivated in gardens of succulents, including the miniature ones grown in homes; they require strong light and careful watering.

The “American aloe” is not an Aloe, but *Agave americana*. Taste: peculiar and bitter. Powder: bright yellow. Medicinal Parts: The insipid juice of the leaves, which is a greenish translucent salve-like substance. Solvent: Water. Effects: Tonic, Purgative, emmenagogue, anthelmintic.

Effects: Aloes are one of the most effective agents we have among the herbal medicines, having a cleansing effect to the tissues of the stomach, liver, spleen, kidney and bladder.

Does not gripe and is very healing and soothing to all the tissue, including blood and lymphatic fluids. Aloes should never be used in pregnancy, or if suffering from hemorrhoids, as it irritates the lower bowels. It’s used in case of suppressed menstruation, dyspepsia, skin lesions, disease of the liver, headaches, etc.

Dose and use: In constipation, in powder form from ½—2 grains, depending on age and conditions; for obstructed or suppressed menstruation, 5-10 grains twice daily; to expel thread worms dissolve the Aloe in warm water and use as an injection. The same mixture can be taken orally for several days. Externally: powdered Aloes made into a strong decoction and rubbed over the nipples will help wean a nursing child; the association of the pleasant experience will soon find other sources due to the disagreeable bitter taste. Aloes show the same cleansing power for external application.

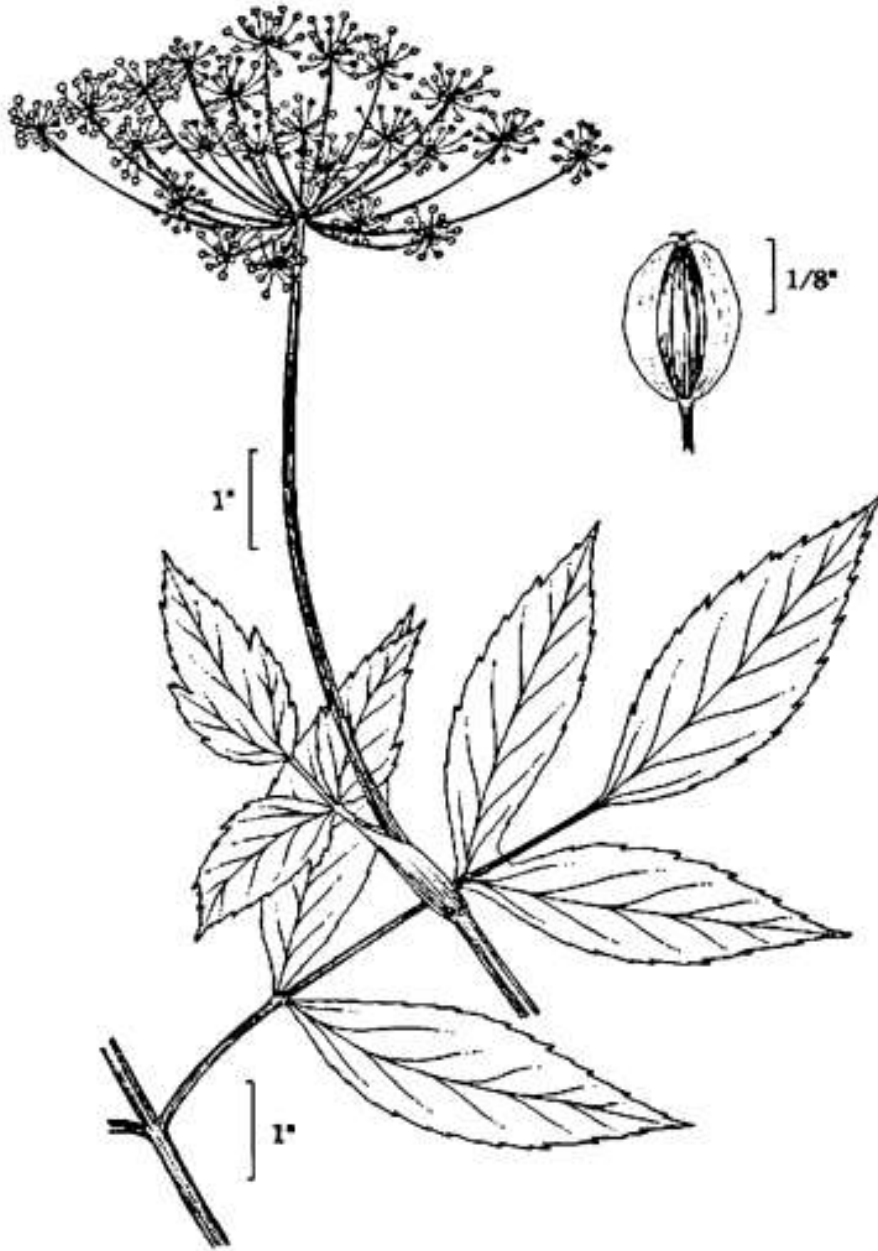
A piece of white linen or cotton saturated in Aloe water can be applied to fresh wounds, as well as old ones to close them quickly.

If ulcers progress to a running stage sprinkle Aloe powder thick enough to cover the open wound and secure with clean gauze, repeating daily. The powder will absorb the morbid, fluid matter, at the same time encouraging the buildup of new, healthy tissues.

The fresh juice, or solution made from dried leaves, is soothing to tender sunburns, insect bites, over-exposure to Xray or other emollient uses.

Warning: Do not give in cases of degeneration of the liver and gall- bladder, as well as menstruation, pregnancy and hemorrhoids . As a rule it is safe to use Aloe as it is established by Folk Medicine, but in all complicated cases the advice of medical or trained practitioners in thisfield should be sought.

Angelica



Apiaceae (*Angelica*

atropurpurea L.)

Identification: Biennial to 9'. Stem thick, erect, purple. Large compound leaves divided into three to five leaflets with hollow petioles. Upper leaves sheathed as they emerge, sheath remains around the base of the petioles. Greenishwhite flowers grow in umbrellalike clusters. Somewhat similar to poison hemlock; be circumspect in your identification.

Habitat: Northern tier of United States, typically east of the Mississippi River. Wet lowlands, along streams and rivers.

Medicinal Parts: Root, herb and seed.

Solvent: Boiling water.

Effects: Aromatic, Stimulant, Carminative, Diaphoretic, Expectorant, Diuretic, Emmenagogue.

Food: Whereas there is little literature on the edibility of *A. atropurpurea*, a similar Chinese herb, *A. sinensis* (dong quai), is eaten as root slices added to stir-fries or soups. A favorite eye-opener and “lip flapper” is a yin and yang cordial. To prepare it, combine 100 grams of *A. sinensis* root (typically available at an Asian market or drugstore)

with 100 grams of whole ginseng root. Add this to ½ liter of peppermint schnapps. Saponins (phytosterols), including phytoestrogens, are drawn from the roots into the schnapps. It takes at least three weeks to get a good tincture. I use the cordial as an aperitif that balances yin and yang and boosts energy. Laplanders supposedly eat the cooked roots of *A. atropurpurea*.

Traditional uses: Native Americans used *A. atropurpurea* root decoctions to treat rheumatism, chills and fevers, and flatulence and as a gargle for sore throat. It was often used in sweat-lodge ceremonies for treating arthritis, headaches, frostbite, and hypothermia. The root was smashed and applied externally as a poultice to relieve pain. *A. sinensis* and *A. atropurpurea* are used differently in Asian and Western traditions, and there are minor chemical

differences between the plants too. Unless stated otherwise, assume that the uses described next are for *A. sinensis*,

which may be purchased from herbs.com as seed or as dried roots from health-food stores and Asian markets. The

root, a warming tonic, is the number-one female herb in traditional Chinese herbal medicine, and it is used to treat

menstrual cramps and may improve scanty menstrual flow. As an antispasmodic it is reported helpful in reducing

angina. Like other members of the Apiaceae plant family, angelica contains calcium channel blockers, similar to the drugs used to treat angina.

According to Chinese practitioners, angelica improves peripheral circulation to distal parts of body.

Modern uses: German holistic healthcare professionals prescribe 3 teaspoons of dried *A. sinensis* infused in water to treat heartburn and indigestion. *A. sinensis* is used by European professionals for treating colic also. American naturopathic physicians use both species; seek out a holistic naturapathic practitioner for professional advice.

Notes: Angelica roots are used as a flavoring agent for vodka, gin, cooked fish, and various jams. Veterinarian/Wildlife: Oil from the root attracts fruit flies. Angelica is pollinated by bees, flies, and beetles. The fruit is crushed and decocted as a wash to kill head lice; a few use it on their pets.

Bearberry



Ericaceae

(*Arctostaphylos uva-ursi* L. Spreng)

Identification: Trailing shrub, low lying, prostrate and mat forming. Leaves dark, evergreen, leathery, smooth edged, obovate or spatula shaped, less than $\frac{3}{4}$ " wide. Alpine variety of bearberry has larger leaves. Fruit is a dry red berry. Also known as kinnikinnick or uva-ursi.

Habitat: Northern United States from East to West, and Canada in boggy and relatively dry areas, at the base of pines, tamarack, and juniper.

Medicinal parts: The leaves.

Solvents: Alcohol, water.

Effects: Astringent, Diuretic, Tonic.

Food: The berries are dry and mealy and lack flavor, so they were traditionally cooked with animal fat or mixed with fish eggs (such as salmon eggs) and stronger-tasting foods. Berries may be dried and then smashed into a flourlike meal. First People of the Northwest used this flour like a spice with meat and organ meats. People of the Bella Coola Nation mixed berries in fat and ate them; Lower Chinook peoples dried the berries and then mixed them

with fat for food. Many Native Americans boiled the berries with roots and vegetables to make a soup. You can sauté the berries in grease until crisp, then place them in cheesecloth or pantyhose and pound them to a mash. Add the mash to cooked fish eggs and stir, pound in some more mash and eggs, mix, then sweeten to taste. Berries are an

aromatic and flavor-enhancing addition to wild fowl and game.

Traditional uses: The whole plant was infused in water and mixed with grease from a goose, duck, bear, or mountain goat. Then glue cooked from an animal's hoof, either horse or deer, was mixed into the grease. The resulting salve was used on sores, babies' scalps, and rashes. An infusion of aerial parts was gargled as a mouthwash to treat canker sores and sore gums. Dried leaves and stems were ground and used as a poultice over wounds. An infusion of leaves, berries, and stems was taken orally for cleaning kidneys and bladder complaints as a diuretic. The same beverage had an analgesic effect on back pain and sprains. Berries were eaten or infused with whole plant for colds. Kwakiutl peoples smoked the leaves for the reported narcotic effect. Dried leaves were crushed to a powder and sprinkled on sores. Leaves and tobacco were mixed and placed in religious bundles for spiritual healing. Pioneers used the leaf infusion as a diuretic, astringent, and tonic (Moerman, p. 87).

Modern uses: Commission E–approved to treat infections of the urinary tract. It is commercially available dried, powdered in capsules, and as whole leaves for tea. There are numerous homeopathic preparations. The hot tea is considered styptic, astringent, and antibacterial. The tea as a diuretic increases urine flow. Also the tea internally and externally is considered antimicrobial and anti-inflammatory, and it has prevented kidney stone formation in

lab animals.

Dose and use: Can be taken orally as follows: soak the leaves in sufficient alcohol or brandy to cover, for one week or more. Place 1 teaspoonful of the soaked leaves in 1 cup of boiling, or cold, water, drink 2-3 cups a day. Quantity of the tincture to be given in the same manner, 10-25 drops in water three or more times a day, according to symptoms. The tea can be made without the brandy or alcohol, if desired, preparing as you would ordinary tea. Effective if mixed with tincture of Quaking aspen (*Populus tremuloides*) 2-15 drops, tincture of Bearberry (*Arctostaphylos*) 10-20 drops.

Warning: Do not use during pregnancy or while nursing. Avoid eating acidic foods when using the tea to treat urogenital and biliary tract diseases. Prolonged use of uva-ursi may damage the liver and inflame and irritate the bladder and kidneys. Its use is not recommended for children, and it should not be used if you have high blood pressure.

Notes: You can use the berries to make a grayish-brown dye. Native Americans used an application of crushed berries to waterproof baskets. Veterinarian/Wildlife: Several herbal formulas for horses incorporate uva-ursi, including formulas for jointrebuilding/protecting supplements, training mixes, and fertility boosters.

Black Cohosh



Ranunculaceae (*Actaea racemosa* L. Nutt.)

Identification: Perennial to 5½' in height. Rhizome blackish, knotty, tough. Leaves double pinnate, smooth, serrated. Flower raceme drooping, with three to eight petals. Sepals enclose flower bud.

Habitat: Northern United States and southern Canada. Primarily east of the plains in forests. Medicinal Part: The root.

Solvent: Boiling water enhances the properties of the root but dissolves only partially; alcohol dissolves wholly.

Effects: Alterative, Diuretic, Diaphoretic, Expectorant, Anti- spasmodic, Sedative (arterial and nervous), Cardiac stimulant (safer than *Digitalis*),

Emmenagogue.

Traditional uses: The root (rhizome) is the medicinal part. Root infusions were used to induce abortions, stimulate menstruation, and promote lactation. An alcohol infusion of the root was used to treat rheumatism. The infused root

was taken to treat coughs and was said to be cathartic and stimulating, a tonic and blood purifier. Pulverized roots in hot bathwater were used as a soak to alleviate arthritis pain.

Modern uses: The plant extract is Commission E–approved for premenstrual syndrome and menopausal complaints.

Commercial preparations are used to treat female conditions including uterine spasms (cramps), menstrual pain, hot flashes, mild depression, vaginal atrophy, and menopause. The estrogenic effect reduces luteinizing hormone levels. A recent study of the use of Remifemin, a proprietary black cohosh extraction, significantly reduced hot flashes and psyche disturbances in a trial group of 304 postmenopausal women (Friede, Liske, et al., *Obstetric Gynecology* 105 [2005]: 1074–83). The study results confirmed the efficacy and tolerability of an isopropanolic extract of black cohosh. Forty-six percent of breast cancer survivors who received a black cohosh preparation were free of hot flashes, sweating, and other symptoms of anxiety and sleep disturbances related to premenopausal breast-cancer treatment (Jacobson, *Journal of Clinical Oncology* 19, no. 10 [2001]: 2739–45). And a 2003 study showed an increase of bone formation in postmenopausal women (Wuttke et al., *Maturitas* 44 [2003]: S67–S77). Holistic health practitioners still use the plant for treating fever, arthritis, and insomnia.

Dose and use: The tincture should be made from the fresh root, or that which has recently been dried; 2 oz. to 1 pint of alcohol (96 per cent proof) taken 5–15 drops four times a day. As a tea 1 teaspoonful of the cut root to 1 cup of boiling water three times a day, or 15–30 drops of the tincture added to 1 cup of water, sweetened with honey. Externally: The bruised root was used by the Indians as an antidote for snake bites, which was applied to the wound,

and the juice, in very small amounts, was taken orally.

Warning: Consult a licensed holistic health-care practitioner before using this herb for dysmenorrhea, hormone replacement therapy, or menopausal symptoms. Avoid completely if you are lactating or pregnant.

Notes: The United Kingdom health-care products regulatory agency (MHRA) and the European Medicines Agency (EMA) have warned patients to stop using black cohosh if they develop signs suggestive of liver toxicity (blood in urine, tiredness, loss of appetite, yellowing of skin or eyes, stomach pain, nausea, vomiting, or dark urine). In the United Kingdom a warning must appear on the label of black cohosh products. For details visit herbalgram.org and

search “black cohosh regulations.”

Veterinarian/Wildlife: Black cohosh is used in a proprietary horse product called Fertility Boost.

Black Haw



Viburnum prunifolium, (N.O.: Caprifoliaceae)

Habitat: Black haw is found in most of the North American states, more abundantly from New York to Florida.

Identification: It's an erect bushy shrub or tree from 10-25 ft. tall, 10 in. of trunk diameter. The bark is irregular, transversely curved and greyish brown, or where the outer bark has scaled off brownish-red; inner surface reddish brown. The root bark is cinnamon in color and tastes bitter and astringent. The deep-green leaves are broadly elliptical or obovate, finely and sharply toothed, the under-surface smooth, 1-3 in. long. The flowers bloom from May to June in small white clusters 2-4 in. across and 3-5 lobes in each flower. The fruit known as Black haw is edible, but to some unbearably sweet. They are shiny black; cadet blue on red stems.

Medicinal parts: Root bark (preferred), bark of stems and branches.
Solvents: Water, alcohol.

Effects: Diuretic, Tonic, Antispasmodic, Nervine, Astringent.

Uses: To expectant mothers under risk of abortion, Black haw is an almost infallible remedy. The preparation for this purpose should be anticipated two or three weeks before the expected reoccurrence of the misfortune and continued for about two weeks after any disturbance. If there are no more symptoms during the last weeks, discontinue until after delivery.

A decoction of this plant will generally alleviate chills and fever and usually gives speedy relief in palpitation of the heart and is a valuable agent in diarrhea and dysentery. Notice that the herbs that have healing qualities on the stomach and intestinal tract are also effective for symptoms in the mouth and throat.

Dose: 1 oz. to 1 pint of boiling water taken in tablespoonful amounts three or four times a day; 1 teaspoonful of the tincture, three or four times a day. As a tea and decoction it is used for painful menstruation, excessive menstrual bleeding, cramps and hysteria. Sometimes associated with and used as a heart tonic, to improve blood circulation,

kidney and bladder.

Bark decoction for cramps. Berries for ulcers. Leaves as tea and decoction.

Catnip



Lamiaceae (Nepeta

cataria L.)

Identification: A perennial that grows to 3.5'. Erect and many branched stems. Leaves are grayish green, giving the plant a whitish gray appearance. Leaves 1" to 3", are ovate and serrated with a gray underside. Leaf petiole to 1.5" long. Flower spike has a large cluster of individual flowers attached with short pedicles.

Habitat: Across North America, border to border, coast to coast: In gardens, along roadsides, and over waste ground. Tolerates well-drained, dry areas.

Solvents: Diluted alcohol, boiling water.

Medicinal Part: The Whole herb.

Effects: Carminative, Stimulant, Tonic, Diaphoretic, Emmenagogue,

Antispasmodic Food: Tea, prepared fresh or dried for following treatments.

Traditional uses: Aerial parts (primarily leaves) of the plant in infusion are a bitter, astringent, and cooling antispasmodic. Catnip leaf and flower teas provide a mild sedative effect. It is antifatulent and may settle a colicky baby (check with your holistic health-care professional before using it in this manner). Also used to soothe the digestive tract. May provide relief from menstrual cramps by mildly stimulating menstruation. The herbal tea promotes sweating, thereby lowering fever in acute infections, and like many herbal teas it is a mild diuretic. Modern uses: Naturopaths use it to treat colic and upset stomach in children (Chevallier, 1996). Catnip may be tinctured and used as a rub for rheumatic and arthritic joints. The tea is also used to stimulate the gallbladder, and is a cleansing herb for the urinary system. Combinations: Naturopaths combine catnip leaves with elderflowers for treating acute infections. Another combination as a sleep aid is catnip, valerian root, and hops. This combination is also used to reduce stress and as a relaxant.

Warning: Not to be used during pregnancy.

Notes: Start catnip indoors and transplant it when it is at least a foot tall. Maybe then it will survive the onslaught of drug-seeking felines. Actinidine, an iridoid glycoside, is the cat-stimulating chemical of the plant. This is one of my favorite teas and should be prepared from the fresh herb in a cold infusion as its physiologically active constituents

are volatile and reduced by drying. Typical dosage is three cups per day.

Veterinarian/Wildlife: Cats' drug of choice: feline stimulant and intoxicant, but a human calming agent.

Chamomile



Asteraceae

(*Matricaria matricarioides*; *Chamomilla recutita* L.; *Chamaemelum nobile* L.)

Identification: Unlike the domestic herb cultivated chamomile, wild chamomile or pineapple weed has a small yellow flower, ½” wide—without the white rays (petals) of chamomile. It is somewhat prostrate and spreading, many branched with severely cut leaves; rayless flowers are conspicuous and pineapple scented, unmistakable.

Habitat: Widespread, along roadsides, pathways, waste ground, low and high impacted soils, throughout the country east to west especially along paths and roads in the Northwest and mountainous areas. **Medicinal parts:** Flowers and herb.

Solvents: Water, alcohol.

Effects: Stomachic, Antispasmodic, Tonic stimulant (volatile oil), Carminative, Diaphoretic, Nervine, Emmenagogue, Sedative.

Food: Tea, fresh flowers preferred over dried. Fresh pineapple weed is more powerful than chamomile. Leaves edible but bitter. Native Americans pulverized the dried plant and mixed it with meat and berries as a preservative.

Traditional uses: Pineapple weed is used just like chamomile. Pioneers drank the fresh flower tea as an antispasmodic carminative to aid digestion, prevent ulcers, and relieve arthritis pain. Said to soothe the nerves. Warm tea may relieve toothache pain. Native Americans used the herb in the same way, primarily for relieving

stomach pain. It is considered a female plant, applied wet to rocks in sweat lodge as a soothing aromatic inviting in the good spirits. Infusion of herb used to relieve menstrual cramps and relieves cold symptoms.

Modern uses: The use of chamomile flowers is unproven (PDR Herbal Medicine, third edition). That would, of course, make the traditional uses of pineapple weed suspect. Regardless, chamomile is widely used topically to treat abrasions, inflammations, eczema, and acne with varied success. One study suggests azulene in chamomile may stimulate liver regeneration. British scientists purport chamomile stimulates infection-fighting macrophages and B lymphocytes of the human immune system. Commercial preparations in lotions and ointments used as antiseptic treatment of sore gums, wounds, raw or sore nipples, and other inflammations. Chamomile is applied topically to treat inflammation associated with hemorrhoids (Singh, 2011).

Warning: Like many herbs, there is a paradox here; although antiallergic for some, chamomile may be allergenic to others, even anaphylactic to a few. If allergic to ragweed, best avoid using this plant externally or internally. Reports say a few people get skin rashes and allergic stomachaches from drinking or applying chamomile-containing products and cosmetics. If you have a ragweed allergy, you may also get an allergic reaction from chamomile tea.

Notes: A pineapple weed or chamomile bath (1 cup flowers in a pair of pantyhose) makes an emollient, moisturizing skin wash. Inhaling the steam may relieve upper respiratory infection (sinusitis). In an 8-quart pan mix $\frac{1}{4}$ cup fresh flowers in 1 quart of water just off the boil. Drape a towel over your head, lower head to water, and inhale for sinus

congestion. Washing hair with the tea improves quality and sheen.

Corn



Stigmata

maydis, L. (N.O.: Gramineae)

identification: Corn is a member of the grass family, the genus *Zea*, and the species *Mays*. Its scientific name is *Zea Mays*. The common Indian corn is generally believed to have originated in the New World, where it was cultivated before Christopher Columbus discovered America. Columbus took it to Spain and many thought it was brought from Asia and it was

frequently known as Turkey corn, or Turkey wheat. The silk should be taken when the corn will shed its pollen. The active principle is maizenic acid.

Solvents: Water, dilute alcohol.

Medicinal Part: The green pistils.

Effects: Diuretic, Demulcent, Alterative.

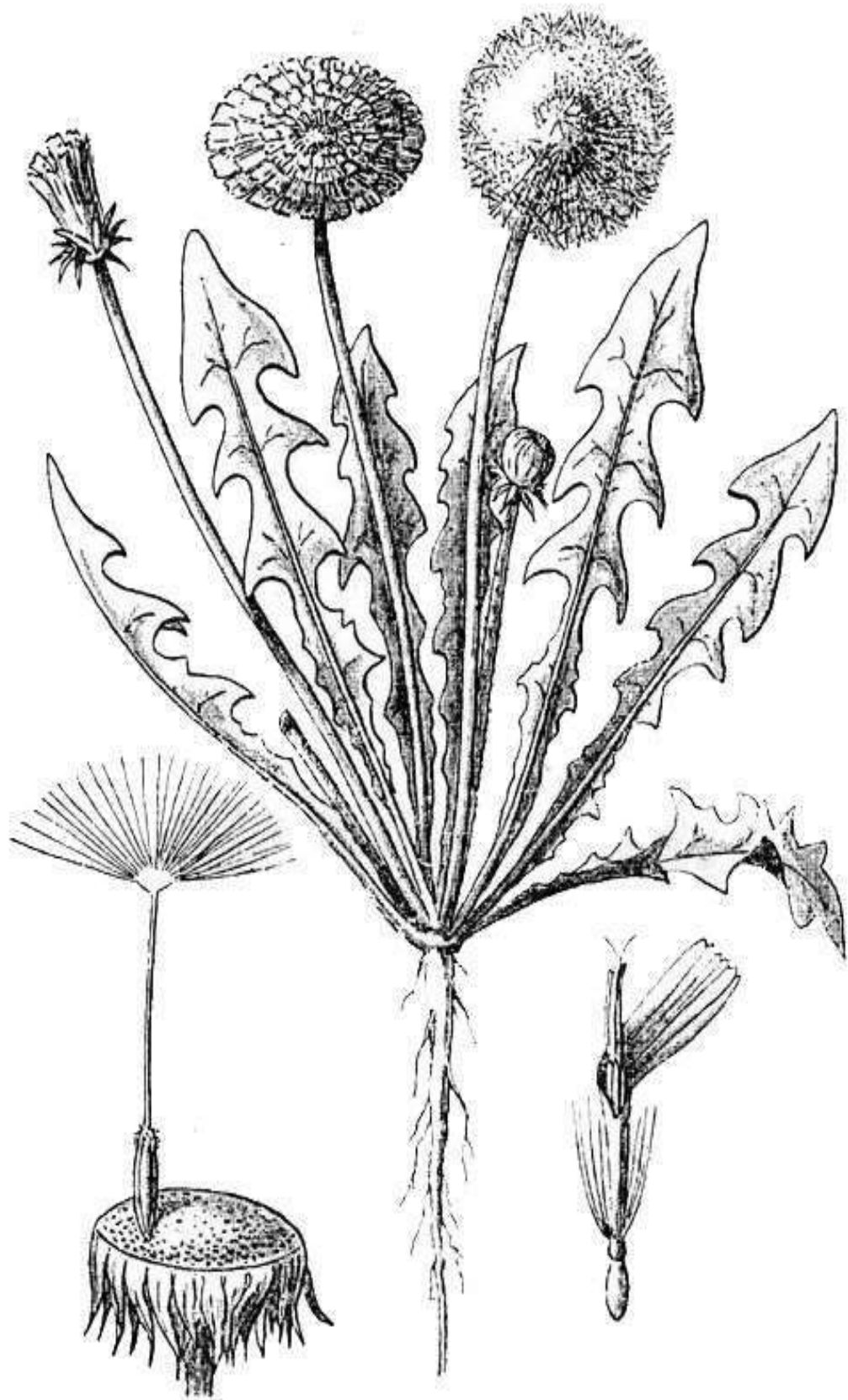
Uses: So well-known and yet not recognized by most for its medicinal properties. Herbalists and naturopaths use corn silk when dangerous deposits of brick dust are present in the urine and for removing the condition which is responsible for the disturbance in cystic irritation due to phosphatic and uric acid build up. *Stigmata maydis* will

assist all inflammatory conditions of the urethra, bladder and kidney, which is the cause of much local and general malfunction of the body due to uric acid retention.

Dose: Tincture of Corn silk (*Stigmata maydis*) 15-30 drops, tincture of Agrimony (*Agrimonia eupatoria*) 10-30 drops, in water between meals and at bedtime. For more severe urinary complaints combine 4 oz. of corn silk, 2 oz. of dandelion root (*Leontodon taraxacum*), 1 oz. of golden seal (*Hydrastis canadensis*)_ Steep 1 teaspoonful to 1 cup

of boiling water. Take every three or four hours or as needed. Sweeten with honey to taste.

