


Hops

Humulus lupus

Immature young hop flowers, prior to cone formation

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Cannabaceae*

Order *Rosales*

Family *Eudicotidae*

Genus *Humulus*

Species *Lupus*

Subspecies: *Hallertauer*, *Tettnanger*, *Saaz*, *Neomexicanus*

Descriptions

General

Vigorous, climbing perennial bine. Originally used by abbey monks in Bavaria and Bohemia from the 8th century AD onward as a preservative for beer. A common circulating rumor (unconfirmed) states that use of the plant in beers was encouraged by the church elders due to the action of its phytoestrogenic components in suppressing the sex drive, now commonly known as "brewer's droop".
Did not supplant traditional herbs such as mugwort in British gruits until the late seventeenth century.

Geographic Origin

Bavaria, Bohemia

Habitat

Moist edges of woods, dedicated clearings. All varieties besides Neomexicanus prefer colder climates. Prefers shade.

Strains

Hallertauer

Believed to be the oldest cultivated variety, grown in the Hallertau region of Bavaria since 768 AD

Saaz

Native Bohemian variety, known for its spicy taste and susceptibility to oxidation. Traditional hop of the Pilsener style.

Neomexicanus

Endemic to the Mountain West, used by a small but growing number of microbreweries in New Mexico and Colorado.

Anatomy and Biology

Typical Size: 1.0 — 10.0 m

Flowering Season: late June — late July

Stalk

Thin, winding tendrils. Can form dense, intertwined mats. May develop thin bark after many years.

Flowers

Plump, pale green strobile cones, with bractioles containing numerous resin-containing glands. 1 to 1.5 inches in length. Found on the underside of stems.

Fruit

Essentially a plumper, more mature incarnation of the flower.

Propagation

Generally dioecious, rarely monoecious. Amenable to vegetative propagation. Often spreads via rhizomes.

Seasonal Behaviour

Grows vigorously from May until its flowering season, typically in July.

Medical Properties

Traditional Uses

Folk (European)

Medical Categories: Antibacterial, Estrogenic, Sedative, Anaphrodisiac, Orexigenic, Diuretic, Antispasmodic

Parts Used: Flowers (cones)

Notable Compounds: Lupulin, Mycene, Humulene, Humulone, Carophyllene, 8-prenylaringenin, Xanthohumol, Linalool, Tannins

Preparation Notes

To flavor and preserve beer, flowers are traditionally kiln-dried, and boiled with the wort of malted grain prior to fermentation with brewer's yeasts. In modern brewing operations, flowers are often ground and compressed into pellets for preservation.
The essential oil is occasionally extracted from ethanol tinctures, especially for use in strong India Pale Ales (IPAs).
Occasionally infused into hot baths for treatment of nervous exhaustion.
Most active constituents are light and oxygen-sensitive, so dark and cold (-5 to 5 Celsius) storage is highly reccommended.
Pillows may be used as a sleep aid.

References

1. "For the Love of Hops". S. Hieronymus
2. "Backyard Medicine". J Bruton-Seal, M Seal
3. Medicinal Plants of the Mountain West. M Moore



Yarrow

Milfoil, Sanguinary, Old Man's Pepper, Devil's Nettle, Staunchweed(European) Plumajillo(Spanish)

Achillea millefolium

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Asteraceae*

Order *Asterales*

Family *Eudicotae*

Genus *Achillea*

Species *millefolium*

Subspecies: *borealis*, *chitralensis*, *occidentalis*, *sudetica*, *puberula*

Descriptions

General

Multi-stemmed perennial. Strongly sweet-scented. Known as an attractor of a wide variety of insects, including bees, butterflies, wasps, and ladybugs.

Geographic Origin

Europe, China

Habitat

Common in disturbed soils of open forests and grasslands worldwide. Well-drained soil with full sun. Sea level to 3500 m

Anatomy and Biology

Typical Size: 0.2 — 0.8 m

Flowering Season: May — June

Roots

Deep relative to stalk size, valued for mineral retention and soil preservation in dry climates.

Leaves

Long feathery bipinnate or tripinnate, distally concentrated, evenly spaced and slightly helically arranged. Macrostructures 5 to 20 cm in length.

Flowers

3 to 9 terminal bracts support densely clustered, flat-topped mat of small, white to light pink capitulae. Smell reminiscent of chrysanthemum.

Fruit

Small achenes

Propagation

Fragrant flowers are pollinated by a variety of insects, including bees and butterflies. Short-lived seeds germinate in response to light and moderate temperatures. Strong asexual propagation via spreading rhizomes. Mature plants may be diploid or polyploid.

Seasonal Behaviour

Grows actively in spring

Medical Properties

Traditional Uses

The oldest recorded use of yarrow is as a tool in the Chinese divination practices of I Ching, dating back to at least 2000 BC. Coincidentally, seemed to be utilized in the Hebrides Islands for similar purposes in ancient times.
In Greek folklore, Homer describes the centaur Chiron as teaching the wound-healing properties of the plant to Achilles during the Trojan war.
In medieval England, Yarrow was one of the common herbs used in gruits prior to the spread of hop-based beers.
The plant was well-known to Native Americans, with leaves, stalk, and root used for varied uses ranging to mild pain relief to stimulation by tribes including the Miwok, Navajo, Pawnee, Chippewa, and Cherokee. Taken ceremonially by the Zuni as part of fire-walking ceremonies.
Recently identified to possess antiinflammatory properties in a mouse model of Multiple Sclerosis.

