

Indiana Medical History Museum

Guide to the Medicinal Plant Garden



2010

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

Guide to the Medicinal Plant Garden

at the

Indiana Medical History Museum

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Disclaimer

“Demonstration - Not Prescription”

The purpose of the Medicinal Plant Garden at the Indiana Medical History Museum is to demonstrate some of the plants that have been the source of medicines in the past and present and to share interesting historical information. In providing this garden and related written materials and presentations, the museum and Master Gardeners do not intend to endorse the use of current herbal remedies.

Individuals should consult with their health care professionals and make their own informed decisions before taking any medicine, herbal or otherwise.

Medicinal plants can be toxic. Do not pick or ingest any part of the plants in the garden.

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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, particularly 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, which was a hospital for patients with psychiatric disorders. 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 doctor's office exhibit that interprets a typical rural physician's practice of the mid-20th century, exploring the transition from the healthcare of the 1800's to the era of modern medicine. The exhibit contents comprise the intact office of Dr. Marion Scheetz of Lewisville, Indiana. The artifacts were donated by his descendants, and the display was made possible in part by a grant from the Indiana Academy of Family Physicians.

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, Edenhaber@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.

Brief History of Central State Hospital and the Indiana Medical History Museum

- 1848 Indiana Hospital for the Insane opened – 5 patients
- 1889 Name changed to Central Indiana Hospital for the Insane
- 1896 Opening of separate Pathological Department building for the education and scientific study of disease Architect – Adolph Scherrer
- 1903 (IU School of Medicine was established – two years of study in Bloomington)
- 1910 Flexner Report revolutionized medical education in the US and Canada
- 1926 Name changed to Central State Hospital
- 1930s Many of the outdated laboratory facilities in the Pathological Department no longer used
- 1956 Last year that IU SOM medical students had neurology and psychiatry classes in the amphitheater – because of the opening of LaRue Carter Hospital at IUSOM
- 1969 Non-profit organization formed to preserve the building: Dr. Charles Bonsett, Dr. John Keating, Dr. Dwight Schuster, Dr. William Sholty, and Mrs. Donald (Dorothy) White; known as “Indiana Medical History Foundation”
- 1972 IMHM’s Old Pathology Building (OPB) added to the National Register of Historic Places and to the Historic American Buildings Survey
- 1985 Name of Indiana Medical History Society changed to “Indiana Medical History Museum”
- 1986 Indiana State Legislature provided IMHM with a 99-year lease for the OPB and 5.24 acres, for fee of \$1 per year
- 1994 Central State Hospital is closed.
- 1995 The pathology building at Bellevue State Hospital (New York) was razed, leaving OPB as the last free-standing pathology building of its kind
- 2001 OPB designated in White House and National Trust’s “Save America’s Treasures” program
- 2003 Addition of Medicinal Plant Garden
- 2004 City of Indianapolis purchased CSH from State
- 2005 Doctor’s Office Exhibit opens - Indiana Academy of Family Physicians sponsorship

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 may have undesired side effects as well as potential beneficial effects. For example, an individual taking feverfew (*Tanacetum parthenium*) for migraine headaches may not realize that it acts as an anticoagulant and 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, bark, 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*), castor bean (*ricin*), mayapple (*podophyllotoxin*), 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*, (*previous 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. Alphabetical lists of common and scientific names are at the end of the brochure. 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-fakah*, 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 *alloeh*, 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, A. 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 photodermatitis – ulcerated skin lesions after exposure to sunlight (photodermatitis).

Asia, Europe

Roots; Roots and Aerial parts

Arborvitae tree*Thuja occidentalis*

These upright evergreen trees in the garden are members of the Cypress family. 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

Autumn crocus*Colchicum autumnale*

There are two kinds of fall blooming crocus. The smaller *Crocus sativus* is a true crocus, a member of the Iris Family, and the source of the spice saffron, which consists of the dried stigmas of the flowers. *Colchicum autumnale* is a larger crocus-like flower that blooms in the fall and is a member of the Lily Family. This flower comes up after the leaves have faded, a trait leading to another common name for the plant, “naked lady.” The modern medicine colchicine is derived from dried seeds and is an effective treatment for gout but can also be a deadly poison. It decreases the inflammatory response to uric acid crystals and inhibits the deposition of crystals in tissue, thereby decreasing the severe pain of gouty attacks. All parts of *C. autumnale* are poisonous, and toxic doses result in a condition similar to acute arsenic poisoning.

Europe

Seeds

Aztec sweet herb*Phylla dulcis (Lippia 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.

Siberia

Roots

Balloon flower*Platycodon grandiflorus*

Robert Fortune, who is best known for introducing tea plants from China to India, sent the roots of the balloon flower plant from China to the Horticultural Society of London at Chiswick, 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 basilis 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, Asia

Leaves, Seeds

Bee balm, Wild bergamot*M. didyma, Monarda fistulosa*

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." Like thyme, bee balms contain the active antiseptic ingredient thymol, and the plants were used to make antiseptic wash for cutaneous and oral inflammation. *M. fistulosa* (wild bergamot) is taller and has lavender colored flowers. There are many cultivars of *M. didyma* (bergamot, Oswego tea, scarlet bee balm) and these plants generally are shorter and have red, pink, or purple flowers. Bee balm plants are not the source of oil of bergamot, which actually comes from an Asian citrus tree now largely cultivated in Italy.

