

Indiana Medical History Museum

Guide to the Medicinal Plant Garden



*Garden created and maintained by
Purdue Master Gardeners of Marion County*

IMHM Medicinal Plant Garden

Plant List – Common Names

Trees and Shrubs:

Arborvitae, *Thuja occidentalis*
Black haw, *Viburnum prunifolium*
Catalpa, *Catalpa bignonioides*
Chaste tree, *Vitex agnus-castus*
Dogwood, *Cornus florida*
Elderberry, *Sambucus nigra*
Ginkgo, *Ginkgo biloba*
Hawthorn, *Crateagus oxycantha*
Juniper, *Juniperus communis*
Redbud, *Cercis canadensis*
Sassafras, *Sassafras albidum*
Spicebush, *Lindera benzoin*
Witch hazel, *Hamamelis virginiana*

Climbing Vines:

Grape, *Vitis vinifera*
Hops, *Humulus lupulus*
Passion flower, Maypop, *Passiflora incarnata*
Wild yam, *Dioscorea villosa*

Herbaceous Plants:

Alfalfa, *Medicago sativa*
Aloe vera, *Aloe barbadensis*
American skullcap, *Scutellaria laterifolia*
Angelica, *Angelica archangelica* and *sinensis*
Aztec sweet herb, *Lippia dulcis*
Baikal skullcap, *Scutellaria baicalensis*
Balloon flower, *Platycodon chinensis*
Basil, *Ocimum basilicum*
Bee balm, Oswego tea, *Monarda didyma*
Black cohosh, *Cimifuga racemosa*
Blackberry lily, *Belamcanda chinensis*
Black-eyed Susan, *Rudbeckia* species
Blazing star, Gay-feather, *Liatris spicata*
Bloodflower, *Asclepias curassavica*
Blue false indigo, *Baptisia australis*
Boneset, *Eupatorium perfoliatum*
Borage, *Borago officinalis*
Butterfly weed, Pleurisy root, *Asclepias tuberosa*
Calendula, Pot marigold, *Calendula officinalis*
Castor bean, *Ricinus communis*
Catnip, *Nepeta cataria*
Cayenne and red pepper, *Capsicum frutescens* and *annuum*
Chamomile, *Anthemis nobilis* and *Matricaria* (*Chamaemelum*) *chamomilla*
Chives, *Allium schoenoprasum*
Comfrey, *Symphytum officinale*
Common milkweed, *Asclepias syriaca*
Coriander/Cilantro, *Coriandrum sativum*
Corn, *Zea mays*

Culver's root, *Veronicastrum virginicum*
Day lily, *Hemerocallis* species
Dill, *Anethum graveolens*
Elderberry, *Sambucus nigra*
Elecampane, *Inula helenium*
European meadowsweet, Queen of the meadow, *Filipendula ulmaria*
Evening primrose, *Oenothera biennis*
False Solomon's seal, *Smilacina racemosa*
Fennel, *Foeniculum vulgare*
Feverfew, *Tanacetum parthenium*
Flax, *Linum usitatissimum*
Foxglove, *Digitalis* species
Garlic, *Allium sativum*
Golden ragwort, *Senecio aureus*
Goldenrod, *Solidago* species
Horehound, *Marrubium vulgare*
Hyssop, *Hyssopus officinalis*
Joe Pye weed, *Eupatorium purpureum*
Ladybells, *Adenophora* species
Lady's mantle, *Alchemilla vulgaris*
Lavender, *Lavandula angustifolia*
Lemon balm, *Melissa officinalis*
Licorice, *Glycyrrhiza glabra*
Lily of the valley, *Convallaria majalis*
Lovage, *Levisticum officinalis*
Lungwort, *Pulmonaria officinalis*
Mint, *Mentha* species
Motherwort, *Leonurus cardiaca*
Mullein, *Verbascum thapsus*
New England aster, *Aster novae-angliae*
Oregano, *Origanum vulgare*
Parsley, *Petroselinium crispum*
Partridge berry, Squaw vine, *Mitchella repens*
Periwinkle, *Vinca minor* and *Catharanthus roseus*
Peony, *Paeonia* species
Purple coneflower, *Echinacea purpurea*
Queen Anne's lace, Wild carrot, *Daucus carota*
Rosemary, *Rosmarinus officinalis*
Sage, *Salvia officinalis*
Sorrel and Dock, *Rumex* species
Soy bean, *Glycine max*
St. John's wort, *Hypericum perforatum*
Sunflower, *Helianthus annuus*
Sweet Annie, Sweet wormwood, *Artemisia annua*
Thyme, *Thymus officinalis*, *T. vulgaris*
Valerian, *Valeriana officinalis*
Vervain, *Verbena officinalis*
Wild ginger, *Asarum canadense*
Yarrow, *Achillea millefolium*
Yucca, *Yucca* species

Table of Contents

List of Common Names and Scientific Names (inside front cover)

Disclaimer

About the Indiana Medical History Museum

Introduction to the Garden

Plants in the Garden: A-G

Photos of Selected Plants

Plants in the Garden: H-Z

Additional Important Medicinal Plants

Types of Medicinal Herbal Preparations

Selected References

Acknowledgments

List of Scientific Names and Common Names (inside back cover)



About the Indiana Medical History Museum

The Indiana Medical History Museum is dedicated to preserving the heritage of the healing arts in Indiana. Through its exhibits and publications, the museum educates the public concerning health care in Indiana during the nineteenth and first half of the twentieth centuries. Museum programming also focuses on the life sciences and health careers.

The IMHM is located in the old Westside of downtown Indianapolis, occupying part of the former Central State Hospital's 160 acre campus. The main building of the museum is the Old Pathology Building of Central State Hospital. It is listed in the National Register of Historic Places and has been identified as an official project of "Save America's Treasures" by the National Trust for Historic Preservation.

This outstanding building was designed and built under the supervision of Superintendent Dr. George Edenharter. It was dedicated in 1896 as a state-of-the-art research and education facility enabling hospital physicians to apply scientific methods in their study of mental diseases. This unique structure survives intact with its original amphitheater, library, and laboratory furnishings. Tours of the museum bring to life the era of early medical research, education, and practice.

The IMHM has restored a smaller adjacent building as the site of a new doctor's office exhibit that interprets a typical rural physician's practice of the mid-20th century. This exhibit explores the transition from the healthcare of the 1800's to the era of modern medicine.

The Medicinal Plant Garden was added to the grounds south of the Old Pathology Building in the spring of 2003. It is the project of a group of Purdue Master Gardeners of Marion County, who designed, installed, and maintain the garden. Garden supplies, plants, and gardening hours all have been donated to the museum.

The museum is open to the public 10 a.m. to 4 p.m., Thursday through Saturday and at other times by appointment. The last tour begins at 3:00 p.m. Groups of ten or more should make tour arrangements by contacting the museum. Admission is \$5 for adults, \$1 for students 18 years old and under, and free for children under 5 years old. Visit or contact the museum at 3045 West Vermont Street, (317) 635-7329, Edenharter@imhm.org, and www.imhm.org.

The Indiana Medical History Museum is a private, nonprofit organization. It is not part of any State, historical, medical, or pharmaceutical organization. Memberships and donations help preserve the historical artifacts of Indiana's past. All donations in support of the museum and garden are welcome.

Introduction to the Garden

In this modern era of urban civilization, many of us have lost touch with nature. We no longer have the intimate knowledge of plants and their uses that our ancestors had acquired through centuries of trial and error. When we want a cure for our headache or fever, we go not to the meadow and woodland but to the drugstore.

The Medicinal Plant Garden of the Indiana Medical History Museum offers the opportunity to remember that plants were the original source of most medicines. Many of the miracle drugs of today are molecules or variations on compounds that were originally available from plant medicines. For example, Bayer Aspirin (acetyl-salicylic acid) had its beginnings in 1897 from a compound that occurs naturally in the herbaceous perennial European meadowsweet.

In recent decades, in the United States people have had an increasing interest in using herbal remedies. A wide variety of herbal preparations are available over the counter at most pharmacies and grocery stores. It is important to treat these substances with care. Just because a product is “natural” does not mean that it is safe. As with our modern drugs, herbal medicines have undesired side effects as well as beneficial effects. For example, an individual taking feverfew (*Tanacetum parthenium*) for migraine headaches may not realize that it acts as an anticoagulant that could result in bleeding complications if surgery is needed. When asked by the doctor, “What medicines are you taking?” one always should include any herbal remedies or tonics taken regularly in the answer.

In this country, the efficacy and strength of commercial herbal preparations is not controlled by governmental regulations at this time. They are considered to be food supplements rather than drugs. The potency of herbal remedies in stores is difficult to predict. Studies even show that some products on the market have no active ingredient present. By contrast, in Europe, Germany’s Commission E carefully studies and makes recommendations about herbal medicines, and products available are better standardized and regulated. Of course, the amount of active compounds in a plant's flower, leaf, or root will vary with the cultivar, the soil, the weather, the time of year, the time in the plant’s life cycle at harvest, and the way in which the plant is dried, preserved, and processed.

Some of the most beautiful medicinal plants are quite poisonous. Examples include, foxglove (digitalis), autumn crocus (colchicine), mayapple (podophyllin), and lily of the valley (digitalis-like cardiac glycoside). **Remember that many of the plants we have included in this garden can be toxic if misused. Please, do not pick or eat any part of the plants in the garden!**

This brochure offers interesting information about the plants in the garden, presented alphabetically according to their most used common name. The information includes the common name, *scientific name*, a brief description of the plant’s main medicinal uses and history, indication of where it began as a native plant, and the parts of the plant that are or were used medicinally. Lists of common and scientific names are inside the front and back covers of the brochure, respectively. More extensive information about some of the plants is available in the museum.

Plants in the Garden

Alfalfa

Medicago sativa

In Arabia this plant was called *al-fac-facah*, meaning “the father of all food” and leading to the current English common name, alfalfa. This plant, which looks similar to clover, was used by healers in ancient China and India and by American settlers to treat ulcers and other digestive problems. While traditional uses have not been proven to be effective, recent research indicates that alfalfa leaves may help lower cholesterol and absorb carcinogens in the intestines. The seeds contain two chemicals that may promote menstruation, and alfalfa seeds should not be consumed during pregnancy. The plant’s coumarins and isoflavones have some estrogenic effect.

Asia, Europe, North Africa

Leaves

Aloe vera

Aloe barbadensis

This plant may be named from the Arabic word *alloe*, which means “bitter and shiny substance.” Aloe has been used medicinally for centuries, especially to soothe and aid the healing of burns. Research shows that one of its active ingredients is bradykinase, which is a protease inhibitor that relieves pain and decreases swelling and redness. Another ingredient, germanium, is a fast-acting pain killer. Aloe gel taken internally is a powerful purgative. Aloe grows better as a houseplant than it does out in gardens in Indiana.

Africa, West Indies

Leaves

American skullcap

Scutellaria lateriflora

The aerial parts of this plant were widely used as a sedative to calm the nervous system, serving as a “nervine” or “nerve tonic.” It was recommended for a wide variety of states, such as hysteria, convulsions, insomnia, delirium tremens, and pre-menstrual tension. Cherokees used skullcap to stimulate the uterus – promoting menses or expelling the placenta after childbirth. The plant also reportedly had hypotensive and anti-spasmodic effects. Modern herbalists also recommend skullcap for anorexia nervosa and fibromyalgia; however, few studies have been done to show evidence that the plant has significant medicinal effects.