Medical Categories: Astringent, Anti-inflammatory, Hemostatic, Anxiolytic, Vasodilator, Antiparasitic

Parts Used: Roots, Stalk, Leaves

Notable Compounds: Salicylic acid, Isovaleric acid, Linalool, Camphor, Sabinene, Chamazulene, Asparagin, Thujone, Sesquiterpene Lactones, Coumarins, Tannins

Preparation Notes

All parts can be chewed raw. For wound treatment, pulverize whole plants and mix with water into a poultice. Traditionally prepared as a tea by the Cherokee, inhaled aromatherapeutically in sweat lodges by the Chippewa.
Can be substituted for or added to hops during the boiling of wort for beer. Occasionally steamed or boiled for consumption in soups or salads.
Steam-distilled essential oil is a common decongestant.

References

1. A. Chevallier, "Encyclopedia of Medicinal Plants"
2. Wikipedia


Mugwort

Nagadamani(Ayurvedic)

aicao, louhao, ai ye(Chinese)

Gypsy's Tobacco, Old Uncle Henry, bollan bane, Felon Herb, St. John's Herb, Wild Wormwood, Cingulum Sancti Johannis(European)

gaiyou, yomogi(Japanese)

Artemisia vulgaris

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Asterales*

Family *Asteraceae*

Genus *Artemisia*

Species *vulgaris*

Subspecies: *argyri*, *glacialis*, *norvegica*, *princeps*, *stelleriana*, *verlotiorum*

Descriptions

General

Aromatic, bushy perennial

Geographic Origin

England, China, Europe

Habitat

Prefers dry environment, often found in steeply sloped scrubland.

Anatomy and Biology

Typical Size: 0.5 — 2.0 m

Flowering Season: early July — early September

Roots

Woody, approximately 8 inches in length, with numerous thin, tough rootlets.

Stalk

Reddish purple, straight, with grooves lining the axis.

Leaves

Dark green pinnate and sessile structures, 5 to 20 cm in length. Dense wooly hairs on the undersides. Tripartite upper leaves, lanceloate bracteal leaves.

Flowers

Small, pale yellow or white, tubular.

Propagation

Central flowers are bisexual; peripheral flowers female.

Medical Properties

Traditional Uses

Oldest known use is as moxibustion agent in Traditional Chinese Medicine. Known also to Dioscorides as an aid in childbirth, and recommended by Pliny as a protective agent for travelers. Also known in Northern Europe (especially England) since before the Roman occupancy of Britain, where it was considered to have protective magical power in warding off evil spirits, particularly when gathered on St. John's Eve (June 23 or July 4).
Used by ancient Norse to repel insects, especially moths.
Used topically to combat marching fatigue by Roman soldiers.
One of the oldest brewing herbs used in English gruits.
Used as a culinary herb in many cultures, ranging from Japan and Korea to Germany.
Considered the symbolic plant of the Isle of Man, where it is still made into wreaths which are burned during St. John's Day riturals.

Medical Categories: Antiseptic, Anthelminic, Antifungal, Insecticide, Diuretic, Diaphoretic, Emmenagogue, Nervine, Febrifuge, Expectorant, Oneirogenic

Parts Used: Leaves, roots

Notable Compounds: Cineole, Thujone, alpha-Thujene, Camphor, Myrcene, alpha-Pinene, beta-Sitosterol, Tauremisin, alpha-Cadinol, Tetracosanol

Preparation Notes

Leaves are generally dried, and often crumbled for most uses.
As would be expected from its brewing history, decoction is a common method of preparation, and the herb is often incorporated into mulled wine.
Dried herb may be used in pillows to enhance the vividness of dreams.
May also be burned as a smudge, and is occasionally smoked in cigarette form.

Mullein

Velvet Dock, Feltwort, Our Lady's Flannel, Beggar's Blanket, Hare's Beard, Candlewick Plant(European)

Verbascum thapsus

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Scrophulariaceae*

Order *Lamiales*

Family *Eudicotae*

Genus *Verbascum*

Species *thapsus*

Subspecies: *Thapsus*, *Phoeniceum*, *Blattaria*, *Candicans*

Descriptions

General

Tall, stout biennial (and occasionally perennial) herb, widespread over Europe, Africa, Asia, and more recently North America. Best known for the long, wooly hairs covering its leaves, it is extremely hydrophobic.
Engages in a number of important symbiotic relationships within its ecosystem, including the mullein moth and hoverfly, and the white-headed woodpecker. However, its somewhat irritating hairs protects it from almost all animal grazing. Susceptible to spider mites.
Named for the ancient village of Thapsus, in present-day Tunisia.

Geographic Origin

Europe, Africa, Asia

Habitat

Most common in bare, dry, disturbed soil with strong sunlight.

Strains

Phoeniceum

notable for its dark red-purple flowers, and its self-incompatibility for purposes of fertilization.

Anatomy and Biology

Typical Size: 0.5 — 3.0 m

Flowering Season: early June — late August

Roots

Shallow taproot

Stalk

Single tall, robust stem, typically emerging during the second year of life.