America

Aerial parts

Black cohosh*Actaea racemosa (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, PMS, and symptoms of menopause but also for rheumatic problems and as a remedy for high blood pressure. The plant would like more shade than it gets in our garden.

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 that 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 or painful menstrual bleeding and threatened miscarriage. It was also used for cramping conditions of the intestine, bile ducts, and bladder. As a smooth muscle relaxant, it may help in asthma and hypertension by opening airways and peripheral blood vessels.

America

Bark, Root bark

Blackberry lily *Iris domestica (Belamcanda chinensis)*
Blackberry “lily” actually is a member of the Iris Family. This common name comes from the prominent clusters of black seeds that stay on the end of the stalks long after the flowers have faded and the plant gone dormant. Another common name “leopard flower” derives from the spotted appearance of the petals. The rhizomes of this plant are the Chinese herbal substance She-Gan. In traditional Chinese Medicine, it is used for asthma, croup, swelling and pain in the throat, and several other conditions. In the 200s, laboratory studies have shown that blackberry lily extract has some activity against the cells of prostate cancer. Seeds of the plant were brought from Asia to Europe by Jesuit priests in the 1730’s. The plant found its way to America in the early 1800’s.

Asia Rhizome

Black-eyed Susan *Rudbeckia hirta* and other species
Rudbeckia is a biennial or short-lived perennial. The daisy-like composite flowers have bright yellow ray petals surrounding a prominent dark brown or black center. Another common name is “ox-eye daisy.” 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. The genus name of the plant honors one of the teachers of Carl Linnaeus, Olaus Rudbeck who was professor of botany at the University of Uppsala. Some individuals have a contact sensitivity to the plant.

America Roots

Blazing star, Gay-feather *Liatris spicata*
Liatris spicata and a number of other Liatris species send up tall feathery spikes of purple or white 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 diuretic and a gargle for sore throat. “America’s first botanist,” John Bartram of Philadelphia, included Liatris in his 1751 compendium, calling it “throatwort” and noting that chewing the tuber could cure sore throat. An older common name “colic root” came from its use for gastrointestinal complaints.

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. *Baptisia australis* has been named the “Perennial Plant of the Year 2010” by the Perennial Plant Association.

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, which is known now to be a non-fatal mosquito-borne viral disease that causes high fever and rash and that also is known as dengue fever. The stem of the boneset 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, cutaneous, and premenstrual or menopausal complaints. Borage seed has a very high concentration of the essential fatty acid gamma linoleic acid (GLA) that is involved in sensitivity to the hormone prolactin (see also Evening primrose). 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 sorowe, and increasing the joie of the minde.”

Mediterranean

Aerial parts, Seeds

Butterfly weed, Pleurisy root *Asclepias tuberosa*
See Milkweeds

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. Fresh flowers can be rubbed on the skin to relieve insect stings. Calendula flower tea is taken internally for inflammations of the alimentary tract, to promote menstruation, and as a cleansing detoxifying herbal tonic. Calendula, which is known as Pot marigold, should not be confused with the more common garden marigolds, which are annual plants of a different Genus – *Tagetes*.

Europe, Mediterranean

Flowers

*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.

Castor bean*Ricinus communis*

Good old castor oil is made from the pretty spotted beans of this large exotic-looking annual 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. (Note: The children's laxative called Fletcher's Castoria is made from Senna, not castor oil.) 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 damages the cells lining the GI tract resulting in 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. There are two species represented. *C. speciosa* (known as Western catalpa, Northern catalpa, and Hardy catalpa) has a taller, narrower, rectangular overall appearance and is not medicinal. *C. bignonioides* (known as Eastern catalpa, Southern catalpa, American catalpa, Indian bean tree, and Fish bait tree) has a more rounded shape and has been used medicinally. Its 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, Seeds, Leaves

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, though it may be related to temporary depletion of neurotransmitters in nerve endings. 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 in 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 77 CE. 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 to regulate menstrual cycles. Its plant compounds have progesterone-like effects. The plant has not been used much in the United States until recently. Vitex is also known as "the chaste tree" from the historical use of berries of Vitex being chewed by monks as an aid in celibacy. They are thought to have an anti-androgenic effect. The aerial parts of Chaste tree often do not survive the winter this far north, but the shrub regrows from the roots each spring.

Europe, Africa, Asia

Berries, Leaves

Chives*Allium schoenoprasum*

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

Asia, Eastern Europe, America

Leaves

Coltsfoot*Tussilago farfara*

This plant has poplar-like leaves and a large dandelion-like flower that appears before the leaves do. A mucilaginous substance in the fresh leaves was used for cough remedies. Ancient and modern herbalists have recommended smoking the dried leaves of coltsfoot to treat cough and symptoms of asthma and chronic bronchitis. The herb is still used in Europe for acute respiratory conditions. Chronic usage may result in liver damage.