Dandelion



Asteraceae (*Taraxacum officinale* G.H. Weber ex Wiggers)

Identification: Perennial herb with a basal whorl of toothed leaves and yellow composite flower with numerous rays. Taproot is deep and bitter. Torn leaf and/or flower stem will exude white latex. Habitat: Common yard bounty also found in meadows, along trails, and waste ground in temperate regions worldwide.

Food: A vitamin- and mineral-rich salad green. Tear it into small pieces (leave out tough veins) for salad and mix with thyme, fennel, and nasturtiums, along with other salad greens. Thyme and fennel balance the bitterness from dandelions. Make a mineral-rich tea from roots and leaves. Gently simmer chopped fresh roots for a stomach bitters. Cook fresh leaves early in season with olive oil, bacon, and lemon juice. As season progresses bitterness of leaves increases. Pour copious amount of water on the late summer plants; the morning harvest will be sweeter. Even when bitter, leaves are a healthy addition to stir-fry. Try with tofu. Cook in oyster oil, with cayenne, garlic, and beef strips.

Medicinal Part: The root.

Solvents: Boiling water, alcohol.

Effects: Diuretic, Tonic, Stomachic, Aperient, De-obstruent.

Traditional uses: The root decoction is a liver-cleansing tonic that aids digestion and helps cleanse the blood. It is also diuretic, and traditionally used to treat PMS. It has a mild laxative effect and may relieve inflammation and congestion of gallbladder and liver. Native Americans applied steamed leaves (poultice) to stomachaches. Greens considered a tonic blood purifier. Root decoction imbibed to increase lactation. Also root decoction used as mild laxative and for dyspepsia.

Modern uses: Commission E–approved for treating dyspeptic complaints, urinary infections, liver and gallbladder complaints, and appetite loss. Root extract may lower cholesterol and blood pressure (hypotensive). Dandelion is one of the most potent diuretics, performance equal to prescription pharmaceutical Furosemide in animal studies. Dandelions are a stimulating tonic and mild laxative with blood glucose regulating capacity (according to the

World Health Organization, WHO). The bitter taste of dandelion is an appetite stimulant and stimulates the entire digestive system (cholagogue) improving appetite and may be helpful treating anorexia (according to the National Institutes of Health, NIH). It raises hydrochloric acid, a digestive acid in the stomach, improving calcium breakdown and absorption, and it also spurs bile production (CM).

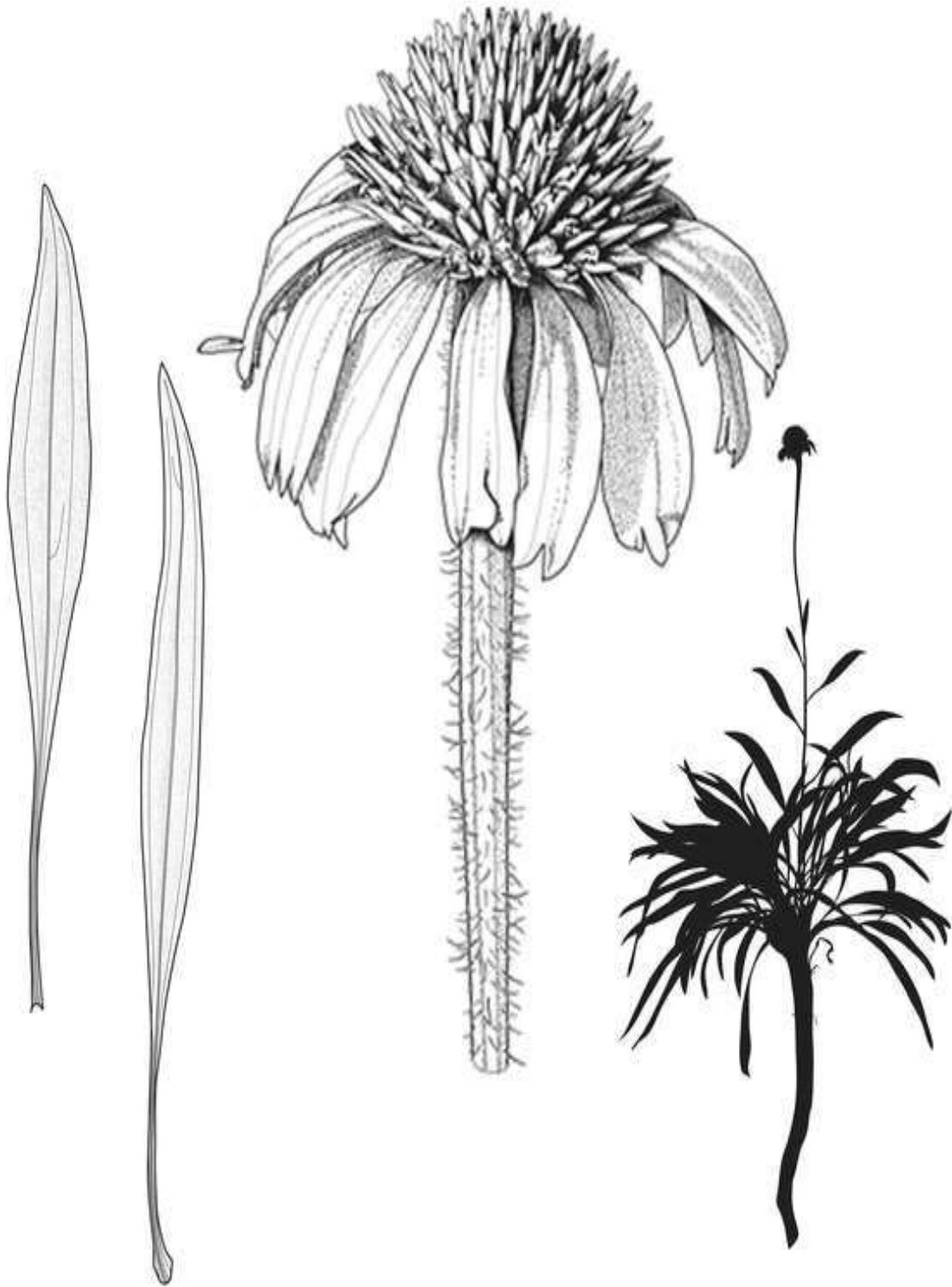
Dose: Of the tincture 5-40 drops. For infusions, fill a cup with the green leaves, add boiling water, steep 1 hr. or longer. Drink when cold, three or four times a day. Or add 1 teaspoon of the cut or powdered root to 1 cup of boiling water and steep 1 hr. Drink cold three times a day.

Cholesterol Lowering Ability: Dandelion and other bitter high-fiber greens can theoretically lower cholesterol in three ways: 1. Stimulate the secretion of bile into the stomach, requiring more production of bile from cholesterol. 2. Fiber in the plants locks up bile in the digestive tract, preventing cholesterol emulsification, thus less cholesterol is absorbed. 3. Fiber removes bile from body, requiring the liver to break down more cholesterol to make more bile. These factors may help prevent atherosclerosis, reduce stroke, and lower blood pressure.

Possible Cancer Fighter: Researchers in Canada are studying how effective dandelion root is in fighting cancer. Siyaram Pandey, a biochemist, and his associates at the University of Windsor are studying the anti-cancer potential of dandelion root extract. His team with two years of work behind them have finished the first phase of research, showing that dandelion root extract forced a very aggressive and drug-resistant type of blood-cancer cell (chronic monocytic myeloid leukemia) to die. The team discovered that repeated low doses of dandelion root extract were effective in killing most of the cancerous cells (CBC News).

Notes: Eight plants under lights or in a window provide ample edible leaves for two people. You can eat dandelion greens and make root tea year-round. Bring plants indoors for the winter. In southern latitudes the plant is available in the yard year-round. Late-season bitter leaves can be chopped and added to salads. Flower petals may be sprinkled over salads, rice dishes, vegetable dishes.

Echinacea



Asteraceae (*Echinacea purpurea* L. Moench; *E. angustifolia* DC)

Identification: Erect perennial 3' in height. Purple blossoms are large to 3" and solitary with rays spreading from umbrella shaped to flat. The bracts are rigid with thorn-like tips. Leaves are large, opposite or alternate, with smooth margins and rough surface. Rhizome (root) when sliced shows a yellowish center flecked with black,

covered in a thin barklike skin. Also known as purple coneflower.

Habitat: Found in eastern and central United States, meadows and prairies, fringes of fields and parks. Cultivated in gardens nationwide.

Medicinal Parts: Dried rhizome, root, leaves, and flowers.

Solvent: Alcohol.

Effects: Diaphoretic, Sialagogue, Alterative.

Traditional uses: Root and flowers used as a snakebite treatment. Boiled root water used to treat sore throats. Mashed plant was applied to wounds, and as a therapy for infections. Root infusion once considered a treatment for gonorrhea. Masticated root was held on sore tooth to treat infection.

Modern uses: Commercial preparations of roots, leaves, flowers are used to treat colds, flu, coughs, bronchitis, fever, urinary infections, inflammations of the mouth and pharynx, weakened immune function, and wounds and burns. Clinical research in 2015 reports that a proprietary combination of a concentrated Echinacea herb and root extract is as effective as the conventional antiviral medicine oseltamivir (Tamiflu) when used early in the treatment of influenza (Raus et al., 2015).

Echinacea considered possibly effective at the onset of upper respiratory infections if started immediately, taken three times a day, and continued until the person is well. Echinacea aerial parts and root extractions enhance immunity in several ways. Polysaccharide-initiated response follows a bell curve: steep initial activity, improving immune response up to 32 percent. Then response peaks, and after four to six days tapers off. Therefore, it is used for acute instead of chronic conditions.

Also used internally for skin diseases, fungal infections (both candida and listeria) and slow-healing wounds, boils, gangrene, upper respiratory tract infections, sinusitis. Used externally for acne and psoriasis (not proven by this psoriasis sufferer).

Root oil has inhibited leukemia cells in vitro and vivo studies.

A recent study challenged Echinacea's immune-modulating effect

(Schwartz, 2005) but subsequent studies have put Echinacea back in the news as an effective immune-modulating therapy.

Warning: A study of 412 pregnant Canadian women (206 of whom took Echinacea during pregnancy) showed malformations of babies to be equivalent between the control group and the test population, but spontaneous abortions were twice as frequent in the Echinacea group, including 13 spontaneous abortions (Chow, Johns, and Mill, 2006). As with all self-administered herbal therapies, consult your physician before using Echinacea while pregnant. The herb should be avoided by those allergic to the aster/daisy family and those with active autoimmune disease.

Notes: I have prepared and used an alcohol tincture of *E. purpurea* flowers as a gargle for mouth and tongue ulcers. I use it to prevent colds and the flu. Commercial extracts come in solid and liquid standardized form with recommended dosage.

A few years ago, I had a staphylococcus infection (cellulitis), an imbedded cyst in my buttock. My physician suggested that I have it cut out before it burst open and infected other parts of my body. I begged to try the Echinacea floral extraction, applied topically and administered internally ($\frac{1}{4}$ teaspoon 3x per day). The large cystlike infection disappeared in three days and has not returned. I continued the therapy for a total of six days.

Veterinarian/Wildlife: Used in pigeon racing formulas as health protecting and cleansing agent after races. Bees and butterflies flit and flip over this flower. Used in a natural product to rebuild damaged nerves in horses. Many herbalists use Echinacea to treat acute infections in pets.

Elderberry



Caprifoliaceae

(*Sambucus racemosa* L.; *S. cerulea* Raf.; *S. nigra* L.; *S. canadensis* L.)

Identification: Clump-forming shrubs. All four species have pinnately compound leaves that are opposite. *S. racemosa* has five or seven leaflets per leaf, green and nearly hairless above and lighter colored and hairy below. *S. cerulea* leaves are shiny, evergreen in the southern range; ovate or lance shaped with long pointed tips, shorter points and unequal size at base; sawtoothed edges; yellow-green color on top, paler and hairy underneath. *S. racemosa* has a red fruit maturing in the summer, whereas *S. cerulea* fruit is

blue, also ripening in the summer. *S. nigra* (an introduced European variety and the most studied) and our native eastern variety *S. canadensis* are similar. *S. nigra* and *S. canadensis* grow to 25' in height. Bark light brown to gray, fissured, and flaky. Branches green with gray lenticels, easily broken. Leaves compound, leaflets oblong, ovate, serrated; matte green above, light blue-green underneath. White flowers in large rounded clusters. Fruit oval, black to deep violet.

Habitat: Nationwide. Typically in wet areas, along streams in lowlands and mountains of the West. *S. canadensis* is typically found in wet thickets, along edges of streams, rivers, and lakes in the eastern states and southeastern Canada. *S. nigra* can be purchased in nurseries and transplanted to your property. Medicinal Parts: The roots, inner bark, leaves, berries and flowers are all recognized as natural medical treatment.

Solvent: Water.

Bodily Influence: Emetic, Hydragogue, Cathartic; Flowers: Diaphoretic, Diuretic, Alterative, Emollient, Discussant, Gentle Stimulant.

Food: Use elder flowers and berries sparingly as food because their safety is not universally established—imbibe at your own risk. We dip the white cluster of blossoms in tempura batter and then cook them like fritters.

Sprinkle

with powdered sugar and serve as a health-protecting, heart-stimulating dessert. Or cook elderberries, then strain the juice through a sieve, thicken with pectin, and combine with other berry jams and marmalades. The cooked

juice may also be added to maple syrup. The juice mixed with brown sugar, ginger, mustard, and soy makes a good wonton dip.

Traditional uses: Flower infusions are reported to lower fever. A wash of the flowers may reduce fever and be soothing to irritations; it is considered alterative, anti-inflammatory, and diuretic. Flowers and fruit are made into tea for influenza, flu, colds, arthritis, asthma, bronchitis, improved heart function, fevers, hay fever, allergies, and

sinusitis. Native Americans scraped the bark and used the root in infusion as an emetic and a laxative. The berry infusion was used to treat rheumatism.

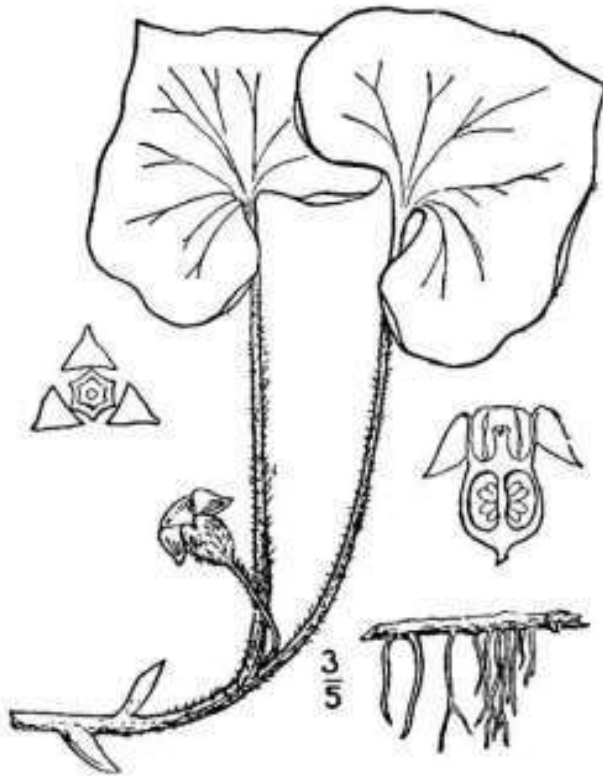
The flower infusion was given to colicky babies. Roots were pounded, decocted, and applied to swollen breasts. Leaves in infusion were used as a wash for sores.

Modern uses: Standardized extractions are Commission E–approved for treating cough, bronchitis, fevers, and colds. The therapeutic dose of flowers is reported to be 1 to 3 teaspoons of dried elder flowers to 1 cup of water off the boil. Over-the-counter elderberry extracts indicate the recommended dosage on the bottle. Flower and berry extractions are used to treat acute infections like colds and flu. Herbalist Michael Moore claims that a tincture of the flowers is alterative and diaphoretic, stimulating the body’s defense systems. Elderberry flower tinctures may be more effective and more tasteful when combined with mints. The berries can act like a mild laxative, yet at the same time they are antidiarrheal and astringent. Research by Erling Thom, of the University of Oslo, presented findings on Sambucol (an elderberry over-the-counter preparation) treats and shortens flu symptoms if taken early in the episode; 93 percent of 60 patients responded positively (Thom, E., 2002).

Warning: The leaves, bark, root, and unripe berries of *Sambucus* species may cause cyanide poisoning. Cook the berries before consuming them. The western variety, *S. racemosa*, with red berries, may be more toxic than the blue and black berries of the varieties *S. cerulea*, *S. canadensis*, and *S. nigra*. Avoid eating red elderberries—the fresh berry juice has caused illness.

Notes: Elderberry (fruit) may be dried in a food dryer, then frozen and used in cooking throughout the cold months for disease prevention. I eat the dried berries of *S. canadensis* throughout the winter on cereal, pancakes, waffles, and porridge and in stir-fries. Berries are best when cooked after drying. Flowers may be gathered in June, dried, and made into tea. Be sure to cut away the stems before eating the flowers and remove the stems from berries too.

Ginger



Aristolochiaceae (*Asarum canadense*

L.)

Identification: Low-lying colonial perennial herb with an aromatic root, smells like ginger; two dark-green, heartshaped leaves. Note the hairy stem and leaves. A primitive red flower emerges under the leaves in May in Michigan. The plant grows from an adventitious rhizome and is spreading.

Habitat: Various species grow across the entire United States, except extreme desert, southern California, and lower Florida. Found on rich soil in moist woods as a ground cover in shady areas.

Food: For the daring gourmet, try boiling the root until tender and then simmer in maple syrup. The result is an unusual candy treat. Taste the leaves. Crushed root added to salad dressings. When dried and grated it is an adequate substitute for Asian ginger.

Medicinal Part: The root.

Solvent: Boiling water.

Effects: Stimulant, Carminative, Tonic, Diaphoretic, Diuretic.

Traditional uses: Root traditionally used to treat colds and cough; antiseptic and tonic. Also used in compounding traditional medicine to treat scarlet fever, nervousness, sore throat, vomiting, headaches, and earaches as well as asthma and convulsions—considered a heal-all.

Modern uses: The stimulating root considered an appetite enhancer.

Herbalists use the root in tincture to dilate peripheral blood vessels, but this is unproven without double-blind, placebo-controlled studies.

Ginseng



Araliaceae (Panaxginseng C.A. Meyer; *P. quinquefolius* L.; *Panax trifolius* L.)

Identification: Perennial to 3' in height. Stem smooth, round. Three to five leaves in terminal whorls with three to five palmate leaflets; leaflets, finely serrated, 3" to 8" long, 1" to 2" wide. Greenish-yellow flowers give rise to a

pea-sized, rounded, glossy seed. Seeds in a cluster on a central stalk separate from leaves. Dwarf variety (dwarf

ginseng, *Panax trifolius*) similar but smaller, to 8” to 9” tall.

Habitat: Cultivated from coast to coast, found wild in the Northwest and eastern forested areas. Rare in most of its former range. Needs shading forest with mature canopy and well-drained soil.

Medicinal Part: The dried root.

Solvent: Water.

Effects: Stimulant, Demulcent, Stomachic, Nervine, Aphrodisiac.

Traditional uses: Native Americans used the root as a ceremonial fetish to keep ghosts away. The decoction made from fresh or dried roots reduced fever and induced sweating. The root is considered a panacea in China and Korea as a tonic and an adaptogen—that is, it helps the user to adapt to stressful conditions. It is said to potentiate normal function of the adrenal gland. Ginseng root is considered a stimulant and an aphrodisiac that enhances the immune response and may improve cerebral circulation and function as well as regulating blood pressure and blood sugar.

In Traditional Chinese Medicine terms, it tonifies primordial energy (increases libido). It is a tonic for the spleen and lungs.

Modern uses: Chinese, Russian, Korean, and European studies suggest that ginseng enhances production of interferon. It is considered an ergogenic aid and may improve endurance. It is reported to regulate plasma glucose. Other research focuses on its anticancer, antiproliferative, and antitumor activity against leukemia and lymphoma. Ginseng’s antimicrobial and antifungal activity has been demonstrated. (Cold FX is an over-the-counter treatment

for colds that contains ginseng. It has proven effective in clinical trials.)

Root preparations lower or raise blood pressure. Ginseng is also used as an immune-system stimulant to help resist infection. Preliminary studies suggest it

may increase mental acuity, and it has an estrogen-like effect on women.

Studies suggest it may protect against radiation sickness and other physical, chemical, and biological stresses, thereby supporting its antistress

applications. Considered by many the closest thing to a cure-all in nature. Asian ginseng (*P. ginseng*) is considered warming and stimulating.

Korean red ginseng (different preparation of *P. ginseng*) warms more than Asian white. American ginseng (*P. quinquefolius*) cools, moistens, and soothes.

American ginseng is considered a better tonic than Asian ginseng, at least in the eyes of Asian practitioners.

As for the performance-enhancing effects of ginseng supplements, the jury awaits more clinical trials—doubleblind, placebo-controlled. So hold onto your money and follow the literature.

Dose and unse: To make a tea, take 3 oz. of powder (Ginseng 6-7 years old), add 1 oz. of honey and 60 drops of wintergreen, and blend. Use 1 teaspoonful to 1 cup of boiling water, let it stay a little short of the boiling point for 10 min., drink as hot as you can before each meal. To make tea from the dried leaves, steep as you would for ordinary teas. Excellent for nervous indigestion.

Warning: Always use this herb under the supervision of a professional healthcare practitioner. Taking more than 3 grams of ginseng per day may cause diarrhea, anxiety, dermatitis, and insomnia. Mild reported side effects include headache and skin rash. Ginseng may strengthen the effects of caffeine. Large doses may cause hypertension, asthma-like symptoms, heart palpitations, and, rarely, dysmenorrhea and other menstrual problems. There have been two reports of interactions with phenelzine, a monoamine oxidase inhibitor. Avoid ginseng if you have diabetes, fever, emphysema, hypertension, arrhythmia, upper respiratory infections, asthma, and bronchitis. Chinese practitioners caution against using ginseng with colds (this is in contrast to its proven benefits fighting reinfection with a cold), pneumonia, and other lung infections. Do not use while on internal steroid therapy. Avoid during pregnancy and while nursing until further studies are available.

Notes: Ginseng is becoming rare in the wild. Roots may be ordered at herbs.com and from numerous other plant and seed resources. I have found many of my Chinese herbs to harbor eggs and larvae that later emerged as some exotic and startling variety of flying insects and fast-moving beetles. Ginseng roots imported from China are now

sprayed with fungicide. Scrub these roots thoroughly before grinding them for use. Dwarf ginseng, pictured above, is very common in Mid-western old-growth beech/maple climax forests. It is believed the root chemistry of the diminutive plant is as effective as its bigger relative.

Use an old sausage grinder to grind hard, dried roots into powder (the dried root is tough enough to break blades of Use an old sausage grinder to grind hard, dried roots into powder (the dried root is tough enough to break blades of gram root (cut to fit) in 1 liter of spirits (vodka or rum) for two weeks. Drink judiciously for its physiological effects. The powdered herb may be purchased; use 1 teaspoon of powder to 1 cup of hot water twice a day.

Goldenrod



Asteraceae (*Solidago canadensis* L.; *Solidago* spp.)

Identification: Perennial with numerous species. *S. canadensis* the most common eastern species, and has a smooth stem at the base, but hairy just below flower branches. Sharp-toothed leaves are plentiful, lance-shaped with three veins. Golden flowers line up atop stem, in a broad, branched spire or

triangular cluster (panicle). Plant found most often in colonies. Flowers July through September.

Habitat: Nationwide fields, meadows, roadsides, railroad right of ways, vacant lots, edges of fields. Medical Parts: The leaves and tops.

Solvent: Water.

Effects: Aromatic, Carminative, Stimulant, Astringent, Diaphoretic.

Food: Seeds, shoots, and leaves edible. Flowers made into a mild tea or used as a garnish on salads and other cold or hot dishes.

Traditional uses: First, goldenrod is not the weed that causes autumn allergies—that's ragweed—but informants say goldenrod floral tea (fresh or dried) may protect a person from allergens (hypoallergenic). Dried leaves and flowers can be applied to wounds (styptic). Traditional herbalists and pioneers used the tea to ward off acute infections like

colds and flu or bronchitis, as it induces the production of mucus. Diuretic whole-plant tea is a kidney tonic. The aerial parts infused were used to treat snakebite.

Modern uses: Commission E–approved for kidney and bladder stones as well as urinary tract infections. Plants gathered when in flower and then dried are used in Europe as a relaxant (spasmolytic) and anti-inflammatory. The drug is prepared with 6–12 grams dried aerial parts in infusion. People with kidney and bladder problems should only use the herb under medical supervision. Whole-plant tea is a kidney tonic (diuretic) and may relieve nephritis (NIH) (GRIN). According to the PDR for Herbal Medicines, fourth edition (2007), the herb “has a weak potential for sensitization (can cause allergies).” Plant drug rarely causes allergic reaction.

Dose and use: 1 teaspoonful of the leaves to 1 cupful of boiling water.

Externally: The Indians used the solution from boiled leaves as an external lotion for wounds and ulcers, sprinkling the affected parts with the powdered leaves as a protective dressing. The same was used for saddle sores on horses, The Spanish Americans used the fresh plant mixed with soap for a plaster to bind on sore throats. Missouri golden rod (*S. missouriensis*), recognized by its

unusually long stemmed and fluted leaves, was eaten as salad greens.
Notes: A colorful garden addition. Also, the whole plant may be infused and used as a yellow dye.

Goldenseal



Ranunculaceae (*Hydrastis canadensis* L.)

Identification: Perennial to 11" in height. Bright yellow (golden) rhizome. Two ribbed leaves up to 7" wide; lower is typically smaller, sessile; upper leaf on a long petiole, with seven lobes, finely serrated. Solitary flower, found on an erect stem, with three small greenish white petals that disappear quickly. Fruit scarlet, with one or two black glossy

seeds. Grows in dense colonies.

Habitat: Eastern United States. Forest dweller; wet, well-drained soil; in spreading colonies on banks in woods. Often found growing near ginseng. Cultivated nationwide.

Traditional uses: Air-dried rhizomes and root fibers were used to treat diarrhea. Cherokees used root decoction as a cancer treatment and as a tonic and wash for inflammations, infections, and wounds. Goldenseal was also used as an appetite stimulant and to treat dyspepsia. The dried root was chewed to treat whooping cough. A decoction was

used for earaches. An aqueous decoction of the root was filtered through animal skin or cloth and applied as eyewash. The root steeped in whiskey was taken as heart tonic. Tuberculosis, scrofula, liver problems, and gall problems were all traditionally treated with the root extraction. According to Botanist Stephen Johnson, “The dried powdered rhizome is a good hemostat and antimicrobial that quickly forms a scab over a wound. I have used the powder this way many times with good effect.”

Modern uses: Standardized extracts from air-dried rhizomes and root hairs are taken with water or in capsules to stimulate bile secretion or hydrochloric acid secretion and to hasten and improve peristalsis. The drug has a weak antibiotic and weak antineoplastic (anticancer) activity. It may constrict peripheral blood vessels and is said to stimulate and cleanse the liver. It is used as a therapy for upper respiratory infections. A few holistic practitioners still recommend it as a topical eyewash. Taken internally goldenseal may increase depressed white blood cell counts, as reported in research on Traditional Chinese Medicine. Clinical trials have suggested its effectiveness against traveler’s diarrhea. The root paste is applied externally to treat wounds and fungal infections. Goldenseal’s bitter taste may stimulate hunger and be useful in treating anorexia. When using over-the-counter products, seek professional advice and follow directions on the package.