Leaves

Basal rosette of wide, wooly structures up to 30 cm long and 8 cm broad, decreasing in size at higher stem locations. Covered in a thick layer of silver star-shaped trichomes, giving the well-known wooly texture and appearance.

Flowers

Five-petalled, sulfur-yellow, from 1.5-3 cm in width, each containing five stamen and a five-lobed calyx tube. Connected to a long, distal widening of the basal stem via nearly sessile attachments. Each flower blooms somewhat sporadically, with its open corolla structure leaving it an easy target for nectar foragers. White and purple-flowered variations exist.

Fruit

Hard green capsules, containing many tiny brown seeds, eaten by some birds including finches.

Propagation

Each flower generally remains open a single day, and self-pollinates if it is not pollinated by wind or insects during that time. An especial symbiosis exists between mullein and the mullein moth, Cucullia verbasci, in Europe and Northern Africa.
Seeds are extremely hardy, retaining viability in many cases for over a hundred years. Germination is typically triggered by high levels of ambient light. A single plant can often produce over 100,000 seeds in a season.

Seasonal Behaviour

Seeds germinate in late Spring, and plants reaching approximately 15 cm diameter by winter usually survive the first winter. The flowering stalk generally appears in the second year, during which the plant flowers and seeds, before typically dying in its second winter.

Medical Properties

Traditional Uses

Known to both Dioscorides and Pliny as a treatment for pulmonary conditions.
Due to their saponin and rotenone content, the seeds are narcotic to fish, and were used in this capacity by the Greeks as a stunning agent
Roman women often used the flowers as a golden hair dye.
Brought to North America by English colonists for its pulmonary properties, its use was rapidly adopted by a large number of Native American tribes.
Used externally by the Zuni against conditions of skin irritation.
The dried stalk is highly flammable, and is often used as a torch, and a spindle for fire production by friction. The down on the leaves is also highly flammable.
Despite its soft texture, the plant is highly contraindicated for use as toilet paper material.

Medical Categories: Expectorant, Emollient, Piscicide, Astringent, Dye

Parts Used: Leaves, Flowers, Seeds, Roots

Notable Compounds: Rotenone, Coumarin, Saponin, Verbascoside

Preparation Notes

Decoction of the leaves is the most common method of ingestion for use as pulmonary treatments. Liquid should be passed through a fine filter (typically muslin or cheesecloth) prior to consumption, to remove the irritating hairs.
An infusion of fresh flowers can be used as a golden hair dye.
Smoking of dried leaves is popular among various Native American tribes.
Root is dried and powdered for incorporation into poultices or infusions for treatment of skin irritations, warts, and Athlete's Foot.

References

1. "Backyard Medicine". J Bruton-Seal, R Seal
2. "A Modern Herbal" S Grieve


Chickweed

Craches, Maruns, Winterweed, Clucken wort, Passerina, Augentrosgras(European) Hakobe(Japanese)

Stellaria media

Chickweed flower, in bloom

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Carophyllales*

Family *Carophyllaceae*

Genus *Stellaria*

Species *media*

Descriptions

General

Small, floppy herb found almost worldwide. Rapidly proliferative, leading to its classification as a weed by farmers of barley, which it is capable of supplanting with ease.
Highly nutritive, it is a common food source of several moths and butterflies, as well as (as may be surmised from the name) birds.

Geographic Origin

Europe

Habitat

Common in shady waste places with rich, moist soil. Often found close to trees.

Anatomy and Biology

Typical Size: 0.02 — 0.4 m

Flowering Season: late February — late September

Stalk

Soft, flexible light-green trailing stem contains a single line of small white hairs.

Leaves

Small, ovate, oppositely aligned, up to 1 cm long and 0.5 cm wide. More basal leaves may have short stems. Leaves fold together each night, to protect the shoots.

Flowers

Very small, white, with five deeply lobed petals, appearing as ten to the casual observer. Fully hermaphroditic, with three styles and 3-8 stamens per flower.

Fruit

Small seed capsules

Propagation

Capsules open in windy conditions for dispersion.

Seasonal Behaviour

Germinates in winter, forming large mats in early spring. Flowers from early spring through autumn.

Medical Properties

Traditional Uses

Known to Dioscorides as external treatment for eye inflammation.
One of the seven Nanakusa herbs of Japan, celebrated by consumption in rice porridge in the Nanakusa-no-sekku festival of Spring on Janurary 7.
Used externally by the Ainu since ancient times for the treatment of itches, bruises, and ulcers.
Recommended by Gerard of London in the 16th century for the treatment of mange.
Common treatment for anemia and menstrual pain due to high Iron content.
Obtained a folk reputation as a slimming aid across Europe.

Medical Categories: Emollient, Culinary, Demulcent, Anti-inflammatory, Tonic, Febrifuge, Diuretic

Parts Used: Leaves and stems.

Notable Compounds: Vitamin A, Vitamin C, Saponins, Emodin, Parietin, beta-Sitosterol, daucosterol, 1-Hexacosanol

Preparation Notes

Eaten fresh in salads, or ground into pesto with pine nuts in early Spring. Often made into vinegar for salad dressing.
For topical use, crush with mortar and pestle and bandage the paste as a poultice, or add to hot bath in muslin bag.
Infuse dried material into tea as reputed slimming aid.