America

Aerial parts

Angelica

Angelica sinensis, Angelica archangelica

Chinese angelica (*A. sinensis*, known as Dang Gui and Dong Quai) in combination with other herbs has been used in the East for centuries to treat gynecologic problems and a variety of other ailments. Recent studies of its effectiveness have shown mixed results. Chinese angelica may stimulate formation of blood clots. European angelica (*A. archangelica*) was associated with witchcraft and magic. Drinking “angelica water” or “the King’s Excellent Recipe for the Plague,” which was made from squeezing the root of this plant and mixing the juice with nutmeg and treacle, was a popular though probably ineffective protection against the plague in the 1600’s. The plant was used in Europe and America to treat respiratory diseases, as were a variety of other hollow-stemmed plants. Colonists also used the plant as an abortifacient. Recent studies indicate that compounds in European angelica act as calcium channel blockers – similar to verapamil. The roots and seeds of *A. archangelica* are used as flavoring for Benedictine and Chartreuse liquors, gin, and vermouth. Caution: the sap and oil of angelica left on the skin may cause severe skin lesions when exposed to sunlight.

Asia, Europe

Roots; Roots and Aerial parts

Arborvitae tree*Thuja occidentalis*

The upright evergreen trees in the garden eventually will be thirty feet tall. The scale-like leaves gathered in summer produced a medicine that Native Americans used for fever, cough, headache, rheumatism, and other ailments. Research has shown antiviral activity against warts and polyps and possible anti-neoplastic activity against uterine cancer. It has been used for bronchitis, cystitis, and several other conditions as well. Arborvitae preparations should be taken only under professional supervision. The heartwood of these trees is light weight and decay resistant, and it was used to make the ribs of canoes.

America

Leaves

Aztec sweet herb*Lippia dulcis, Phylla dulcis*

The Aztec Classic Codex of 1552 recommended the root as a treatment for cough, and the leaves do have demulcent, expectorant qualities. The dried leaves contain hernandulcin, a sesquiterpene compound stated to be 1000 times sweeter than refined sucrose. But, the leaves should not be used as sweetener because they also contain camphor, which makes this herb quite toxic. Tea made from the leaves has been used externally on cuts and abrasions and as a mouthwash to fight gum disease and tooth decay.

Mexico

Leaves

Baikal skullcap*Scutellaria baicalensis*

Also known as Chinese skullcap or Huang Qin, the root is used to treat a wide variety of conditions, including respiratory infections and inflammations. Other uses include improving brain function, lowering blood pressure and cholesterol, diuresis, and improving digestion. Baicalin, a component in the root, has antifungal actions and may be antiviral as well. This is not the same plant as American skullcap.

Siberia

Roots

Balloon flower*Platycodon chinensis*

Robert Fortune sent the roots of this plant from China to the Horticulture Society in England in 1844. In Traditional Chinese Medicine since at least 100 AD, the bitter platycodon root (Jiegeng) has been used in combination with other herbs for a variety of conditions, but especially as a “phlegm-loosener” for lung and throat ailments and for the treatment of abscesses. Young dried roots also were used as a source of dietary starch after being blanched to remove the bitter saponin that is the plant’s medicinal component.

Asia

Roots

Basil*Ocimum basilicum*

The leaves of sweet basil are used in cooking to make pesto and flavor many dishes. Medicinally, the leaves of sweet and other basils have been used to treat indigestion and skin conditions. In India and Thailand, basil seeds are used to calm mucosal membranes, providing relief for mucous discharges, diarrhea, and coughs. Seeds and leaves eaten as a source of bulk fiber have been used for constipation and to prevent rapid rise in blood sugar after meals. The presence of the carcinogen estragole in basil is a concern, and the herb is not approved for medicinal use by Germany’s Commission E. Medicinal basil should not be used by pregnant women.

Mediterranean, Middle East

Leaves, Seeds

Bee balm*Monarda didyma*

The Oswego Indians of New York taught the colonists how to use Bee balm to make a pungent tea that could treat colic, stomach ache, intestinal worms and several other conditions. A weaker version of the drink became commonly used after the Boston Tea Party. Both the tea and the plant were known as "Oswego tea." Seeds of the plant were sent from Philadelphia to England in about 1744, where it was introduced and used as a substitute for tea from Asia. It then spread to continental Europe where it was sometimes called "Indian nettle." Bee balm, like thyme, contains the active antiseptic ingredient thymol. Bee balm was brought to Indiana by the pioneers. It escaped cultivation and grows wild in damp areas.

America

Aerial parts

Black cohosh*Cimifuga racemosa*

Recent research has confirmed that the black roots of this perennial woodland plant contain substances with estrogenic, anti-inflammatory, sedative, and hypoglycemic effects. It was used by Native Americans traditionally to treat "female ailments," and is marketed today not only for treatment of menstrual cramps and symptoms of menopause but also for rheumatic problems and as a hypotensive remedy. The plant would like more shade than it gets in our garden.

America

Roots

Blackberry lily*Belamcanda chinensis*

Blackberry "lily" actually is a member of the iris family. Its rhizome is the Chinese herbal substance She-Gan. In traditional Chinese Medicine, it is used for asthma, croup, and swelling and pain in the throat. Seeds of the plant were brought to Europe by Jesuit priests in the 1730's. The plant found its way to American in the early 1800's.

Asia

Rhizome

Black-eyed Susan*Rudbeckia* species

Rudbeckia is a biennial or short-lived perennial. Native Americans used tea made from the roots to expel worms and treat colds. Juice of the root was a treatment for earache, and a wash was used externally to soothe sores, snakebite, and swelling. Some individuals have a contact sensitivity to the plant.

America

Roots

Black haw shrub*Viburnum prunifolium*

This deciduous shrub is native to the American woodlands. The bark of the branches and roots contains many active compounds, including coumarin and salicin, which have anticoagulant and aspirin-like qualities, respectively. The plant's medicinal use is mainly related to its strong anti-spasmodic properties. Native Americans used it to abate heavy menstrual bleeding and threatened miscarriage. It was also used for cramping conditions of the intestine, bile ducts, and bladder.

America

Bark, Root bark

Blazing star, Gay-feather*Liatris spicata*

Liatris spicata and a number of other *Liatris* species send up tall spikes of purple flowers in the summer. Tests on members of this genus have shown anti-cancer properties. In Europe, *liatris* is used for gynecologic problems and as a gargle for sore throat.

America

Roots

Bloodflower*Asclepias curassavica**See Milkweeds***Blue false indigo***Baptisia australis*

Native Americans used hot root tea as an emetic and purgative and cold tea to prevent vomiting. They also applied the root directly to ease toothache. A poultice of false indigo had anti-inflammatory effects. This plant may prove to be an immune system stimulant. Cherokee Indians and early settlers used this native plant to make blue dye. The name “false indigo” distinguished it from true indigo (*Indigofera tinctoria*), a plant native to India that was cultivated in the American colonies as a source of blue dye made from its leaflets and branches – the dye that makes blue jeans blue.

America

Roots

Boneset*Eupatorium perfoliatum*

Boneset probably got its name because of its ability to ease the severe muscle and joint pains of breakbone fever, a mosquito-borne viral disease also known as dengue fever. The stem of the plant grows through (perforates) the fused pairs of leaves, hence the species name “*Eupatorium perfoliatum*.” Native Americans and pioneers both used a tea made of the aerial parts of the dried plant to treat colds and malaria. The pioneers of Indiana gathered large bundles and dried them for use through the winter. This herbal reduces fever by inducing sweating. Boneset was listed in the *US Pharmacopoeia* and *US Dispensatory* for decades as the standard treatment for influenza. Use of boneset in large doses may damage the liver and kidneys or lead to internal hemorrhage.

America

Aerial parts

Borage*Borago officinalis**

Borage is native to the Mediterranean area but is cultivated widely. The plant is dried at the time it is in flower. It is effective as a poultice or infusion externally for inflamed or sore skin. Internal use is considered unsafe, except for borage seed oil, which is useful for rheumatic and premenstrual complaints. In the Middle Ages, borage flowers and leaves were added to wine that was drunk to dispel melancholy. The herbalist Gerard wrote that borage was good “for the comfort of the hart, for driving away of sorrowe, and increasing the joie of the minde.”

Mediterranean

Aerial parts, Seeds

Butterfly weed, Pleurisy root*Asclepias tuberosa**See Milkweeds*

*Many of the plants in the garden have a scientific species name ending in “*officinalis*” or “*officinale*.” This indicates that the plant was the specific one in a Genus that would be found “in the office” of the physician, apothecary, or pharmacist.

Calendula, Pot marigold*Calendula officinalis*

This annual plant has many medicinal uses. The bright yellow-orange flowers are harvested when in bloom. They contain active ingredients with antiseptic and astringent properties and are used on the skin for rashes, wounds, fungal infections, diaper rash, sore nipples, and varicose veins. Calendula is taken internally for inflammations of the alimentary tract and as a cleansing detoxifying herbal tonic.

Europe

Flowers

Castor bean*Ricinus communis*

Good old castor oil is made from the pretty spotted beans of this large exotic-looking plant. The seeds oil is almost colorless and without a strong odor, but it has a highly nauseating disagreeable taste. Castor oil was widely used as a laxative in acute, temporary constipation, especially in children and the elderly. A topical ointment of castor oil also was used for leprosy, ringworm, and itching skin lesions. The oil had many other uses, such as making soap, artificial rubber and leather, candles, furniture polish, and cleaning solution for oil paintings. In ancient Greece and Egypt the plant was valued for its oil for lamps and unguents. The seeds contain a very powerful poison (ricin), but ricin is water soluble and is not present in processed castor bean oil. Ricin is a potent cytotoxin, and when ingested it quickly causes abdominal pain, vomiting, and often bloody diarrhea, followed by dehydration, loss of renal function, and hypotension. Death or recovery is expected in 3-5 days. Castor bean plants in the garden should not be allowed to flower or set seeds when children are present and likely to be attracted to the pretty beans, because a single chewed bean can be fatal. Also, children should not be allowed to play with necklaces or bracelets made from the spotted beans.

Africa, India

Seeds

Catalpa tree*Catalpa bignonioides*

Some of the largest trees on the museum grounds are catalpas, recognizable by their coarsely grooved bark, heart shaped leaves, and long cigar-like seed pods. Catalpa leaves were used as poultice for wounds, and tea made from seeds treated bronchitis and asthma. Tea made from the bark had antiseptic, laxative, and sedative properties. Plus, it was used to expel intestinal worms and as a snakebite antidote. Other species of catalpa in China also were used as medicine for worm infestations.

America

Bark, Fruits

Catnip, Catmint*Nepeta cataria*

The leaf and flower of this plant contain a compound that causes euphoria in cats. Trappers used catnip as bait when going after bobcats and mountain lions. Traditionally, as a medicine it was used for "obstruction of the womb," and weak catnip tea was a remedy to soothe a colicky baby. Catnip induces sweating and can bring down the fever of colds and flu. It has been used to treat digestive tract problems, including use as an ointment for hemorrhoids. Catnip should not be taken during pregnancy.