Warning: Do not take goldenseal if you are pregnant or lactating due to the uterine-stimulating activity of plant alkaloids and insufficient data on breast milk and alkaloid secretions. Goldenseal is extremely bitter and may be rejected for that reason by some. It is nontoxic at recommended dosages; however, large doses of the physiologically active chemicals in goldenseal—berberine and hydrastine—may be fatal. Amounts in excess of the

therapeutic dosages may cause stomach upset, nervousness, and/or depression. Large doses may cause hypertension, involuntary reflex action, respiratory failure, convulsions, paralysis, and death. The herb may negate the activity of heparin, as reported for the isolated alkaloid berberine.

Notes: Goldenseal is scarce in the wild due to overharvesting. Many botanical gardens exhibit goldenseal, and the plant is widely cultivated in the United States and Canada. Personally, I don't see goldenseal as a particularly useful

herb. There are safer, more efficacious, and easier to find herbs for the same ailments. I rely more on Echinacea, Siberian ginseng, and Astragalus. I have used goldenseal for treating athlete's foot by mixing equal amounts of cinnamon, oregano, and goldenseal powder; moistening the mixture with alcohol; and then applying it with a Q-tip to areas of the foot and between the toes. My dentist's dissertation measured the antimicrobial activity of goldenseal root powder in vitro and found the alkaloids weakly antimicrobial.

Veterinarian/Wildlife: Goldenseal is one of several natural products in Brain Cool, an herbal supplement that the manufacturer claims helps rebuild nerves in horses. It is also used in training mixes, wound treatment, and fertility

enhancing formulas for horses. Goldenseal is a vital component in a post-race cleansing formula for racing birds.

Gravel Root



Asteraceae (*Erechtium purpureum* L. La Mont; *E. maculatum* L.)

Identification: Perennials to 5' tall in the northern range, and up to 10' in the southern states. It grows from a rhizome on a stout stem, topped with flower heads that are domed to flat topped. Flowers are pink to purple and tubular-

shaped disks. Leaves are lance shaped and in whorls, up to seven in a whorl, each leaf toothed, rough and hairy to the touch. Another species is spotted Joe-Pye weed (*E. maculatum*).

Habitat: Marsh, wetlands, fringes of wetlands, seeps, lakesides on damp ground, primarily eastern United States and eastern Canada.

Medicinal Part: The whole plant, especially the leaves.

Solvent: Boiling water.

Effects: Diuretic, Astringent.

Food: Not generally edible. Some American Indian tribes used the root ash as a spice or as a salt substitute and as a healing tea. Aerial parts and roots drunk as a medicinal tea to treat infections and colds.

Traditional uses: Used to treat typhus in colonial America. Native Americans used it as a revitalizing tonic to relieve constipation and as a diuretic to treat kidney stones and other urinary tract problems. Tea was used as a wash on infections to cleanse and promote healing. The root of *E. purpureum* was used by the Meskwakis as an aphrodisiac (they sucked on the root while wooing a man or woman). The roots of *E. purpureum* are preferred as medicine. The root decoction was used to treat bed-wetting in children and as a diuretic to treat congestive heart failure (dropsy).

The tea was also used for treating asthma. Native Americans used both species for treating menstrual disorders and dysmenorrhea and as a recovery tea for women after pregnancy. *E. purpureum* was used by Cherokees to treat rheumatism and arthritis and as a diuretic. An infusion of the root is said to be a laxative. Potawatomi used fresh leaves as a wound poultice. Navajos used the root as antidote to poisoning.

Modern uses: Hot infusions of the aerial parts are used by naturopaths to treat colds, fever, and arthritis. The plant is said to be antimicrobial and to induce sweating, loosen phlegm, and induce coughing to remove mucus. It is also used as a tonic and laxative to rid the body of worms.

Warning: This herb is no longer used with pregnant and lactating mothers.

Notes: Found in abundance in southwest Michigan but rarely harvested and used. Joe Pye, spelled historically Jopi, was a Native American healer who introduced the plant to the colonists to treat typhus fever caused by the Rickettsia bacteria. When carrying the *E. maculatum* species, Cherokees and other tribes used the hollow stems like straws. This plant is a striking late-summer bloomer worth adding to your wildflower garden.

Hawthorn



Rosaceae

(*Crataegus* spp.: *C. laevigata* [Poiret] DC.; *C. monogyna* Jacquin Emend.; *C. oxyacantha*; *C. douglasii* Lindl; *C. macrosperma* Ashe)

Identification: Shrubs to small trees from 6' to 20' in height, many branched. Branches thorny. Yellow-green leaves glossy, three- to five-lobed, with

forward-pointing lobes and serrated leaf edges. Numerous white flowers in terminal clusters, with ten to twenty stamens that give rise to small applelike fruit. Fruit ovoid to round, red or black, mealy. There is one seed in each chamber of the ovary.

Habitat: Hawthorn species are found nationwide. *C. macrosperma*: United States east of the prairie. Damp woods and fringes of forests. They prefer some exposure to sun.

Food: The fruit may be eaten out of hand. It's mealy and seedy, but its heart-protecting value makes it worth the trouble. The fruit may be sliced and dried and decocted or infused in water to make a health-protecting drink. It blends tastefully with green tea. Berries are gathered in August and immersed in boiling water for thirty seconds

and then cut in half, seeds removed, and dried in a food dryer. Berries may be cooked in hot cereals or added to tea. Be creative.

Traditional uses: Hawthorn has long been used to treat heart disease in Europe and China. The active phytochemistry includes bioflavonoids that improve peripheral circulation to the heart and the extremities, including the brain. They also improve coronary blood flow and are hypotensive. Native Americans chewed the leaves and applied the masticated mash to sores and wounds as a poultice. Shoots were used in infusion to treat children's diarrhea. Thorns were thrashed on arthritic joints as a counterirritant. The Okanagan-Colville Nation's herbal art included burning the thorn down to the patient's skin, not totally unlike incense burning (moxibustion) on Chinese acupuncture needles to heighten effect. A decoction of new shoots was used to wash mouth sores. Numerous other remedies are discussed in Moerman's *Native American Ethnobotany* (Moerman, 1998).

Modern uses: Most studies have been on *C. laevigata* leaves, fruit, blossoms, and new end growth. Hawthorn is said to improve and protect cardiac and vascular function by dilating coronary blood vessels and initiating heart muscle regeneration. The extract may be antiangina and improve Buerger's disease (paraesthesia of foot or single toe, an arterial spasm). It's also used to treat tachycardia. Hawthorn is considered cholesterol lowering and hypotensive. The anthocyanidins and proanthocyanidin fraction are said to

be synergistic with vitamin C. In European studies, use of the standardized extract improved exercise tolerance in heart patients. Other studies suggest that the extract may alleviate leg pain caused by partially occluded coronary arteries.

Chinese practitioners decoct the dried fruit and use it for treating irritable bowel and gallbladder problems. The berry is considered antibacterial to shingella (dysentery) species. A decoction of dried fruit is considered antidiarrheal and helpful in treating dyspepsia. Dr. Ann Walker, University of Reading, in the United Kingdom, published in the British Journal of General Practice a human study, placebo controlled, using hawthorn extract to lower blood pressure in diabetics. Patients taking hawthorn had a significant reduction in diastolic blood pressure but no difference in systolic pressure with no drug/herb interactions. Dr. Walker reported the blood pressure effect from the study was real (Walker, 2006).

Warning: Not recommended during pregnancy and lactation.

Proanthocyanidins have been shown not to be mutagenic when tested by means of the Ames test (a standardized measure of carcinogenicity). Safety with berry extracts is well established.

Notes: Some herbs with circulation-stimulating properties, in addition to hawthorn, include garlic, ginger, ginkgo biloba extract, and cayenne. If you grow them, in the spring you can cut off a few dozen clusters of flower buds and emerging new-growth leaves to make a tea. The hot water extracts the bitter bioflavonoids that are hypotensive and

anti-angina.

Heal-all



Lamiaceae (*Prunella vulgaris* L.)

Identification: Perennial typically 6” to 10” tall. Square stem erect when young; may fall and creep. Leaves ovate to lance shaped, margins dentate (toothed) to entire, and opposite. Blue to violet bract of flowers clustered in a whorl at end of square stem. Also known as self-heal.

Habitat: Nationwide. Waste ground, lawns, edges of fields, margins of woods, wetlands.

Food: According to Moerman (Moerman, 1998), the Cherokees cooked and ate small leaves. The Thompson First People made a cold infusion of the aerial parts and drank this as a common beverage. Leaves and flowers may be added in judicious amounts to salads.

Traditional uses: Documented as used by the Chinese for more than 2,200 years, self-heal was used for liver complaints and improving the function of the liver. The whole plant was used in infusion to stimulate the liver and gallbladder and to promote healing. It is considered alterative; that is, capable of changing the course of a chronic

disease.

Modern uses: Heal-all is still used internally by holistic practitioners to treat excessive menstruation and externally to treat burns, cuts, sores, and sore throats. The whole plant is infused and gargled for ulcers of the mouth and throat. The tea is made with 1 teaspoon of the dried whole aerial parts of the plant to 1 cup of water as a remedy for diarrhea and unspecified gynecological disorders. Consult with a professional holistic health-care professional for specific formulations and applications. Extracts of the herb are used in a dentifrice to treat gingivitis (Adamkova, 2004).

Notes: Locate this plant to your garden so you have it on-site and handy when you need it.

Hops



Cannabaceae (*Humulus lupulus* L.)

Identification: Climbing perennial with pencil-thick stems that do not turn woody. The plant climbs through and atop shrubs and spreads to 30'. Leaves

are opposite, three to five lobed and serrated. Male flowers are small and inconspicuous, yellowish green. Female flowers have numerous florets and a fruit cone grows from the flowers.

Cone may be yellowish to gray depending on whether it is fresh or dried. The scales of the cone contain the bitter drug.

Habitat: Plant has escaped from cultivation and can be found in marshes, meadows, and the edges of woods. Cultivated stands are in northeastern Washington State, east of Seattle in the Okanagon of Washington and Canada, including northern Idaho.

Medicinal Parts: The strobiles or cones.

Solvents: Boiling water, dilute alcohol.

Effects: Tonic, Diuretic, Nervine, Anodyne, Hypnotic, Anthelmintic, Sedative, Febrifuge. Traditional uses: Pioneers put hops in a pillow for a sleep aid. Water extraction used as a calming tea.

Modern uses: Commission E–approved for treating nervousness and insomnia (sleep aid). The flavonoids in the plant in animal and in vitro studies show them to be antibacterial, antifungal, and antitumor. Like so many plant teas, it is a diuretic. In mouse studies, humulon reduced the average number of tumors in cancer-induced mice. In another human study, hops, combined with valerian, balm, and motherwort, improved sleep in alcoholics (WidyTyszkiewica and Schminda). A randomized double-blind study investigated the sedative effects of a phytotherapeutic containing valerian, hops, balm, and motherwort (Morin, 2005). The University of Chicago is completing a study of hops as a sleep aid. Related research suggests that the use is “relatively safe and effective” in

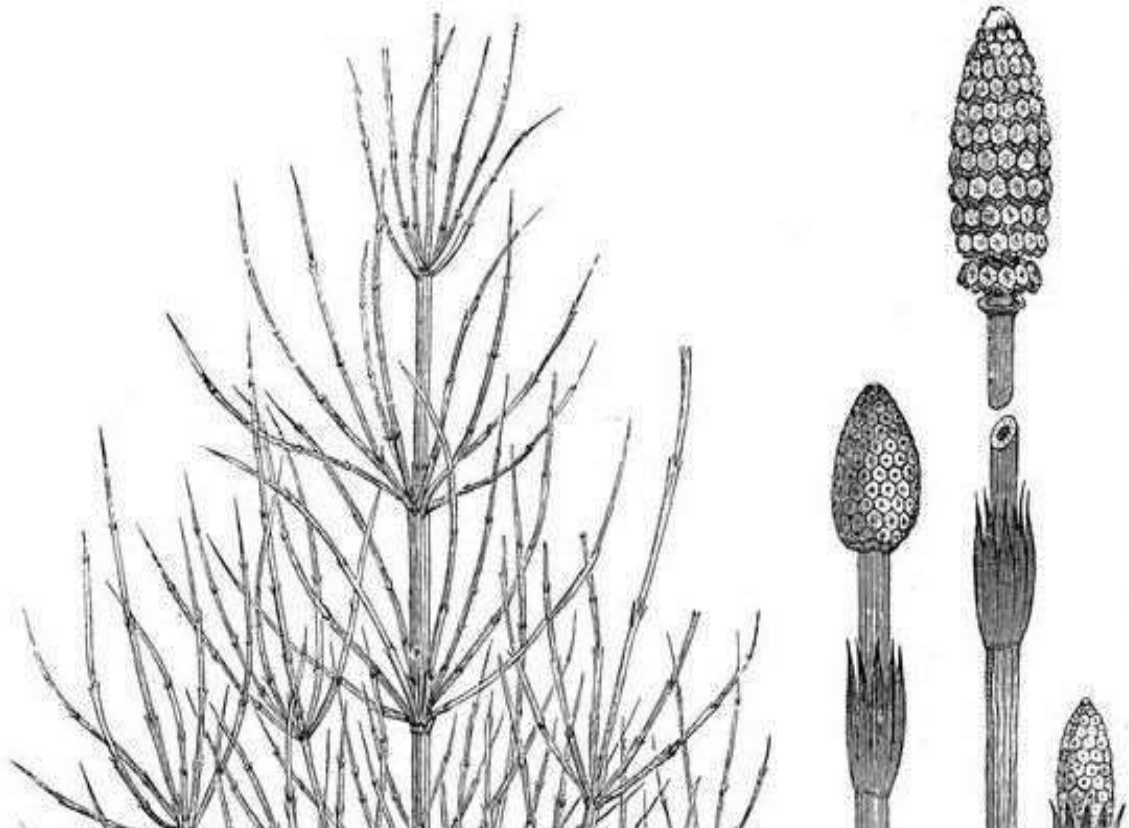
inducing sleep. Early research suggested that the hop flower tea may impart estrogenic effect; subsequent research has not shown this effect.

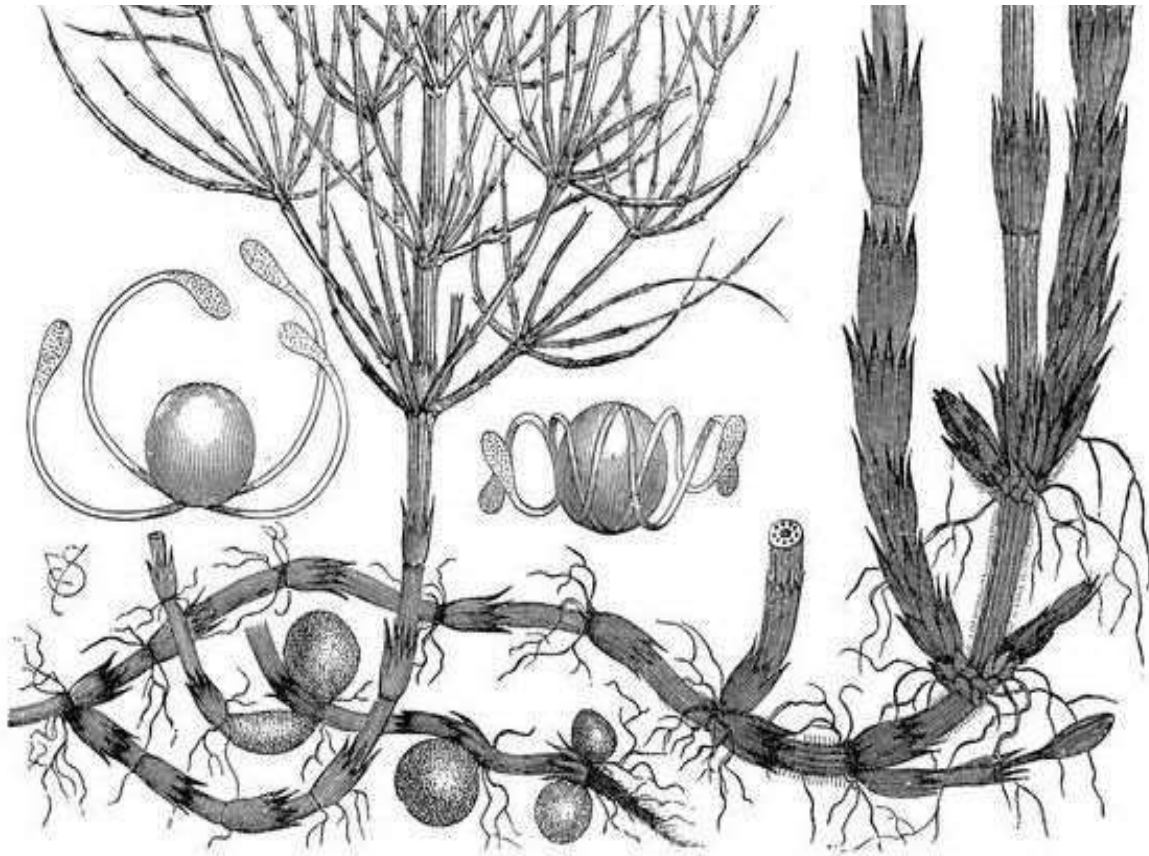
Warning: Contact with hops and its pollen has caused allergic reactions. Fertilizers and pesticides have been eliminated as the cause—the dermatitis is caused by the plant.

Notes: For steam bath, place leaves in a clean pair of pantyhose, tie off, and put in hot bathwater. Or make a sweat lodge from a dome tent, cover the tent with a tarp and a blanket, and then heat stones over an outside fire until hot. Place stones in a large container (five-gallon enameled metal) and transfer to the floor of the tent. Place the metal tub on boards so as not to burn the tent floor. Drop water-soaked cedar boughs and hops on the hot stones, and use a long-handled ladle to dip water carefully over the rocks. Resultant steam will warm the lodge with healing aromatics. According to some sources smoking hops may provide a mild sedative effect. To make a sleep aid, add about 1 teaspoon of dried flowers to a 6-ounce cup of hot water, just off the boil. Cover, cool, and drink. To improve cheap, watery beer place two hops into the open can or bottle and drink. Ahhh, that's better.

Veterinarian/Wildlife: Dogs have perished in as little as six hours after eating hops. Keep hops away from pets and don't drink beer with your dog.

Horsetail





Equisetaceae (*Equisetum hyemale* L.; *E. arvense* L.)

Identification: Perennial to 3' or 5' in height. Appears in the spring as a naked segmented stem with a dry-tipped sporangium (spores may be shaken from it). Later the sterile-stage stem arises, with many long needlelike branches arranged in whorls up the stem. Also known as scouring rush or equisetum.

Habitat: Nationwide. Around marshes, fens, bogs, streams, lakes, rivers.

Medicinal Parts: The leaves and root.

Solvent: Water.

Effects: Anodyne, demulcent, astringent.

Food: Native Americans of the Northwest eat the tender young shoots of the plant as a blood purifier (tonic). The tips (strobili) are boiled and eaten in Japan. Mix them with rice wine vinegar, ginger, and soy and enjoy. The roots are eaten by Native Americans in the Southwest.

Traditional uses: Mexican Americans use the dried aerial plant parts of horsetail in infusion or decoction to treat painful urination. Equisetonin and bioflavonoids in the plant may account for its diuretic effect. Native Americans used a poultice of the stem to treat rashes of the armpit and groin. An infusion of the stem was used by the Blackfoot Indians as a diuretic. Cherokees used the aerial-part infusion to treat coughs in their horses. An infusion of the plant was used to treat dropsy, backaches, cuts, and sores. Baths of the herb were reported to treat syphilis and gonorrhea. This is one of the First Peoples' most widely used herbs.

Modern uses: Commission E–approved externally for wounds and burns and internally for urinary tract infections and kidney and bladder stones.

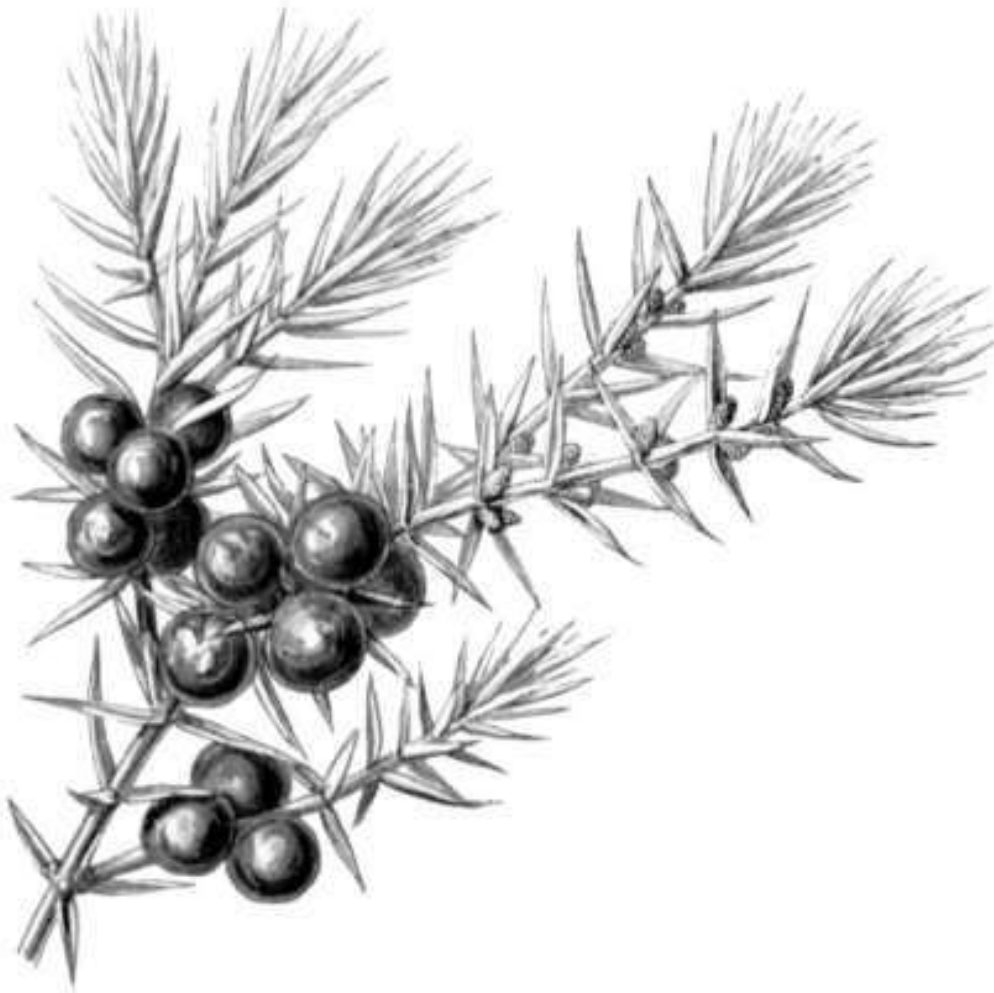
Available over the counter.

Warning: An overdose of the herb may be toxic. Use only under the supervision of a skilled holistic health-care professional.

Notes: As a fast-spreading garden plant, it does well in the shade or sun and makes an interesting addition to a flower arrangement, albeit a wandering denizen traipsing here and there through your garden. Use the stems to clean pots and pans when camping because it is high in silica.

Veterinarian/Wildlife: Ingestion of horsetail by grazing animals has caused weight loss, weakness, ataxia, fever, and other symptoms. The Meskwaki peoples fed the plant to wild geese and claimed it fattened them within weeks.

Juniper



Cupressaceae (*Juniperus communis* L.; *Juniperus osteosperma* [Torr.] Little)

Identification: Evergreen tree or lowlying spreading shrub; often grows in colonies. Leaves evergreen, pointy, stiff, somewhat flattened, light green; whorls of three spreading from the branches. Buds covered with scalelike needles. Berries blue, hard, emit a tangy smell when scraped, and impart a tangy flavor—a creosote-like taste. Male flowers are catkinlike with numerous stamens in three segmented whorls; female flowers are green and oval, fruit ripens to

blue, edible, aromatic, with one or more seeds.

Habitat: *J. communis* is found nationwide, *J. osteosperma* found in dry montane areas of southwest and Wyoming. Medicinal Part: The ripe dry berries.

Solvents: Boiling water, alcohol.

Effects: Diuretic, Stimulant, Carminative.

Food: Dried berries are cooked with game and fowl. Try putting them in a pepper mill and grating them into bean soup and stews and on lamb, goat, venison, duck, and turkey. The berries may be made into tea—simply crush one or two berries and add them to water just off the boil. Gin, vodka, schnapps, and aquavit are flavored with juniper berries. Use berries in grilling marinades. Grate berries on cold cuts and on vegetated (soy) protein cold cuts, like Wham and Gardenburgers. Be judicious; large amounts of the berry may be toxic (as are large amounts of pepper

and salt), so use in small amounts like a spice.

Traditional uses: The diluted essential oil is applied to the skin to draw and cleanse deeper skin tissue. It has been used to promote menstruation and to relieve PMS and dysmenorrhea. Traditional practitioners use 1 teaspoon of berries to 1 cup of water, boil for 3 minutes, let steep until cool. A few practitioners add bark and needles to the berry tea. The berry is considered an antiseptic, a diuretic, a tonic, and a digestive aid. It's strongly antiseptic to

urinary tract problems and gallbladder complaints but contraindicated in the presence of kidney disease.

Modern uses: Commission E–approved for treating dyspepsia. One tenth of a milliliter of the essential oil used to treat dyspepsia. The berry is diuretic, so the extract is diuretic (Odrinil). It's possibly indicated for treating heart disease, high blood pressure, and dropsy. The berry extract is used in Europe to treat arthritis and gout. Animal studies of the extract in various combinations showed anti-inflammatory and anticancer activity, but this is not proven in humans. It decreased glycemic levels in diabetic rats. In human trials the berry extract combined with

nettle and yarrow extracts failed to prevent gingivitis. In one double-blind, placebo-controlled study, juniper oil and wintergreen oil (30 milliliters of Kneipp-Rheumabad) were added to bath water and reduced pain in trial participants. Mice trials suggest the berry extract in pharmaceutical doses to be anti-inflammatory, at least in the rodents. Juniper oil has been used successfully as a diuretic and may be useful as adjunct therapy for diabetes.

Dose: To make an infusion, several tablespoonfuls of the berries are generally prepared by macerating (softening by soaking), then adding them to 1 pint of boiling water for 1 hr or more. Cool and divide the mixture into four portions, which is then taken morning, noon, afternoon and evening. Dose of the tincture, 10-30 drops.

Warning: Use juniper sparingly, as allergic reactions are possible. Pregnant women should avoid this herb because it may induce uterine contractions. It may increase menstrual bleeding. Do not use if kidney infection or kidney disease is suspected. Do not use the concentrated and caustic essential oil internally without guidance from a licensed holistic healthcare practitioner.

Notes: Juniper is easily transplanted to your garden and the wild varieties, especially the western ones, provide a windfall of fruit.

Lady's Slipper



Cypripedioideae (Cypripedium acaule Aiton)

Identification: Perennial. Leaves lilylike, basal, stalkless, broadly lance shaped, to 10" in length, bright green above and pale underneath. Horizontal rhizome gives rise to orchidlike, slipper-shaped flower, typically pink, rarely white. Fruit capsule brown.

Habitat: Northern United States and Canada. Upland pine forests, wet blackspruce sites. Occasionally open wetlands. More prolific in the northeastern states and southern Ontario. Grows in profusion along the north shore of Lake Superior.