References

1. Backyard Medicine. J Bruton-Seal, M Seal
2. A Modern Herbal. S Grieve
3. The Earthwise Herbal. M Wood

Jimsonweed

Dhatura(Ayurvedic)

Toloache, Wysoccan, Aneglakya(Indigenous)

Thorn-Apple, Devil's Snare, Jamestown Weed, Moonflower, Devil's Cucumber, Devil's Trumpet(European)

Datura stramonium

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Solanales*

Family *Solanaceae*

Genus *Datura*

Species *Stramonium*

Subspecies: *Stramonium*, *Tatula*, *Wrightii*, *Ferox*, *Metel*

Immature fruit

Ripened fruit, split to reveal seeds

Descriptions

General

Bitter-smelling, highly branched annual. Long known to Native Americans and Africans for its intense entheogenic properties, it additionally harbors several more mundane medical uses, including treatment of burns and asthma. It is avoided by almost all animals.

Geographic Origin

North America

Habitat

Found in moderately warm, sunny locales, primarily in North America, Europe, and India, around livestock enclosures, waste lands, and roadsides. Requires rich, calcareous soil.

Strains

Tatula

distinguished by its dark red stem, and darker leaves.

Anatomy and Biology

Typical Size: 0.5 — 2.0 m

Flowering Season: late May — late August

Roots

Long, fibrous taproot.

Stalk

Thin and rubbery, heavily branched, leading to a plant nearly as wide as it is tall.

Leaves

Rhomboid, toothed, irregularly undulated, between 8 and 20 cm in length. Smooth to the touch, they produce a very bitter, fetid odor, especially when bruised.

Flowers

Trumpet-shaped, white to violet, 6 to 9 cm in length with a long, tubular calyx that is swollen at its base. Prominently ribbed corolla. May grow from leaf axils or stem branching nodes. Open primarily at night, releasing a pleasant aroma (in marked contrast to that of the leaves) attractive to moths. Each flower blooms for a single day.

Fruit

Spiny, egg-shaped seed capsule 3 to 8 cm in diameter.

Propagation

Fertilization is strongly aided by various moths and the Western Honeybee. However, self-fertilization greatly predominates, occurring in between 80 and 95 percent of cases.
Fruits split into four at maturity, releasing several dozen small black seeds. These are often eaten by birds (especially the ruby-throated hummingbird), and spread via droppings.

Seasonal Behaviour

Seeds germinate in mid-spring, flowering quickly and sporadically. Plants typically die with the first frost.

Medical Properties

Traditional Uses

Originally used primarily for religious ceremonial purposes by Native Americans and Ethiopians.
Numerous Native American tribes incorporated a decoction of the roots into their initiation ceremonies for manhood, including the Luiseno, Yokuts, and Juaneno of Southern California, the Navajo of the Four Corners region, and the Algonquin of the Northeast. During the resulting intoxication of two or three days duration, initiates would be visited by their guardian animal spirits, from whom they would learn mantra-like songs. The closely related innoxia species was used in highly similar fashion by the Tarahumara and Yaqui in the maize-based "tesquino", which was also used to ease childbirth.
Ethiopian priests use the plant to open their minds, whereas in Tanzania it is primarily mixed with the millet-based pombe beer as a narcotic. Quite curiously, it is reported that Caribbean shamans of Western African descent (primarily Nigeria, Togo, and Benin also use Datura as part of occult Vodou rituals derived from the Vodun tradition, indicating the existence of a huge swath of Africa across which the plant was revered by the 17th century if it is indeed the same plant used in Ethiopia.
The closely related "metel" variety most likely originated in India, as its use is still ubiquitous in ancient Shaivite sects in the mountains of Northern India and Nepal, typically taken in combination with wine or cannabis. Datura metel was known to Dioscorides, and later Avicenna,as Jouz-mathal, and additionally revered by certain esoteric Chinese Buddhist and Taoist sects in the second millenium AD as "Man-t'o-lo". Chinese knowledge of the herb is suspected to have accompanied the eastward diffusion of Indian Buddhism. It has been long used in Ayurvedic medicine as a treatment for asthma. Various rumor of efficacy against cancer have persisted unsubstantiated over the years.
Consumption of seeds causes immense dilation of the pupils, and perceived dimness of visual acuity, with specific deliriant effects strongly dependent upon the personality of the consumer. Memories of the experience are generally not retained.
Boiled fruits were used as a topical burn treatment by the British since at least the 16th century, and are also recommended for hemorrhoids.
The first recorded discovery of its more potent properties by the Western world occured when British soldiers called in to suppress Bacon's Rebellion against governor Berkeley in Jamestown in 1676 accidentally incorporated the leaves into a salad, subsequently behaving like "natural fools, in a frantic condition... full of innocence and good nature". (Beverley, "The History and Present State of Virginia, Book II",1705)
Extracts were tested in CIA attempts to develop truth serums and psychic control agents during Project MKUltra in the 1960s.