Europe

Leaves, flower stems

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 tissues and broken bones. In some instances, pulverized comfrey root was packed around a fracture site and allowed to set like a plaster cast. Others report boiling or pounding 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 and Europe because toxic alkaloids (especially in the root) can severely damage the liver by causing hepatic veno-occlusive disease. 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 as a diuretic, 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 bona fide 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 soothe 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 soothe 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,” promoting the flow of bile. It was also diuretic and induced sweating. The fresh root is stated to be “violently laxative.”

America

Roots

Daylily*Hemerocallis fulva* and other species

Daylilies 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 over a long time. Daylilies are toxic when eaten by cats and cows, due to a neurotoxin causing paralysis and blindness.

Asia, Europe

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 cinchona 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* species

In European 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. Various Native American peoples had many medicinal uses for elderberry, using infusions of bark as an emetic and laxative, of flowers to induce sweating and bring down fevers, and of berries as salve for burns. Very recent studies have shown that extract of elderberry may significantly reduce the symptoms of acute influenza. The hollow stems of this plant were used by many cultures to make flutes, whistles, spouts, tubes to blow air on fires and other devices.

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 *I. 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 in humans and horses. 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

Eucalyptus*Eucalyptus globulus* and other species

Eucalyptus oil (eucalyptol) extracted from the leaves of this plant helps open up respiratory passages in colds, bronchitis, and other respiratory conditions. It also is antiseptic and has been used externally as a treatment for sores and ulcers and as a gargle for sore throats. In its native Australia, the plant grows as a tree that can reach heights of greater than 400 feet, but in our garden it does not survive the cold of winter. For the first several years, the plant has round leaves closely applied to the stems. Later the leaves are long and thin and hang down from the stems. Koalas eat a diet consisting almost completely of eucalyptus leaves. They are one of the few species that can digest the leaves containing several toxic compounds.

Australia

Leaves

European meadowweet*Filipendula ulmaria* (*Spiraea ulmaria*)

Hippocrates had recommended powdered willow bark for relief of pain and fever in the 4th century B.C. The active substance in willow (*Salix* species) can also be obtained from a few other plants. In Europe, a tea made from the dried flowers of European meadowsweet (*Spiraea ulmaria*) had been used to treat arthritis and other painful conditions. Salicin was extracted from the plant in the 1828, converted into salicylic acid and used to treat colds, malaria, and arthritis. Salicylic acid was anti-inflammatory, soothed pain, and reduced fever but was very irritating to the gastric lining. In 1853, a French chemist was the first to buffer the caustic effects of salicylic acid with sodium and acetyl chloride, producing acetyl-salicylic acid. A chemist at Friedrich Bayer & Co. in Germany came up with a new process for that acetylation that was patented in 1897. Bayer's acetyl-salicylic acid was named Aspirin: "A" for acetyl, "spirin" for the European meadowsweet that was used as the source of salicin, honoring the 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*Maianthemum canadense (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 burning 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. The great English herbalist John Gerard (1545-1612) recommended stamped roots in wine as an internal medicine for persons with broken bones – “as touching the knitting of bones ...there is not another herb to be found comparable..”

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 relieve 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 piece 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 also 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 non-medicinal uses, such as in the manufacture of linoleum, paint, varnish, soap, and ink.

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; however, recent studies show it to be ineffective in lowering cholesterol in patients with moderately high hypercholesterolemia. 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*

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. Because ginkgo interferes with platelets, it 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*Packera aurea* (*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. In fact, it rarely causes allergies itself but blooms at the same time as ragweed, a prime culprit in hay fever. Native Americans and Chinese both used goldenrod for wound healing, and 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. It is the state flower of Kentucky, Nebraska, and South Carolina. Goldenrod contains a natural rubber, and Thomas Edison developed a variety that produced 12% rubber, intended for use in Model-T tires, but goldenrod rubber never caught on.

America, 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, Seeds, Sap

Hawthorn tree*Crataegus monogyna* and other species

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 Shan Zha and used to improve circulation and digestion.

Europe, Asia

Flowers, Berries, Leaves

Hop 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 caused yeast to remain as the main fermenting agent 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 dermatitis, 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, and then cooking sugar into the strained water and letting the mixture cool and harden. *Marrubium vulgare* is sometimes known as White horehound. Black horehound (*Ballota nigra*) is an unrelated malodorous plant.

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 promote menstruation and as a poultice for wounds and nascent cold sores. Hyssop may lower the threshold for seizures in children.

Mediterranean

Leaves, Flowers

Jewelweed*Impatiens pallida, I. capensis*

The aerial parts of this plant are famous for relieving the itching of poison ivy dermatitis. Jewelweed is a native of North America and grows wild in moist soils along creek beds. The plant has unusual yellow (*I. pallida*) or orange (*I. capensis*) flowers that dangle downward from the stems. When the seeds are ripe and the pod is touched, the seeds go flying outward for several feet. This characteristic leads to another common name for the plant, “touch-me-not.” A different type of jewelweed in Asia (*I. balsamina*) is also used topically as an anti-pruritic remedy and also to soothe rheumatism, bruises, and swelling.

North America, Asia

Aerial parts

Joe Pye weed *Eutrochium purpureum* (*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.” New growth on junipers is needle shaped and sharp, but older parts of the plant have non-sharp, scale-like leaves.

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 *verticillata* 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*Lavandula 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 a popular herbal remedy in the United States, and much of the 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 Asclepios.