Medicinal Part: The root.

Solvents: Boiling water, diluted alcohol.

Effects: Antiperiodic, Nervine, Tonic.

Food: Not eaten.

Traditional uses: The horizontal rhizome (root) contains the active principle. It is styptic and astringent, considered a superior nervine (tranquilizer) and therefore overharvested in the wild. The rhizome was used in decoction or tincture and considered by Native Americans as a panacea for nervousness, colds, cramps, diabetes, flu, hysteria, menstrual problems, spasms, and inflammations (applied as a poultice). The rhizome is harvested in autumn and

used fresh or dried for later use. Following the Doctrine of Signatures, this plant was once considered one of nature's finest aphrodisiacs because of the flower's shape.

Modern uses: This plant has been overharvested and is now protected, so its legal use has been discontinued. Its chemical constituents have not been tested but are still used to treat anxiety and insomnia. Warning: Contact with pink lady's slipper may cause contact dermatitis.

Notes: During Memorial Day weekend, Lake Superior Provincial Park on Lake Superior is ablaze with pink lady's slippers. Bring your kayak. There are lady's slipper-studded islands just a stone's throw offshore. The species is widely protected from illegal harvesting.

Veterinarian/Wildlife: Lady's slippers are difficult to relocate because of a complex symbiosis with soil fungi. Bees, moths, butterflies, gnats, and

mosquitoes pollinate the orchids.

Licorice



(*Glycyrrhiza lepidota* [Nutt.] Pursh)

Fabaceae

Identification: Member of the pea family with clusters of pealike flowers and compound pealike leaves. Grows to 5” in colonies.

Habitat: Grows in moist, sandy soils along rivers and sunny stream banks. Pictured plant filmed on the banks of the Yellowstone River in Paradise Valley, Montana. Ranges over the entire West and prairie states, with some extension into the East, but not Southeast.

Medicinal Part: The dried root.

Solvent: Water, sparingly in alcohol.

Effects: Demulcent, Expectorant, Laxative, Pectoral. Food: Warriors and hunters chewed the root as a sialagogue (produces saliva) to increase running endurance.

Traditional uses: The Cheyenne drank medicinal tea made from the peeled, dry roots of the plant for diarrhea and upset stomach. The Lakotas used the root as a medicine for flu. The Dakotas steeped the licorice leaves in boiling water to make a topical medicine for earache. The roots were also chewed and held in the mouth to relieve toothache. Blackfoot made a tea from roots to treat coughs, sore throat, and chest pain. They also considered it antirheumatic and applied foliage and wet, smashed roots to swollen joints. Dakota used infusion of the leaves to treat earache (Moerman).

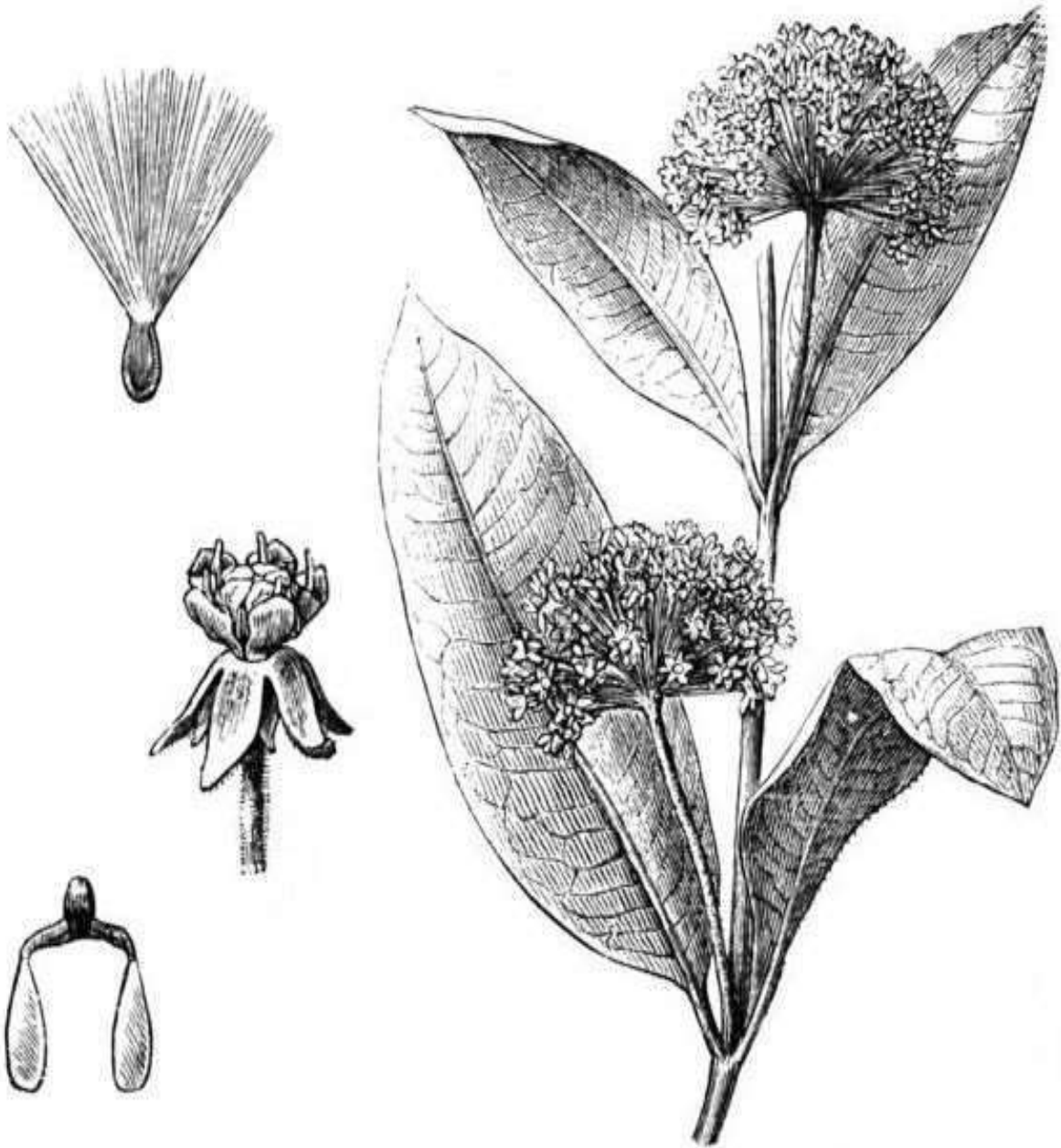
Modern uses: Used as a flavoring agent and to sweeten tobacco. Holistic health practitioners use the herb in the same way as Asian licorice (*Glycyrriza glabra*) for ulcers, boosting the immune system, improving mental function, and stress reduction (no double-blind, placebo-controlled crossover studies have been done on wild licorice, *G. lepidota*, as of this writing).

Dose: 1 lb. of Licorice root boiled in 3 pints of water, reduced by boiling to 1 quart, is an all-purpose decoction; a teaspoonful three times a day. 1 teaspoonful of the dried root to 1 cup of boiling water can be taken as a herbal tea, made fresh daily.

Warning: Go gently, my friend. Glycyrrhizin in root may raise blood pressure. Veterinarian/Wildlife: Roots were used to treat horse windgalls by

Native Americans.

Milkweed



Asclepiadaceae (*Asclepias syriaca* L.)

Identification: Perennial to 4' with numerous species raised on a single stem, leaves opposite, large, elliptical to 8" in length, 3" wide. Pink flowers in

drooping clusters grow from leaf axils. Flowers and seedpods are striking, seedpods Arabian slipper-like.

Habitat: Edges of cornfields, waste ground, roadsides, railroad rights-of-way, meadows, dune lands, desert, and gardens. Various species found nationwide.

Food: Native Americans prepared *Asclepias syriaca* shoots like asparagus; pick before milky sap appears, simmer in two changes of water, then sauté in oil. Flower buds are prepared like cooked broccoli when harvested before they open. Flowers buds and seedpods are prepared as follows: Boil water, pour over seedpods, let water and pods steep

for five minutes, then pour off water. Repeat, pour a second boil of water over once-steeped pods, pour off water, and then stir-fry in olive oil or butter. Flowers may be dried and stored for winter use in soups, stews.

Flowers have

been diced, sweetened, and made into marmalade. Native Americans ground seeds into flour. You can only eat *A. syriaca*. Other species may be toxic. Do not experiment unless guided by an expert.

Traditional uses: Native Americans pounded or split the roots for drying. Dried roots in decoction have a mild cardiac-stimulating effect, without the toxic effects of digitalis. Be warned this should be practiced with medical supervision because *Asclepias syriaca* L. contains toxic cardiac glycosides and requires careful preparation before use. Native Americans believed the plant was a lactagogue (promotes milk flow) because of the milky white sap, as per the Doctrine of Signatures, or “like treats like.” Latex from the leaves was also rubbed on warts, and, reportedly, on cancerous tumors. Native American lore suggests that approximately a fistful, a cup and a half, of milkweed was dried and pounded to a pulp, then mixed with three dried *Arisaema* (jack-in-the-pulpit) rhizomes. The plants were then put in a skin or gourd and infused into water for 20 or 30 minutes. The infusion of the two plants was swallowed, one cup per hour, to induce sterility. All varieties were used by First People to treat wounds as a poultice.

The white gum was applied over insect stings, bites, and spider envenomations. The root infusion was used for kidney ailments and the dried leaves were infused for stomach problems. Native Americans also used the white sap of the plant to treat poison ivy, ringworm, and many other skin

problems. The boiled root decoction was also used externally for edema and ringworm and internally for congestive heart failure and kidney disorders. The Eclectics used dried and powdered milkweed root in a tea for asthma and as a mild sedative. According to Foster and Duke the plant is considered “dangerous and contraceptive” (Foster and Duke).

Modern uses: Homeopathic preparations are used for treating many ailments to include edema, dropsy, dysmenorrhea (as an emmenagogue). *Asclepias curassavica* L. from China is used to disperse fever (clears heat), to improve blood circulation, and to control bleeding. The entire plant is dried and decocted as a cardiac tonic. Other Chinese formulations are used for tonsillitis, pneumonia, bronchitis, urethritis, externally for wounds.

Calotropin

from *Asclepias* inhibits human nasopharyngeal tumors (source did not say whether this effect was in vivo, or in vitro, so take that with a grain of salt). According to herbalist Michael Moore, the dried gum may be chewed in small portions to treat dry cough, as an expectorant; the bitterness stimulates saliva flow, a potential sialogogue

(stimulates saliva flow; also see sweet flag, *Acorus calamus* root).

Warning: Root decoction may be emetic; may stimulate the heart; and a few people may have allergic reactions to the milky sap.

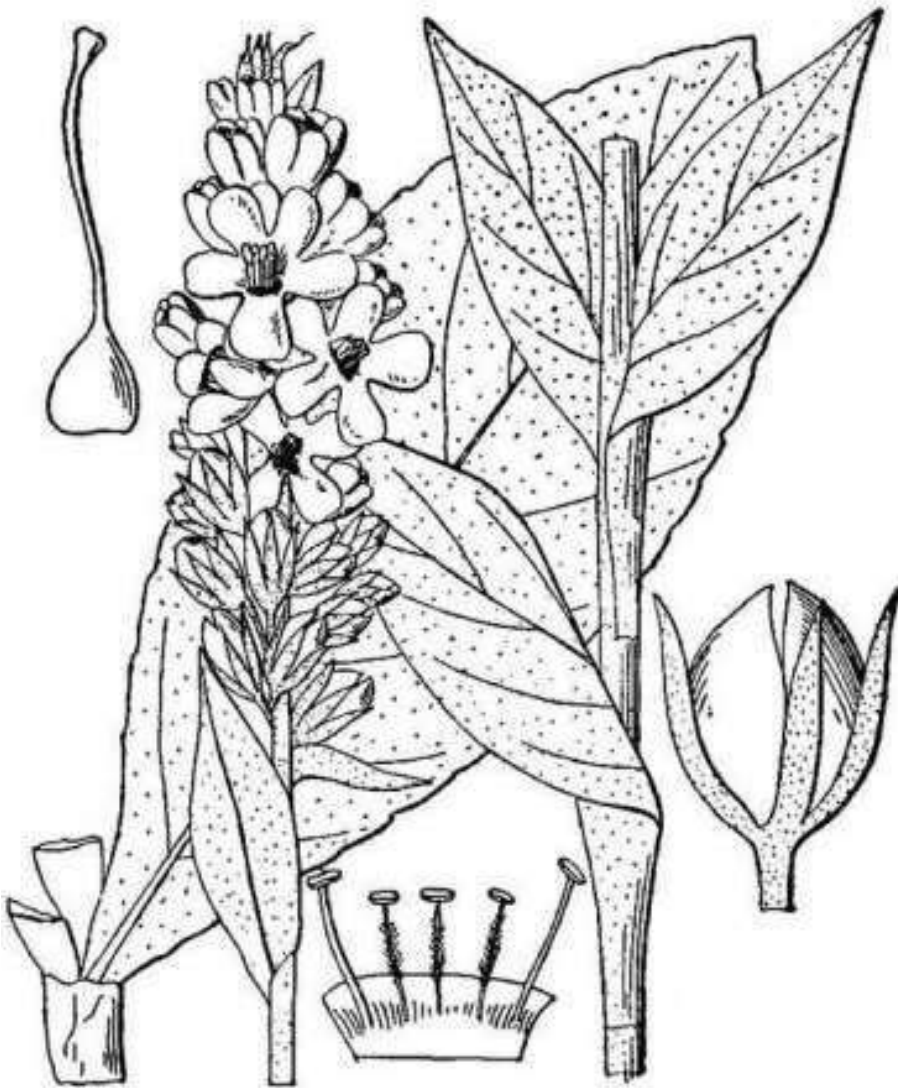
Notes: Resin may be collected from leaves and stems. Cut and collect, working your way down from the top of the plant. For example, cut a leaf stem or stem near top of plant, then scrape away the white resin; when this wound dries and skins over, then cut a bit farther down and collect more resin. Collected resin will oxidize and dry in a

glass or stainless-steel collecting dish. Stir or turn it occasionally for thorough drying. This process does not kill the plant as long as you leave ample growth for it to survive. Seed fiber and seed hair were used as life-jacket batting.

Fragrant flowers are sweet, a potential source of sugar. The strong, fibrous stems can be made into cordage and the pulp of plant may be chopped, shredded, boiled, and prepared into paper.

Veterinarian/Wildlife: The plants are exotic-looking garden additions. They attract bees, butterflies (monarchs, fritillary) and hummingbirds. With luck you will soon see monarch caterpillars crawling over the leaves. Look out for black and yellow sucking insects called milkweed bugs (*Oncopeltus fasciatus*) on the underneath side of the leaves.

Mullein



Scrophularaceae

(*Verbascum thapsis* L.)

Identification: Plants sprout a stout, tall stem from a basal whorl of large woolly leaves. Smaller leaves continue up the stem. Flowers are yellow, $\frac{3}{4}$ " to 1" long, densely packed on a spike at the apex of the pole. Leaves to 15"

in length, ovate, covered with gray hair; basal leaves larger, clasping upper leaves less dense, smaller. Habitat: Found on waste ground, along roadsides, fields, railroad rights-of-way, and montane areas nationwide.

Medicinal Parts: The leaves and flower (Culpeper used the root also).

Solvent: Boiling water.

Effects: Demulcent, Diuretic, Anodyne, Antispasmodic, Astringent, Pectoral.

Traditional uses: Tea for upper respiratory-tract conditions, coughs, congestion, and infections. Used for treating bronchitis and tracheitis. Leaf and flower infusion used to reduce and thin mucus formation. Induces coughing up of phlegm (expectorant). Often combined with other expectorants: thyme (*Thymus vulgaris*) and coltsfoot (*Tussilago farfara*), for example. Native Americans made a necklace of the roots to be worn by teething babies. Decoction of leaves used for colds, and raw crushed leaf poultice over wounds and painful swellings. Mucilaginous leaves also rubbed over rashes. Said to be helpful reducing pain from stinging nettle. Dried leaves smoked to stop hiccups and to induce coughing (expectorant).

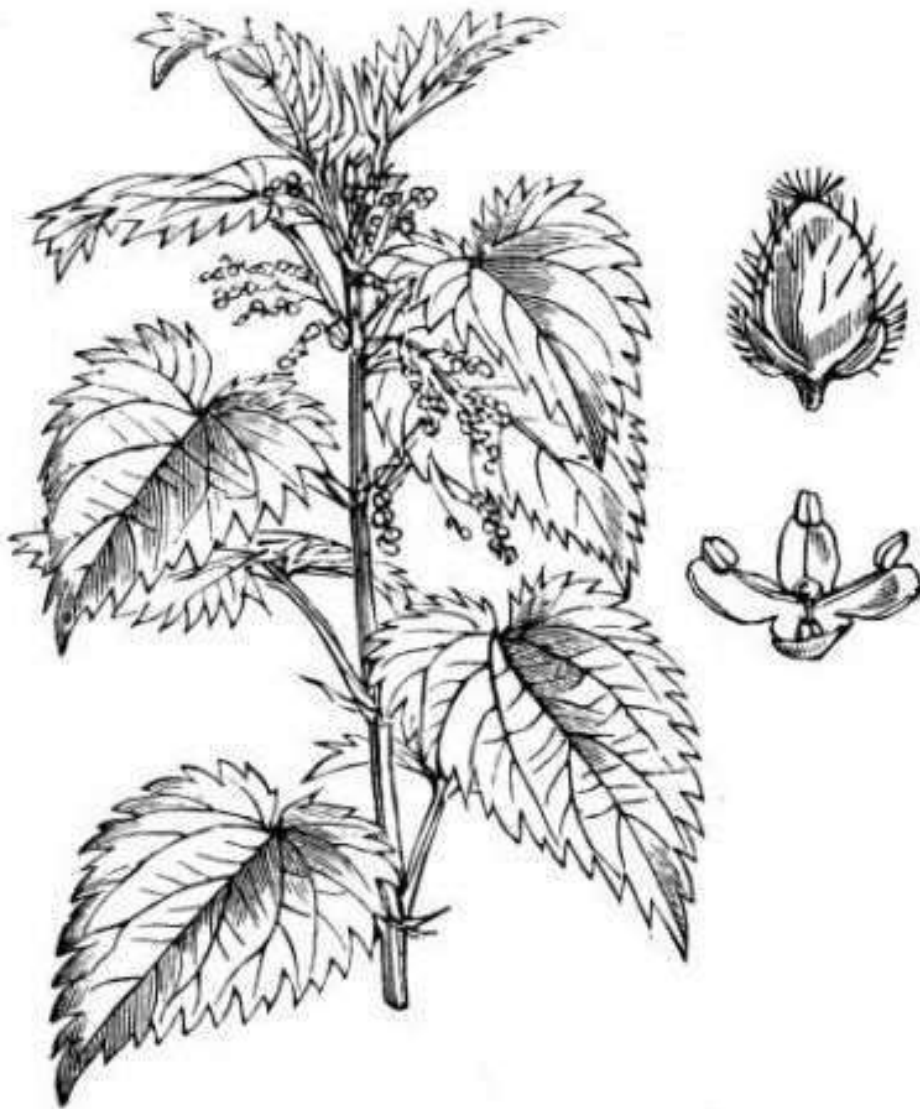
Modern uses: Commission E–approved for bronchitis and coughs. Flowers infused in olive oil are used in Europe for hemorrhoids and ear infections. Therapeutic teas are available over the counter.

Dose: Use as an antispasmodic. Pour a cup of boiling water over 1 tablespoon of dried, crushed or powdered leaf. Drink when cool.

Notes: Protect any mullein herbal preparation from heat and light. Add one or two of these plants to your yard: simply find a first year's growth, a basal rosette of fuzzy leaves; dig it out; and transplant. The next year the biennial will bloom.

Veterinarian/Wildlife: Appalachian spider bite treatment: For insect and spider bites, infuse whole fresh flowers in olive oil. Pack flowers into a small jar; cover with olive oil. Let infuse in refrigerator for at least 3 days. Apply warm oil over bite or sting every hour for 12 hours. Garlic and mullein are used as an ear oil. See your veterinarian for more detail.

Nettle



Urticaceae

(*Urtica dioica* L.)

Identification: Perennial plant, erect to 5' tall with square, grooved stem, studded with stinging hairs. Leaves dark green, rough, hairy, heart- to oval-shaped, toothed; numerous green flowers borne in leaf axils, bearing numerous green seeds. Both sexes may be on one plant, or plants may have separate sexes.

Habitat: Widespread, edges of fields, streamside, wetlands, marshy areas, fringe areas, wasteland, roadsides nationwide.

Medicinal Parts: The roots and leaves.

Solvent: Boiling water.

Effects: Diuretic, Astringent, Tonic, Pectoral.

Food: Young shoots in fall (new growth) and shoots in spring are picked and steamed or sautéed. Also, stir-fry. One of my favorite recipes is to cream nettle into soup. Older summer-hardened nettles may be simmered with other

herbs—rosemary, celery, thyme, onions, leeks, lovage—to make a vegetable bullion, or soup base. Discard the plant materials after simmering for twenty-five minutes. Use vegetable broth in cooking.

Traditional uses: Nettles, a mineral rich plant food, have been used for generations to treat allergies. The infusion of the aerial parts has expectorant qualities having been used for asthma and cough. Nettle tincture is used for flu, colds, pneumonia, and bronchitis. Dried plant is styptic when applied to wounds and naturopaths use the drug to

treat internal bleeding. According to Brill and Dean in their book,

Identifying and Harvesting Edible and Medicinal

Plants, drinking nettle tea and eating nettles may make your skin clearer and healthier and it may be therapeutic for

eczema. Eating nettles may improve color, texture, gloss, and health of hair.

Aerial parts may be infused as a tea and used for urinary tract infections, kidney and bladder stones, rheumatism. Root tincture used for irritable bladder and prostate complaints.

In traditional Russian medicine, nettle is used to treat hepatitis. Other North American plants used to treat hepatitis include lobelia, plantain, passion flower, Oregon grape, pennyroyal, dogwood, and mayapple.

In Spanish traditional medicine, nettle leaves are prepared in infusion as a diuretic, mineral replenisher, hemostat, and to purge toxins from the body (purgative). The root is believed to reduce the size of kidney stones. A decoction of the seeds is believed to prevent involuntary urination in children.

Stinging nettle is said to be helpful on arthritic joints as a counterirritant.

Mexican truck drivers use the plant to relieve sciatica. They also drink copious amounts of tequila. I recommend if you use the nettle arthritis remedy, have the tequila ready. Scarification is another way that Native

Americans treated arthritis. See the DVD Native American Medicine and Little Medicine available from the author.

Nettles have been used to thrash arthritic joints. Whipping the arthritic area causes pain and inflammation and temporary relief. Not recommended. However, when nettles come in contact with a painful area of the body, they actually do decrease the original pain, perhaps by reducing inflammatory chemicals and interfering with neural

pain signals.

Modern uses: Commission E–approved for treating benign prostatic hyperplasia (BPH). Nettle root and saw palmetto have been combined successfully to treat prostate enlargement symptoms (Blumenthal, et. al., 2000). Nettle roots in Russia are tinctured for hepatitis and gallbladder inflammation. In Germany, as in the US, nettle root extract is being researched for the treatment of prostate problems.

A randomized study of arthritis sufferers suggests that stinging nettle extract, when accompanied by a lowered dose of the anti-inflammatory drug diclofenac, improved or enhanced the efficacy of the prescription drug. In the test, half the patients took the full, 200 mg dose of diclofenac while the test group took 50 mg of diclofenac along with 50 g of stewed nettle leaf. The results showed that the reduced prescription drug and nettle combination was just as effective at lowering pain as the full dose of the drug. These results confirmed the 1996 study of Ramm and Hansen, showing a lower amount of prescription antiinflammatory was effectively enhanced by dried nettle-leaf capsules. Sodium formate, an analog of formic acid found in stinging nettle and ants, makes a metal-based cancer treatment called JS07 fifty times more effective than the JS07 alone (University of Warwick).

Notes: If you cannot obtain fresh nettle, then freeze-dried is your next best choice. Nettle grows readily in a garden and provides edible leaves for up to nine months. Harvest the new-growth leaves at the top of the plant and watch as the picked stem bifurcates and grows two new growth sprouts. In effect, you have doubled your crop. Try rubbing out the sting of nettle with mullein leaves or the juice of spotted touch-me-not (jewelweed, *Impatiens capensis*).

Veterinarian/Wildlife: Nettle juice mixed with nettle seeds is a good hair tonic for domestic animals.

Oak



Fagaceae (Quercus

spp.)

Identification: The best way to learn to identify oaks is to visit an arboretum. There the oaks will be labeled for identification. Armed with this visual proof, you will be more successful in the bush gathering nuts for the winter. Acorns vary in size and taste. Leaves are lobed, cut, pointed, or rounded, varying by species.

Habitat: Many species nationwide. Yards or wood lots, forested areas, roadsides. Food: Generally speaking, acorns from oaks that have rounded leaf lobes are less bitter than acorns from species of oaks with pointed leaf lobes. White oak (*Q. alba*), bur oak (*Q. macrocarpa*), swamp chestnut oak (*Q. michauxii*), and chestnut oak (*Q. prinus*) are good examples of sweet acorns from the eastern United States. The chinquapin oak or yellow chestnut oak (*Q. muehlenbergii*) also has bittersweet acorns. Out west look for Gambel's oak (*Q. gambelii*), blue oak (*Q. douglasii*), and Oregon white oak (*Q. garryana*). Black oak (*Q. velutina*) and red oak (*Q. rubra*) are extremely bitter and considered not edible by this author. Tannins in acorn meat embitter the taste, but tannins are water-soluble phenolic compounds that leach away in water. A quick fix in the kitchen is to puree acorn meat in a blender, using 2 cups of water for every cup of nut meat. Blend thoroughly. Then strain and press the water out of the nut meat through cheesecloth, a clean pair of pantyhose, or a clean white sock. I like acorn mash on baked potatoes, mixed into tomato sauces, and in all baking recipes. Also eat out of hand as a snack.