Medical Categories: Analgesic, Anti-asthmatic, Anti-inflammatory, Dissociative, Deliriant, Entheogen, Mydriatic, Narcotic, Anodyne, Euphoric, Antispasmodic

Parts Used: Leaves, Seeds

Notable Compounds: Atropine, Scopalamine, Hyoscyamine, Meteloidine, Ditigloylteloidine, Cuscohygrine, Daturadiol

Preparation Notes

Dried leaves may be smoked for treatment of asthma.
Infusion of dried leaves and fruit traditionally added to animal fat as a burn liniment. Without adding fat, may be added to bath as muscle relaxant, treatment for rheumatism, and mild narcotic.
For entheogenic use, seeds are typically boiled in water, or macerated and tinctured in alcohol. Extreme caution is recommended: as few as 100 seeds (the content of a single fruit) may be fatal, representing a ratio of approximately ten times the threshold dose.
Licorice is used as a traditional antidote to overdose, though this is not a substitute for professional medical care in such instances.

References

1. "Encyclopedia of Life". www.eol.org
2. "A Modern Herbal". S Grieve
3. "Edible and Useful Plants of the Southwest". D Tull
4. "Medical Plants of the Mountain West". M Moore
5. "The Native Americans". R Spencer, D Jennings
6. "Plants of the Gods". RE Schultes, A Hofmann, C Ratsch

Sassafras

Winauk, Pauane, Kombu(Indigenous)

Sassafras albidum

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Magnolidae*

Order *Laurales*

Family *Lauraceae*

Genus *Sassafras*

Species *Albidum*

Budding leaves in early spring

Sassafras fruits, in varying states of ripeness

Descriptions

General

Genus consists of three extant species; Tzumu and Randaiense are native to China and Taiwan respectively, while Albidum is natively North American.
Like most members of the family Lauraceae, Sassafras is highly sensitive to the fungal parasite Raffaelea lauricola, which is introduced into its sapwoods by flying redby ambrosia beetles attracted by the fragrant terpenes.
Sassafras has a fascinating economic history, playing a large role in the founding of colonies in Virginia and North America, until overharvesting greatly depleted the supply outside of (at the time) indigenously occupied lands.

Geographic Origin

Eastern to Southern-Central North America

Habitat

Prefers rich, loose soil, and full sunlight. Altitudes below 5000 feet.

Anatomy and Biology

Typical Size: 10.0 — 30.0 m

Flowering Season: early April — early December

Roots

Thick, fleshy, and rapidly growing (up to 4 feet per year), sassafras roots are invariably used for aclonal propagation, resulting in dense thickets when unchecked.

Stalk

Trunks typically from 40-60 cm wide, turning from green to red to dark reddish brown over the first few years of the tree's life. Soft, spongy bark displays high quantities of mucilage in young trees, and tastes simultaneously sweet and spicy. Furrows in the bark continue to deepen throughout the life of the tree. Wood is hard, dull orange-brown, and while effective as a construction material has been primarily limited as an economic choice by the scarcity of the tree.

Leaves

Yellow-green, alternately oriented. Somewhat unusually, most trees will display two- and three-lobed elliptical ovate leaves, and also unlobed elliptical leaves. 10-15 cm in length, 5-10 cm in width.

Flowers

Drooping yellow-green racemes with five or six tepals. Flower structure is strongly dependent upon the gender of the bearing tree. Male flowers display nine functional stamens, female flowersdisplay six antherless stamenodes and a style 2-3 cm in length.

Fruit

Blue-black drupe approximately 1 cm long, bound to stems by a long, red fleshy pedicel.

Propagation

Roots are highly stoloniferous, and large clonal colonies can form in only a few years.
In contrast to the Asian varieties, North American sassafras trees are almost entirely dioecious, with distinct flower morphologies dependent upon the gender of the tree.