Europe

Flowers, Leaves, Rhizomes

Lion's tail, Wild Dagga*Leonotis leonurus*

This unusual plant is native to South Africa. The local tribes used the plant as a calming and dream-enhancing substance for medicine and ritual. Although one other common name is Cape hemp, the plant is not related chemically or botanically to marijuana. Lion's tail also has been used for painful conditions like arthritis, as a purgative and vermifuge to get rid of worms, and as a folk remedy for diabetes. Like other members of the Mint family, the stems are square and the flowers come off at intervals hugging the stems. Unlike most mints, this plant flowers very late in the growing season (October), and the flowers are large and bright orange. The plant will not survive the winter in Zone 5.

South Africa

Aerial parts, Roots

Lobelia*Lobelia* species

Several species of lobelia have been used for medicinal purposes. *Lobelia inflata* (also known as Indian tobacco, Pukeweed, and Vomit wort) was and still is used for many purposes, including as a “nervine relaxant,” emetic, sweat inducer, diuretic, and expectorant. Lobelia plants share some characteristics with tobacco plants (*Nicotiana*) and have been used in smoking cessation regimens. Big blue lobelia was named *L. siphilitica* in the mistaken belief that it was an effective treatment for venereal disease. The Asian lobelia *L. chinensis* is one of the fundamental herbs in Traditional Chinese Medicine.

America

Aerial parts

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

Marigold*Tagetes patula* and other species

Marigolds are popular and commonly seen annual garden plants that have an interesting medicinal history. *Tagetes lucida*, *T. erecta*, and *T. patula* were important herbs in traditional Aztec medicine and were used ritualistically as sacred herbs offered to Tlaloc, the god of rain who made all things grow. Aztec physicians used marigolds to treat conditions that they thought were due to “excessive cold” influences in the body, such as edema, local swellings, cough with phlegm, fever with chills. Marigold was given as “bitter water” to drink or rubbed on the skin. It also was used as incense and blown into the face of sacrificial victims. *Tagetes lucida* also was used ritualistically by Mayans and other peoples of Mexico.

America

Leaves, Flowers

Mayapple*Podophyllum peltatum*

In the spring, mayapples appear in wooded areas as patches of shiny-leaved umbrella-like plants that are two to three feet tall. A single white flower blooms under the umbrella and becomes an apple-like fruit that is poisonous until fully ripe. Historically, the Cherokee, Delaware and Iroquois all used mayapple root as a laxative. Mayapple plants contain the poisonous substance podophyllotoxin that has been used to treat warts and genital warts. Podophyllotoxin also is the compound used for the production of some anti-cancer drugs (etoposide, teniposide, etopophos for cancers of the lung and testis and childhood acute leukemia) as well as remedies being used or tested for psoriasis, malaria, and rheumatoid arthritis. Mayapple also is known as American mandrake.

America

Root, Rhizome, Leaves

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

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.” The Common milkweed has spherical clusters of small pink flowers. Butterfly weed, which is also known as Pleurisy root, is a milkweed with large clusters of small orange flowers. A third medicinal milkweed is Bloodflower. It has clustered yellow and red flowers, and its root also was used 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 Asclepios (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. Asclepios was deified after Zeus felt remorse for having killed him, and for many centuries at Aescleopian temples all comers were treated with a mixture of ritual, herbal medicines, and surgery. Asclepios 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, Asclepios is often shown holding a healing staff with a coiled serpent (the snake being a symbol of renewed life).

America

Roots

Mint *Mentha* species
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. Menthol vapors help open nasal passages. 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 reportedly were worn to help clear and sharpen the mind. Mint becomes very invasive in the garden, and it is wise to grow it in containers.

Europe, Africa Leaves

Motherwort *Leonurus cardiaca*
Traditionally in Europe, 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. In Traditional Chinese Medicine, different Motherwort species (*L. sibiricus* and *L. heterophyllus*) known as Yi Mu Cao was used to regulate menses and increase urine flow to reduce swelling from edema

Europe, Asia Aerial parts

Mullein *Verbascum thapsus* and other species
Common mullein is a biennial plant that is also known as Bunny's ears, Feltwort, and Flannel leaf.. In its second year it sends up a dramatic six foot stalk of yellow flowers from its cluster of fuzzy, pillow-like basal leaves that often measure about a foot in length. Root preparations were widely used for respiratory problems. A tincture made of the root in the first year's growth was given for cystitis and urinary incontinence. The crushed leaves were treatment for bruises, sprains, and rashes (including diaper rash). Oil in which the flowers were allowed to soak was a remedy for earache and hemorrhoids. The name mullein comes from the Middle English word *moleyne* (Latin *mollis*), meaning "soft." American settlers sometimes used the big leaves as absorbant diaper material. 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, Africa Flowers, Leaves, Roots

New England aster *Sympphyotrichum novae-angliae* (*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 and smudge of burning aster plants was used to revive someone who had fainted. More recently, the plant has been considered a mild sedative and relaxant and has been used topically to treat sumac-induced dermatitis. Flowers have been reported to have a calming effect on the mind and lungs. According to legend, an old squaw turned two Indian girls into Aster and Goldenrod.