Europe

Aerial parts

Cayenne peppers*Capsicum annuum and frutescens*

Medicinal capsaicin is present in the perennial Tabasco pepper, chili pepper plants (*C. frutescens*) and also in annual chili pepper, paprika, bell pepper plants (*C. annuum*). Many of the peppers were native to tropical America and were introduced to Europe in the 1400's. Capsaicin-containing topical preparations are used as analgesics for muscle spasms and arthritis. They may be useful as neuritic pain relievers in conditions such as shingles, post-herpetic neuralgia, trigeminal neuralgia, and possibly diabetic neuropathy. The mechanism of action is not yet determined. Taken internally, capsaicin increases circulation and may stimulate blood flow to the hands and feet.

Tropical America

Fruits

Chamomile

The nomenclature of chamomile is somewhat confusing. Roman chamomile (*Anthemis nobilis* or *Chamaemelum nobile*), also known as English chamomile or Garden chamomile, is a slow growing perennial. German chamomile (*Matricaria chamomilla*, *M. recutita*), also known both as Genuine chamomile and False chamomile by different parties, is an annual. Both were brought from Europe by the pioneers and used to treat "female problems." A weak tea was drunk to settle the stomach and improve a variety of intestinal complaints. Ancient Egyptians used chamomile's power to reduce fevers to treat malaria. Chamomile tea has excellent calming, relaxing qualities and can be used to alleviate stress-related problems. It has some pain relieving properties and has been used for menstrual pain and to ease contractions during childbirth. It also has antibacterial, antifungal, antihistaminic, antiseptic and anti-inflammatory properties. Greeks called it "ground apple" because of its scent, and Spaniards called it "little apple" and used it to flavor sherry. Chamomile also has been used as a hair rinse for blond hair.

Europe

Flowers

Chaste tree*Vitex agnus-castus*

The great ancient herbalist Dioscorides wrote *De Materia Medica* in about 55 AD. In it, he described how using the plant Vitex could promote lactation and menstruation and decrease inflammation of the uterus. Nearly 2000 years later, herbalists in Europe still use *Vitex agnus-castus* as an herb for female hormonal imbalances. The plant has not been used much in the United States until recently. Vitex is also known as "the chaste tree" from the legend about women placing the leaves of the plant on their beds in order to curb the passion of their amorous partners. Also, traditionally the berries of Vitex were chewed by monks as an aid in celibacy. They are thought to have an anti-androgenic effect. Chaste tree often does not survive the winter this far north.

Europe, Africa, Asia

Berries

Chives*Allium schoenoprasum*

Chives were brought to North America by the pioneers. Their medicinal qualities are not as strong as those of garlic. Chives have some antiseptic effect and may lower blood pressure.

Europe

Leaves

Comfrey*Symphytum officinale*

Other common names for comfrey include “boneset” and “knitbone.” Comfrey leaf and root poultices have been used for 24 centuries to promote healing of bruised and broken tissues and bones. In some instances, pulverized comfrey root was packed around a fracture site and allowed to set like a plaster cast. Others report boiling the leaves to release mucilaginous substance, soaking cloth in the water, and wrapping it around a fracture to dry and set like a cast. The wound healing effect of comfrey is due to a substance called allantoin which stimulates cell proliferation in wound healing and in regenerating peripheral nerves. Comfrey tea was taken internally for a variety of conditions; however, comfrey products intended for internal consumption have been banned in the US, Europe and other countries because toxic alkaloids (especially in the root) can severely damage the liver. Some believe comfrey intended for external use should be banned as well.

Europe

Leaves and roots

Common milkweed*Asclepias syriaca**See Milkweeds***Coriander/Cilantro***Coriandrum sativum*

In cooking, the leaves of this plant are known as cilantro, and the round seeds are called coriander. The name comes from the Greek word *koris*, which means “bug” or “bedbug,” supposedly because the unpleasant smell of crushed unripe seeds was reminiscent of squashed bugs. When the seeds mature and dry they develop a good flavor and are used in many cuisines, especially in Indian curries. In England, coriander is grown as a flavoring for gin. Medicinally, the seeds have been used for intestinal cramps and as an appetite and digestion enhancer. Paste made from the seeds has been used on sores in the mouth and on the skin. As yet, no real medical value has been proven scientifically.

Mediterranean

Seeds

Corn*Zea mays*

Freshly picked and dried soft threads of the female flower (corn silks) have been used as a remedy to sooth irritations of the urinary tract, such as urethritis, cystitis, and bladder stones. Components in the silks do have some diuretic properties. They also have been folk remedies for bed-wetting. The daily ingestion of “grits” (corn meal porridge) may lower blood cholesterol levels. Cornstarch as a paste or added to bath water can sooth itchy skin conditions.

America

Corn silks, Fruits

Culver’s root*Veronicastrum virginicum*

This perennial plant is native to American moist meadows. Indians, and later physicians, used the dried and aged root to make tea that was a gentle laxative and “stimulant for the liver.” It was also diuretic and induced sweating. The fresh root is stated to be “violently laxative.”

America

Roots

Day lily*Heemerocallis fulva* and other species

Day lilies get their name from the fact that each large colorful bloom on the stalk lasts only one day. These plants are native to Asia and have been used in Traditional Chinese Medicine for centuries. The roots and young shoots were given as a pain reliever and as a remedy for edema, difficult urination, mastitis, breast cancer, and other ailments. While the plant is edible, the roots and shoots should not be consumed in large amounts. They contain a toxin that accumulates in the system and can cause blindness.

Asia

Roots, Rhizomes

Dill*Anethum graveolens*

In cooking, dill is a useful spice that loses its flavor when overcooked. As a medicine, dill seeds and leaves were used to aid digestion and relieve intestinal cramps and flatulence. "Gripe water" or dill water was given to soothe babies with the colic. The plant name may come from the Saxon word *dilla*, which means "lull." Dill was used to promote lactation, but there is no scientific evidence that it actually has that effect. Dill was known as "anethon" in ancient Greece, and in the Middle Ages it was used by magicians as a charm against witchcraft.

Europe, Asia

Leaves, Seeds

Dogwood tree*Cornus florida*

Like redbud, the dogwood is another small showy woodland tree and popular landscape plant. And, its bark and roots also have astringent properties and were made into medicines in the form of teas, tinctures, and poultices. In the Civil War, dogwood was used as a quinine substitute for malarial fever and diarrhea. Dogwood twigs were chewed on to make a brushy end and then used as a toothbrush to clean the teeth. Dogwood berries soaked in brandy made a bitter tonic for the digestive tract. Other uses of dogwood are for treatment of headache and fatigue.

America

Roots, Bark, Berries

Elderberry*Sambucus nigra*

In folklore, this shrub was inhabited by "the Elder Mother" and so was rarely cut down. Its flowers and berries have been used to treat colds and flu. They are mildly diuretic and induce sweating. Infusions of flowers have been used to "enhance" the lining of the nose and throat, decreasing the effects of allergies, ear infections, and asthma.

Europe

Flowers, Berries

Elecampane*Inula helenium*

By legend, Helen of Troy was holding this plant when she went off with Paris, ergo the species name *helenium*. Or, perhaps it was named for the island Helena where it was known to grow abundantly. The plant has been used at least since Roman times to treat lung problems. The root contains a mucilaginous substance, inulin, that is useful in relieving coughs by soothing the bronchial linings. Inulin was first isolated from the plant in Germany in 1804. Another plant component called alantolactone shows some action against the bacillus that causes tuberculosis according to German research in 1999, and it had been used in the past as a treatment for TB. Inula extract has proven useful in treating the nausea and vomiting brought on by chemotherapy.

Europe, Asia

Roots, Rhizomes

European Meadowsweet*Filipendula ulmaria, Spiraea ulmaria*

Tea made from the dried flowers of European meadowsweet (*Spiraea ulmaria*) was used to treat arthritis. Salicylic acid was first extracted from the plant in the late 1830's and was used to treat colds, malaria, and arthritis. It is also present in the bark of white willow trees (*Salix alba*) and a few other plants. Salicylic acid is anti-inflammatory, soothes pain, and reduces fever. A chemist at Friedrich Bayer & Co. in Germany acetylated the compound in an attempt to decrease the drug's tendency to irritate the stomach. The resulting acetyl-salicylic acid was patented in 1897. It was named Aspirin: "A" for acetyl, "spirin" for the source plant's scientific Genus name, which at the time was *Spiraea*. Bayer & Co. lost its trademark for Aspirin after World War I, but the company continued to advertise Bayer Aspirin as the only "genuine aspirin." Another name for this plant is European Queen of the meadow. The Genus name now is *Filipendula*.

Europe

Aerial parts

Evening primrose*Oenothera biennis*

Indians used this indigenous plant for a variety of ailments. Native American women chewed seeds of evening primrose to relieve premenstrual syndrome (PMS). Research has shown that one active ingredient of the seed oil is gamma-linolenic acid (GLA), an essential fatty acid in the production of prostaglandins. Deficiency of GLA causes abnormal sensitivity to prolactin, which may contribute to PMS. This may prove to be a very important medicinal plant. Studies have shown some effectiveness of evening primrose in treating eczema, in decreasing use of NSAIDs in rheumatoid arthritis patients, and in delaying the development of diabetic neuropathy. Studies of its use in cancer, hypercholesterolemia, peptic ulcers, ADHD, and other conditions are underway. This herbal remedy should not be taken by patients with epilepsy.

America

Seeds, Leaves, Stem bark, Flowers

False Solomon's Seal*Smilacina racemosa*

This is a plant of North American woodlands. Various Native American tribes used all parts of the plant. Leaf tea was a contraceptive. Smoke from the roots was used to treat insanity and to quiet a crying child. Powdered dried root stopped external bleeding, rashes, and itch. The round fruits of the plant were taken by settlers to prevent scurvy, and they were sometimes called scurvy berries.

America

Roots, Leaves, Berries

Fennel*Foeniculum vulgare*

Fennel is a feathery aromatic perennial plant native to the Mediterranean area. It was introduced into North America by Spanish priests who grew it in their mission gardens. The seed was used to promote lactation in nursing mothers. Fennel seed (like caraway and anise seed) tea also was useful for the treatment of indigestion, relieving bloating and stomach pain. Fennel also has been used as an eyewash for conjunctivitis and sore eyes. Fennel seed in large amounts is a strong uterine stimulant, and therapeutic fennel should not be used in pregnancy.

Mediterranean Europe and Africa

Seeds

Feverfew*Tanacetum parthenium*

This plant originated in southeastern Europe and was brought to North America for its medicinal qualities. As its name implies, the flowers and leaves are able to make a fever go away (“it maketh a fever fugitive”), and the pioneers used feverfew tea to cure fever, colds, and headache. The herb may help in arthritis. Feverfew is especially useful in treating and preventing migraine headaches. Although some recommend migraine sufferers eat a “feverfew sandwich” (two fresh leaves on a slice of bread) daily as a means of preventing migraine headaches, eating fresh leaves can cause mouth sores. Using capsules or pills may be preferable. It has been used since ancient times to promote menstruation, in difficult births, and to expel the afterbirth. Feverfew does have strong effects on the uterus and should not be used during pregnancy. It should not be taken by patients being treated with warfarin or other “blood thinners,” because it too interferes with coagulation.