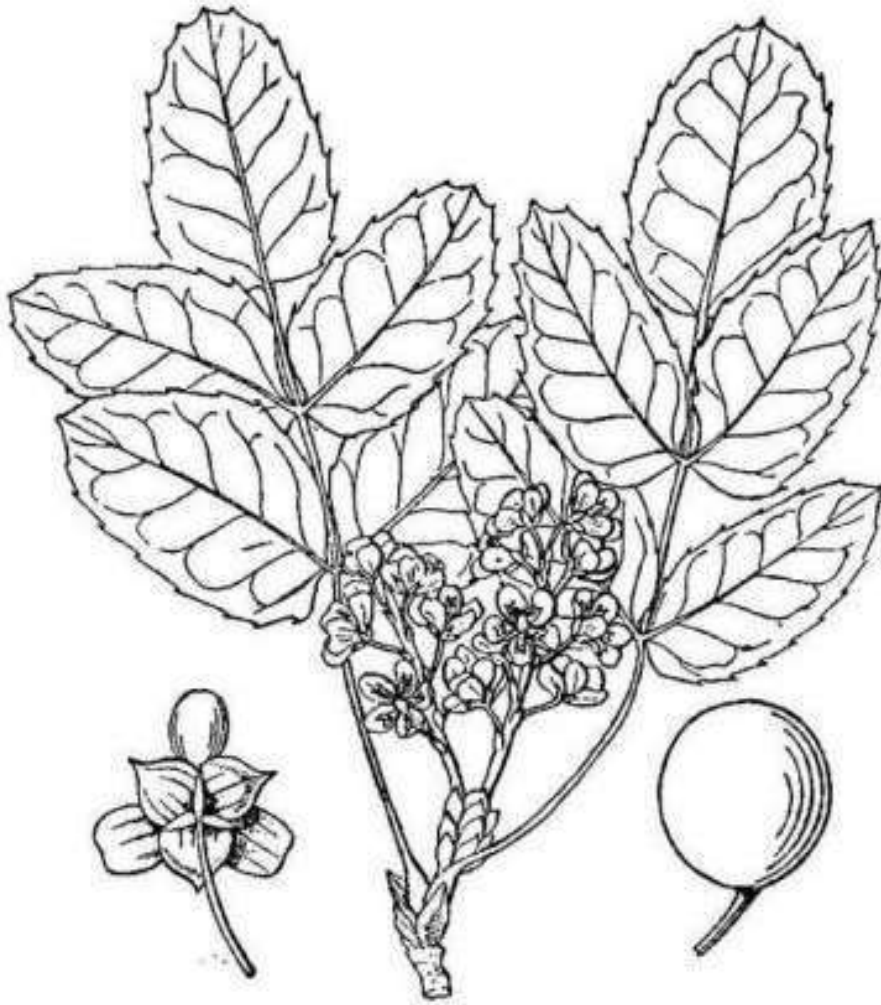
Traditional uses: Native Americans mashed and sun-dried the acorn meat before using it for food, as drying the meats makes them more palatable. White oak (*Q. alba*) has tannin-rich bark. Tannins are antiseptic and astringent. Native Americans and pioneers made a tea from the bark for mouth sores, burns, cuts, and scrapes. The bark extraction, considered a panacea, was believed to provide cancer protection. Dried and powdered bark was sprinkled over the navel of an infant to heal the wound caused by removing the umbilical cord. Red oak (*Q. rubra*) bark in decoction was used to treat diarrhea; the tannins once again account for the reported effectiveness of this remedy. The bark of pin oak (*Q. palustris*) was prepared in decoction for dysentery and for edema of joints. The inner bark was heated and infused with water by dropping a hot stone into a gourd or skin bag, and the resulting tea was taken for intestinal pain (analgesic). Chinquapin oak (*Q. muehlenbergii*) bark was decocted by people of the Delaware and Ontario Nations to stop nausea and vomiting (antiemetic). Most species of oak bark were boiled and the decoction taken internally for dysentery and diarrhea. And the bark and wood decoction of tannin-rich oaks was used externally to treat inflammations, sores, hemorrhoids, sore muscles, and tender joints.

Modern uses: Oak bark extract, typically from *Q. robur* or *Q. petraea*, is Commission E–approved for treating bronchitis, cough, diarrhea, mouth and throat sores, and inflammations of the skin. Chemicals from oak bark are being tested as a cancer therapy.

Dose: A decoction is made from 1 oz. of bark in 1 quart of water, boiled down to 1 pint, and taken in wineglass doses. Excellent as a gargle for sore or relaxed throat. For neck enlargements, fomentations are beneficial if applied often. Indian tribes are known to have allowed acorn meal to go moldy in a dark, damp place and then scrape the mold off for application to boils, sores and other inflammations.

Notes: All oak nut meats can be improved by an overnight soaking in fresh water. Native Americans would shell, crack, or smash the acorns, then place them in a skin bag and soak them in a stream for a day or two to remove the bitter tannins. Chopping the acorn meats thinly, then drying them, reportedly attenuates the bitter taste.

Oregon Grape



Berberidaceae

(*Mahonia aquifolium* [Pursh] Nutt.; *M. nervosa* [Pursh] Nutt.)

Identification: *M. aquifolium*: Evergreen shrub to 6' tall. Gray stem. Hollylike, shiny leaves; pinnate, compound, pointed edges. Flower small, bright yellow. Berries deep blue, waxy. Roots and root hairs, when peeled, are bright yellow inside due to the alkaloid berberine. *M. nervosa* is a smaller forest dweller with rosette of compound leaves

in a whorl up to 3' tall, berries on central spikes.

Habitat: *M. aquifolium*: Washington State east into Idaho and Montana. Along roadsides and forest edges. *M. nervosa*: Pacific Northwest. Along Mount Baker Highway in Washington en route to Mount Baker, in open forests and graveyards.

Food: The tart berries of *M. aquifolium* are eaten in late summer in

Northwest. Native Americans smashed the berries and dried them for later use. They may be boiled into jam, but be certain to add honey or sugar, because the juice is tart. Carrier Indians of the Northwest simmered the young leaves and ate them. The smaller creeping *M. nervosa* was prepared and eaten in the same way and is preferred, but it is not as abundant. Try berries mixed with other fruit to improve the taste. Berries may be pounded into paste, formed into cakes, and dried for winter food. Traditional uses: When eaten raw in small amounts, the fruit is slightly emetic. Tart berries of both species were considered a morning-after pick-me-up. Native Americans believed the berries were slightly emetic. A decoction of stems was used by Sanpoils as an antiemetic. These two species of bitter and astringent herbs were used to treat liver and gallbladder complaints. The bark infusion was used by Native Americans as an eyewash. According to traditional use, the decocted drug from the inner bark (berberine) stimulates the liver and gallbladder, cleansing them, releasing toxins, and increasing the flow of bile. The bark and root decoction reportedly was used externally for treating staphylococcus infections. According to Michael Moore (*Medicinal Plants of the Mountain West*), the drug stimulates thyroid function and is used to treat diarrhea and gastritis. According to Deni Brown (*Encyclopedia of Herbs and Their Uses*), *M. aquifolium* has been used to treat chronic hepatitis and dry-type eczema. A root decoction of *M. aquifolium* was used by the Blackfoot peoples to stem hemorrhaging. They also used roots in decoction for upset stomach and to treat other stomach problems.

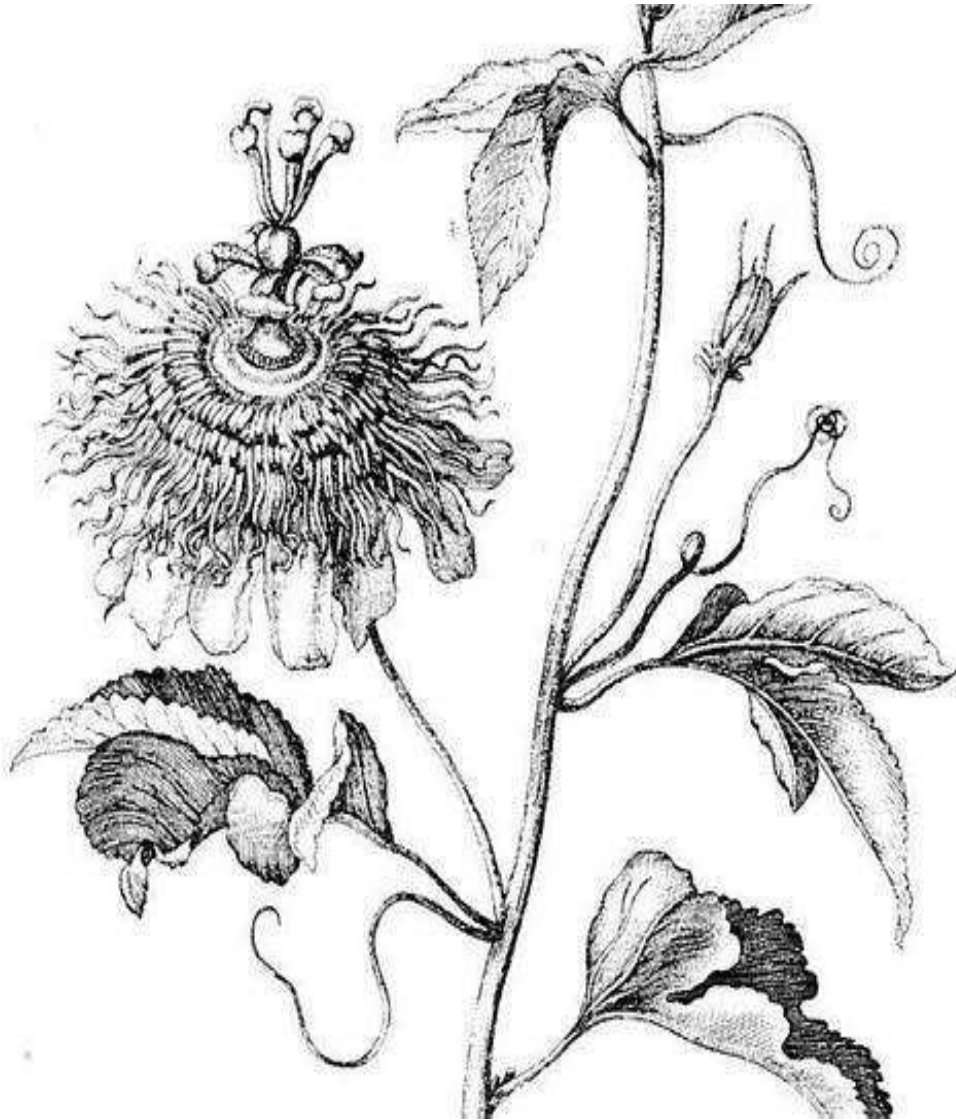
Modern uses: *M. aquifolium* extractions are available in commercial ointments to treat dry skin, unspecified rashes, and psoriasis. The bitter drug may prove an appetite stimulant, but little research has been done. Other unproven uses in homeopathic doses include the treatment of liver and gallbladder problems. Three human studies showed *Mahonia aquifolium* skin application (10 percent cream or ointment extract from leaves and root) as effective in

treating psoriasis. Each study had positive results. Participants rated the *M. aquifolium* extract as good as, or better than, standard Dovonex cream, an expensive prescription alternative. This is good news to psoriasis sufferers, and that includes me (Gulliver, 2005).

Warning: Do not use during pregnancy or while nursing. Notes: The shredded bark and roots of both species was simmered in water to make a bright yellow dye.

Veterinarian/Wildlife: Berries are eaten by birds. The Saanich people claim the berries to be an antidote to shellfish poisoning. They chewed M. aquifolium for protection after hunting when approached by a dying deer. Oregon grape is an ingredient in a training mix and nervous system formula for horses.

Passionflower



Passifloraceae (*Passiflora incarnata* L.)

Identification: There are numerous varieties, all somewhat similar. It is a perennial vine on a woody stem climbing to 35' or more. Bark is longitudinal and striated when mature. Leaves are alternate, with petioles, serrated with fine hair on both the top and bottom, but underside of leaf is hairier. Leaf blades have bumps called floral nectaries. Flowers are single, wheel shaped, petals like spokes, striking, to 5" in width.

Habitat: Climbing vine of open areas and the forest edge. Most species tropical or subtropical, but will grow in a temperate garden. With a worldwide distribution, numerous species are found across seven climactic zones. Often introduced. Found wild in the southeast United States.

Medicinal Parts: Plant and flower.

Solvent: Diluted alcohol.

Effects: Anodyne, Nerve sedative, Diuretic, Antispasmodic.

Food: The leaf and flower tea has mild sedative properties. Fresh fruit may be eaten raw or juiced or made into a beverage. Mexicans mix with cornmeal or flour and eat it as a gruel. Leaves eaten by Native Americans. Typically, leaves are parboiled and pan-fried in vegetable oil or animal fat.

Traditional uses: Fresh or dried aerial parts or whole dried herb used in infusion as mild sedative. Also used to treat nervousness and insomnia—a sleep aid. Antispasmodic effect of infusion considered a gastrointestinal aid. People used the infusion of crushed root for treating earache. They also pounded root, and applied the mass as a poultice on inflamed contusions, boils, and cuts. The root water of the plant was mixed with lye-treated corn and used to wean babies. The tisane was considered a blood purifier for many tribes. Pioneers used the whole plant with Epsom salts as a sedative bath. Root tea and aerial-parts tea used for treating hemorrhoids.

Modern uses: As above. In animal studies, infusion was reported as sedative, antispasmodic, and inhibited motility of organisms. Commission E—approved for treating nervousness and insomnia. Use as an antidepressive and for treating somatization disorder (colloquial: hysteria) is unproven.

Notes: The Doctrine of Signatures suggests that this sensual-looking plant is an aphrodisiac. Passiflora contains betacarboline harmala alkaloids, which are MAOI (monoamine oxidase inhibitors) with antidepressant properties. Typically the flower has only traces of the chemicals, but the leaves and the roots of some species have been used to

enhance the effects of mind-altering drugs.

Veterinarian/Wildlife: Extract is used to calm stressed cats, and has been used as a mild sedative for horses.

Peppermint





Lamiaceae (Mentha spp.: *M. piperita* L.)

Identification: There are many American members of the mint family. Common characteristics include: square, erect stem, leaves almost always aromatic when crushed, typically aggressive and spreading. Species vary in height from 8” to 30” tall. Root a spreading rhizome. Leaves plumply lance shaped (elongated) to ovate to roundish, typically serrated. Flowers in dense whorls culminating in a terminal spike of blossoms or in clusters in the axils of leaves. Flower colors vary by species: white, violet, blue. One common species is peppermint (*Mentha piperita*).

Habitat: Nationwide. *M. piperita* can usually be found around water, shorelines, stream banks, and dunes of the Great Lakes and in or around mountain passes, blowdowns, avalanche slides, and wet meadows.

Medicinal Parts: Leaves and stems.

Solvent: Water.

Effects: Aromatic, Stimulant, Stomachic, Carminative.

Food: Peppermint is used in teas, salads, and cold drinks; with sautéed vegetables; and as an integral part of the subcontinent and Middle Eastern flavor principles. Romans such as Pliny the Elder used mint to flavor wines and sauces. Mint is excellent in Mexican bean soups or in chilled soups of all kinds.

Traditional uses: Aristotle considered peppermint an aphrodisiac, and Alexander the Great thought that eating mint or drinking the tea caused listless, unaggressive behavior. Peppermint leaves and flowers are infused in water and taken as an uplifting tea. The extracted oil (as well as the tea) is antiseptic, carminative, warming, and relieves muscle spasms. An infusion increases perspiration and stimulates bile secretion. Menthol and menthone, peppermint’s inherent volatile oils, are antibacterial, antiseptic, antifungal, cooling, and anesthetic to the skin.

Modern uses: Leaf and flower extraction are Commission E–approved for treating dyspepsia, gallbladder, and liver problems. Peppermint oil is approved for colds, coughs, bronchitis, fevers, mouth and larynx inflammations, infection prevention, dyspepsia, and gallbladder and liver problems. Recent studies in Europe suggest it may be a treatment for irritable bowel syndrome. The tea and oil have an antispasmodic effect on the digestive system. Peppermint is also used to treat colic, cramps, and

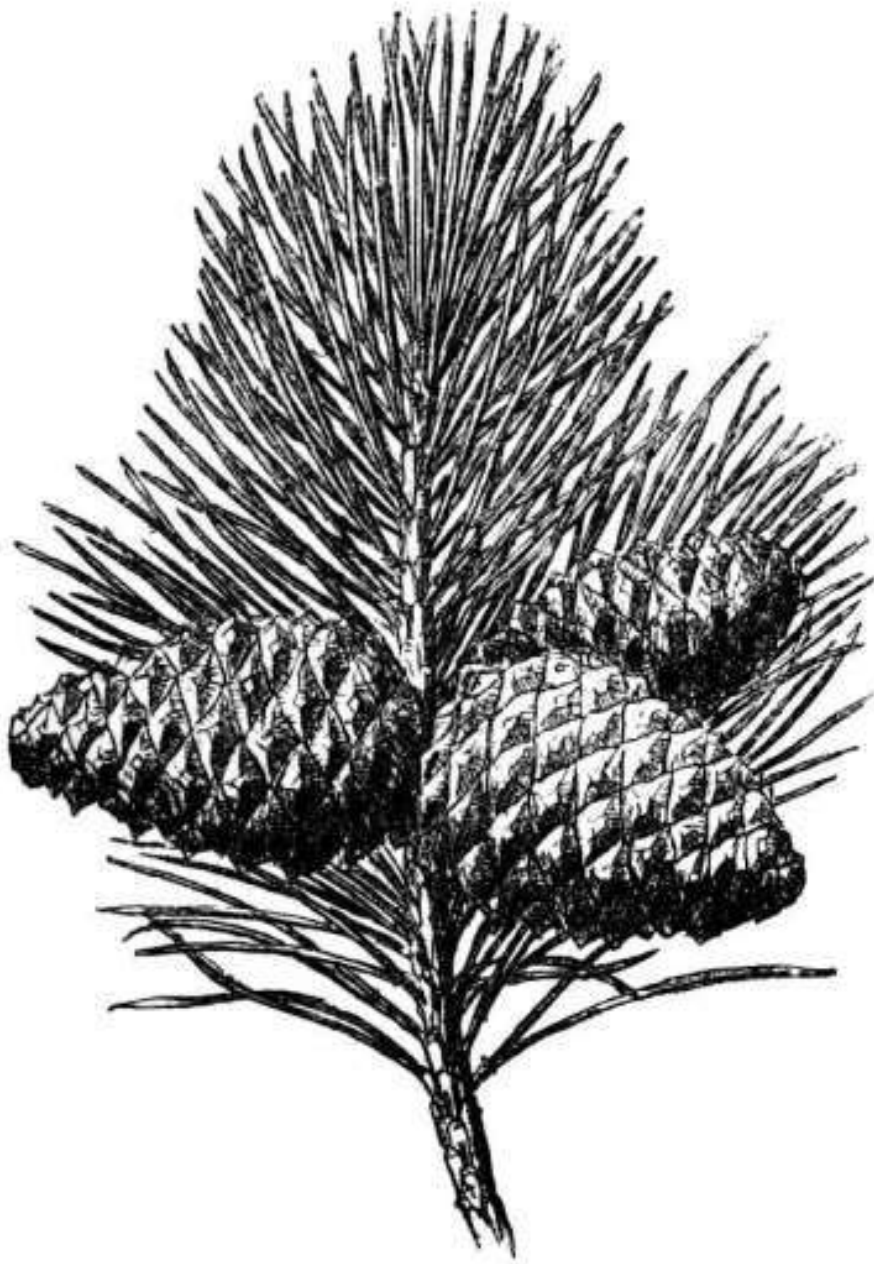
flatulence. It may help relieve diarrhea, spastic colon, and constipation. Headache due to digestive weakness may be relieved by taking peppermint, and trials using the extract to treat tension headaches look promising (the essential oil is diluted and rubbed on the temple to relieve headaches and tension). The diluted oil is used in aromatherapy for treating headache and as an inhalant for respiratory infections (i.e., rubbed on the chest). Enteric-coated capsules are used for irritable bowel syndrome and to relieve colon spasms during enema procedures. In vitro comparative research in 2014 found peppermint suppressed growth and induced cell death (anticancer effect) against human laryngeal carcinoma (Abirami and Nirvada, 2014). So drink your mint tea and good things may happen.

Warning: In too high a concentration, the mint oils are a skin irritant and may burn. Be careful. Peppermint is contraindicated for ulcers, gastritis, and acid reflux because it relaxes the esophageal sphincter, allowing stomach acid to escape into the esophagus (acid reflux).

Notes: Peppermint, spearmint, mountain mint, and other mints have edible flowers and leaves that may be used in salads and desserts. Try mint blossoms on sliced pears. Mint is a carminative herb used to dispel gas. For a dollar or so buy mint lozenges (Altoids) and use them to alleviate gallbladder pain and pain from a spastic colon. The mint lozenges may quell the discomfort from irritable bowel syndrome.

Gardeners beware: Grow mints in a buried steel container to prevent their unabated spread. **Veterinarian/Wildlife:** Historically mint was strewn around floors as a vermifuge to rid the home of insect and rodent pests.

Pine



Pinaceae

(*Pinus* spp.: *P. strobus* L.; *P. edulis* L.)

Identification: White pine (*Pinus strobus*) is an evergreen tree with medium to long needles. Needles in clumps of five, light green with single white stripe. Pinyon pine (*P. edulis*) is a stubbier plant isolated in dry alpine areas of the four-corner region north to Canada, especially abundant on the east side of

Flaming Gorge, both in Wyoming and Utah. Its cones harbor the delicious pine nut used to make pesto.

Habitat: White pine: eastern United States. Pinyon pine: dry plateaus from Mexico north to Canada. Scotch pine: planted as an ornamental in yards, fencerows, and fallow fields.

Medical Parts: Inner bark or sprigs.

Solvent: Boiling water.

Effects: Expectorant.

Food: White pine needles may be made into a tea. I take a handful of needles, crush them, and add them to a gallon jar of water containing mountain mint, lemon thyme, and lemon balm. Squeeze in juice of half a lemon and let the mixture infuse in the refrigerator for six hours. Uplifting! Seeds from pinecones may be eaten. Pinyon pine provides

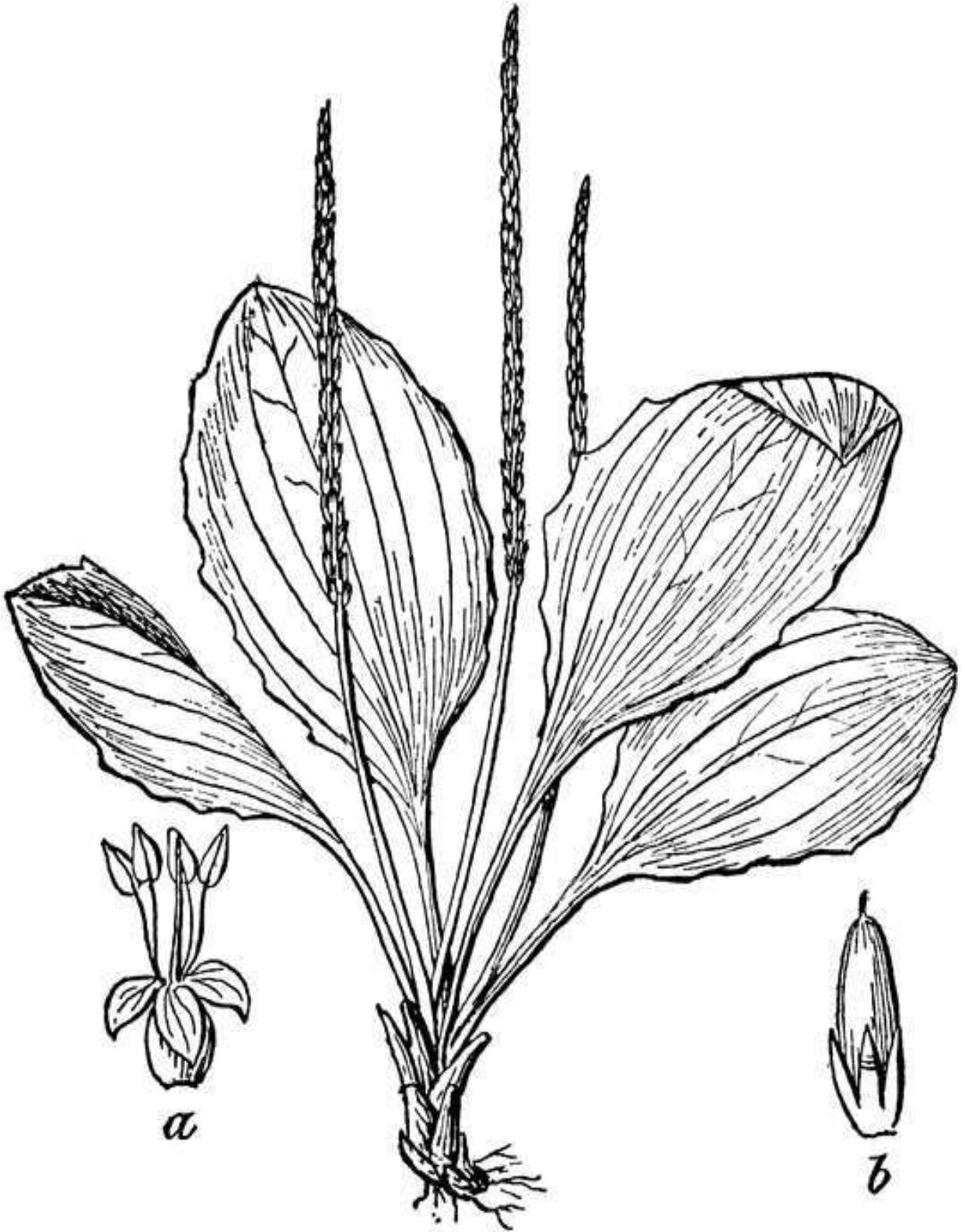
the most notable edible seeds used in pesto.

Traditional uses: Pine sap is styptic and wound sealing and was used by pioneers and First People to treat gunshot wounds, cuts, scrapes, and lacerations. There is historical evidence that the presence of antiscorbutic quantities in pine needles helped prevent scurvy, which supports the historical tradition of drinking pine needle tea.

Modern uses: Oil from the needles of Scotch pine shoots is Commission E–approved to prevent infection and to treat blood pressure problems; colds, coughs, and bronchitis; fevers; oral and pharyngeal inflammations; and neuralgias. Most pines and firs have vitamin C in their needles, especially end needles—a wilderness way to get the tree’s antiscorbutic effect.

Notes: I brew a tea from all of these pines, mixed with lemon balm, mint, fennel, and lime juice. It’s invigorating and anti-infective. This brew is made overnight by cold infusion. Stuff the leaves into a gallon jar, fill the jar with pure water, refrigerate for twelve hours, then drink. Pinyon pine nut ice cream, served in Guanajuato and Dolores Hidalgo, Mexico, is one of my favorite treats. Chop some pine nuts, mash them into vanilla ice cream, and let them infuse overnight. Terrific!

Plantain



Plantaginaceae (*Plantago lanceolata* L.; *P. major* L.; *P. maritima* L.)

Identification: Several varieties are found across the United States. The difference is in the leaves: *P. major*'s leaves are broad and ovate, and *P. lanceolata*'s leaves are narrow and lance-shaped. And *Plantago maritima* leaves are narrow, almost linear, and it is found along the West Coast, often submerged during high tide. The green flowers of all three species are borne on terminal spikes.

Habitat: These common plants are found on open ground, wasteland, edges of fields along roadsides, and in lawns. *Plantago maritima*, as mentioned, is found in the upper tidal zone especially abundant in the Pacific Northwest.

Medicinal Part: The whole plant. Solvent: Water. Effects: Alterative, Astringent, Diuretic, Antiseptic.

Food: In the spring, chop whole leaves into salads or sauté them with wild leeks, nettles, dandelions, and watercress. Tear the tough mid-leaf vein (rib) from summer and autumn leaves before adding them to salads.

Traditional uses: The flowering heads may be stripped off between thumb and forefinger into hot water to form a mucilaginous drink for treating constipation. A few folks believe this plant when crushed and applied is a good antidote or treatment of poison ivy. Native Americans chewed the leaves, mixing in saliva and defensin (a chemical in our mouths that is antibiotic and immune stimulating) to provide an antiseptic and immunestimulating poultice to be applied to wounds, scrapes, cuts, or bruises. Digestive enzymes in our mouths are also weakly antimicrobial, while the plantain is styptic, stopping blood flow. Simply chew the plantain leaf and fix it in place over the wound. Plantain lotions and ointments are used to treat hemorrhoids, skin fistulae, and ulcers. Tea is diuretic, decongestant, expectorant. May be helpful in diarrhea, dysentery, irritable bowel syndrome, laryngitis, and urinary tract bleeding. Acubin increases uric acid excretion by kidneys and may be helpful in treating gout.