America Roots, Flowers

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 freshening 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* and other species
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. Passion flower extract may prove helpful in treating general anxiety disorder. 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 to correct gynecologic conditions, ease pain, and nourish the blood. Along with three other herbs (rehmania, chuan xiong, and Chinese angelica), white peony is a key ingredient in the female tonic called "four thing soup."

Europe, Asia Roots, Bark, Seeds, Flowers

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 different plant with a similar flower that originally was native to Madagascar (Madagascar periwinkle) has true medicinal value. It was the source of the important chemotherapeutic agents vincristine and vinblastine, which are used against Hodgkin's disease, other lymphomas and leukemias, and other solid cancers. These agents destroy cancer cells by damaging their DNA. It is of local interest that in 1979, Eli Lilly & Co. brought out vinblastine under the Trade Name "Eldisine." Originally placed in the Genus *Vinca* as *Vinca rosea*, Madagascar periwinkle was later reclassified as *Catharanthus roseus*. 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 having these cortisone-like qualities, Echinacea also is bactericidal and insecticidal. The plant is indigenous to the central plains of North America and was used by many Native American tribes for a variety of ailments. 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

Rose*Rosa species*

Of the many species of roses, those most used medicinally were *Rosa gallica*, *R. centifolia*, and *R. canina*. The petals of deep red roses of the first two (*R. gallica* & *R. centifolia*) were thought to be the most powerful. Types of preparations made from the dried petals included essential oils (known as rose attar or otto), rose-water, infusions, syrups, honeys, and vinegars. Rose petal preparations have been used for sores in the mouth and throat, hemorrhages, cough, depression and stress. Rose water was used as lotion for the eyes. Compresses soaked in rose vinegar were applied to relieve headache induced by the hot sun. Rose petal preparations are also used as ingredients to make other medicines more palatable. Rose hips (*R. canina*) contain a high level of vitamin C (as well as vitamins A, B, E, and K) and have been used to prevent scurvy. The hips and seeds also have been used as a diuretic and mild laxative.

Persia

Petals, Hips

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 applied to insect 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, Seeds

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 was much in the news in the early 2000s when studies proved that this plant was an effective therapy for malaria, even in cases that were resistant to treatment with quinine or chloroquine. The extracted compound of the leaves is called artemisinin (and derivatives artemether and artesunate). The World Health Organization recommended ACT (meaning “artemisinin-based combination therapy”) for treatment of malaria. Unfortunately, as of 2009, malarial parasites were becoming resistant to artemisinin too. More recently, scientists are exploring its anti-cancer effects. Experiments include attaching artemisinin to the iron-carrying molecule transferrin, which tricks cancer cells into taking up the transferring-artemisinin complex. Once inside the cells it acts to release free radicals and kill the cells. 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

Tansy *Tanacetum vulgare*
Tansy is a strong smelling herb that was used as an insect repellent and preservative. Before refrigeration, both coffins and meat storage containers were sometimes packed with tansy to prevent decay. Medicinally, tansy was used to expel intestinal worms and to induce abortion. Tansy is very toxic and should not be ingested. Even external use to rid patients of scabies and lice can lead to toxic effects and should be avoided, especially by pregnant women.

Europe, Asia

Flowers

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 anti-parasitic – 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

Tobacco *Nicotiana rustica, N. tabacum*
N. rustica is known as “True tobacco” or “Wild tobacco.” *N. tabacum* does not occur in nature but is a cultivated plant thought to be a hybrid of three naturally occurring *Nicotiana* species. Tobacco is included in the Medicinal Plant Garden because historically at one time it was considered to be a “Holy herb” and “God’s remedy” – miraculously useful for healing ulcers, polyps, catarrh, and all sorts of other conditions. Tobacco species originated in tropical and subtropical America, but there is evidence that cultivation of tobacco in North America was established as early as the first century BC. The plant was used for ritual and healing by many Native American tribes. The leaves of tobacco have been applied fresh to heal wounds but more often were dried and then smoked or otherwise inhaled (or blown into the rectum). It is now known that the plant contains nicotine, which binds to acetylcholine receptors and activates several neurochemical pathways. It also contains many other chemicals that are carcinogenic or otherwise toxic to the human body. When Europeans were discovering all sorts of plants from the New World, in 1560 the French ambassador to the Spanish court in Lisbon became particularly interested in tobacco and introduced the seeds and plant to the French court. Tobacco became associated with his name, Jean Nicot de Villemain, resulting in the genus name *Nicotiana*.

America

Leaves

Tulip tree *Liriodendron tulipifera*
The flowers of this tree resemble those of spring-flowering tulip bulbs. The inner bark of the roots and trunk were made into teas and used as tonics to increase appetite, calm the nervous system, and promote less painful function of the uterus. The Cherokees used tulip tree for many medical conditions, including getting rid of intestinal worms and applying it to fractured limbs. The tulip tree is the State Tree of Indiana. It grows more quickly than oaks and often reaches 150 feet in height. The trunk of the tulip tree grows very straight, and the wood was used for dugout canoes and is still the wood of choice for making organ pipes. The tulip tree is not a member of the poplar family and should not be called a tulip poplar.

America

Bark

Valerian*Valeriana officinalis*

At various times since ancient Greece, this herbal has been used as a diuretic, antidote to poisin, 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 sedative in Europe. 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 taking vervain.