Europe

Leaves

Flax, Linseed*Linum usitatissimum*

Flax has been cultivated widely for so many centuries that no one is sure where the plant originated. The stems of flax produce fibers that are woven into fine linen, such as that mentioned in the Bible, found in ancient Egyptian tombs, and used for the white sails in Homer’s *Odyssey*. The seeds have been used medicinally. Oil expressed from the seeds has been an additive in cough medicines, used externally for burns, and combined with honey to remove complexion spots from the face. The seeds contain a lignan (SDG) that may prove to have anti-cancer, anti-viral, and antibiotic properties. Linseed oil also has many many non-medicinal uses.

Uncertain

Seeds

Foxglove*Digitalis purpurea* and other species

These beautiful garden plants are biennial or short-lived perennials. They are grown commercially in Europe and India and harvested late in the fall, then dried in the shade so that sunlight and excess moisture does not diminish the medicinal content. The leaves of digitalis plants are the source of the cardiac glycosides digoxin and digitoxin, which help the heart beat become stronger, slower, and more regular. The plant also acts as a diuretic, decreasing the volume of fluid in the blood. Ingestion of the plant and overdose of the drug can be fatal.

Europe

Leaves

Garlic*Allium sativum*

In some studies, garlic has been shown to reduce cholesterol (LDL) and blood pressure (possibly through diuresis) and reduce atherosclerotic plaque. Garlic’s active components allicin, S-allyl cysteine, and diallyl sulfide may be potent inhibitors of the initiation of carcinogenesis. Studies have shown decreased risk of stomach and colon cancer in patients ingesting fresh or cooked garlic cloves (but not commercial garlic tablets or powders). Allicin also reduces clotting, and this may cause problems in some people, especially if surgery is needed. Allicin has antibacterial and antifungal effects, and garlic poultices were used on wounds in WW II when antibiotics were not available.

Asia

Bulbs

Ginkgo tree*Ginkgo biloba*

The ginkgo trees in the garden are still small but eventually will be up to 100 feet tall. Ginkgo is probably the most ancient tree still living on earth. It is native to Asia and has long been used in Chinese medicine. The female trees produce fruit containing seeds that are used for wheezing and urinary problems. In landscaping the female trees are avoided because ripe and rotting fruits produce an odor that most people find disgusting. The primary medicinal compound of ginkgo comes from its fan shaped leaves. There is controversy about whether *Ginkgo biloba* improves memory and helps in Alzheimer disease. Studies have come down on both sides of the issue. The ginkgolides do improve circulation in the brain and peripherally. They also are antagonistic to platelet activating factor (PAF), which is implicated in asthma, transplant rejection, inflammation, and other conditions. Ginkgo interferes with platelets and may lead to bruising or bleeding. Individuals should stop taking ginkgo if surgery is planned, and the recommended dose of ginkgo should not be exceeded.

Asia

Leaves, Seeds

Golden ragwort*Senecio aureus*

This native perennial plant has rounded basal leaves that are green in the winter in Indiana when few other plants are. In the spring the plant sends up a stalk with purple buds that open to golden yellow flowers. The plant is also known as squaw weed and life root. Native Americans and settlers both used leaf tea to treat delayed menses, labor pains, complications of childbirth, and symptoms of menopause. The plant contains pyrrolizidine alkaloids that are highly toxic to the liver, and it should never be taken internally. Some herbalists today recommend its use as a douche for excessive discharge.

America

Roots, Leaves

Goldenrod*Solidago species*

This tall spreading perennial plant makes beautiful displays of golden meadows in the late summer. It has an unwarranted bad reputation. It, in fact, rarely causes allergies itself but blooms at the same time as ragweed, a prime culprit in hayfever. The plant spread from Europe, and Native Americans and Chinese both used goldenrod for wound healing. The genus name comes from Latin *solida* "whole" and *ago* "to make." Goldenrod leaf tea was a common beverage in the American Revolution. Stronger preparations from leaves and flowers were used for a wide variety of ailments. Goldenrod remedies cause allergic reactions in some individuals.

Europe, Asia

Aerial parts

Grape vine*Vitis vinifera*

Grape vines can live to be hundreds of years old. The astringent qualities of the leaves and grape seeds were thought to be useful in treating diarrhea, excessive uterine hemorrhage, varicose veins, and hemorrhoids. In 1652, Culpeper said that rubbing the ashes of burnt grape vine on the teeth would make them "white as snow." Sap from the vine has been used as an eye lotion, and raisins (dried and seedless grapes) have a laxative action. Modern pharmacology indicates that the antioxidant effects of procyanidins in grape seed extract are anti-atherosclerotic and anti-carcinogenic. Grape seed extract has been shown to decrease abdominal pain and vomiting in chronic or relapsing pancreatitis. Oligomers in grape seed also inhibit the enzymatic breakdown of collagen and promote collagen cross-linkages.

Europe, Asia

Leaves, Fruits, Sap



Alfalfa



American skullcap



Angelica



Arborvitae



Asclepius, Greek god of healing



Aztec sweet herb



Baikal skullcap



Balloon flower



Basil



Bee balm



Black cohosh



Black haw



Blackberry lily



Black-eyed Susan



Blazing star



Bloodflower



Boneset



Borage



Butterfly weed



Calendula



Castor bean



Catalpa



Catnip



Cayenne pepper



Chamomile



Chaste tree



Chives



Common milkweed



Corn silks



Day lily



Elderberry



Elecampane



European meadowsweet



Evening primrose



Fennel



Feverfew



Flax



Foxglove



Garlic



Ginkgo



Golden ragwort



Goldenrod



Grape



Hops



Horehound



Hyssop



Joe Pye weed



Ladybells



Lady's mantle



Lavender



Lemon balm



Licorice



Lily of the valley



Lovage



Lungwort



Mint



Motherwort



Mullein



New England aster



Oregano



Partridge berry



Passion flower



Peony



Purple coneflower



Queen Anne's lace



Redbud flowers



Rosemary



Sage



Sassafras



Soy bean



Spicebush



St. John's wort



Sunflower



Sweet Annie



Thyme



Valerian



Vervain



Wild yam vine



Witch hazel



Yarrow



Yucca



In the first year of the garden, 2003, fifty plants were installed. The garden was expanded in 2004-2006, and it now features nearly 100 different medicinal annuals, perennials, vines, shrubs, and trees. Garden labels with educational information about each plant's history and medicinal uses have also been added.



One of the newer garden areas consists of quadrants, each of which features plants used to treat diseases of the nervous system, respiratory system, digestive system, or cardiovascular system.

Hawthorn tree*Crateagus oxycantha, syn. C. laevigata*

This small to medium sized tree with thorns typically grew in a hedge, also known as a “haw.” Traditionally this plant was used to increase the flow of urine and eliminate kidney stones. Since the late 19th century, an extract of hawthorn flowers and berries has been used to increase the action of the heart muscle and improve congestive heart failure and other cardiovascular conditions. The active constituents of the berries have been shown to dilate coronary blood vessels and reduce peripheral resistance in the circulatory system. This leads to increased cardiac output and lowered blood pressure. The effects of hawthorn occur only after the herbal remedy has been taken for some time. Asian medicinal hawthorn (*C. pinnatifida*) is known as Shen-Za.

Europe, Asia

Flowers, Berries, Leaves

Hops vine*Humulus lupulus*

The seed packets (strobiles) of the female plant contain compounds that are sedative and useful in treating insomnia, restlessness, and anxiety. They also contain a bitter principle that relieves indigestion and improves appetite. The well-known bitter taste of beer is due to hops. Beginning in the ninth century, adding hops to the brewing process gave beer clarity, flavor, and a longer shelf life. This was a marked departure from the traditional process of malt fermentation. The antibiotic effect of hops left yeast as the main fermenter in the process. The use of hops in beer making was banned in England until the 16th century in an effort to protect against changing the nature of English ales. Harvesting hops can be dangerous because small hairs on the strobiles can become dislodged and irritate the eyes. Collectors also may suffer cardiac disturbance and breathlessness. Hops sedatives should not be used in pregnancy or by patients with estrogen-dependant breast cancer.

Europe

Female flowers and seeds (Strobiles)

Horehound*Marrubium vulgare*

This plant has a long history of medicinal uses. The Egyptians called the plant “Seed of Horus,” Horus being the god of sky and light and the son of Osiris and Isis, and this is likely the source of the English common name for the plant. Since ancient times, it has been used for gastrointestinal complaints, cough, and other lung ailments. Culpeper wrote, “It helpeth to expectorate tough phlegm from the chest...” In large doses, horehound is a gentle purgative and eliminates intestinal worms. Horehound candy is made by boiling fresh or dried leaves, then cooking sugar into the strained water and letting the mixture cool and harden.

Europe, Asia

Leaves, Aerial parts

Hyssop*Hyssopus officinalis*

Hyssop is mentioned in the Bible ten times in the Old Testament and two times in the New Testament; however, scholars think that the texts were referring to a type of oregano rather than to *Hyssopus officinalis*. In any case, the leaves and blue flowers of what we know today as hyssop have been used to treat colds, cough, and bronchitis because of their expectorant qualities. The plant also was used to treat epileptic seizures, to promote menstruation, and as a poultice for wounds and nascent cold sores.

Mediterranean

Leaves, Flowers

Joe Pye weed*Eupatorium purpureum*

This native plant with a purplish stem was named after Joe Pye, an Indian medicine man in New England who touted it as a cure for typhus. Also known as “gravel root,” this plant was dug up in autumn and the roots were used to increase urine flow and thereby treat urinary stones, cystitis, enlarged prostate, and other genitourinary problems. It also was a treatment for gout and rheumatism. This plant is one of our giant native perennials, growing up to nine feet tall and producing large clusters of small pink flowers in late summer. The blossoms are often covered with butterflies and bees. Another name for the plant is American Queen of the meadow.

America

Roots

Juniper*Juniperus communis* and other species

The pea-sized berries (fleshy cones) of the juniper tree/shrub take several years to ripen and turn blue. In the past, juniper has been used to treat indigestion, urinary tract problems, and a wide variety of other conditions. Juniper oil baths and rubs were soothing for rheumatic patients. Recent studies have shown that *Juniperus chinensis* extract has anti-tumor effects in mice and that *Juniperus communis* has an anti-mycobacterial effect that may make it useful in tuberculosis, but that it is not effective in fighting dental plaque. Juniper berries have been used to flavor gin since the Dutch invented that drink, which was originally called “Holland’s Geneva.”

Europe, Northern Asia and America

Berries

Ladybells*Adenophora* species

The example of ladybells in the garden is *Adenophora liliifolia*, but many species of *Adenophora* have been used medicinally, especially in Chinese medicine. *A. remotiflora* and *verticulata* have been used as antidotes to poisoning and poison bites. *A. stricta* is a stimulant for the respiratory and cardiac systems and has been used to treat tuberculosis, chronic bronchitis, and dry cough.