Seasonal Behaviour

Deciduous

Medical Properties

Traditional Uses

Long known to Southeastern Native American tribes including the Choctaw, Delaware, Algonquin, Missouri, and Timuca as both a medicine and a food. Roots typically used as a body-cleansing agent, both internally, and externally to treat open wounds, bruises, or acne. Common treatment for fever and urinary disorders.Wood was a popular firestarter due its the high concentration of volatile oils, which also serve as a well-known pesticide.
Thomas Harriot, a member of Walter Raleigh's initial expedition to found the Roanoke Colony in the late 16th century, reports the culinary use of Sassafras leaves among the Algonquin in the late 16th century. After relations with the Algonquin soured, colonists reported subsisting through the winter on a diet of boiled sassafras leaves and dog meat. Raleigh and the pirate Francis Drake were the first to import sassafras back to England, where it was made into a beverage called "saloop" advertised as a treatment for fever and syphilis (which was spreading through Europe at epidemic proportions at the time), leading settlers to actively seek out and harvest the plant. It was the second largest export behind tobacco until the mid-seventeenth century, when it was supplanted by sugarcane. However, commercial harvesters typically stripped too much bark from each tree, killing it in the process and rapidly depleting the coastal population of the trees. This wastefulness was to become a significant source of friction between colonists and indigenous peoples.
Dried powdered leaf, now known as file powder, was used by the Choctaw as a thickening agent for soups. The importation of Gambian and Senegalese slaves to Louisiana resulted in a fusion of flavor giving rise to the soup called gumbo, first recorded in 1803. Whether the term stems from the Choctaw word "kombo" for sassafras or the Umbundu and Tshiluba word "nggombo" for okra, is uncertain.
In 1875, the Quaker pharmacist Charles Elmer Hires marketed Hires Root Beer, a carbonated sassafras root tea, as an alternative to alcoholic beverages among the working class. Ironically, as industrial-scale air compressors had not yet been invented, his product used yeast and priming sugar to produce its carbon dioxide, giving a mildly fermented result (likely between 1 and 3 percent ABV). Nevertheless, the FDA banned sassafras oil in 1960 on the basis that safrole was a carcinogen, and the very same year the Hires family sold their business to the Sara Lee Corporation. By this time, most major corporate competitors used a combination of sarsparilla, wintergreen oil, and birch sap rather than sassafras for their flavorings.
Sassafras tea was banned in the United States on the same grounds from 1977 to 1994.
In 1912, the Merck corporation discovered the chemical methylsaframin, a hemostatic produced by the amination of safrole. The discovery of the entheogenic properties of this compound appear to originate in classified research perofrmed by the United States Army Chemical Center shortly after WWII. Details concerning the emergence of this compound in the recreational drug scenes of San Francisco and Chicago in 1970 are quite murky, as it psychological effects were not published until 1978 by pharmacological chemists Shulgin and Nichols. Despite its rapid subsequent adoption as a tool by psychotherapists worldwide, the DEA classified the compound as a Schedule I Hallucinogen in 1985, in the face of vocal protest from the therapeutic community. Within a year, the United Nations Commission on Narcotic Drugs adopted an identical classification. In 1989, safrole was designated a List I Precursor under the Chemical Diversion and Trafficking Act, and again within a year the identical classification had been adopted by the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, which is still in effect in 189 nations worldwide.

Medical Categories: Diaphoretic, Febrifuge, Anticoagulant, Anti-inflammatory, Abortifacent, Stimulant, Dye

Parts Used: Roots, Bark, Wood, Leaves, Fruit, Flowers

Notable Compounds: Safrole, Mucilage, Camphor, alpha-Pinene, beta-Carophyllene, Linalool, Nerolidol,

Preparation Notes

A decoction of the roots is traditionally used as a spring cleanser. A milder tea may be made from the flowers for blood purification.
Ground bark may be chewed, or smoked in cigarette form.
Add a few tablespoons of dried, powdered leaves and stems to meat stews just before serving to make a traditional Creole gumbo.
Sassafras oil may be obtained from the bark and roots by steam distillation.

References

1. "Field Guide to Medicinal Plants and Herbs of Eastern and Central North America". J Duke, S Foster
2. "The Shulgin Index". A Shulgin, T Manning, P Daley.


Wormwood

Green Ginger(European)

Artemisia absinthium

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Asteraceae*

Order *Asterales*

Family *Eudicotae*

Genus *Artemisia*

Species *Absinthium*

Subspecies: *Absinthium*, *pontica*, *maritima*

Descriptions

General

Leafy perennial, named after the Greek goddess Artemis, guardian of animals, wildlands, and women. Famed for its bitterness, it is mentioned in Shakespeare's "Romeo and Juliet" in reference to a strategy employed to wean Juliet from her wet nurse. Etymology of the common name is from the Old English "wermod". Closely related to Mugwort, Sagebrush and Tarragon (all members of the Artemisia genus).

Geographic Origin

Northern Africa and Southern Eurasia

Habitat

Prefers shade and dry, nitrogenated soil. Found along roadsides, pastures and waste places over much of Eurasia, especially near bodies of salt water.

Anatomy and Biology

Typical Size: 0.7 — 2.0 m

Flowering Season: May — late October

Roots

Unlike the rest of the plant, noted for its warm, aromatic taste.

Stalk

Firm, thin whitish heavily branched stems, which may develop some wood character with age. Covered in fine, silky hair.

Leaves

Spiral-oriented, Gray-green from above, gray-white from below. Pinnatifid, up to 6 or 7 cm long by 3 or 4 cm wide.

Flowers

Small green-yellow panicles.

Fruit

Panicles of pale yellow, clustered tubular capitulae.

Propagation

Primarily reproduces through self-fertilization. Easily propagated asexually via cuttings from Spring to Autumn.

Medical Properties

Traditional Uses

Oldest known use is as a fortifying agent in wine, in India starting in 1500 BC. This tradition was adopted by the Greeks, and maintained by the Romans, making a resurgence in Germany in the early Renaissance period. It was also occasionally boiled with fresh wort for its antibacterial properties in gruit ales of Renaissance England. A highly similar formulation to the German "Wermut" comprised the original vermouth (the etymological similarity being no coincidence!), first marketed in Piedmont in the mid-17th century. This was greatly popularized in a sweetened form in Turin, which was used as an apertif. Joseph Noilly began producing the still-extant "dry" version of the concoction in 1800 in France.
However, the critical additions of fennel and green anise to make a traditional absinthe was first concocted in the Neuchatel canton of western Switzerland by Dr. Pierre Ordinaire in 1792, as a general-purpose medical elixir. After a series of transfers, Ordinarie's recipe was first capitalized upon by Marcellin and Henry-Louis Pernod, who expanded their manufacturing operation across the border to Pontarlier, France in 1805. It became popular as an antimalarial among troops of the French empire, who introduced it into the social milieu in the 1850s. A sweeping change in public sentiment toward temperance resulted in absinthe being declared illegal within six of its highest-consuming nations, including Switzerland, France, and the United States, between 1906 and 1916. The primary effects of this legislation were a shift in manufacturing to the Czech Republic, and a proliferation of clandestine production in France. In most of the above countries, it was ultimately relegalized in the 21st century, though subjected to numerous federal requirements.
A weaker version known as Pelinkovac (from 28-35 percent ABV) has been produced in Eastern Europe (primarily Croatia, Romania, Slovenia, and Bosnia) since the late 19th century.
The English commonly scattered the dried plant (often combined with Rue) around their houses as an insect, and most especially a moth repellant. Often used as an antidote to poisoning by Hemlock and toxic fungi. Powdered infusions were occasionally reputedly used as folk love charms.