Modern uses: Commission E reports that *P. lanceolata* extract from the fresh plant may fight colds (4 grams of herb to 1 cup boiling water), may alleviate symptoms of bronchitis and cough, and may reduce fever. The commission also approves the herb for treating inflammation of pharynx and mouth, and for skin inflammations. Also used in respiratory-tract infections and is considered antibacterial. The tea of the fresh leaves is used to treat

respiratory tract infections and is considered antibacterial (GRIN). Typical dose is 3–6 grams of the fresh whole herb (aerial

parts when in bloom) added to 1 cup of water just off the boil. Let it cool, strain away plant material, and then drink 3 or 4 times a day.

Notes: Humans have chewed the leaves and applied the masticated mass over wounds. Plantago seeds from India and Africa are dried and used as a bulking laxative. *Plantago ovata* is a constituent of Metamucil.

Veterinarian/Wildlife: *P. major* is a favored food of the eastern box turtle. Tough leaf veins can be stripped and in an emergency used as fishing line, or even used as suture material for saving a hunting dog bitten by a bear, for example. Plantain seed, known as psyllium, is used in training mixes and wound treatment formulas for horses.

Evening Primrose



Onagraceae

(*Oenothera biennis* L.)

Identification: This biennial grows to 3' or more with fleshy turniplike root. First-year plant is a non-flowering basal rosette of leaves; second-year is an erect, blooming plant, conspicuous in the autumn with its large seed-filled fruit capsules. Oblong lance-shaped leaves, pointed and finely dentate. Fragrant bugle-shaped yellow flowers, 1" long growing from the leaf axils.

Flowers open in evening. Fruit is linear-oblong, 4 sided, downy, about ½” to 1” in length, containing dark gray to black seeds with sharp edges.

Habitat: Found in gardens, along roadsides, on waste ground, fields, and prairies nationwide.

Food: The root is edible (biennial plant: first-year root best). New leaves of first or second year edible in salads, stirfry. The leaves are tough and need to be cooked. Seeds can be poured out of seed capsule (seed capsule looks like small dried okra pod). Immature seed capsules may be cooked like okra, but do not taste like okra. Traditional uses: Native Americans used warm root poultice to treat piles. Roots were chewed to increase strength and endurance. Whole plant bruised, soaked, and used as a poultice on bruises and sores.

Modern uses: The seed oil is used to treat essential fatty-acid deficiency and to lower cholesterol. Cholesterol-lowering effect was not effective in a 1986 study but did prove successful in a double-blind crossover study conducted in 1994 (Guivernau, Meza, Barja, et al.). Seed extract said to dilate coronary arteries and clear arterial obstruction. Used as a holistic treatment for intermittent claudication. Other uses include treatments of atopic eczema and psoriasis (not effective with this author). Oil may provide relief from premenstrual syndrome (PMS) symptoms, although one study disputed this claim. Also used as a treatment for recurrent breast cysts (Ooman, 1998). The essential fatty acids and amino acids in the seeds are reportedly good for treating mild depression. Evening primrose oil (EPO) has been used successfully with vitamin B6 therapy to treat breast pain (mastalgia). The oil is considered anticoagulant, demulcent, and a precursor of prostaglandin E (anti-inflammatory). EPO has not proven effective against multiple sclerosis (MS). Some practitioners suggest that flaxseed (omega-3 oils) and Vitamin D may better serve the MS patient as alpha-linolenic acid and Vitamin D are required for normal myelin composition.

One study showed that with women who had recurrent breast cysts, evening primrose oil treatment resulted in a slightly lower rate of recurrence as compared to placebo.

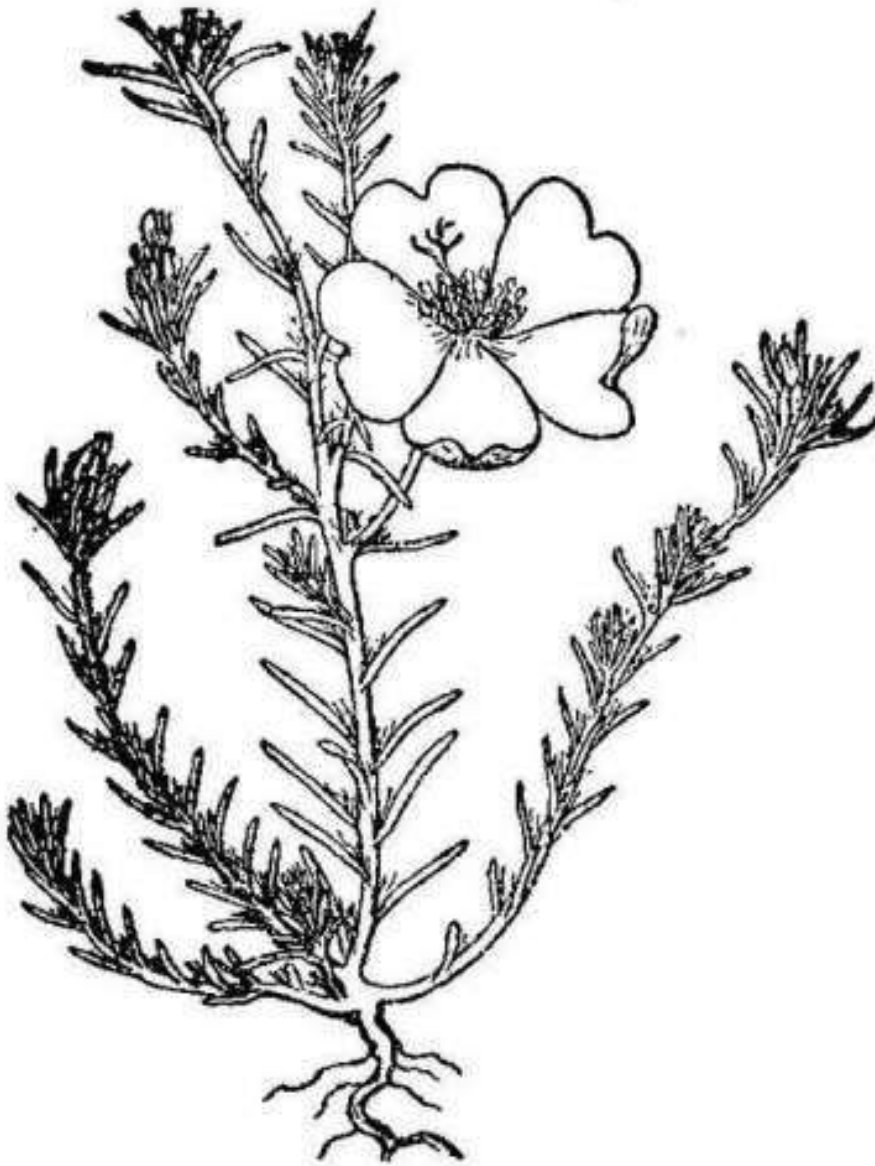
Another study suggests that EPO may reverse neurological damage in diabetic patients. Provided significantly increased serum essential fatty acids in insulin-dependent children. Also, decreased PGE2 levels. EPO therapy

may improve liver function in alcoholics and is said to decrease the use of nonsteroidal antiinflammatory drugs in treatment for rheumatoid arthritis. Vaginal suppositories of EPO soften the cervix in preparation for labor and delivery (Senner, 2003).

Warning: In large doses may cause headache, diarrhea, indigestion, and nausea. Avoid in cases of schizophrenia and epileptogenic drugs: phenothiazines. No long-term studies during pregnancy and lactation. **Notes:** Evening primrose oil is high in GLA, a naturally occurring nutrient also found in breast milk. This widely used nutritional supplement has been marketed for over thirty years.

Veterinarian/Wildlife: Seeds are fine additions to bird feeders; finches, sparrows, and numerous other birds will be attracted to the seed-laden capsules of the plants. Omega 6 essential fatty acids from evening primrose are a constituent in Healthy Coat Skin & Coat Tabs from Doctors Foster and Smith.

Purslane



Portulacaceae

(*Portulaca oleracea* L.)

Identification: Spreading, fleshy, succulent annual that sprawls close to the ground. Stems many branched, reddish. Leaves 1" long and thick, fleshy, smooth and shiny, ovate or teardrop shaped (spatula shaped). Small, inconspicuous, yellowish flower in leaf rosettes. Blooms June through November.

Habitat: Found nationwide, in gardens and waste ground.

Food: Purslane is a common garden plant, a volunteer alien creeper. It may be eaten right off the ground, put in salads, or chopped and added to soup. The payoff is omega-3 essential fatty acids. Native Americans ate the leaves as a raw or cooked vegetable. It was also boiled in soups and with meats. Try it chopped in salads, in salad dressing, or

even in turkey stuffing. Mexicans eat purslane raw with meat and green chiles or cooked with onions, carrots, beans, and chiles. Purslane can be dried and reconstituted as a winter food.

Traditional uses: Used as a poultice and a skin lotion. The whole plant in decoction was used to treat worms. Juice of the whole plant considered a tonic and was also used to treat earaches. Purslane was an antidote to unspecified herbal toxins. Infusion of leaf stems was used to stem diarrhea. Mashed plant was applied as poultice over burns and bruises. Decoction of the whole plant was considered an antiseptic wash. Purslane was eaten to alleviate stomachache.

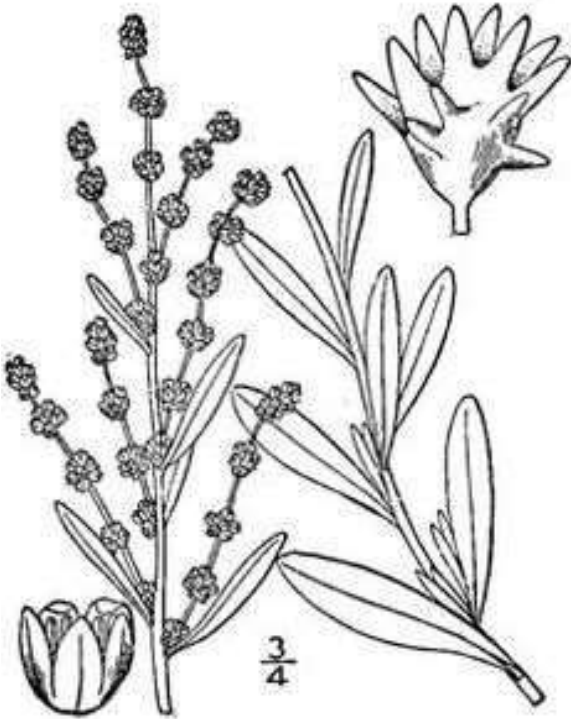
Modern uses: Purslane's essential fatty acids may help prevent inflammatory conditions such as heart disease, diabetes, and arthritis. Preparation of the extract is found in a few commercially available skin lotions. Ongoing clinical trial: Patients are enrolled in a clinical trial using purslane extract to treat oral lichen planus, a chronic

inflammatory disease that rarely undergoes spontaneous remission. Patients with OLP have a significant increased risk of oral squamous cell (Agha-Hosseini, 2010).

Notes: Purslane is often present in commercial bags of garden manure; spread it on your garden and by midsummer, purslane. I add the succulent leaves to salads and encourage this plant to grow in my garden. It is a natural and tasty way to get omega-3 fatty acids into my diet. If you won't eat it, add it to your mulch pile. The worms will prosper!

Veterinarian/Wildlife: In Mexico this is an important fodder for wildlife and domestic animals, especially freerange chickens, providing essential fatty acids.

Sageshrub



Asteraceae (*Artemisia tridentata* Nutt.)

Identification: Gray, fragrant shrub to 7'. Leaves are wedge shaped, lobed (three teeth), broad at tip, tapering to the base. Yellow and brownish flowers form spreading, long, narrow clusters. Bloom in July to October. Seed is hairy achene. Also referred to as sagebrush.

Habitat: Definitive shrub in dry areas of Wyoming, Washington, Montana, Texas, New Mexico, California, Idaho, Oregon, Colorado, and elsewhere in the West.

Food: Seeds, raw or dried, are ground into flour and eaten as a survival food. Seeds have been added to liqueurs for fragrance and flavor.

Traditional uses: This powerful warrior plant is used for smudging and sweeping to rid the victim of bad airs and evil spirits. Leaves are used as a tea to treat infections or ease childbirth or as a wash for sore eyes. Leaves are soaked in water and applied as a poultice over wounds. The tea is used to

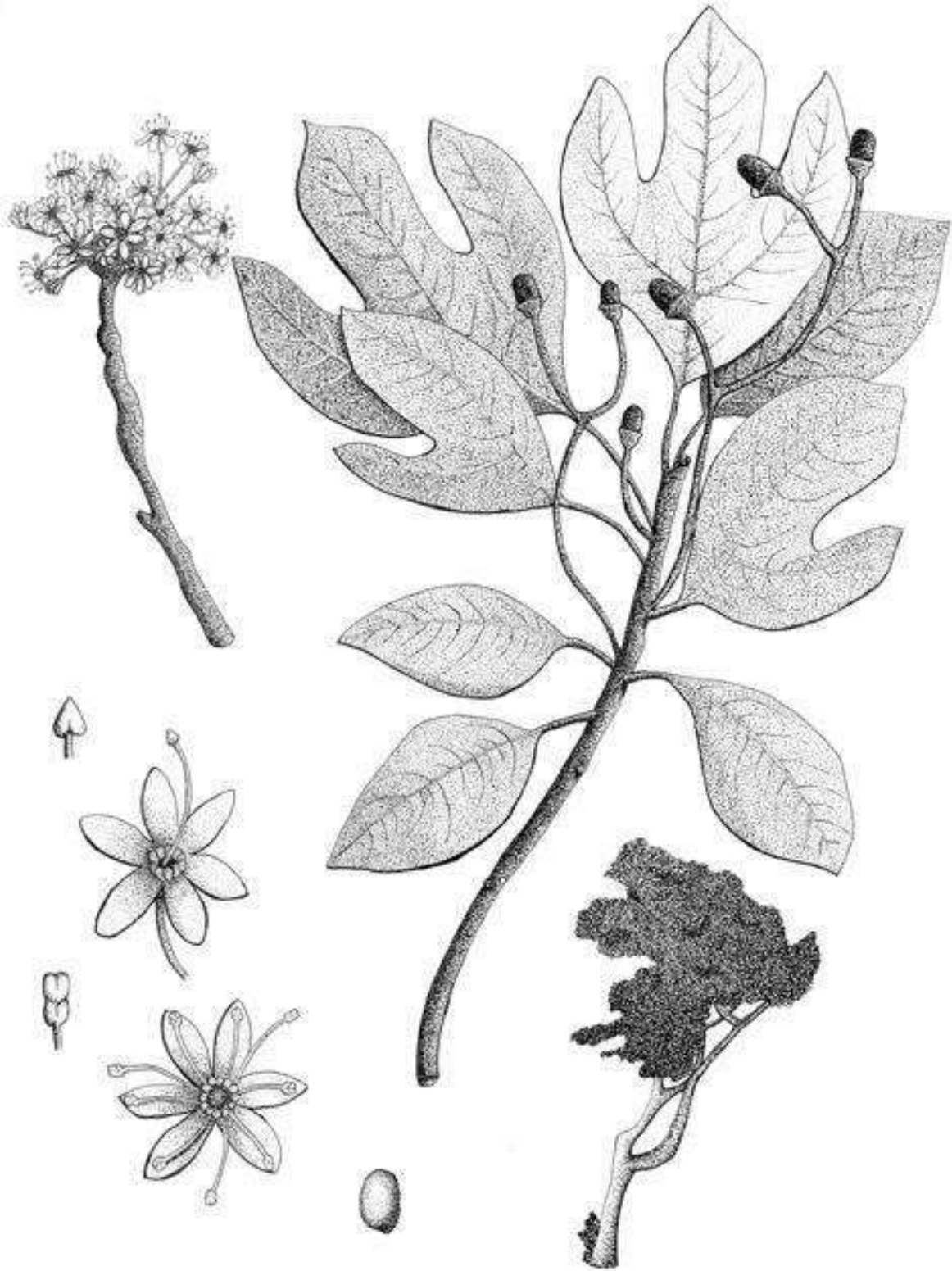
treat stomachache. Tree limbs are used as switches in sweat baths. The infusion was used to treat sore throats, coughs, colds, and bronchitis. A decoction or infusion was used as a wash for sores, cuts, and pimples. The aromatic decoction of steaming herb was inhaled for respiratory ailments and headaches. The decoction was said to be internally anti-diarrheal and externally antirheumatic. This panacea drug was also drunk to relieve constipation.

Modern uses: Still very popular and important in Native American religious rituals, including smudging, sweeping, sweat lodge, and as a disinfectant. For details see the DVD Native American Medicine. Gram-positive bacteria are sensitive to the oil of *A. tridentata*.

Notes: Add this herb to your hot bath, hot tub, or sweat lodge for a fragrant, disinfecting, and relaxing cleanse. Often sagebrush is the only source of firewood in the desert.

Veterinarian/Wildlife: Native Americans rubbed the herb over their bodies to hide the human scent when hunting. Considered a moth and flea repellent, the decoction of the herb was applied to the wounds of domestic animals.

Sassafras



Lauraceae (*Sassafras albidum* [Nutt.] Nees)

Identification: A small to medium tree to 50'. Leaves mitten-shaped and

irregular. Twigs and root aromatic, odor somewhat like root beer. Flowers are yellow green. Branches and twigs break easily.

Habitat: Eastern forests and Midwestern and prairie states. Located along edges of woods, in drier, well-drained areas as a first-growth companion with oak and hickory in eastern forests.

Food: Spring leaves are dried and used as filé in gumbo and other Cajun dishes. Simply crush the dried leaves to powder and use as a spice. Spread the leaf powder on pasta, soup, cheese, and other savory dishes. For root tea, peel the root, discard the peel, and boil the pith.

Traditional uses: Extracts were used to make perfume and root beer. The root oil was used as an antiseptic until 1960, when the USDA declared it unsafe because of the content of safrole, a carcinogen. The root decoction was used in traditional healing as a drinkable tonic and blood purifier to relieve acne, syphilis, gonorrhea, arthritis, colic, menstrual pain, and upset stomach. Bark tea was used to cause sweating.

Modern uses: Sassafras has no proven effect as a medicine, and because of the toxic effects of safrole, the root tea should be taken judiciously. Small amounts of the dried leaves of spring are used as a spice. A twig chew is refreshing but overuse is not recommended. Recent evidence shows safrole, a component in sassafras oil, is added as an adulterant to the drug Ecstasy in Cambodia.

Warning: Sassafras oils, including safrole, may be carcinogenic.

Notes: When camping, you can use the twigs as a toothbrush (chew stick). Chew the end of the twig until it is bristly, then “worry” the bristles between teeth and gums. Slippery elm twigs, rich in antioxidants, also make fine chewing sticks. The flavor is refreshing and the sap is a mild sialagogue (promoting the secretion of saliva). Dried

leaves make a fine tea.

Saint John’s Wort



Hyperacaceae (*Hypericum perforatum* L.)

Identification: Stiff, almost woody stem, reddish and erect; may grow to 4' in height. Leaves ovate, attached at the base, and covered by glands. Hold 1.5" leaves toward the sun and you will see the glands; they appear as small perforations in the leaf. Stems bear yellow flowers with five sepals in terminal cymes (clusters). Sepals are marked with numerous glands. Blossoms have numerous stamens fused into three bundles. Cylindrical

seeds are 1 to 3 mm long, black or brown, covered with small warty markings.

Habitat: Nationwide. Roadsides, waste ground, fields, prairies, stream banks, riverbanks. There are numerous garden varieties.

Traditional uses: The whole-plant decoction was used to induce abortions by promoting menstruation. Parts used included the fresh and dried flowers, buds, and leaves. Topical applications rubbed on sores may have antiviral,

antibacterial, and wound-healing activity. It was considered anti-inflammatory, antibacterial, antiviral, antidiarrheal, and astringent.

Traditionally used for 2,000 years, initially in Greece to drive out evil spirits. Flower infusion or flower tincture was said to calm nerves, relieve insomnia, and boost mood by dispelling lethargy, like a

nervine. Internally, tea was used as a PMS treatment. Tea, standardized capsule, and tincture were used to treat sciatica, anxiety, shingles, and fibrositis. Chewed root was considered a snakebite remedy. Crushed leaves and flowers were stuffed in nose to stem nosebleed.

Modern uses: Several studies in Europe show the benefit of this herb to treat mild depression. A standardized extract of 0.3 percent hypericin, 300 milligrams three times a day, was found comparable in antidepressant effect to a drug standard of imipramine. A recent study suggests a 5 percent hyperforin extract of the plant showed a slight increase

in cognitive function. Other trials suggest that the drug may combat fatigue, relieve anxiety, improve sleep, help with weight loss, and attenuate menopausal symptoms. One study showed it relieved some forms of atopic dermatitis but was no more effective than placebo for treating major depression. It may work better than fluoxetine in treating depression (M. Fava et al., 1995). A recent NIH/Duke University Medical Center study showed no difference between placebo and Saint-John'swort for treating moderate and/or severe depression (NIH/Duke University, 2012).

An external infusion of flowers and leaves is used as a cooling, astringent, wound-healing infection fighter. It is antiviral and anti-inflammatory and is said to promote healing when used externally as a poultice or wash for infections, burns, bruises, sprains, tendonitis, sprains, neuralgia, or cramps.

In vitro studies show a widespread antimicrobial activity against influenza, herpes simplex I and II, retrovirus, polio virus, sindbis virus, murine cytomegalovirus, hepatitis C, and gram negative and gram positive bacteria. It appears that exposure to ultraviolet light increases its antimicrobial activity.

Saint-John's-wort is available over the counter as a dietary supplement. Check with your health practitioner for appropriate use and dosage.

Warning: Not to be used to treat severe depression or bipolar depression. Extracts when used in German trials induced side effects in 2.4 percent of the test group. Side effects included gastrointestinal irritation, restlessness, and mild allergic reactions. It appears to be synergistic with serotonin reuptake inhibitors, thereby increasing serotonin levels. Use of the supplement may lower activity of simultaneously administered drugs, including nonsedating antihistamines, oral contraceptives, certain antiretrovirals, antiepileptics, calcium channel blockers, cyclosporine, some chemotherapeutics, antibiotics, and select antifungals. Recent evidence suggests the chronic long-term use (abuse) of Saint-John's-wort is undesirable and may have negative health consequences. Purchase prepared products and only after consultation with your health-care professional.

Valerian



Valerianaceae

(*Valeriana sitchensis* Bong.; *V. officinalis* L.)

Identification: Perennial to 24", sometimes taller. Leaves opposite, staggered up the stem, often with several basal leaves. Terminal cluster of white- to cream-colored odiferous flowers; petals are feathery. Blooms April to July.

Habitat: Montane plant, typically found on north-facing slopes. Plentiful in alpine meadows and along trails in the Olympics, Cascades, North Cascades, Mount Rainier, and Mount Baker, especially along Heliotrope Trail toward the climbers' route.

Medicinal Part: The root.

Solvent: Water.

Effects: Antispasmodic, Calmative, Stimulating Tonic, Nervine.

Traditional uses: Stress-reducing, tension-relieving mild sedative for insomniacs. *V. sitchensis* roots were decocted in water to treat pain, colds, and diarrhea. A poultice of the root was used to treat cuts, wounds, bruises, and inflammation.

Modern uses: A few people still use *V. sitchensis* in the traditional way. Aqueous extract of *V. officinalis* root in a doubleblind study had significant relaxing effect on poor or irregular sleepers, smokers. Sometimes combined with hops (*Humulus lupulus*) and skullcap (*Scutellaria lateriflora*). Valerian is used by herbalists today as a nerve tonic. Is best combined with Skull cap (*Scutellaria*), Blue vervain (*Verbena hastata*), and Mistletoe (*Viscum album*), Gentian (*Gentiana lutea*) and Peppermint (*Mentha piperita*) increase the promptness of its action, which is more effective than when combined with bromide. The effect of valerian on gamma amino butyric acid (GABA) may reduce blood pressure and help mild depression. This chemical is also found in evening primrose seeds and several varieties of tomatoes.

Watercress



Brassicaceae

(*Nasturtium officinale* L.)

Identification: Water-loving plant that grows in floating mats that root beneath the water and rise as much as 14" above. Grooved stem is tough, fibrous when mature. Leaves alternate, ovate, with paired and lobed leaflets. Each leaflet broader toward the base and about $\frac{3}{4}$ " wide, but variable in width, with terminal lobe. White flower, $\frac{1}{4}$ "

wide, with four petals. Blooms in May and sporadically through summer and may be available year-round if warmer weather persists.

Habitat: Nationwide. Temperate areas; in or near seeps and springs, along the margins of slow-moving, muckbottomed streams and creeks.

Medicinal Parts: Leaves, root.

Solvent: Water.

Effects: Tonic, Stimulant, Blood purifying.

Food: Watercress is from the mustard family, and its taste is spicy and pungent. Harvest watercress from a clean water source, then cook it. That's right—trust only your backyard if you plan to eat this food raw. You may pull watercress out by its roots and replant it in your garden. Keep it wet and it will reward you with peppery leaves. It is one of the main ingredients in V8 vegetable juice. Watercress is great in Italian dishes: Try it mixed half and half with spinach in spinach lasagna.

Traditional uses: The pharmaceutical record all the way back to Hippocrates describes watercress as a heart tonic, stimulating expectorant, and digestive. It is good for coughs, colds, and bronchitis and it relieves gas. As a diuretic it releases fluid retention and cleanses the kidneys and bladder. Mexicans revere this plant as a spring tonic. It is dampened and then grilled over charcoal.

Modern uses: Watercress is a good source of vitamins, minerals, and isothiocyanate. Watercress in 8 ounces of V8 cocktail juice provides two servings of vegetables. The latter may provide protection from cancer and is Commission E–approved to treat coughs and bronchitis.

Notes: Watercress, often found growing wild in questionable water sources, should be relocated to your garden. Keep it well watered and it will cleanse itself.

Veterinarian/Wildlife: Mats of watercress are habitats for snails, insect larvae, and frogs. These creatures attract fish. Should you find a mat on your favorite trout stream, approach cautiously and expect to be surprised.

White Poplar



Salicaceae

(*Populus* spp.: *P. balsamifera* L.; *P. tremuloides* Michx.; *P. deltoides* Bartr. ex Marsh)

Identification: Many poplars have ovate leaves on long petioles that provide a quaking effect when the wind blows. Flowers are drooping catkins. Cottonwood (*P. deltoides*) when mature has thick, furrowed bark. Aspen (*P. tremuloides*) is distinctive with its greenish-white bark and quaking leaves. Balsam poplar (*P. balsamifera*) has broad heart-shaped leaves, 6" to 10", edged with fine teeth; slightly flattened to rounded leaf stalks. New-growth end buds of balsams are sticky (resinous) and aromatic. The young balsam poplar's bark is gray green and smooth; the mature tree has dark, grooved bark.

Habitat: Wide distribution in United States. Requires ample water. Balsam poplar is found in the northern tier of states and throughout southern and central Canada. Cottonwoods reside typically in low, wet areas. Aspens are found in stands on mountain slopes, in mountain meadows, and along wild rivers.

Medicinal Parts: Leaves, bark, buds.

Solvent: Boiling water (soak buds in alcohol, then boiling water will expel their properties). **Effects:** Tonic, Diuretic, Stimulant, Febrifuge.

Food: Balsam poplar cambium (inner bark) is eaten raw. The cambium was boiled, dried, pounded to flour, and mixed with corn flour (masa) and/or

wheat flour to make bread. Shoots, leaf buds, and catkins taste best when simmered in water. The vitamin C content is high.

Traditional uses: Native Americans considered balsam poplar a panacea: The inner bark decoction was used as a tonic, a treatment for colds, and a system cleanser after acute infections. The bark maceration and decoction was used as a wash for rheumatism. Pioneers gathered the reddish resin covering new-growth leaf buds and dissolved

and thinned the resin in an alcohol solvent. The resulting salve was applied to seal and heal wounds and relieve inflammations.