Europe, Asia Minor

Roots, Rhizomes

Lady’s mantle*Alchemilla vulgaris*

This perennial grows in the Northern Hemisphere, even above the Arctic Circle and in high altitude mountain ranges. The “lady” referred to in the name is the Virgin Mary, and the scalloped edge of the leaf was thought to be reminiscent of Mary’s mantle (cloak). The plant is noted for collecting sparkling drops of dew in the furrows of its leaves. The Genus name, *Alchemilla*, from the word “alchemy” may refer to the plant appearing to change water into diamonds, or it may refer to the use of the plant in magic. Medicinally, the plant was used for its astringent properties, treating bleeding such as excessive menstrual flow, diarrhea, and inflamed wounds. In Germany, Commission E approves the use of Lady’s mantle for mild diarrhea.

Europe

Aerial parts, Roots

Lavender*Lavendula angustifolia* and other species

Lavender is native to France and the Western Mediterranean area. It was an important herbal medicine in the Middle Ages, and the Pilgrims brought it to North America to treat headache, apoplexy, and epilepsy among other conditions. The essential oil of the flowers is useful as a first aid remedy. It is antiseptic and relieves pain and inflammation on burns, stings, and wounds. Lavender is best known for its calming and soothing effect and is helpful in insomnia, irritability, headache, colic, and some types of asthma. The name comes from *lavare*, the Latin word for “to wash.” Lavender added to bath water can relieve muscle tension, calm the nervous system, and promote a good night’s sleep.

Europe, Mediterranean

Flowers

Lemon balm*Melissa officinalis*

The lemon scented leaves of this member of the mint family have long been valued as a tonic to raise the spirits. Culpeper in 1652 wrote that it “causeth the mind and heart to be merry.” Lemon balm has been used for insomnia and may diminish palpitations and stomach complaints related to nervousness and panic. Its anti-thyroid properties may account for its calming effect. It has been used to treat oral and genital herpes and help prevent outbreaks of more sores. It was brought from Europe and used in the colonial period as both medicine and flavoring. Thomas Jefferson grew it in his gardens at Monticello.

Mediterranean Europe and Africa, Western Asia Aerial parts

Licorice*Glycyrrhiza glabra*

The glycyrrhizic compound in roots is said to be 50 times sweeter than sugar. Licorice was a medical plant of ancient Greece, and it has been used for centuries in Traditional Chinese Medicine and Ayurvedic medicine. The plant is widely used and studied in Europe where it is available with the active compound glycyrrhizin or as deglycyrrhized licorice (DGL). Among its many uses is relieving arthritis and other inflammatory conditions. Reportedly, it stimulates adrenal gland secretion and slows the breakdown of steroid hormones. Glycyrrhin also boosts levels of interferon, contains powerful antioxidants, is anti-viral, and has some phytoestrogenic actions. DGL promotes the production of mucus in the stomach and esophagus and is used to protect the digestive tract from ulceration by gastric acid. Licorice interferes with several prescription medicines, and chronic ingestion of licorice root causes serious complications. Licorice has not been popular in the United States. Most licorice candy here is flavored with anise instead of with true licorice.

Europe, Asia Rhizomes, Roots

Lily of the valley*Convallaria majalis*

This contains cardiac glycosides with an effect similar to digitalis, but the compounds are milder than digitalis and are cleared from the body more quickly. Even so, lily of the valley should never be ingested or used except under professional care. This herbal reportedly increases blood flow to the heart; makes the heart’s beat slower, more regular, and more powerful; causes diuresis and lowers blood pressure. It also has been used to treat soldiers exposed to poison gases. Legend says that Apollo gave this plant as a gift to the Greek god of healing Asclepius.

Europe Flowers, Leaves, Rhizomes

Lovage*Levisticum officinalis, L. canadense*

This tall perennial plant has been used for digestive complaints such as flatulence, colic, and indigestion. Commission E approves lovage for use in urinary tract problems because of its antibacterial and diuretic properties. In America in the South, lovage was also known as “angelico” and was prized by African-Americans as an aphrodisiac, a tonic, and a good-luck charm. Another folk name for this angelico was “boarhog root,” reportedly because it smelled like a wet hog. Lovage (angelico) somewhat resembles true angelica but is in a different Genus. Lovage reportedly promotes menstruation and relieves menstrual pain. It should not be taken in pregnancy.

Mediterranean, America Leaves, Seeds, Roots

Lungwort*Pulmonaria officinalis*

In the past, European healers believed that the appearance of a plant gave a sign of what it should be used for in healing – this was called the “Doctrine of Signatures.” For example, the spots on the leaves of this plant reminded healers of the spots in diseased lungs (tuberculosis or bronchopneumonia), so they called the plant lungwort (*Pulmonaria*) and used it to treat lung ailments. Native Americans had the same idea, referred to as the “Law of Similars.” Lungwort also was used as a topical astringent for wounds and hemorrhoids. A totally different plant lung moss (*Lobaria pulmonaria*) is also a medicinal plant (lichen) and is sometimes called “lungwort”.
Europe Leaves

Milkweeds*Asclepias syriaca* (Common milkweed, Silkweed)*Asclepias tuberosa* (Butterfly weed, Pleurisy root)*Asclepias curassavica* (Bloodflower)

Most of the milkweeds have a milky sap in their stem that is quite toxic to heart action but was sometimes used externally to treat conditions like warts and ringworm. Native Americans gathered the root of the common milkweed plant to make a tea that was used as a laxative and as a diuretic treatment for kidney stones and dropsy (edema due to heart failure). An infusion of the root was a treatment for respiratory diseases, leading to another name “pleurisy root.” Butterfly weed is another milkweed with large clusters of orange flowers that also is known as pleurisy root. Bloodflower has clustered yellow and red flowers, and its root was given for scrofula and as an emetic and laxative. A preparation of the plant also was an abortifacient. The name of this Genus is in honor of Asclepius (Asklepios; known to Romans as Aesculapius), who was the Greek god of healing. By legend, he was snatched from his mother’s womb by a jealous Apollo and sent to be raised by the centaur Chiron, who taught him all medicinal knowledge. Asclepius was deified after Zeus felt remorse for having killed him, and for many centuries at Aesclepien temples all comers were treated with a mixture of ritual, herbal medicines, and surgery. Asclepius had two sons who were physicians at the siege of Troy. He also had two daughters: Panakis (as in panacea) and Hygeia (as in hygiene). In statuary, Asclepius is often shown holding a healing staff with a coiled serpent (the snake being a symbol of renewed life).

America

Roots

Mint

Both peppermint (*Mentha x piperita*) and spearmint (*Mentha spicata*) were brought from Europe and have escaped cultivation. Mint’s important quality is its ability to aid in digestion, increasing the flow of gastric juices and bile and relieving flatulence, bloating, and colic. Herbal mint tea may decrease morning sickness. Mint lotion applied externally can relieve pain and headache. Peppermint should not be given to young children, and peppermint oil should not be taken internally. The name comes from *mente*, the Latin word for “thought.” Bundles and garlands of mint were worn to help clear and sharpen the mind. Mint becomes very invasive in the garden.

Europe, Africa

Leaves

Motherwort*Leonurus cardiaca*

Traditionally, motherwort, as its name implies, was given for “female weaknesses and disorders.” It was used to treat hysteria, palpitations, fainting, tremors, and to induce a “quiet passivity of the mind.” Culpeper wrote about motherwort that “there is no better herb to drive melancholy vapours from the heart, to strengthen and make the mind cheerful, blithe and merry...” Commission E approves it for thyroid dysfunction and nervous heart complaints.

Europe, Asia

Aerial parts

Mullein*Verbascum thapsus* and other species

Common mullein is a biennial plant. In its second year it sends up a dramatic six foot stalk of yellow flowers from its cluster of fuzzy, pillowy basal leaves that often measure about a foot in length. The large leaves reportedly were used as disposable diapers, and leaves inserted into shoes were felt to increase circulation and keep the feet warm. Oil in which the flowers were allowed to soak was a remedy for earache and hemorrhoids. An infusion of mullein leaves has expectorant qualities and was used for bronchitis and sinusitis. A tincture made of the root in the first year's growth was given for cystitis and urinary incontinence. The name mullein comes from the Middle English word *moleyne* (Latin *mollis*), meaning "soft." Another name for the plant is Quaker Rouge, because rubbing a leaf on the cheeks brings a blush to the skin without using official makeup. Romans and people through the ages dipped the tall stalks in oil and used them as torches. The flowers contain the insecticidal compound rotenone, and cooled flower tea can be used in the garden as a pesticide; however, it is highly toxic to aquatic wildlife and should not be allowed to contaminate streams or ponds.

Europe, Asia

Flowers, Leaves, Roots

New England aster*Aster novi-angliae*

This beautiful perennial plant blooms profusely in late summer and fall. Root tea was used by Native American tribes to treat fever and diarrhea. Asters also were remedies for headache and insanity. The smoke of burning aster plants was used to revive someone who had fainted. According to legend, an old squaw turned two Indian girls into Aster and Goldenrod.

America

Roots

Oregano, Wild marjoram*Origanum vulgare*

Oregano was brought to North America from Europe and cultivated by New England settlers for its medicinal as well as culinary uses. Oregano stimulates the flow of bile and can decrease flatulence. Oregano was used to treat tonsillitis and respiratory conditions, and oregano oil has been shown to have antibacterial, anti-fungal, and anti-parasitic effects. Diluted oregano oil was a traditional cure for toothache. Internal use of the essential oil is not recommended. This herbal medicine promotes menstruation and should not be taken during pregnancy.

Asia, Europe, Africa

Aerial parts

Parsley*Petroselinum crispum*

Crispy parsley is a well known and nutritious culinary herb. The leaves have a high content of vitamins A, C, and E, as well as breath freshener chlorophyll, bone strengthening flourine, and minerals. Parsley seeds and root have diuretic properties and have been used to treat high blood pressure, cystitis, gout, and other forms of arthritis. It is approved by Commission E for urinary infections and stones. In ancient Greece, parsley was associated with death, and wreaths of parsley were placed on graves. Parsley is a strong uterine stimulant, and its seeds and root should not be taken during pregnancy or by individuals with kidney disease.

Mediterranean

Seeds, Leaves

Partridge berry, Squaw vine*Mitchella repens*

Colonists observed the use of this low growing evergreen herb by Native American women and called the plant “Squaw vine.” Many tribes used it prepared as a salve for sore and cracked nipples of nursing mothers and as a medicine taken internally to hasten childbirth, ease labor pains, regulate menses, and ease cramps. It may be an abortifacient and should not be used by pregnant women, except in labor.

America

Aerial parts, Berries

Passion flower vine, Maypop*Passiflora incarnata*

The aerial parts of this plant are valued for their tranquilizing and anti-spasmodic effects. It was long used by Incas and other Native Americans and today is recommended by herbalists for insomnia and anxiety. The elaborate structure of the flower was thought to be symbolic of the Passion of Christ, ergo the name. The vine also is known as Maypop. The plant was dropped from the U.S. *National Formulary* in 1936, and it was banned as a sleep aid by the FDA in 1978; however, Commission E in Germany approves use of passion flower for nervousness and insomnia. A related plant ornamental plant *Passiflora caerulea* contains cyanide.