Medical Categories: Antiseptic, Anthelminic, Vermifuge, Carminative, Apertif, Nervine, Antidepressant, Stimulant, Febrifuge, Diaphoretic, Tonic

Parts Used: Leaves, Flowers, occasionally Roots

Notable Compounds: Thujone, Thujyl alcohol, Phellandrene, Pinene, Absinthic Acid, Artabsin

Preparation Notes

Macerated leaves and flowers are tinctured in grain alcohol, and typically redistilled to exclude the most bitter components. Sale or importation of this formulation is illegal in the United States.
Tinctured flowers reported as a treatment for gout.
Dried powdered flowers are an exceptional vermifuge.

References

1. "A Modern Herbal". S Grieve
2. "The Earthwise Herbal". S Wood
3. "Encyclopedia of Medicinal Plants". A Chevallier






Mandrake

Satan's Apple(European)

Mandragora officinarum

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Solanales*

Family *Solanaceae*

Genus *Mandragora*

Species *Officinarum*

Subspecies: *Autumnalis*

Typical flowers of officinarum

The Mediterranean autumnalis variant is known for its bright violet flowers

Descriptions

General

Long known in various occult European circles, the Common Mandrake was introduced to the modern world in through the bestselling novel "Harry Potter and the Chamber of Secrets." In this instructive text, the root of Mandrake is discovered to actually be a horrifically ugly, fat, wrinkled baby, whose piercing cries induce coma in gardeners neglecting proper ear protection. However, a decoction of the root is found to be a powerful restorative, saving several would-be victims from the malevolent attacks of an embedded fragment of the soul of Lord Voldemort.

Geographic Origin

Mediterranean

Habitat

Open woodlands and disturbed soil, close to sea level. Thrives in moist soil in the summer, and dry soil in the winter.

Strains

Autumnalis

Bears bright violet flowers rather than the paler specimens of officinalis. Seeds are also considerably larger.

Anatomy and Biology

Typical Size: 0.1 — 0.5 m

Flowering Season: late September

Roots

Long, thick, branched.

Stalk

Nearly nonexistent: leaves exist as a basal rosette.

Leaves

Elliptical to obovate, crinkled and somewhat hairy. Up to 45 cm long.

Flowers

Greenish-white, or pale bluish-violet, 0.2-1.0 cm in length. Five stamens per flower, from 0.7 to 1.5 cm long, with yellow, brown, or blue anthers.

Fruit

Waxy yellowish-orange elliptic globes, 0.5 to 4 cm long. Bears yellow-brown seeds between 0.2 and 0.6 cm in length.

Propagation

Perennial, dioecious. Usually Propagated by seed.

Seasonal Behaviour

Somewhat flexible; flowers may form between September and April, maturing into fruits between November and June.

Medical Properties

Traditional Uses

Mandrake has been known to civilization since antiquity— its use as a fertility enhancement is strongly alluded to in Genesis, Chapter 30. Its use was also known within the cult of the well-traveled Pythagoras, prior to 500 BC.
Due to Levantine superstitions claiming that any human uprooting the plant would be killed by its screams and dragged to hell, many European herbalists of the middle ages would tie the foliage to their dog in order to minimize the risk.
However, the Roman Apuleius recommended its use for protection against demoniacal possession, and both Dioscorides and Pliny advocated chewing the root to induce anaesthesia prior to surgery. According to Theophrastus, it was rumored that the deathly shriek could be circumvented by making a circle around the plant with a sword, and facing West while uprooting it.
The development of Mandrake's association with Medieval European witchcraft over the next millenium is murky at best. The application of a salve made from a decoction of the root to the vaginal tissue, often by broomstick, is recorded in the early fourteenth century, and various rituals are recounted by Paracelsus in the early sixteenth century. In the Middle Ages, it was typically picked shortly after the Vernal Equinox

Medical Categories: Dissociative, Anaesthetic, Narcotic, Emetic, Laxative, Anodyne, Oneirogenic

Parts Used: Root

Notable Compounds: Atropine, Hyoscyamine, Scopalamine, Scopine, Cuscohydrine, Mandragorine, Apoatropine, Scopoletin, Sitosterol

Preparation Notes

Leaves may be boiled with milk, and used topically as a poultice for ulcers.
Root may be ground and tinctured, taken internally for use as an emetic, applied topically or smoked as an anaesthetic.