Europe, Africa, Asia

Aerial parts

Vinca -- See Periwinkle**White snakeroot***Eupatorium rugosum (Ageratina altissima)*

Although a few Native American tribes used white snakeroot for a variety of conditions, the plant is poisonous and not generally considered to be therapeutic. It is included in the Medicinal Plant Garden because of its historical importance. In the early 1800s in the Midwest, many settlers who drank milk from cows with “trembles” became very ill and often died of a condition called “The Slows” or “Milk sickness.” This was the mysterious condition that caused the death of Abraham Lincoln’s mother, Nancy Hanks Lincoln, in 1818 in Spencer County in southern Indiana. As populations increased and cows were kept fenced in pastures and couldn’t wander into the woods, the incidence of milk sickness declined precipitously. The solution of the mystery of milk sickness was that cows that ate white snakeroot ingested a poison that was passed on in the milk. The solution was officially completed with the identification of the toxin tremetol in 1927. Although, based on a tip from a Native American woman, pioneer doctor Dr. Anna Pierce Hobbs Bixby had taught her patients to get rid of white snakeroot plants back in about 1828, she was not credited with figuring out the problem of milk sickness. White snakeroot is quite similar in appearance and grows in the same areas as the very useful plant boneset (*Eupatorium perfoliatum*).

America

Wild ginger*Asarum canadense*

This low-growing woodland 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*

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 bathes for relief of feverish colds, heavy phlegm, and coughing.

America

Leaves, Twig bark

Woad*Isatis tinctoria*

Woad is an interesting biennial plant, flowering in its second and last year of life. Although it has abundant clusters of tiny bright yellow flowers, its main use was as the source of a blue dye. Before indigo became available from the Far East, woad had been cultivated for centuries in Europe for textile use. Woad reportedly exhausts the soil like tobacco plants do and cannot be grown in the same place for long. Both woad and plant-derived indigo eventually were largely replaced by synthetic dyes, but, ironically, because woad produces a biodegradable dye, it may become widely used again in modern inks. In Chinese medicine, dried root of woad (Ban Lan Gen) is considered to be one of the best anti-viral medicines and is used to treat mumps, measles, other febrile diseases, sore throats, and various other conditions. The leaves of woad contain very high levels of glucobrassicin, a substance also in broccoli, that may give that plant cancer-preventive qualities. It should be noted, however, that woad is not edible.

Asia

Roots, Leaves

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 aggressive in the garden.

Europe, Asia

Leaves, Flowers

Yew*Taxus brevifolia*, and other species

For Druids, the yew tree was sacred. Also, it often was planted in Christian graveyards as a symbol of immortality. In the 1970s, the medicinal compound Taxol (paclitaxel) was found in the bark of the Pacific Yew (*T. brevifolia*) in the American Northwest. Taxol became an important chemotherapeutic agent for cancer of the breast and other solid tumors. The compound stops cell division by interfering with intracellular microtubules and triggering a form of cell death called apoptosis. Unfortunately, *T. brevifolia* is a very slow growing tree with a limited geographic distribution area in the Pacific Northwest. Fortunately, a related compound that can be turned into Taxol in the laboratory, is also present in the common yew *T. baccata* and other species of yew. All parts of the yews are toxic, and children should be taught not to be tempted to eat the red berries.

America, Europe

Bark

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 Plants and Their Medicines

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: anti-malarial, 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 deserts in China

Use: cold and allergy medicines; now outlawed weight loss energy booster “fen-phen”

Action like amphetamines

| | | |
|---|--------------------------------------|--|
| Ginger | <i>Zingiber officinale</i> | Ginger |
| Rhizomes | Native to Asia | |
| Use: anti-nausea, digestive stimulant | | |
| | | |
| Jaborandi | <i>Pilocarpus pennatifolius</i> | 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 | | |
| | | |
| Marijuana, Hemp | <i>Cannabis sativa</i> | Cannabis, THC |
| Flowers, Seeds, other parts | Native to central & western Asia | |
| Use: now outlawed sedative, analgesic, antispasmodic, psychoactive | | |
| anti-nausea and appetite stimulant in patients on chemotherapy | | |
| lower intra-ocular pressure in glaucoma | | |
| Binds to various receptors in brain and body | | |
| | | |
| Opium poppy | <i>Papaver Somniferum</i> | Morphine, codeine, heroin, papaverine |
| Fruits, Seeds | Southwest Asia | |
| Use: pain killer, cough suppressant; muscle relaxant | | |
| Binds to opioid receptors, endorphin receptors | | |
| | | |
| Psyllium | <i>Plantago psyllium</i> | Psyllium |
| Seeds, Husks | Native to Mediterranean, Middle East | |
| Use: laxative, lowers cholesterol and blood sugar | | |
| Prevents absorption | | |

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 essentials 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

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Database of Medicinal Plants (Rao)

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Book list for Medicinal Plants of India

www.ipni.org

The International Plant Names Index

Thanks to Our Donors and Volunteers!

The Medicinal Plant Garden is made possible by the volunteer work of a group of Purdue Master Gardeners¹ of Marion County and by contributions from many individuals, organizations, and local businesses.

All expenses related to the garden have been donated. Many thanks to all who have contributed plants, gardening materials, financial support, and gardening volunteer hours.