America

Aerial parts, Flowers

Peony*Paeonia officinalis* and other species

Various species of peony are used medicinally. *Paeonia officinalis*, which was native to European areas, has some antispasmodic and sedative effects. From the time of Hippocrates it was recommended as a treatment for epilepsy. It also was used to stimulate the uterus to bleed in menstruation and to expel the placenta in childbirth. In Chinese medicine, for centuries white peony (*Paeonia lactiflora*, *P. albiflora*) was used for gynecologic conditions. Along with three other herbs (rehmania, chuan xiong, and Chinese angelica), white peony is a key ingredient in “four thing soup,” which is a female tonic used in China. It helps to regulate menses and decrease pain and cramping.

Europe, Asia

Roots, Seeds

Periwinkle*Vinca minor*; *Catharanthus roseus*

There are two different periwinkles. The aerial parts of the common garden plant known as Lesser periwinkle (*Vinca minor*) has unproven medicinal value but was used as an astringent and taken to improve circulation and brain function. A look-alike plant native originally native to Madagascar (Madagascar periwinkle) has true medicinal value. It was the source of the important chemotherapeutic agents against Hodgkin’s disease (vinblastine) and against lymphoma/leukemia and other cancers (vincristine). Originally placed in the Genus *Vinca* as *Vinca rosea*, Madagascar periwinkle was later reclassified as *Catharanthus roseus*. In 1979, Eli Lilly & Co. brought out vinblastine under the Trade Name “Eldisine.” Madagascar periwinkle extracts have also been used in other conditions as tranquilizer, hypotensive, and coagulant agents and to lower blood sugar in diabetes.

Europe; Madagascar

Leaves; Aerial parts, Roots

Pot marigold – see *Calendula*

Purple Coneflower*Echinacea angustifolia, E. purpurea*

The flower of echinacea is one of the most beautiful in the medicinal plant garden. The active ingredients in this plant have anti-inflammatory and immune-stimulant properties. Besides these cortisone-like qualities, it is also bactericidal and insecticidal. The plant is indigenous to the central plains of North America and was used by Native Americans. Now, Echinacea is the top selling herbal remedy in the United States. The roots and sometimes the flowers are used to prevent and treat colds and the flu, and to treat yeast infections, herpes, acne, insect bites, and other inflammatory diseases. Some studies show that Echinacea decreases the symptoms in acute colds and flu when taken after onset of symptoms, but it does not protect against catching a cold or flu when taken on a long term basis. A 1999 *Consumer Reports* study showed up to 500% variation in the amount of active compounds among over the counter herbal Echinacea products in the USA, with marked variation even among pills in the same bottle. Echinacea should not be used by transplant patients or by those with autoimmune diseases.

America

Roots, Aerial parts

Queen Anne's lace, Wild carrot*Daucus carota*

This actually beautiful biennial “weed,” also known as wild carrot, originated in Afghanistan but was cultivated around the world because of its many uses. The root is rich in beta-carotene, a precursor of vitamin A, and the plant therefore was useful in preventing the most common cause of blindness in the world – vitamin A deficiency. The leaves and seeds have diuretic qualities. The plant also is bactericidal, a hypotensive agent, and especially effective in expelling intestinal worms. At one time the seeds were used as a morning-after contraceptive, and in some animal studies the seeds have prevented implantation of the embryo. Studies in China show inhibition of progesterone production by seed oil. The plant should not be used during pregnancy. It is extremely important not to confuse this plant with its deadly look-a-like poison hemlock, which is widespread throughout the USA.

Afghanistan

Roots, Leaves, Seeds

Queen of the meadow – See European meadowsweet and Joe Pye weed.

Redbud tree*Cercis canadensis*

Redbud trees grow wild in southern Indiana woodlands and are a popular landscape plant because of their small size and beautiful reddish-purple flowers in early spring - flowers that were eaten fresh or pickled by Indians. The inner bark of the redbud tree was used to make an astringent tea for the treatment of dysentery and other diarrheas, and this use was promoted by the Eclectic physicians. Redbud also was a folk remedy for leukemia. No modern research indicating medicinal qualities of redbud was found. The redbud trees in the garden show the characteristic heart shaped leaves of this plant.

America

Bark

Rosemary*Rosmarinus officinalis*

For centuries, the essence of rosemary has been inhaled to concentrate the mind and strengthen the memory. It may increase circulation to the head and may help with migraine headaches. The whole herb contains powerful anti-oxidants. Commission E in Germany approves the use of rosemary for blood pressure problems, dyspepsia, poor appetite, and rheumatism. In many cultures, “rosemary is for remembrance,” and it is used in wedding and funeral ceremonial practices.

Mediterranean

Leaves

Sage*Salvia officinalis*

The name of this plant's Genus, *Salvia*, is from the Latin word *salvare*, meaning "to cure." Sage is native to southern Europe, and ancients believed sage was related to longevity and immortality. An Italian aphorism in the 10th century was "why should a man die while sage grows in his garden?" The Chinese also were impressed by this herb and traded fine green tea for sage at a four to one rate. Sage was brought to Indiana by the pioneers who used sage tea for colds and upset stomachs. The plant also was very important as a meat preserver in sausage. Current uses of sage include as a gargle for sore throat, canker sores, and sore gums. Fresh leaves can be rubbed on stings and bites. And, sage is used as a remedy for irregular menses, symptoms of menopause, and herpes infections. English herbalists of the 1500s recognized sage is "good for the head and brain, and quickeneth the nerves and memory." Modern studies indicate that sage has acetylcholinesterase inhibitor properties and may have potential in treating Alzheimer's disease.

Mediterranean, especially Adriatic coast

Leaves

Sassafras tree*Sassafras albidum*

Sassafras trees show three forms of ovoid, mitten-like leaves typical of the tree (sometimes called "knife, fork, and spoon" leaves). They grow to be medium sized trees and form groves by sending up new trunks from the spreading root system. Sassafras had many medicinal uses for the Native Americans. The bark and root are very aromatic, and sassafras was used to flavor toothpaste, chewing gum, Cajun gumbo file, and other products. It is now known that oil of sassafras contains safrole, a compound that can induce malignant tumors in lab animals, and regular use of delicious sassafras tea is not recommended. Now in the USA, retail sassafras products have had the safrole removed. In colonial times a great deal of sassafras was shipped to London, where it was promoted as a cure for syphilis and was an extremely valuable cargo. Indiana pioneers took sassafras tea as a general tonic in the spring to "thin the blood." Tea was also used for rheumatism and fevers. The tiger swallowtail butterfly lays her eggs on sassafras trees.

America

Bark, Roots

Skullcap – See Baikal skullcap and American skullcap**Sorrel and Dock***Rumex* species

The Genus *Rumex* comprises sorrels and docks. Various species of these plants have a sour taste and astringent properties, and they have been used as cleansing tonics, laxatives, and treatments for skin problems. Sheep sorrel (*R. acetosella*) was one of four ingredients in "essiac," an herbal anti-cancer mixture that was popular in the 1920s. Twenty-first century lab tests of essiac show some *in vitro* anti-cancer effects. French sorrel (*R. scutatus*) has a more lemony taste and is the main ingredient in sorrel soup. The leaves of sorrels contain small amounts of oxalate. Dock leaves contain higher amounts of oxalate (like rhubarb leaves) and should not be eaten because oxalate poisoning and renal failure can result. Several types of large perennial weedy dock plants have been used as medicinal herbs, especially for skin conditions. For example, crushed leaves were laid on hives and pounded root on cuts. The plant was also the source of a "blood purifier," a tonic for arthritis and liver complaints, and as a laxative. Wood sorrel (*Oxalis acetosella*) is in a different Genus that is characterized by clover-like leaves, but it also contains oxalate and has the typical sour taste of sorrels.

Europe, America**Roots, leaves**

Soy bean*Glycine max*

This annual plant, which is indigenous to Asia and widely cultivated here in the Midwest, is the source of many soy-based products, including glycerin, linoleum, paint, soaps, ink, varnish, biofuel and other petroleum and rubber substitutes. Medicinally, soy contains isoflavones, sterols, and coumestrol that are phytoestrogens that mimic the effects of human estrogen. This makes them potentially useful in combating the symptoms of menopause and protecting against osteoporosis. Soy also is believed to inhibit the development and growth of estrogen-sensitive cancers such as some breast, ovary, and prostate cancers. The compound genistein from soy inhibits the growth of new blood vessels that supply tumors. Soy can interfere with the effectiveness of tamoxifen, and soy and tamoxifen should not be used concurrently. Consumption of low fat soy products (25 grams of soy a day) may lower serum cholesterol by about 7%.

Asia

Beans**Spicebush***Lindera benzoin*

Indians and settlers used the berries, twigs, and bark of this shrub for many ailments. A diaphoretic decoction of bark was used especially for typhoid and other fevers and for expelling intestinal worms. In the 1890s, Parke Davis sold spicebush preparations for use as “an exhilarant and refrigerant.” Benzoin used medically generally comes from the gum of *Styrax benzoin*, which is a different plant that is native to South America.

America

Bark, Twigs, Berries

Squaw vine – See Partridge berry**St. John’s Wort***Hypericum perforatum*

The bright yellow flowers of this plant open around the time of St. John’s Day, June 24, which was changed from the day honoring Balder, the Norse god of light, as the Christian transformation of Europe took place. Traditionally it was thought that the plant could chase away darkness, gloom, and the devil, and it was used to cure melancholy, hysteria, and madness. St. John’s wort in oil has a cicatrizing effect on wounds and was used externally to treat burns and battle injuries in the Civil War, the Crusades, and ancient Greece and Rome. The herbal extract taken internally has proven useful in treating mild to moderate (but not severe) depression. It may also have antiviral activity against viruses that have an envelope, for example herpes and hepatitis B virus. The plant increases sensitivity to light and may help with seasonal affective disorder (SAD). Cautions in the use of this herbal include severe photosensitivity of the skin in some individuals and interaction with other medications. “Wort” is an old English word for “plant.”

Europe

Flowers

Sunflower*Helianthus annuus*

This cheerful looking plant is one of the most useful ones ever, and it was cultivated in North America long before the arrival of Europeans. Native Americans made root tea to treat various lung problems, rheumatism, spider bites, and gastrointestinal worms. The seeds were, and still are widely used as a source of food and oil. Among other things, sunflower oil was a lubricating laxative. The plant was useful as a tobacco and coffee substitute, to control flies, and to make cordage. Yellow dye was made from the petals.

America

Roots

Sweet Annie, Sweet wormwood *Artemisia annua*

Leaves gathered before the plant is in flower were used by settlers to make tea for the treatment of colds, flu, malarial fever, dysentery, and diarrhea. The plant is indigenous to Asia, and it has been used for centuries in Chinese medicine, where it is known as Qing Hao. This herbal medicine has been much in the news recently. Studies have proven that this plant is an effective therapy for malaria, even in cases that are resistant to treatment with quinine or chloroquine and cases involving the brain. The extracted compound of the leaves is called artemisinin (and derivatives artemether and artesunate). The World Health Organization now recommends ACT for treatment of malaria, meaning “artemisinin-based combination therapy.” The antimalarial constituent also has strong herbicidal effects. Another common name for this plant is sweet wormwood, and sweet-smelling cuttings often are used in dried floral arrangements. A related plant *Artemisia absinthium* or wormwood is the source of absinthe, an addictive and toxic drink popular in 19th century France. As the names suggest, both wormwoods contain antiparasitic compounds.