Modern uses: Bark, leaves, and leaf buds are used in modern therapies. Leaf bud extract is Commission E–approved to treat hemorrhoids, wounds, and burns. The leaf-bud extract is healing, antibacterial, and antiphlogistic (relieves inflammation). Salicin from the bark and leaves is analgesic (it's considered a precursor of aspirin, the synthetic of which was modeled after the natural drug). The bark and leaves are considered antispasmodic and are used to treat

arthritis, rheumatism, and pain and urinary complaints due to prostate hypertrophy. The bitter tonic effect and alterative effect may make it helpful in treating anorexia.

Warning: Do not use poplar if you are allergic to aspirin or other salicylates. Notes: Poplar is not a particularly good firewood. Although poplar tree sap may be tapped, its sugar content is low, and too much boiling is required to sweeten the brew.

Veterinarian/Wildlife: Young trees, leaf buds, and shoots are browsed on by deer, moose, and rodents. Dead and dying poplars are a favorite place to find oyster mushrooms.

Willow



Salicaceae

(*Salix* spp.: *S. alba* L.; *S. nigra* Marsh)

Identification: Tree or shrub from 10' to over 100' with lanceolate fine-toothed leaves; yellow male flowers and green female flowers in the form of densely blossomed catkins. White willow (*S. alba*), sometimes called weeping

willow, has drooping branches. Black willow (*S. nigra*) is erect, large with shedding branches. Both prefer wet ground and are considered dirty trees in that they constantly shed branches, flowers, and leaves.

Habitat: Nationwide north to the Arctic. Marshy areas, mountain streams, thickets, lakeshores, along streams and rivers.

Medicinal Part: The bark.

Solvent: Boiling water.

Effects: Aphrodisiac, Tonic, Astringent, Detergent, Anti- periodic.

Traditional uses: Native Americans used the bark of twigs and new growth in decoction to treat tendonitis, arthritis, headaches, and bursitis. An infusion of the stem and leaves releases salicin, the natural chemical model for synthetic

aspirin. Aspirin may help prevent acute infections, cancer, strokes, and heart attacks. It may help boost immunity, but it does have numerous side effects and may aggravate ulcers and cause intestinal bleeding.

Modern uses: The extraction, although infrequently used from the tree, is Commission E–approved for treating pain and rheumatism. Not to be used by people allergic to salicylates.

Warning: Much double-blind, placebo-controlled, double-crossover research has been done on aspirin but not on salicin from willow extraction. Keep in mind that the infusion or decoction of willow contains much more than salicin. Recent evidence shows that willow can concentrate cadmium, a toxic metal, in its tissue. All species of willow are known to concentrate this metal when it is available in the soil. I prefer using aspirin for its therapeutic effects.

Notes: Do not garden under or too near a willow. Willow rootlets travel near the surface and suck water and nutrients from the soil. This can distress nearby garden plants. When a willow dies, be aware that the widespread root system has drained the soil of nutrients. Rebuild the soil before you replant the area.

Wormwood



Asteraceae

(*Artemisia campestris* L. subsp. *caudata* [Michx.] H.M. Hall & Clem.)

Identification: *Artemisia* species comprise numerous plants found worldwide. *A. campestris* is not aromatic, unlike many other artemisias. It is a biennial, a second-year flowering plant or a shortlived perennial. First-year leaves are a basal rosette, each leaf up to 4" long and 3" wide. Leaves are deeply divided with narrow, linear lobes; color is grayish blue. Upper mature (second-year) leaves have a green undersurface and whitish-green top. On the mature plant, leaves get smaller and more deeply cut or linear toward the top of the plant. Leaves are hairy at first and become smooth as they mature. Stems are branched, light green to red in color. Young stem ends are matte

with fine hairs. The cobweblike hairs disappear as the stem grows. Also known as dune wormwood or field sagewort.

Habitat: In Michigan, frequently found in Great Lakes dunes area. Widely dispersed, however, from coast to coast and south to Texas and north into Canada. Away from dunes, search on dry roadsides, sides of hills, and other dry, sandy areas.

Medicinal Parts: The tops and leaves.

Solvents: Diluted alcohol, water (partially).

Effects: Tonic, Stomachic, Stimulant, Febrifuge, Anthelmintic, Narcotic.

Food: Not edible. The leaves of *Artemisia* species are often made into bitter teas to treat indigestion. Absinthe from other *Artemisia* species is used to flavor vermouth and other spirits, to include the cordial absinthe.

Traditional uses: Tewa nation people chewed and swallowed juice to relieve gas and upset stomach. Leaf infusion also used to treat fever and chills (see Moerman, p. 93). Numerous people and holistic practitioners have used the plant as medicine for thousands of years, particularly popular in Europe and China.

Modern uses: Thujone and artemisinin are anthelmintic, that is, they kill intestinal worms (including the malaria *falciparum*) and other parasites. In Europe wormwood (*Artemisia*) is used as a stomach bitters and digestive (an after-dinner drink, such as vermouth or absinthe, relieves indigestion). Artemisinin, a synthetic derivative from

sweet wormwood (*Artemisia annua*) is used to control malaria and other parasites. Tu Youyou, who discovered this use, was awarded the Nobel Prize in 2015. A recent clinical trial showed artemisinin 97 percent effective against noncomplicated cases of malaria (see ncbi.nlm.nih.gov/pmc/articles/PMC1887535).

Warning: Thujone is a GABA antagonist—in large amounts it blocks gamma amino butyric acid, which can lead to seizures and even death. *Artemisia* chemistry is toxic in large enough dose, and the amount of *Artemisia* extract used in alcoholic drinks is government controlled.

Veterinarian/Wildlife: Wormwood extracts are used to treat worm infestations in domestic animals. There may be benefits for using *Artemisia* as a companion plant among vegetable and flowers. It is an attractive and unusual houseplant and garden plant.

Yarrow

Asteraceae (*Achillea millefolium* L.)

Identification: Spreading perennial with soft feather-like leaves to 3' to 4' in height. Fragrant. White flowers in flat clusters, flowers have five petal-like rays.

Habitat: Broadly distributed along roadsides, fields, yards, gardens, mountain slopes, streams, edges of woods nationwide—especially prevalent in montane areas.

Medicinal Part: The herb. Solvents: Water, alcohol. Effects: Astringent, Alterative, Diuretic, Tonic.

Traditional uses: Traditionally the tea made from the aerial parts (leaves and flowers) is said to increase perspiration and reduce inflammation; used both externally and internally. In China, the tea is taken to protect against thrombosis after stroke or heart attack and is used over wounds and for hemorrhoids, inflamed eyes, nosebleeds, and ulcers. Can be combined with elderberry flowers and/or berries. Native American uses: Yarrow is ranked as one of the most important herbs used by Native Americans. Whole plant (aerial parts) infused and used to treat acute infections: colds, fever, flu, and as a diuretic. Whole plant infusion also used to control coughing. Wash (infusion) of whole plant for bites, stings, snakebites. Root decoction used as a wash for pimples. Leaves infused and consumed as tea for inducing sleep. Leaf infusion a poison ivy treatment. Infusion of leaves anti-diarrhea. Infusion of leaves used to reduce fever (febrifuge). Leaves in infusion used as an astringent (styptic) to treat internal and external bleeding (to treat piles) and to treat conditions causing bloody urine (kidney and bladder infections?). Leaves dried, crushed, and snorted as snuff for headaches; also placed in nose to stop bleeding. Also, fresh or dry leaves used as a poultice over wounds. Leaves crushed and used as a fomentation or poultice over

breast (nipple) abscesses. Leaf decoction as a hair rinse. Bella Coola chewed leaves and applied them as a poultice to treat burns and boils. Leaves and flowers in decoction used for headaches or for chest pains. Poultice of flowers (masticated) applied to reduce edema. And leaves mixed with animal grease used as a poultice on chest and back to treat bronchitis. Juice of aerial parts or decoction of aerial parts considered a general tonic. Leaf decoction used as an inhalant for headaches.

Modern uses: Commission E–approved to treat loss of appetite, liver and gallbladder complaints, dyspepsia, and also as a hip bath for female functional lower abdominal complaints. In Europe the entire plant used as an antispasmodic, emmenagogue, tonic, carminative, digestive aid, and for wound healing. Infusion of the aerial parts is used as a carminative, digestive aid, tonic, and emmenagogue. Wound healing is facilitated by an infusion in distilled water and application as a wash to the wound site. It is used to flavor many liqueurs. However, internal use contraindicated during gestation due to uterine-stimulating propensity; also avoid during lactation. A 70 percent alcohol extract of yarrow lowered blood lipids (PDR, 2000, p. 918). Yarrow may lower blood pressure slightly, and could strengthen the effects of prescription drugs taken to lower blood pressure (University of Maryland).

Warning: Drinking the tea and applying the herb has induced photosensitivity, sensitivity to light. The tea may also contain a small amount of thujone, a carcinogen and liver toxin. As with all plants, allergic reactions are possible.

Notes: Yarrow is used to flavor gin and other liquors. The herb should be in everyone's garden. Yarrow is a "secret" ingredient in fine beers. The bitter tea is a good digestive and anti-inflammatory that may protect you from infection. Use it when you have been exposed to infective organisms or infected individuals. I use lard for oil extractions from this herb, because lard penetrates deeper than olive oil and other plant-based oils.

Veterinarian/Wildlife: Leaves and stems can be smudged as a mosquito repellent. Whole aerial parts used to preserve fish by stuffing them in

cleaned body cavity.



CHAPTER FOUR

Traditional Remedies for Common Ailments

Abscess and Gingivitis

Relevant tissue states: heat (inflammation), dampness, laxity Relevant herbal actions: anti-inflammatory, antimicrobial, astringent, vulnerary

Herbal Allies

- Calendula flower
- Chamomile flower
- Goldenrod leaf and flower
- Licorice root
- Meadowsweet flower
- Plantain leaf
- Rose
- Sage leaf
- Self-heal leaf and flower
- Thyme leaf
- Uva-ursi leaf
- Yarrow leaf and flower

It can be very painful to have an abscess—a fluid-filled blister or infection—in the mouth. Gingivitis is an inflammation of the gums that can lead to loose teeth. Resist the urge to poke and prod at the gums too much—if you make them bleed, bacteria can move deeper. Treat your gums gently! Antimicrobial, astringent, antiinflammatory, and wound-healing herbs fight infection and restore healthy tissue.

HERBAL MOUTHWASH Makes 8 fluid ounces (16 to 20 swishes)

While saltwater works well on its own, adding herbs makes it much more effective. Adjust the amounts of each herb according to taste. Swish with $\frac{1}{4}$ to $\frac{1}{2}$ fluid ounce of mouthwash after brushing, and swish well, getting between the teeth and throughout the mouth, for 2 to 5 minutes.

4 fluid ounces water 1 teaspoon sea salt

1 fluid ounce tincture of uva-ursi 1 fluid ounce tincture of yarrow $\frac{1}{2}$ fluid ounce tincture of calendula $\frac{1}{2}$ fluid ounce tincture of plantain $\frac{1}{2}$ fluid ounce tincture of self-heal $\frac{1}{4}$ fluid ounce tincture of licorice $\frac{1}{4}$ fluid ounce tincture of meadowsweet

1. In a jar with a lid, combine all the ingredients. Cover the jar, label it, and shake well. This is shelf stable. 2. Use this mouthwash every time you brush—twice a day is best.

Acne

Relevant tissue states: heat (inflammation), dampness (oily)

Relevant herbal actions: anti-inflammatory, antimicrobial, astringent, circulatory stimulant, liver stimulant, lymphatic

Herbal Allies

- Calendula flower
- Chamomile flower
- Dandelion root
- Elder
- Milk thistle seed
- Rose
- Sage leaf
- Self-heal leaf and flower
- St. John's wort leaf and flower
- Thyme leaf
- Yarrow leaf and flower

To cope with chronic skin problems, it's important to treat the issue from both the inside and the outside. Topical applications (compresses, poultices, and steams) of astringent, anti-inflammatory, and antimicrobial herbs will

clear and tone the skin directly. Internal preparations (tea, tincture, capsules) of liver-stimulating, circulatory-stimulant, and lymphatic herbs support the health and nourishment of skin tissue from beneath.

SKIN TONER Makes 12 fluid ounces (90+ applications)

The acidity and probiotics from the vinegar combine with the astringency of the witch hazel and rose to gently but effectively tonify the skin, reducing blemishes and protecting against breakouts. Be consistent; results will begin to show after a few days to a week of use. This simple skin toner is a key part of Katja's vibrant skin protocol. (Though

she's 44 years old, everyone thinks she's a decade younger.) If your skin is sensitive, reduce the amount of apple cider vinegar.

4 fluid ounces apple cider vinegar (preferably raw, unfiltered) 4 fluid ounces nonalcoholic witch hazel extract 4 fluid ounces rose water, or strong, well-strained rose petal infusion

1. In a small nonreactive bowl, stir together the vinegar, witch hazel, and rose water. This mixture is shelf stable. Store in an airtight container.
2. Apply this toner once a day after washing your face. If your skin tends toward dryness, rub a few drops of oil (rosehip or olive) into the skin afterward.
3. Apply this toner a second or third time during the day if your acne is persistent, but don't scrub too hard or use harsh soaps—just rinse gently with water first.

FACIAL STEAM Makes 2 cups dried herb mix (4 to 8 steams)

For an active breakout, especially one that is oily, a steam is a great way to effectively deliver circulation-enhancing, inflammation-reducing, and bacteria-eliminating herbal action right into the pores.

½ cup dried chamomile flower ½ cup dried sage leaf ½ cup dried thyme leaf ½ cup dried yarrow leaf and flower ½ gallon water

1. In a small bowl, stir together the chamomile, sage, thyme, and yarrow. Store in an airtight container.
2. Clean your face with gentle soap and water.

3. Make and execute an herbal steam: In a medium pot over high heat, boil the water. Place the pot on a heat-proof surface, someplace where you can sit near it, and make a tent with a blanket or towel. Add $\frac{1}{4}$ to $\frac{1}{2}$ cup of the herb mixture to the water. Position your face over the steam and remain there for 5 to 20 minutes. (Bring a tissue; the steam also clears your sinuses!)
4. Follow with spot applications of raw or herb-infused honey.

Allergies

Relevant tissue states: heat (inflammation), laxity (of the mucous membranes) Relevant herbal actions: antihistaminic, anti-inflammatory, kidney supportive, liver stimulant

Herbal Allies

- Calendula flower
- Goldenrod leaf and flower
- Milk thistle seed
- Mullein leaf
- Nettle leaf
- Plantain leaf
- Self-heal leaf and flower

Allergic reactions to pollen, dust, or pets are primarily due to excessive histamine production, which ignites the inflammation underlying the runny nose, itchy eyes, and excessive phlegm. Histamine isn't all bad, though; it's a necessary part of sleep regulation, brain function, and even sexual response! Antihistaminic herbs are ideal because, while they help relieve allergy symptoms, they won't overshoot the mark and suppress histamine so much they cause adverse effects.

When trying to resolve allergies, we also must support the liver and kidneys. Among other things, the liver produces histaminase—an enzyme that breaks down histamine. So, when it's sluggish or overworked, histamine builds up and the inflammatory response worsens. The kidneys also help clear inflammatory instigators from the system, so giving them extra support helps reduce allergic symptoms.

ALLERGY RELIEF TEA Makes about 3 to 4 cups dried herb mix (enough for 18 to 22 quarts of tea)

Nettle and goldenrod contain the antioxidant quercetin, which, according to a 2006 study by Shaik et al., stabilizes mast cells and prevents the release of histamine. Meanwhile, mullein supports the mucous membranes in the lungs and sinuses, reducing phlegm and mucus and quelling cough. Calendula and licorice improve liver function. Feel free to add some honey to your tea—especially if it's raw, local honey! Unfiltered honey helps reduce allergic

response because it contains some pollen grains. Introducing these to the body through the oral route helps it become less reactive to them when you inhale pollen in the springtime.

1 cup dried nettle leaf (see Tips) 1 cup dried goldenrod leaf and flower ½ cup dried mullein leaf ½ cup dried calendula flower ½ to 1 cup marshmallow leaf (optional) 2 to 4 tablespoons dried licorice root

1. In a medium bowl, mix together all the herbs, including the marshmallow (if using, for a dry constitution). Store in an airtight container.
2. Make a long infusion: Prepare a kettle of boiling water. Measure 2 to 3 tablespoons of herbs per quart of water and place in a mason jar or French press. Pour in the boiling water, cover, and steep for 8 hours, or overnight.
3. Drink a quart or more every day, especially in the month before and during your personal peak allergy season. The earlier you start, the less you'll suffer.

TIP: Omit the nettle leaf and increase the goldenrod if you take blood-thinning pharmaceuticals. **TIP:** Want a quick fix? No time for tea? The simple combination of freeze-dried nettle leaf capsules and milk thistle seed capsules offers quick relief from allergy. Choose a high-quality brand, and take 2 of each (with plenty of water) every 4 hours.

Back Pain

Relevant tissue states: tension (spasms), heat (inflammation) Relevant herbal actions: analgesic, anti-inflammatory, antispasmodic, relaxant

Herbal Allies

- Ginger
- Goldenrod leaf and flower
- Meadowsweet flower
- Mullein root
- Solomon's seal root
- Wild lettuce

Back pain can have many causes—injury, spasms, sciatica (nerve pain), disc problems, and so on. Long-term resolution requires figuring out what exactly is the root of the problem, but in the meantime these herbs and formulas will relieve pain and release tension, allowing you to move more freely.

SPINE'S FINE TINCTURE Makes 4 fluid ounces (40 to 120 doses)

These warming, relaxant, analgesic herbs quell the spasms responsible for most back pain, regardless of whether the pain is acute or chronic, muscular or connective, etc. If you have infused oil made from fresh goldenrod or ginger, use it as a massage oil after you apply this formula topically. For help sleeping, take 1 to 4 droppersful of tincture of

wild lettuce by mouth—this will also contribute more pain-relieving action.
1 fluid ounce tincture of Solomon's seal 1 fluid ounce tincture of ginger

½ fluid ounce tincture of goldenrod ½ fluid ounce tincture of meadowsweet
½ fluid ounce tincture of mullein root (see Tip) ½ fluid ounce tincture of St. John's wort (optional; see Tip)

1. In a small bottle, combine the tinctures. Cap the bottle and label it. 2. Take 1 to 4 droppersful by mouth 3 to 5 times per day. 3. Additionally, squirt 1 to 4 droppersful into your palm and rub it into the back muscles.

TIP: If the vertebral discs are impinged or worn away, increase the mullein root to 1 fluid ounce. It specifically supports these tissues. If sciatica or other radiating nerve pain is present, include the tincture of St. John's wort (unless you are taking pharmaceuticals). It regenerates damaged nerve tissue.

WARMING COMPRESS Makes 1 compress

This simple application provides immediate relief.

16 fluid ounces water ½ cup dried ginger (see Tip) ¼ cup Epsom salts

1. In a small pot with a tight-fitting lid over high heat, combine all the ingredients. Cover and bring to a boil. Reduce the heat and simmer for 5 minutes. Meanwhile, fill a hot water bottle. 2. Soak a cloth in the hot tea, holding it by a dry spot and letting it cool in the air until hot but comfortable to the touch.

3. Lie down and place the wet cloth over your back. Cover with a dry cloth and lay the hot water bottle on top. Get comfortable and let it soak in for 10 to 20 minutes. You should feel warmth, relaxation, and relief from pain.

4. Repeat as often as desired.

TIP: Have pain, but no dried ginger? If all you have on hand is fresh ginger from the grocery store, you can use that, too—sliced, chopped, or grated.

Bites and Stings

Relevant tissue states: heat (inflammation)

Relevant herbal actions: anti-inflammatory, astringent, lymphatic, immune stimulant

Herbal Allies

- Peppermint leaf
- Plantain leaf
- Rose
- Self-heal leaf and flower
- Yarrow leaf and flower

Whether it's mosquitoes, black flies, or fire ants, most bug bites are fairly simple: We just need to reduce the inflammation. Bee and wasp stings are a bit more intense: Here, our goals include drawing out the venom, if possible, reducing inflammation, and helping the immune system cope with the venom that has entered the body. Watch for anaphylaxis! If someone stung or bitten is having difficulty breathing, seek help immediately.

COOLING COMPRESS

Makes 1 compress Peppermint's menthol provides a cooling sensation to the skin, while at the same time increasing blood circulation and dispersing the irritants from the bite or sting site.

16 fluid ounces water ½ cup dried peppermint leaf ¼ cup Epsom salts

1. In a small pot with a tight-fitting lid over high heat, combine all the ingredients. Cover and bring to a boil. Remove from the heat.
2. Soak a cloth in the hot tea, holding it by a dry spot and letting it cool in the air until hot but comfortable to the touch.
3. Apply the cloth to the bite or sting.

BUG BITE RELIEF SPRAY Makes 8 fluid ounces (number of applications varies by use)

If you regularly walk through clouds of mosquitoes or black flies or live in an area infested with chiggers, you'll want this cooling, itch-relieving spray stocked for when you come inside.

4 fluid ounces nonalcoholic witch hazel extract or apple cider vinegar
2 fluid ounces tincture of rose
1 fluid ounce tincture of self-heal
1 fluid ounce tincture of yarrow

1. In a bottle with a fine-mist sprayer top, combine all the ingredients. Cap the bottle and label it.
2. Liberally spray wherever you've been bitten.

Bronchitis/Chest Cold/Pneumonia

Relevant tissue states: dampness, cold (depressed vitality)

Relevant herbal actions: antimicrobial, astringent, decongestant, diaphoretic, expectorant, pulmonary tonic

Herbal Allies

- Angelica
- Elder
- Elecampane root
- Garlic

- Ginger
- Pine
- Sage leaf
- Thyme leaf

When you have a lung infection, don't suppress the cough—it's a vital response! Our goal is to cough when it's productive, so all the irritating or infectious material is expelled as you cough up phlegm, and to reduce the amount of unproductive coughing. If you can't bring up the phlegm, you may find a simple cough developing into pneumonia because of the mucus buildup. (True pneumonia is a serious condition—seek higher care. Meanwhile, take elecampane and garlic—they're your strongest allies for this problem.) Infection-instigated coughs are usually wet, and the herbs we discuss here assume that's the case. The goal is to get it just a little on the moist side—nice and productive—so you can expel that phlegm. As with any respiratory condition, an herbal steam is a great remedy all on its own, combating infection and greatly improving blood circulation—which means immune activity—in the lungs. A simple steam with thyme or sage is very good for this problem.

FIRE CIDER Makes about 1 quart

Traditional fire cider recipes are blends of pungent and aromatic stimulating expectorants that will heat you up and help you get the gunk out. In this version, we sneak in some immune stimulants and a good source of vitamin C. Do not consume this if you take pharmaceutical blood thinners.

1 whole head garlic, cloves peeled and chopped 1 (2-inch) piece fresh ginger, chopped ¼ cup dried pine needles
 ¼ cup dried sage leaf
 ¼ cup dried thyme leaf
 ¼ cup dried elderberry
 ¼ cup dried rose hips
 2 tablespoons dried elecampane root 2 tablespoons dried angelica root 1 quart apple cider vinegar
 Honey or water, for sweetening or diluting (optional)

1. In a quart-size mason jar, combine the garlic, ginger, and remaining herbs.
2. Fill the jar with the vinegar. Cover the jar with a plastic lid, or place a sheet of wax paper under the jar lid before you screw down the ring. (The coating on the bottom of metal mason jar lids corrodes when exposed to vinegar.)
3. Let the herbs macerate in the vinegar for 2 weeks or longer.
4. Strain, bottle, and label the finished fire cider. If the vinegar is too heating to be comfortable on your stomach, add some honey (up to one-fourth the total volume), or dilute your dose with water.
5. Take a shot (about ½ fluid ounce) at the first sign of mucus buildup in the lungs, and every couple hours thereafter until symptoms resolve.

Burns and Sunburns

Relevant tissue states: heat

Relevant herbal actions: anti-inflammatory, antimicrobial, antiseptic, vulnerary

Herbal Allies

- Calendula flower
- Linden leaf and flower
- Marshmallow
- Peppermint leaf
- Plantain leaf
- Rose petals
- Self-heal leaf and flower

Immediately following a burn, run cold water over the area—the skin retains heat for much longer than you'd expect. (If blisters form in the burned area, be very gentle with them and don't break them before they naturally slough off, if you can avoid it.) Then, gently clean the wound, removing any dirt or contaminant. Apply the herbs, combining antiseptics to prevent infection with cooling, wound-healing herbs to encourage tissue regeneration.

Apply any of the herbal allies in a wash, compress, poultice, or infused honey—don't use oily preparations (like salves) on burns, because they trap the heat in the tissue.

Do not underestimate the power of a marshmallow root poultice! Simply saturate a handful of marshmallow root with enough cold water to make a gloopy mass and apply it to the burn. Cover with gauze and leave in place for 20 minutes. Repeat frequently.

BURN-HEALING HONEY Makes about 1 pint

Honey is the single best healing agent for burns: If you have nothing but plain honey, you're still in good shape. It gets even better, though, when you infuse these healing herbs into it ahead of time.

½ cup fresh calendula flower ½ cup fresh rose petals
1 pint honey, gently warmed

1. Put the calendula and rose petals in a pint-size mason jar.
2. Fill the jar with the warm honey. Seal the jar and place it in a warm area to infuse for 1 month.
3. In a double boiler, gently warm the closed jar until the honey has a liquid consistency. Strain the infused honey into a new jar, pressing the marc against the strainer to express as much honey as you can.
4. After cooling and cleaning a burn site, apply a layer of the infused honey and cover lightly with a gauze bandage. Refresh the application at least twice a day.

SUNBURN SPRAY Makes 8 fluid ounces

A few spritzes cool the skin and begin to reduce inflammation. 1 tablespoon dried peppermint leaf

1 tablespoon dried plantain leaf

1 tablespoon dried self-heal leaf and flower 1 tablespoon dried linden leaf and flower 1 quart boiling water

4 fluid ounces rose water

1. Make a hot infusion: In a mason jar, combine the peppermint, plantain, self-heal, and linden. Pour in the boiling water, cover, and steep for 20 minutes.
2. Move the jar to the refrigerator until it's cold.
3. Strain out 4 fluid ounces of the infusion and transfer to an 8-ounce bottle with a fine-mist sprayer top. Use the remaining infusion for compresses or a

cooling drink. It will keep, refrigerated, for 3 days. 4. Add the rose water to the spray bottle. Cap the bottle and label it.

5. Apply copiously and frequently. Keep the spray refrigerated when not in use.

Constipation

Relevant tissue states: cold (stagnation), dryness, tension Relevant herbal actions: bitter, carminative, demulcent, hepatic, laxative

Herbal Allies

- Angelica
- Dandelion root
- Ginger
- Marshmallow
- Milk thistle seed
- St. John's wort leaf and flower

Sometimes, constipation is simply a sign of dehydration—drink some water! If it's a chronic issue, it may be an indication of a food allergy or simply a sign that you're not getting sufficient fiber in your diet. A good, thick, cold infusion of marshmallow solves both problems: It rehydrates better than water alone, and it includes a lot of polysaccharides and fibers that help move stool along.

Constipation, especially when ongoing, can be traced back to sluggish liver function. Bile produced by the liver is a digestive fluid, but it also lubricates the intestines; when production is low, things can get stuck. Bitters and carminatives help spur digestive function, and liver-restorative herbs (hepatics) such as milk thistle can reestablish normal function.