Special thanks to the following members of the core group of Master Gardeners who donate their labor and expertise:

| | |
|------------------|---------------|
| Patricia Angotti | Kathleen Hull |
| Arlene Bow | Meredith Hull |
| Jean Bradford | Karl Koons |
| Robert Catus | Carol Moulton |
| Debby Falls | Judy Turner |
| Linda Furuness | Sue Zordan |

For more information about the garden, contact Kathleen Hull at hulk@ccrtc.com or through the museum at 317 365-7329 or Edenharter@imhm.org

¹ The work of Purdue Master Gardeners in Marion County is made possible by the Purdue Extension-Marion County. For information about becoming a Purdue Master Gardener, go to www.IndyMG.org or contact the Extension Office at 317-275-9305.

Directions to the Medicinal Plant Garden at the Indiana Medical History Museum's Old Pathology Building:

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.**

Special Tours and Lectures

To arrange guided tours of the garden or lectures related to the garden, please contact Kathleen Hull, MD at hulk@ccrtc.com or through the IMHM at 317-635-7329 or Edenharter@imhm.org

Lecture Topics:

Medicinal Plants of Indiana Pioneers

Indiana Wildflowers and Their Medicinal Uses

Female Complaints in the Garden (plants used by women)

Five Modern Miracle Drugs that Come from Plants

Garden Plant List – Common Names & Scientific Names

Trees and Shrubs:

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

Climbing Vines:

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

Herbaceous Plants:

Alfalfa, *Medicago sativa*
Aloe vera, *Aloe barbadensis*
American skullcap, *Scutellaria lateriflora*
Angelica, *Angelica archangelica* and *sinensis*
Autumn crocus, *Colchicum autumnale*
Aztec sweet herb, *Phyla dulcis*
Baikal skullcap, *Scutellaria baicalensis*
Balloon flower, *Platycodon grandiflorus*
Basil, *Ocimum basilicum*
Bee balm, Oswego tea, *Monarda fistulosa*, *M. didyma*
Black cohosh, *Actaea racemosa*
Blackberry lily, *Iris domestica*
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*
Coltsfoot, *Tussilaga farfara*
Comfrey, *Symphytum officinale*
Common milkweed, *Asclepias syriaca*
Coriander/Cilantro, *Coriandrum sativum*
Corn, *Zea mays*
Culver's root, *Veronicastrum virginicum*
Daylily, *Hemerocallis* species
Dill, *Anethum graveolens*

Herbaceous Plants continued:

Elecampane, *Inula helenium*
Eucalyptus, *Eucalyptus* species
European meadowsweet, Queen of the meadow, *Filipendula ulmaria*
Evening primrose, *Oenothera biennis*
False Solomon's seal, *Maianthemum canadense*
Fennel, *Foeniculum vulgare*
Feverfew, *Tanacetum parthenium*
Flax, *Linum usitatissimum*
Foxglove, *Digitalis* species
Garlic, *Allium sativum*
Golden ragwort, *Packera aurea*
Goldenrod, *Solidago* species
Horehound, *Marrubium vulgare*
Hyssop, *Hyssopus officinalis*
Jewelweed, *Impatiens* species
Joe Pye weed, *Eutrochium 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*
Lion's tail, *Leonotis leonurus*
Lobelia, *Lobelia* species
Lovage, *Levisticum officinalis*
Lungwort, *Pulmonaria officinalis*
Marigold, *Tagetes* species
Mayapple, *Podophyllum peltatum*
Mint, *Mentha* species
Motherwort, *Leonurus cardiaca*
Mullein, *Verbascum thapsus*
New England aster, *Sympphyotrichum novae-angliae*
Oregano, *Origanum vulgare*
Parsley, *Petroselinum 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*
Rose, *Rosa* species
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*
Tansy, *Tanacetum vulgare*
Thyme, *Thymus officinalis*, *T. vulgaris*
Valerian, *Valeriana officinalis*
Vervain, *Verbena officinalis*
White snakeroot, *Eupatorium rugosum*
Wild ginger, *Asarum canadense*
Wild tobacco, *Nicotiana rustica*
Woad, *Isatis tinctoria*
Yarrow, *Achillea millefolium*
Yucca, *Yucca* species

Garden Plant List – Scientific Names & Common Names

Trees and Shrubs:

Catalpa bignonioides, Catalpa
Cercis canadensis, Redbud
Cornus florida, Dogwood
Crataegus oxyacantha, Hawthorn
Ginkgo biloba, Ginkgo
Hamamelis virginiana, Witch hazel
Juniperus communis, Juniper
Lindera benzoin, Spicebush
Liriodendron tulipifera, Tulip tree
Sambucus species, Elderberry
Sassafras albidum, Sassafras
Taxus species, Yew
Thuja occidentalis, Arborvitae
Viburnum prunifolium, Black haw
Vitex agnus-castus, Chaste tree

Climbing Vines:

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

Herbaceous Plants:

Achillea millefolium, Yarrow
Actaea racemosa, Black cohosh
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
Baptisia australis, Blue false indigo
Borago officinalis, Borage
Calendula officinalis, Pot marigold
Capsicum annuum and *frutescens*, Cayenne, red pepper
Catharanthus roseus, Periwinkle
Colchicum sativum, Autumn crocus
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
Eucalyptus globulus, Eucalyptus
Eupatorium perfoliatum, Boneset
Eupatorium rugosum, White snakeroot
Eutrochium 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