Asia

Leaves

Thyme *Thymus officinalis, T. vulgaris*

Thyme is yet another plant that was brought from southern Europe for its medicinal and culinary qualities. The famous English herbalist of the 17th century, Nicholas Culpeper, wrote that thyme was “a notable strengthener of the lungs ...neither is there a better remedy growing for that disease in children which they commonly call chin-cough [whooping cough].” Today, Germany’s Commission E approves of using thyme for cough and bronchitis. The oil from the plant is antiseptic, antifungal, and antiparasitic – therefore useful for athlete’s foot, ringworm, scabies, and lice. An infusion made from thyme leaves has been used as a general tonic, and research in Scotland has suggested that thyme is antioxidant and does support the body’s normal function and counteract the effects of aging. The essential oil should not be taken internally.

Europe

Aerial parts

Valerian *Valeriana officinalis*

At various times since ancient Greece, this herbal has been used as a diuretic, antidote to poison, pain reliever, decongestant, and cure-all. Today it is used for its calming effect due to valepotriate compounds that are present, especially in the roots. As the roots dry, they develop an unpleasant odor that has been compared to the smell of carrion or dirty socks. The ancient Greek herbalist Dioscorides called the plant “phu,” and some believe he was referring to the smell. It was listed in the *US Pharmacopeia* and in *the National Formulary* until 1950, and it was used as a treatment for panic attacks, nervous tension, and insomnia. There is controversy over whether valerian is addictive, but it is advised that it should not be used for more than a few weeks at a time because toxicity, including paralysis, may develop. Valerian reportedly is the top selling herbal medicine in Europe. In the US the top seller is Echinacea. Valerian plant is highly attractive to both cats and rats.

Europe, Asia

Roots, Rhizomes

Vervain*Verbena officinalis*

Verbena officinalis was called “the sacred herb” by Dioscorides in the 1st century AD. Throughout history it has been used as a panacea with tonic, restorative, anti-anxiety, anti-stress properties. Other uses were for migraine headache and to improve absorption of nutrients in the digestive tract. Research has shown some estrogenic and progesterone-like actions, and the herb has been used as a uterine stimulant and to promote milk production. Cardiac patients and pregnant women should avoid vervain.

Europe, Africa, Asia

Aerial parts

Vinca -- See Periwinkle**Wild ginger***Asarum canadense*

This low-growing plant has characteristic heart shaped leaves hiding a dark maroon bell-shaped flower. Native Americans used the root for many medicinal purposes, especially for digestive tract complaints, colds, fever, and sore throat. The component aristolochic acid has some anti-tumor effect. Leaves were put on wounds as a poultice, and studies show that a substance in the leaves does have some antibiotic activity. The root also was used as a flavoring in cooking, when true ginger from the tropics was not readily available.

America

Roots, Leaves

Wild yam vine*Dioscorea villosa*

Native Americans made wild yam root tea to ease labor pains and relieve morning sickness. European settlers used the plant for rheumatism, muscle spasms, and intestinal disorders - leading to its being called “colic root.” Dioscin in the roots of this species breaks down to diosgenin, which can be pharmaceutically converted to sex hormones. Using wild yams for its diosgenin substrate made it possible to manufacture progesterone-containing birth control pills at a reasonable cost prior to 1970, when progesterone could be made synthetically. Dioscin also made possible the manufacture of corticosteroid hormones with anti-inflammatory properties. It is recommended that this herbal remedy should not be taken during pregnancy or while taking other estrogen-containing medicines, although plant-derived diosgenin is not converted to hormones in the body.

America

Tubers, Roots

Witch hazel*Hamamelis virginiana, vernalis*

This plant is a shrub or small tree native to North American woodlands. The leaves and the bark of young twigs are used to make witch hazel preparations. These contain tannins and flavonoids and are used externally to soothe and tighten skin and shrink distended blood vessels. It is recommended for bruises, bites, stings, sunburn, and muscular stiffness. The name probably comes from the fact that when a new well was needed, branches of witch hazel were used by dowsers to find water underground, a process known as “witching water.” Another suggestion is that the spontaneous popping sound made by the seed pods opening in the woods made folks think that witches were about. Native Americans took witch hazel steam baths for relief of feverish colds, heavy phlegm, and coughing.

America

Leaves, Twig bark

Yarrow*Achillea millefolium*

According to legend, Achilles was given the gift of yarrow before the battle of Troy to help heal the wounds of his soldiers. According to Homer's *Iliad*, it was the powdered root of yarrow that was effective, but most herbal texts today refer to using the aerial parts rather than the root. The leaves of yarrow applied externally do stanch the flow of hemorrhage and aid in wound healing. Old names for the plant include wound-wort, knight's milfoil, stanchweed, and *herba militaris*. Yarrow flower tea has been used as an expectorant, analgesic, and sweat-inducing medicine to treat colds and flu. Rubbing fresh yarrow leaves on the skin will serve as a mosquito repellent, but it also may cause dermatitis in some individuals. Yarrow, like mint, is invasive in the garden.

Europe, Asia
Leaves, Flowers

Yucca*Yucca filamentosa* and other species

Common names for this plant include Adam's needle, Spanish bayonet, Amole, Soapweed, and the Joshua tree. The plant leaves and root were used in poultices and baths to relief inflammation and sprains as well as various skin lesions. The root is rich in saponins, and Native Americans used yucca root as soap and as a shampoo to make hair clean and strong and to cure scalp conditions. Navajo and Hopi Indians used yucca ceremonially for its "magical" power to cleanse and purify. Indians also used the leaves and seed pods as dyes. Yucca also is used in beverages to cause foam (as in root beer). Saponin compounds from *Yucca filamentosa* are being investigated as treatment for the parasitic disease leishmaniasis, and they are also studied for use in arthritis.

America
Leaves, Roots

Additional Important Medicinal Plants

Autumn crocus *Colchicum autumnale* **Colchicine**
Corms, Seeds Native to Europe
Use: pain killer and anti-inflammatory for gout
Inhibits spindle fibers in cell division; prevents migration of white blood cells

Belladonna *Atropa belladonna* **Atropine, scopolamine**
Leaves, Roots Native to Europe and Middle East
Use: Dilate pupils, CPR, motion sickness
Acts on parasympathetic nervous system

Bloodroot *Sanguinaria Canadensis* **Sanguinarine**
Rhizome Native to America
Use: previously in toothpastes and cough medicines
Antibacterial and antifungal

Cascara sagrada *Frangula purshiana* **Cascara**
Bark Native to Northwest America
Use: previously a laxative, banned by US FDA in 2002
Stimulates intestinal peristalsis

Chinchona *Cinchona officinale* **Quinine, quinidine**
Bark Native to South America
Use: antimalarial anti-pyretic;
relieves muscle spasms and leg cramps, cardiac depressant

Coca *Erythroxylum coca* **Cocaine**
Leaves Native to South American Andes
Use: anesthetic, euphoric; in Coca-Cola (1885-1904)
Blocks sodium channels in neurons; binds to dopamine receptors in brain

Curare *Chondrodendron tomentosum* **Tubocurarine**
Leaves, Roots Native to South American Amazon Basin
Use: muscle relaxant adjunct in anesthesia; treatment for tetanus
Interferes with acetylcholine stimulation of muscle contraction

Ephedra *Ephedra sinica* **Ephedrine**
Stems Native to China deserts
Use: cold and allergy medicines; now outlawed weight loss energy booster “fen-phen”
Action like amphetamines

Ginger *Zingiber officinale* **Ginger**
Rhizomes Native to Asia
Use: anti-nausea, digestive stimulant

Hemp *Cannabis sativa* **Cannabis, THC**
Flowers, Seeds. Leaves Native to central & western Asia
Use: now outlawed sedative, analgesic, antispasmodic, psychoactive, appetite stimulant
Binds to various receptors in brain and body

Jaborandi *Pilocarpus pennatifolius* **Pilocarpine**
Leaves Native to South & Central America
Use: glaucoma, xerostomia, sweat test for cystic fibrosis
Acts as a muscarinic receptor agonist in the parasympathetic nervous system

Mayapple *Podophyllum peltatum* **Podophyllin**
Rhizome Native to North America **etoposide, teniposide**
Use: cancer chemotherapy

Opium poppy *Papaver Somniferum* **Morphine, codeine,**
Fruits, Seeds Southwest Asia **Heroin, papaverine**
Use: pain killer, cough suppressant; muscle relaxant
Binds to opioid receptors, endorphin receptors

Psyllium *Plantago psyllium* **Psyllium**
Seeds, Husks Native to Mediterranean, Middle East
Use: laxative, lowers cholesterol and blood sugar
Prevents absorption

Yew *Taxus brivifolia, T. baccata* **Taxol (paclitaxel)**
Bark, Leaves Native to Northwest America
Use: cancer chemotherapy
Interferes with microtubules, triggers apoptosis

Types of Medicinal Preparations

- Compress: Cloth soaked in a cool infusion or decoction and applied externally
- Crude herbs: Herb dried and chopped
- Decoction: Herbal bark or root boiled in liquid, usually 10-50 minutes
- Elixir: A remedy made of the “drug,” alcohol, water, and sugar
- Infusion: Herbal flowers, stems, or leaves covered with lightly boiled water and allowed to steep
Steeping for 5-10 minutes produces herbal tea. Some reserve the term infusion for liquids that steep longer and are stronger.
- Oil: Herb placed in vegetable oil with a small amount of vinegar and allowed to sit for weeks in a warm place; applied externally
Oils may become contaminated by bacterial or fungal growth.
- Essential Oils: Concentrated volatile aromatic oils distilled from herbs
Use of undiluted essential oils can be dangerous!
Essential oils should be diluted first and used only externally.
Essential oils should not be used or inhaled by children.
- Ointment: Crushed herbs simmered in melted petroleum jelly for several minutes then cooled; or tincture added to commercial lotion; applied externally
- Powder: Ground up crude herbs
- Poultice: Fresh herbs moistened or boiled briefly and applied externally, often wrapped in muslin or cheesecloth to make them more manageable
- Tea: See infusion
- Tincture: Herbal extract steeped in alcohol (or warmed cider vinegar or wine vinegar) for two days to six weeks; strongest and longest-lasting preparation, often good for three years
- Tonic: A remedy that stimulates, refreshes, invigorates, restores