BOWEL-HYDRATING INFUSION Makes 2½ cups dried herb mix (enough for 14 to 18 quarts of tea)

A bit tastier than solo marshmallow, this is a great solution for the type of constipation that often afflicts people with dry constitutions. If you have hard-to-pass, dry, little “rabbit pellet” bowel movements, this is for you. Drink a quart or more every day.

1 cup dried linden leaf and flower 1 cup dried marshmallow root ¼ cup dried cinnamon bark ¼ cup dried licorice root

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a cold infusion: Measure 2 to 4 tablespoons of herbs per quart of water and place in a mason jar or French press. Pour in cold or room-temperature water and steep for 4 to 8 hours before straining.

BOWEL-MOTIVATING TINCTURE Makes 4 fluid ounces (30 to 60 doses)
These bitters and carminatives will spur the bowels to movement by stimulating bile flow and intestinal peristalsis.

1½ fluid ounces tincture of dandelion root
1½ fluid ounces tincture of St. John's wort ½ fluid ounce tincture of angelica root ½ fluid ounce tincture of ginger

1. In a small bottle, combine the tinctures. Cap the bottle and label it. 2. Take 2 to 4 droppersful every 20 minutes until relief occurs.

Cough

Relevant tissue states: heat (irritation) or cold (depressed vitality), dryness or dampness Relevant herbal actions: antitussive, astringent, decongestant, demulcent, diaphoretic, expectorant, pulmonary tonic

Herbal Allies

- Fennel seed
- Ginger
- Pine
- Marshmallow
- Mullein leaf
- Sage leaf
- Thyme leaf

For herbs to work best, we need to differentiate between a hot, dry, irritated cough and one that is wet, but cold and unproductive. When the lungs are dry, you'll have a racking, relentless cough; we use moistening herbs to correct

this. Wet lungs rattle or gurgle and are most likely a response to infection. See Bronchitis/Chest Cold/Pneumonia or Cold and Flu.

LUNG-LUBRICATING TEA Makes 2¾ cups dried herb mix (enough for 18 to 22 quarts of tea) For dry, hot lungs, these soothing and moistening herbs bring relief from a racking, unrelenting cough.

1 cup dried marshmallow root 1 cup dried mullein leaf ½ cup fennel seed
¼ cup dried licorice root, or to taste Honey, for extra soothing (optional)

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a cold infusion: Measure 2 to 4 tablespoons of herbs per quart of water and place in a mason jar or French press. Pour in cold or room-temperature water and steep for 4 to 8 hours. 3. Strain the liquid and drink directly, or warm, if desired.

4. Add honey (if using) for extra soothing.

ANTITUSSIVE OXYMEL Makes about 1 quart (20 to 60 doses)

An oxymel is simply a blend of vinegar and honey, which combines the astringent and stimulating effects of the vinegar with the moistening and soothing aspects of the honey. Adding lung-specific herbs makes this a go-to for coughs of all kinds.

⅓ cup dried pine needles ⅓ cup dried sage leaf
⅓ cup dried thyme leaf
¼ cup dried ginger
1 quart apple cider vinegar Honey, as needed for topping off the jar

1. In a quart-size mason jar, combine the herbs. 2. Fill the jar four-fifths full with vinegar; top off with honey. 3. Cover the jar and let macerate for 4 weeks. 4. Strain and bottle the oxymel. Cap the bottle and label it. 5. Take 1 to 3 tablespoons as needed.

Diarrhea

Relevant tissue states: laxity (barrier compromise), dampness Relevant herbal actions: astringent, demulcent

Herbal Allies

- Cinnamon bark
- Marshmallow
- Meadowsweet flower
- Plantain leaf
- Rose
- Self-heal leaf and flower

When the lining of the bowels loses integrity, excess fluid is lost. To counteract this directly, astringent herbs restore healthy tone to the mucous membranes, so water stays in the body where it belongs. Once this is accomplished, it's a good idea to follow up with some soothing demulcent herbs—especially if the diarrhea has been going on for a while, as that causes dehydration, which must be corrected.

ASTRINGENT FORMULA Makes 2¼ cups dried herb mix (enough for 14 to 18 quarts of tea)

The tannins in these herbs help bind lax tissues back together so fluids stay where they belong and barriers keep their integrity. Drink a quart of tea over the course of the day.

1½ cups dried self-heal leaf and flower ½ cup dried meadowsweet flower ¼ cup rose petals

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a hot infusion: Prepare a kettle of boiling water. Measure 2 to 3 tablespoons of herbs per quart of water and place in a mason jar or French press. Pour in the boiling water, cover, and steep for 20 minutes or until cool enough

to drink.

TINCTURE VARIATION: If you prefer, make a tincture blend using the same proportions: Combine 1½ fluid ounces tincture of self-heal, ½ fluid ounce tincture of meadowsweet, and ¼ fluid ounce tincture of rose petal. Take 1 to 6 droppersful every 20 minutes until relief occurs.

CINNAMON POWDER CAPSULES Makes 20 to 24 capsules

When cinnamon is extracted into water—as an infusion or decoction—its demulcent quality is emphasized. However, if you swallow a capsule of the powder, the capsule dissolves in your GI tract and releases the dry powder, which then absorbs excess water and exerts an astringent effect on the intestinal lining. This quells diarrhea quite nicely. The Capsule Machine, a handy manual capsule-filling device, helps with this recipe quite a lot.

20 to 24 empty gelatin capsules, size “00” 2 tablespoons powdered cinnamon
1. Fill the capsules with the cinnamon powder.
2. Take 1 to 3 capsules when you have diarrhea. If relief isn’t obtained within an hour, take another dose.

Fever

Relevant tissue states: heat, dryness (dehydration) Relevant herbal actions: diaphoretic, refrigerant

Herbal Allies

- Angelica
- Catnip leaf and flower
- Elderflower
- Garlic
- Ginger
- Peppermint leaf
- Sage leaf
- Thyme leaf
- Tulsi leaf
- Wild lettuce
- Yarrow leaf and flower

Fever is your friend: It’s a vitally important immune response—and herbalists aren’t the only ones saying so! The American Academy of Pediatrics released a clinical report in 2011 that stated: “It should be emphasized that fever is not an illness but is, in fact, a physiologic mechanism that has beneficial effects in fighting infection.” So, don’t give

in to fever phobia—help your body do its work.

Stay hydrated! Almost all serious problems associated with fever come not from the fever itself but from runaway dehydration. If a person is too nauseous to keep down fluids, sitting in a warm bath is a good way to rehydrate. Finally, remember that temperatures are relative to individuals. Children run hot, elders run cool, and constitution influences your baseline body temperature. A limp and unresponsive person at 99°F is in more trouble than an active, alert person at 101°F. So, always look at the person more closely than the thermometer.

FEVER-MAKING TEA Makes 3 cups dried herb mix (enough for 18 to 24 quarts of tea)

Often we want to help fever come on strong, with the help of our stimulating diaphoretics. These will help a fever be more productive, and they can also help the fever be more bearable because they cause the body to sweat. Drink a big mug of this tea whenever a fever is low and lingering and you want to boost it into an effective heat.

1 cup dried tulsi leaf
½ cup dried sage leaf
½ cup dried thyme leaf
½ cup dried yarrow leaf and flower

¼ cup dried angelica root
¼ cup dried ginger
1 garlic clove, sliced, for a real kick (optional)

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a hot infusion: Prepare a kettle of boiling water. Measure 2 to 3 tablespoons of herbs per quart of water and place in a mason jar or French press. Add the garlic (if using). Pour in the boiling water, cover, and steep for 20 minutes. For best effect, reheat before drinking and drink very hot.

FEVER-BREAKING TEA Makes 1¾ cups dried herb mix (enough for 14 to 24 pints of tea)

If the fever is too hot to tolerate, these relaxing diaphoretics and refrigerants will relieve tension and release the heat without stimulating more fire. The wild lettuce in the mix will make you sleepy, which is good—sleep is your best healing mechanism. Go to bed!

½ cup dried catnip leaf and flower ½ cup dried elderflower ½ cup dried peppermint leaf ¼ cup dried wild lettuce leaf and stalk 1 pint boiling water

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a hot infusion: Measure 1 to 2 tablespoons of herbs and place in a pint-size mason jar. Pour in the boiling water, cover, and steep for 20 minutes or until cool. Drink this tea slightly cooler than usual. 3. Sip on a mugful when you want to reduce a fever.

Heartburn/Reflux/ GERD

Relevant tissue states: heat (inflammation), laxity Relevant herbal actions: bitter, carminative, demulcent, vulnerary

Herbal Allies

- Catnip leaf and flower
- Chamomile flower
- Dandelion root
- Fennel seed
- Kelp
- Licorice root
- Linden leaf and flower
- Marshmallow
- Meadowsweet flower
- Self-heal leaf and flower
- St. John's wort leaf and flower

Contrary to what you might expect, heartburn is most often caused by low levels of stomach acid. When stomach acid is low, it causes a chain of problems in the digestive system that ultimately increase upward-moving pressure in the abdomen. This weakens the “trapdoor” between the stomach and the esophagus—when that’s compromised, acid is more likely to splash

up through and irritate the unprotected tissue there. Reducing stomach acid production (with antacids or acid-blocking pharmaceuticals) temporarily relieves pain, but makes the underlying problem worse. To address heartburn, first we have to heal existing damage in the esophagus or stomach (inflammation and ulcers). Then we can work to restore normal acid levels to prevent recurrence. That stomach-esophagus “trapdoor” (the lower esophageal sphincter, LES) can also be compromised by poor alignment and stress. When in a state of stress, saliva production decreases and digestive movement is inhibited. A rest-and-digest state of mind is required to retain the proper resting tone of the LES. This starts by being present with your food—slow down, chew thoroughly, take your time.

MARSHMALLOW INFUSION Makes 1 quart

If you have active heartburn, the first thing you need is a good cold infusion of marshmallow root. Keep this on hand for when there’s an attack and to heal the damaged tissue in the esophagus. When heartburn happens, just sip on this slowly and you’ll feel relief in no time.

2 to 4 tablespoons dried marshmallow root

In a quart-size mason jar, combine the marshmallow with enough cold or room-temperature water to fill the jar. Cover and steep for 4 to 8 hours. Keep refrigerated, where each batch will last for 2 to 3 days.

BITTERS BLEND Makes 3½ fluid ounces (30 to 60 doses)

To restore normal stomach acid levels and reduce the conditions for heartburn to develop, take these drops before every meal.

1 fluid ounce tincture of dandelion root ½ fluid ounce tincture of catnip ½ fluid ounce tincture of chamomile ⅓ fluid ounce tincture of fennel ⅓ fluid ounce tincture of meadowsweet ⅓ fluid ounce tincture of self-heal ½ fluid ounce tincture of St. John’s wort (see Tip)

1. In a small bottle, combine the tinctures. Cap the bottle and label it. 2. Take ½ to 1 dropperful 10 minutes before eating. TIP: Omit the St. John’s wort if you are concurrently taking pharmaceuticals.

Indigestion/ Dyspepsia

Relevant tissue states: cold (stagnation), tension

Relevant herbal actions: bitter, carminative, relaxant

Herbal Allies

- Catnip leaf and flower
- Chamomile flower
- Dandelion root
- Fennel seed
- Ginger
- Licorice root
- Peppermint leaf
- Sage leaf

If you're reading this book cover to cover, you've probably gathered that we like to look for the root causes of things. If you're having chronic digestive discomforts, take a hard look at your diet to see if you have any food sensitivities. Lucky for you, though, indigestion is a problem for which herbal quick fixes are ready at hand—read on for two simple, portable solutions.

BEFORE-MEAL BITTERS

Makes 4 fluid ounces (60 to 120 doses)

Indigestion often means just that—incomplete digestion. This formula stimulates all your digestive fluids—saliva, stomach acid, bile, and pancreatic enzymes—so digestion is as thorough and complete as possible.

1 fluid ounce tincture of dandelion root 1 fluid ounce tincture of sage 1 fluid ounce tincture of catnip 1 fluid ounce tincture of chamomile

1. In a small bottle, combine the tinctures. Cap the bottle and label it. 2. Take 1 to 2 droppersful 10 minutes before eating.

CORE CARMINATIVES Makes 4 fluid ounces (60 to 120 doses)

This formula warms the body's core, stimulating your digestive organs and keeping the bowels from getting sluggish. If peppermint isn't your style, substitute angelica.

1½ fluid ounces tincture of ginger 1 fluid ounce tincture of fennel 1 fluid ounce tincture of peppermint (see headnote) ½ fluid ounce tincture of licorice

1. In a small bottle, combine the tinctures. Cap the bottle and label it. 2. Take 1 to 2 droppersful after each meal, or whenever your guts feel uncomfortably stuck.

Rash

Relevant tissue states: heat (inflammation), dryness or dampness, laxity

Relevant herbal actions: anti-inflammatory, astringent, demulcent

Herbal Allies

- Calendula flower
- Kelp
- Licorice root
- Plantain leaf
- Rose
- Self-heal leaf and flower
- St. John's wort leaf and flower
- Uva-ursi leaf
- Yarrow leaf and flower

A sudden appearance of a rash generally means you've come into contact with some kind of irritant—an irritating plant, a toxic chemical, or perhaps an insect bite or sting. Wash the area well with soap and water. Then apply insights from basic herbal energetics: If the rash is dry, use moistening herbs and preparations; if it's damp and

oozy, use drying agents.

If there doesn't seem to have been any contact with an irritating plant, chemical, or other direct trigger, the rash may be an external reflection of an internal imbalance. Allergies can cause this, of course, as well as overworked

internal detoxification systems. See Allergies, Bites and Stings, and Detox.
DRY RASH SALVE Makes 9 ounces (60-day supply)

Salves are emollient due to their oil and wax content, especially when they have a moisturizing oil, like olive oil, as the base. In this simple formula, the herbs' healing and anti-inflammatory effects enhance the emollient effect.

3 fluid ounces calendula-infused oil 3 fluid ounces plantain-infused oil 2
fluid ounces licorice-infused oil

1 ounce beeswax, plus more as needed 1. Prepare a salve as usual (see here for complete instructions). 2. Gently apply a thin layer to the affected area at least twice a day.

WEEPY RASH POULTICE Makes 4½ cups dried herb mix (enough for 12 to 18 poultices)

Contact with poison ivy and similar plants often produces a rash with fluid-filled blisters. These call for astringents, and those are best delivered in a water extract—a poultice or compress.

Learn to identify the plants that cause contact rash in your area! Poison ivy, poison oak, and poison sumac all grow in the US. Check out poison-ivy.org for great pictures and details about how to make a positive identification, as well as how to tell them apart from benign look-alike plants.

1 cup dried calendula flower 1 cup dried rose petals
1 cup dried self-heal leaf and flower ½ cup dried St. John's wort leaf and
flower ½ cup dried uva-ursi leaf ½ cup dried yarrow leaf and flower Boiling
water, to make the poultice

1. In a large bowl, mix together all the herbs. Store in an airtight container.
2. Measure 4 to 6 tablespoons of the herb mixture and place in a heat-proof dish.
3. Pour just enough boiling water over the herbs to get them fully saturated—not so much that they're swimming. Let the herbs soak for 5 minutes.
4. Apply the mass of herbs, warm and wet, to the affected area. Cover with a cloth. Keep in place for 5 to 10 minutes, then gently pat dry.
5. Repeat 1 to 3 times per day.

TIP: If you don't have these herbs on hand, plain green or black tea bags will do the trick! Just get them warm and wet, apply them over the rash, and let them sit in place for 20 minutes.

Sinusitis/Stuffy Nose

Relevant tissue states: heat (inflammation), laxity (mucous membranes)

Relevant herbal actions: antifungal, anti-inflammatory, antimicrobial, astringent, decongestant, demulcent

Herbal Allies

- Calendula flower
- Garlic
- Goldenrod leaf and flower
- Pine
- Marshmallow
- Sage leaf
- Thyme leaf
- Uva-ursi leaf

Runny nose is a vital response to a cold or the flu! Believe it or not, mucus is actually full of antibodies. Drying it up with pharmaceutical decongestants makes the tissue more susceptible to infection. Keeping mucous membranes at a happy medium—not too dry, not too drippy—helps shorten the illness and prevent complications. If not connected to a full respiratory infection, or if chronic or recurrent, the cause of symptoms is likely a complex of bacterial, fungal, and viral components. (This is why it can persist even after multiple rounds of antibiotics.) Antimicrobial herbs are less specific than antibiotic drugs, which is a benefit in this case, meaning that they can counteract a variety of pathogens and compromised states simultaneously. Grating fresh horseradish and breathing its fumes, or eating prepared horseradish or wasabi, is a great way to clear the sinuses. If you've been blowing your nose a lot and the skin is irritated, some soft, simple salve or lanolin is very soothing.

SINUS-CLEARING STEAM

Makes 2 cups dried herb mix (enough for 4 to 8 steams)

Steaming is a universal treatment across cultures for any respiratory system troubles, including those related to the sinuses. The combination of hot steam and the evaporating volatile oils from the herbs makes it very difficult for pathogens to survive and stimulates immune response in the mucous membranes.

1 cup dried pine needles
½ cup dried sage leaf
½ cup dried thyme leaf
½ gallon water
5 garlic cloves, chopped, per steam (optional)

1. In a small bowl, mix the pine, sage, and thyme. Store in an airtight container.
2. Make and execute an herbal steam: In a medium pot over high heat, boil the water. Place the pot on a heatproof surface, someplace where you can sit near it, and make a tent with a blanket or towel. Add ¼ to ½ cup of the herb mixture to the water, along with the garlic (if using). Position your face over the steam and remain there for 5 to 20 minutes. (Bring a handkerchief, your nose will run as your sinuses clear!)
3. Repeat 2 to 3 times per day.

TIP: Similar microbe-clearing benefits can be gained by working with aromatic herbs as incense or a smudge stick (a tightly wrapped bundle of leaves, lit on one end to produce medicinal smoke). A study by Nautiyal et al. in the *Journal of Ethnopharmacology* found that “[when] using medicinal smoke[,] it is possible to completely eliminate

diverse plant and human pathogenic bacteria of the air within confined space.” Conifer trees like pine are particularly good at this.

Sore Throat

Relevant tissue states: heat (inflammation), dryness or dampness
Relevant herbal actions: anti-inflammatory, antimicrobial, astringent, demulcent, mucous membrane tonic

Herbal Allies

- Cinnamon bark
 - Ginger
 - Goldenrod leaf and flower
 - Licorice root
 - Marshmallow
 - Sage leaf
 - Self-heal leaf and flower
- Sore throats are generally due to infection, whether that's a simple cold, the flu, or strep throat. When choosing remedies, it is helpful to differentiate between the hot, inflamed, dry sore throat and the cold, wet sore throat induced by post-nasal drip. Use extra demulcents for the former and astringent mucous membrane tonics for the latter. See also Cold and Flu and Immune Support.

SORE THROAT TEA Makes 2 cups dried herb mix (enough for 12 to 16 quarts of tea)

We make this perennial favorite in a big batch every winter. Ryn's particularly prone to sore throat—it's his early warning sign of a cold coming on—and if he starts with this tea right away, it can cut the sickness short before it gets going.

Add any spices you like, such as allspice, clove, or star anise. You can also include orange peel—simply chop the peel of your (organic!) oranges, and let dry fully before adding.

Stir in some lemon and honey if you like the flavors. Lemon has some antimicrobial action, and the sour and sweet flavors both stimulate the flow of healthy mucus, which fights infection. You can also add a bit of butter, ghee, or coconut oil—just a ½ teaspoon or so per cup of hot tea. The medium-chain fatty acids (MCFAs) in these oils are topically antimicrobial, and add a nice “coating” quality to the drink.

1 cup marshmallow root ½ cup dried ginger ¼ cup dried cinnamon bark ¼ cup dried licorice root

1. In a small bowl, mix together all the herbs. Store in an airtight container.
2. Make a decoction: Measure 2 to 4 tablespoons of herbs per quart of water and place in a lidded pot over high heat. Add the water and cover the pot. Bring to a boil, reduce the heat, and simmer for 1 hour.
3. To enhance the

soothing effects of the mucilaginous herbs in this blend, cool the tea fully after decoction, then continue to cool for 1 to 2 more hours. Strain, and reheat before drinking. 4. Drink liberally throughout the day.

HERB GARGLE Makes 16 fluid ounces (enough for several gargles)

Sage is an aromatic astringent, and it specifically kills rhinovirus—a virus that causes many colds. Combining it with vinegar and salt enhances these properties. If you have a dry sore throat, you may want to follow this with a nice cup of marshmallow tea.

8 fluid ounces water

2 tablespoons dried sage leaf 8 fluid ounces apple cider vinegar 3 teaspoons salt

1. In a small pot over high heat, bring the water to a boil. Remove it from the heat and add the sage. Cover tightly and let infuse for 20 minutes.
2. Strain the liquid into a pint-size mason jar.
3. Add the vinegar and salt, cover the jar, and shake well.
4. Pour off 1 fluid ounce or so and gargle with it for 2 to 3 minutes. Rinse your mouth out with water afterward—the vinegar's acidity can wear down tooth enamel if left in place.
5. Repeat 3 to 5 times per day.

Sprains and Strains

Relevant tissue states: heat (inflammation), tension and/or laxity

Relevant herbal actions: anti-inflammatory, circulatory stimulant, connective tissue lubricant, lymphatic, nerve tropho-restorative, vulnerary

Herbal Allies

- Cinnamon essential oil
- Ginger
- Goldenrod leaf and flower
- Kelp
- Meadowsweet flower
- Peppermint essential oil
- Self-heal leaf and flower

- Solomon's seal root
- St. John's wort leaf and flower

The pain of an injured joint is your body speaking a warning to you. Heed it! Don't let a minor strain become a serious sprain. Rest the joint—but don't immobilize it; gentle movement allows blood to move through the injury site and speeds healing. Drink some bone broth (see Build-Up Broth), eat some seaweed, and work with herbs to

reduce inflammation, improve blood exchange, and restore the connective tissues (tendons, ligaments, fascia). One of the best methods for healing a sprain is alternating hot and cold compresses or baths. Heat exposure brings in fresh blood, while cold constricts the vessels and squeezes out stuck fluids. Alternate between 3 minutes of hot and 30 seconds of cold. Go back and forth a few times, and always finish with hot to bring fresh, healthy circulation to the area. See also Arthritis, and Joint Pain.

SOFT TISSUE INJURY LINIMENT Makes about 8 fluid ounces (100+ applications, 30-day supply)

This is similar to Joint Liniment, but we add some extra vulneraries, lymphatics, and nerve-healing herbs to address the other types of tissue damaged in an injury.

- 3 fluid ounces ginger-infused oil
- 2 fluid ounces Solomon's seal-infused oil or tincture of Solomon's seal
- 1 fluid ounce tincture of St. John's wort
- 1 fluid ounce tincture of self-heal
- 1 fluid ounce tincture of meadowsweet
- 40 drops peppermint essential oil
- 40 drops cinnamon essential oil

1. In a small bottle, combine the infused oils, tinctures, and essential oils. Cap the bottle and label it, including Shake well before each use.
2. Hold your palm over the bottle's mouth and tilt to deposit a small amount in your palm. Rub between your hands to warm the treatment, then apply to the painful joints.
3. Massage the oil into the joints until your hands no longer feel oily. Really

work the liniment into the tissue. 4.Repeat the application 3 to 5 times per day. More is better!

Wounds

Relevant tissue states: heat (inflammation)

Relevant herbal actions: antimicrobial, astringent, emollient, lymphatic, vulnerary

Herbal Allies

- Calendula flower
- Chamomile flower
- Goldenrod leaf and flower
- Kelp
- Marshmallow
- Pine
- Plantain leaf
- Rose
- Self-heal leaf and flower
- St. John's wort leaf and flower
- Yarrow leaf and flower

When working with a cut, scrape, abrasion, or other open wound, it's important to always follow the same order of operations:
Stop the bleeding. Direct application of pressure is usually the best way to accomplish this. Clean the wound. Any particulate or foreign matter must be completely washed out of the wound or it will slow healing and allow infection to take root. A wound wash or soak with astringent, antimicrobial herbs is very effective for this stage.

Prevent or manage infection. Wound washes and soaks are also good here. Herb-infused honeys are extremely effective for this stage, serving both to disinfect and encourage healing. (Don't put tinctures directly into wounds unless you have no other option; even then, dilute them at 1 part tincture to 5 parts purified water, because alcohol inhibits cell growth.)

Encourage healing. Herb-infused honeys, poultices, compresses, and baths are all appropriate for open wounds. Once the wound closes (or if it was never very deep to begin with), you can transition to a salve. Choose herbs

that are vulnerary, lymphatic (to drain blisters), and—especially in later stages—softening or emollient (to prevent scarring).

WOUND WASH Makes 3 cups dried herb mix (enough for 10 to 20 quarts of wound wash)

If you're in a hurry, a simple wash with rose water or nonalcoholic witch hazel extract is very effective during the cleaning stage. After that, transition to soaks and compresses with a formula like this. In the later stages of wound healing, you may want to add ½ cup dried marshmallow or kelp for their emollient effects.

½ cup dried calendula flower ½ cup dried plantain leaf

½ cup dried rose petals

½ cup dried goldenrod leaf and flower ¼ cup dried chamomile flower ¼ cup dried self-heal leaf and flower ¼ cup dried St. John's wort leaf and flower ¼ cup dried yarrow leaf and flower Salt, for the infusion

1. In a medium bowl, mix together all the herbs. Store in an airtight container. 2. Make a hot infusion: Prepare a kettle of boiling water. Measure 4 to 6 tablespoons of herbs per quart of water and place in a mason jar or French press. Pour in the boiling water, cover, and steep for 20 minutes or until cool. 3. Stir in 1 teaspoon of salt for each quart of infusion you've made.

4. Soak the wounded part, or apply a compress over the affected area.

5. Repeat as frequently as you can, at least 3 times per day.

PINE RESIN SALVE Makes 8 ounces (40-day supply)

Pine resin salve is our go-to for wounds that have closed or were never very deep. You can work with the resin of other conifers, too. Resin can be harvested directly from the trees—you'll find whitish globs of it along the trunk where branches were lost. Leave enough on the tree to keep the wound sealed—this resin is how the tree forms a scab! It will probably have bits of bark, dirt, insect parts, etc., stuck in it—don't worry! We'll filter that out during

processing.

After gathering resin, use a bit of oil to wash your hands—soap and water won't work. Just drop a bit of any liquid oil you have handy into your hands and scrub as if it were soap. The resin will soften and separate from your skin.

Then you can use soap and hot water to wash it away. You can use plain oil for infusing your resin, but starting with an herb-infused oil means you get the good actions of all these herbs, instead of just those the resin contributes.

6 to 8 ounces pine resin or another conifer resin

8 fluid ounces total calendula-infused oil, goldenrod-infused oil, and/or plantain-infused oil
1 ounce beeswax, chopped or grated, plus more as needed

1. In a small pan over low heat, combine the resin and infused oil and heat gently, stirring frequently. The resin will soften and dissolve, infusing the oil with its virtues.
2. Pour this warm oil through a few layers of cheesecloth. Wrap the mass that remains and squeeze it to extract as much oil as possible.
3. Prepare a salve using this resin-infused oil (see here for complete instructions).
4. Apply to the wound several times a day, using fresh, neat bandages each time.



Conclusion

I hope you have enjoyed reading this book as much as I've enjoyed writing it, and I hope it will accompany you in your ongoing journey to the discovery of Native American herbs and their medicinal uses. If you found this book useful and are feeling generous, please take the time to leave a short review on Amazon so that other may enjoy this guide as well.

I leave you with good wishes and hopefully a better knowledge of the plants around us and their amazing powers.