Herbaceous Plants continued:

Hemerocallis species, Daylily
Hypericum perforatum, St. John's wort
Hyssopus officinalis, Hyssop
Impatiens pallida and *capensis*, Jewelweed
Inula helenium, Elecampane
Iris domestica, Blackberry lily
Isatis tinctoria, Woad
Lavandula angustifolia, Lavender
Leonotis leonurus, Lion's tail, Wild Dagga
Leonurus cardiaca, Motherwort
Levisticum officinalis, Lovage
Liatris spicata, Blazing star, Gay-feather
Linum usitatissimum, Flax
Lobelia species, Lobelia
Maianthemum canadense, False Solomon's seal
Marrubium vulgare, Horehound
Medicago sativa, Alfalfa
Melissa officinalis, Lemon balm
Mentha species, Mint
Mitchella repens, Partridge berry, Squaw vine
Monarda fistulosa and *didyma*, Bee balm
Nepeta cataria, Catnip
Nicotiana rustica, Wild tobacco
Ocimum basilicum, Basil
Oenothera biennis, Evening primrose
Origanum vulgare, Oregano
Packera aureus, Golden ragwort
Paeonia species, Peony
Petroselinum crispum, Parsley
Phyla dulcis, Aztec sweet herb
Platycodon grandiflorus, Balloon flower
Podophyllum peltatum, Mayapple
Pulmonaria officinalis, Lungwort
Ricinus communis, Castor bean
Rosa species, Rose
Rosmarinus officinalis, Rosemary
Rudbeckia species., Black-eyed Susan
Rumex species, Sorrel and Dock
Salvia officinalis, Sage
Sambucus nigra, Elderberry
Scutellaria baicalensis, Baikal skullcap
Scutellaria lateriflora, American skullcap
Solidago species, Goldenrod
Symphytum novae-angliae, New England aster
Symphytum officinale, Comfrey
Tagetes species, Marigold
Tanacetum parthenium, Feverfew
Tanacetum vulgare, Tansy
Thymus officinalis, *T. vulgaris*, Thyme
Tussilago farfara, Coltsfoot
Valeriana officinalis, Valerian
Verbascum thapsus, Mullein
Verbena officinalis, Vervain
Veronicastrum virginicum, Culver's root
Vinca species, Periwinkle
Yucca species, Yucca
Zea mays, Corn



Alfalfa



American skullcap



Angelica



Arborvitae



Asclepios, Greek god of healing



Autumn crocus



Aztec sweet herb



Baikal skullcap



Balloon flower



Basil



Bee balm



Black cohosh



Black haw



Blackberry lily



Black-eyed Susan



Blazing star



Blood flower



Blue false indigo



Borage



Butterfly weed



Calendula



Castor bean



Catalpa



Catnip



Cayenne



Chamomile



Chaste tree



Chives



Comfrey



Common milkweed



Coriander



Corn



Daylily



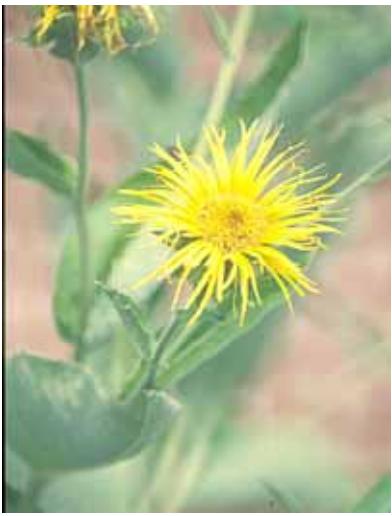
Dill



Dogwood



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



Lion's tail



Lovage



Lungwort



Mint



Motherwort



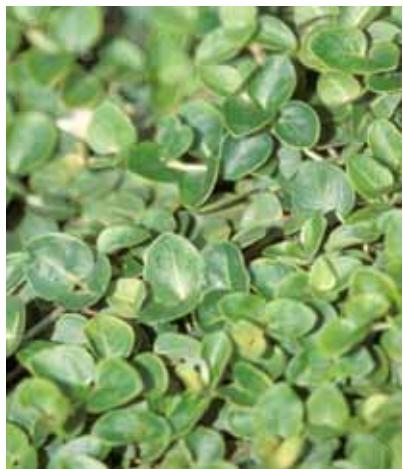
Mullein



New England aster



Oregano



Partridge berry



Passion flower



Peony



Periwinkle



Purple coneflower



Queen Anne's lace



Redbud



Rose



Rosemary



Sage



Sassafras



Soy bean



Spicebush



St. John's wort



Sunflower



Sweet Annie



Thyme



Tulip tree



Valerian



Vervain



White snakeroot



Wild yam vine



Witch hazel



Woad



Yarrow



Yarrow



In the first year of the garden, 2003, fifty plants were installed. The garden has been expanded in subsequent years, and it now features over one hundred 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 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.



In the second year, most of the plants that overwhelmed their neighbors the first year were moved to a new bed, appropriately called “the tall garden.”