Selected References

- Berman, Alex and Michael A. Flannery: *America's Botanical-Medical Movements*. Vox Populi, Pharmaceutical Products Press, 2001.
- Brown, Deni: *Encyclopedia of Herbs and Their Uses*, Dorling Kindersley, 1995
- Castleman, Michael: *The New Healing Herbs*, Rodale, 2001
- Chevalier, Andrew: *Encyclopedia of Herbal Medicine*, DK Publishing, 2000
- Crellin, John K. and Jane Philpott: *Herbal Medicine Past and Present, Vol. II, A Reference Guide to Medicinal Plants*, Duke University Press, 1990.
- Densmore, Frances: *How Indians Use Wild Plants for Food, Medicine and Crafts*, Dover Publications, Inc., 1974
- Duke, James A.: *The Green Pharmacy Herbal Handbook*, Rodale, 2000
- Dwyer, James and David Rattray: *Magic of Medicine and Plants*, Reader's Digest Association, Inc., 1986
- Fetrow, Charles W. and Juan R. Avila: *The Complete Guide to Herbal Medicines*, Pocket Books, 2000
- Fluck, Hans: *Medicinal Plants and Their Uses*, W. Foulsham & Co. Ltd., 1988
- Foster, Steven and James A. Duke: *Peterson Field Guide, Eastern/Central Medicinal Plants*, Houghton Mifflin Co, 1990
- Foster, Steven and Varro E. Tyler: *Tyler's Honest Herbal: A Sensible Guide to the Use of Herbs and Related Remedies*, 4th ed., Haworth Press, Inc., 1999
- Hanson, Bryan A., PhD: *Understanding Medicinal Plants: Their Chemistry and Therapeutic Action*, The Haworth Herbal Press, 2005
- Harstad, Carolyn: *Go Native! Gardening with Native Plants and Wildflowers in the Lower Midwest*, Indiana University Press, 1999
- Kowalchik, Claire and William H. Hylton (Eds.): *Rodale's Illustrated Encyclopedia of Herbs*, Rodale Press, 1987
- LaGow, Betty (Chief editor): *PDR for Herbal Medicines*, 3rd edition, Thomson PDR, 2004
- McIntyre, Anne: *The Medicinal Garden: How to Grow and use Your Own Medicinal Herbs*, Owl Books, Henry Holt and Company, Inc., 1997
- Meletis, Chris: *Complete Guide to Safe Herbs: What Everyone Should Know about Herbal Interactions and Side Effects*, DK Publishing, Inc., 2002.
- Minter, Sue: *The Healing Garden: A Natural Haven for Body, Senses and Spirit*, Charles E. Tuttle Company, Inc., 1993
- Moerman, Daniel: *Native American Ethnobotany*, Timber Press, 1998. Murray, Michael T: *The Healing Power of Herbs*, PRIMA HEALTH, Prima Publishing, 1995.
- Peterson, Roger and Margaret McKinney: *A Field Guide to Wildflowers of Northeastern and North-Central North America*, Houghton Mifflin Co, 1968

Stockwell, Christine: *Nature's Pharmacy: A History of Plants and Healing*, Royal Botanical Garden, Kew, London Century Hutchinson, 1988

Stuart, Malcolm (Editor): *The Encyclopedia of Herbs and Herbalism*, Grosset and Dunlop, 1979

Sumner, Judith: *The Natural History of Medicinal Plants*, Timber Press, 2000.

Sumner, Judith: *American Household Botany: A History of useful Plants 1620-1900*, Timber Press, 2004.

Tilford, Gregory L.: *From Earth to Herbalist: An Earth-Conscious Guide to Medicinal Plants*, Mountain Press Publishing Company, 1998

Tillotson, Alan Keith, Nai-shing Hu Tillotson, and Robert Abel, Jr.: *The One Earth Herbal Sourcebook*, Twin Streams, 2001

Tyler, Varro E.: *Hoosier Home Remedies*, Purdue University Press, 1985

Tyler, Varro E., Ph.D.: *The Honest Herbal*, Pharmaceutical Products Press, 1993

Wampler, Maryrose and Fred: *Wildflowers of Indiana*, Indiana University Press, 1988

Yatskievych, Kay: *Field Guide to Indiana Wildflowers*, Indiana University Press, 2000

<http://www.hort.purdue.edu/newcrop/med-aro/default.html>

Purdue's Guide to Medicinal and Aromatic Plants

<http://nccam.nih.gov>

National Center for Complementary and Alternative Medicine

<http://www.herbalgram.org>

American Botanical Council

<http://www.who.int/medicines/library/trm/medicinalplants/medplantsdocs.html>

World Health Organization – Herbal medicines

<http://www.wye.ic.ac.uk/PressReleases/herbal.html>

Imperial College Physic Garden Plant List (England)

<http://www.ars-grin.gov/duke/>

Dr. Duke's Phytochemical and Ethnobotanical Database

<http://www.indmedplants-kr.org/>

Database of Medicinal Plants (Rao)

<http://www.vedamsbooks.com/medicina.html>

Book list for Medicinal Plants of India

Thanks to Our Donors and Volunteers!

The Medicinal Plant Garden is made possible by the volunteer work of a group of Purdue Master Gardeners of Marion County and by contributions from many individuals, organizations, and local businesses.

Special thanks to the core gardening group:

Arlene Bow, Jean Bradford, Robert Catus, Debby Falls, Kathleen Hull, Carol Moulton

And many thanks to others who contributed plants, gardening materials, financial support, and gardening volunteer hours:

Altum's Horticulture Center and Gardens
Carolee's Herb Farm
Garrity Stone
Mark M. Holeman Landscaping
Master Gardener Association of Marion County
Sullivan's Hardware Do-It Center
URS
Woman's Department Club of Indianapolis

Barb Allen
Dan and Sophia Anderson
Jean Bradford
Marie Deardorf
Allison and Alexa Dorris
Connie Edwards
Rosemary Ervin
Shirley Fry
Mary Anne Gfell
Annette Graham
Barbara Hamilton
Angela Herrmann
Sharon and Ken Hicks
Meredith Hull
Gail Hunt
Karen Jensen
Sheila Kinney
Barb Masters
Jackie Powers
Sherry Randolph
Anne Rollison
Teresa Sherow
Judie Sloan
Marilyn and Charles Spurgeon
Hank and Pat Stevens
Laura Vannote
Virginia Terpening

For more information about the garden, contact Kathleen Warfel Hull, MD at hullk@ccrtc.com or through the IMHM at 317-635-7329 or Edenharter@imhm.org

Directions to the Medicinal Plant Garden at the Indiana Medical History Museum:

From downtown Indianapolis, drive west on West Washington Street (about a mile past the zoo); turn north on Warman Avenue; turn west on Vermont Street and proceed to the museum gate (3045 W. Vermont).



The Indiana Medical History Museum is a private, nonprofit organization. It is not part of any State, historical, medical, or pharmaceutical organization. Memberships and donations help preserve the historical artifacts of Indiana's past. All donations in support of the museum and garden are welcome. Thank you for your support.

IMHM Medicinal Plant Garden

Plant List – Scientific Names

Trees and Shrubs:

Catalpa bignonioides, Catalpa
Cercis canadensis, Redbud
Cornus florida, Dogwood
Crateagus oxycantha, Hawthorn
Ginkgo biloba, Ginkgo
Hamamelis virginiana, Witch hazel
Juniperus communis, Juniper
Lindera benzoin, Spicebush
Sambucus nigra, Elderberry
Sassafras albidum, Sassafras
Thuja occidentalis, Arborvitae
Viburnum prunifolium, Black haw
Vitex agnus-castus, Chaste tree

Climbing Vines:

Dioscorea villosa, Wild yam
Humulus lupulus, Hops
Passiflora incarnata, Passion flower, Maypop
Vitis vinifera, Grape

Herbaceous Plants:

Achillea millefolium, Yarrow
Adenophora species, Ladybells
Alchemilla vulgaris, Lady's mantle
Allium sativum, Garlic
Allium schoenoprasum, Chives
Aloe barbadensis, Aloe vera
Angelica archangelica and *sinensis*, Angelica
Anthemis nobilis and *Matricaria (Chamaemelum) chamomilla*, Chamomile
Anethum graveolens, Dill
Artemisia annua, Sweet Annie, Sweet wormwood
Asarum canadense, Wild ginger
Asclepias curassavica, Bloodflower
Asclepias syriaca, Common milkweed
Asclepias tuberosa, Butterfly weed, Pleurisy root
Aster novae-angliae, New England aster
Baptisia australis, Blue false indigo
Belamcanda chinensis, Blackberry lily
Borago officinalis, Borage
Calendula officinalis, Pot marigold
Capsicum annuum and *frutescens*, Cayenne, red pepper
Catharanthus roseus, Periwinkle
Cimifuga racemosa, Black cohosh
Convallaria majalis, Lily of the valley
Coriandrum sativum, Coriander/Cilantro
Daucus carota, Queen Anne's lace, Wild carrot
Digitalis species, Foxglove
Echinacea purpurea, Purple coneflower
Eupatorium perfoliatum, Boneset

Eupatorium purpureum, Joe Pye weed
Filipendula ulmaria, European meadowsweet
Queen of the meadow
Foeniculum vulgare, Fennel
Glycine max, Soy bean
Glycyrrhiza glabra, Licorice
Helianthus annuus, Sunflower
Hemerocallis species, Day lily
Hypericum perforatum, St. John's wort
Hyssopus officinalis, Hyssop
Inula helenium, Elecampane
Lavendula angustifolia, Lavender
Leonurus cardiaca, Motherwort
Levisticum officinalis, Lovage
Liatris spicata, Blazing star, Gay-feather
Lippia dulcis, Aztec sweet herb
Linum usitatissimum, Flax
Marrubium vulgare, Horehound
Medicago sativa, Alfalfa
Melissa officinalis, Lemon balm
Mentha species, Mint
Mitchella repens, Partridge berry, Squaw vine
Monarda didyma, Bee balm, Oswego tea
Nepeta cataria, Catnip
Ocimum basilicum, Basil
Oenothera biennis, Evening primrose
Origanum vulgare, Oregano
Paeonia species, Peony
Petroselinium crispum, Parsley
Platycodon chinensis, Balloon flower
Pulmonaria officinalis, Lungwort
Ricinus communis, Castor bean
Rosmarinus officinalis, Rosemary
Rudbeckia species., Black-eyed Susan
Rumex species, Sorrel and Dock
Salvia officinalis, Sage
Sambucus nigra, Elderberry
Scutellaria baicalensis, Baikal skullcap
Scutellaria laterifolia, American skullcap
Senecio aureus, Golden ragwort
Smilacina racemosa, False Solomon's seal
Solidago species, Goldenrod
Symphytum officinale, Comfrey
Tanacetum parthenium, Feverfew
Thymus officinalis, *T. vulgaris*, Thyme
Valeriana officinalis, Valerian
Verbascum thapsus, Mullein
Verbena officinalis, Vervain
Veronicastrum virginicum, Culver's root
Vinca species, Periwinkle
Yucca species, Yucca
Zea mays, Corn

The original printing of the

Indiana Medical History Museum
Guide to the Medicinal Plant Garden

was made possible by grants from the Woman's Department Club of Indianapolis and from the Master Gardener Association of Marion County. The museum is a 501(c)(3) tax-exempt not-for-profit organization. All donations in support of the garden and the Indiana Medical History Museum and greatly appreciated.

The Master Gardener program in Marion County
is made possible by the
Purdue Extension- Marion County

You might like to visit these other medicinal gardens in Indiana.

Apothecary Garden at Butler University, in Indianapolis
Gardens of Connor Prairie, in Noblesville
Hamer Pioneer Garden and Apothecary Shop, Springmill State Park
Doctor's Office, in Madison
Gardens in New Harmony