References

1. "Harry Potter and the Chamber of Secrets". JK Rowling
2. "A Modern Herbal". S Grieve
3. "Plants of the Gods". RE Schultes, A Hofmann, C Ratsch


American Ginseng

Five Fingers, Tartar Root(European)
Hua Qi Shen, Xi Yang Shen, Jin Chen(Chinese)
Garantoquen(Indigenous)
Panax quinquefolius

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Apiales*

Family *Araliaceae*

Genus *Panax*

Species *Quinquefolius*

Descriptions

General

American Ginseng is a perennial herb native to eastern North America. It is one of two species of Panax found endemically in the New World, the other being Dwarf Ginseng, or Panax trifolius. The name Panax is derived from the Greek panakos, the root of the modern word panacea.

Geographic Origin

East-Central North America: primarily Appalachians, Ozarks, and Southern Ontario

Habitat

Loose, richly organic soil, in very shady areas.

Anatomy and Biology

Typical Size: 0.2 — 0.6 m

Flowering Season: June — early September

Roots

Fleshy, elastic, cream to yellow-brown, occasionally darker brown, 5 to 8 cm long and 1 to 3 cm wide. Primarily vertical, but well-branched. Known for its slow growth. Interior is highly annulated. Tastes similar to licorice, albeit slightly more bitter. After drying, it tends to become very tough.

Stalk

Up to 30 cm tall

Leaves

Only three oblong, lanceolate leaves, each comprised of five finely toothed leaflets.

Flowers

Sparse, yellow, contained in the terminal umbel of the stem.

Fruit

Cluster of small, bright red berries, each containing two seeds.

Propagation

Roots are often propagated by asexual division, each partition being placed in warm sand to mature.

Seasonal Behaviour

Flowers in early summer, berries set seed between late summer and early autumn. Plants require five years to grow to maturity.

Medical Properties

Traditional Uses

Used since prehistoric times by several indigenous American tribes for a variety of purposes. Sioux, Cherokee, and Menominee chewed the root bark as a nervine tonic and to enhance mental acuity. Iroquois used the root to aid induce childbirth and enhance appetite, and the Penobscot used it to enhance fertility.
First European discovery was by French Jesuit settlers of Southeastern Canada in 1704. Within 15 years the product was being exported en masse to China, to supply the demand arising from overharvesting of the Chinese variety. Unsurprisingly, this has gradually produced a scarcity of the plant in the New World as well, the infamously slow growth cycle rendering agricultural production unprofitable and rapid replenishment of the wild stock unlikely.

Medical Categories: Anticoagulant,Nervine, Neruasthenic, Stimulant, Orexigenic, Demulcent, Adaptogen, Neurotropic, Aphrodisiac

Parts Used: Root

Notable Compounds: Ginsenosides, Protopanaxadiol, beta-Farnesene, Pulegone, beta-Gurjunene, beta-Bisabolene, beta-Elemene

Preparation Notes

Typically boiled as a decoction, or dried, powdered, and tinctured.

References

1. "A Modern Herbal". S Grieve
2. "Field Guide to Medicinal Plants and Herbs of Eastern and Central North America". S Foster, J Duke


Holy Basil

Tulsi, Kala Tulasi, Krishnamul(Ayurvedic)
Kaphrao(Thai)
Ocimum tenuiflorum

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotidae*

Order *Lamiales*

Family *Lamiaceae*

Genus *Ocimum*

Species *Tenuiflorum*

Subspecies: *Krishna*, *Rama*, *Vana*, *Kapoor*

Rama is the most commonly encountered variant of tulsi

Krishna is known for its deep purple leaves

Vana is the largest variant of tulsi

Descriptions

General

Leafy shrub of the mint family, Tulsi has been revered in Ayurvedic medicine since ancient times.

Geographic Origin

India

Habitat

Temperate climates

Strains

Krishna

Has dark purple leaves and stems, with a peppery taste.

Rama

This is the most common variety. Displays green leaves, white to purple flowers and green to purple stems. Considered more cooling than Krishna.

Vana

This variety has green leaves and white flowers, with a woodier stem. It grows considerably taller than any other variety. Its leaves are also quite spicy.

Kapoor

This variety is common in the United States, and is especially fragrant and attractive to bees.

Anatomy and Biology

Typical Size: 0.3 — 1.0 m

Flowering Season: May — August

Stalk

Erect and hairy, strongly branched.

Leaves

Green to purple, 3 to 7 cm in length. Highly fragrant, finely toothed, and covered in fine hairs.

Flowers

White to purple, in whorled racemes at the distal end of the stalk.

Propagation

Prefers cross-fertilization, but is known to self-seed at higher frequencies in warmer climates.

Medical Properties

Traditional Uses

Worshied since ancient times in the Hindu religion as an avatar for Lakshmi, wife of Vishnu, or her human avatar Sita. The ceremony of Tulsi Vivaha celebrates the marriage of Krishna and Radha (also avatars of Vishnu and Lakshmi) on the eleventh day of the waxing moon in the month of Kartik, typically falling between late October and early November. This begins the traditional marriage season in India. Stems and roots are used in rosaries and necklaces by devotees to Vishnu and (curiously) Hanuman.
It is traditionally kept in Hindu homes for a wide variety of curative and adaptogenic uses.

Medical Categories: Antibacterial, Astringent, Adaptogen, Insecticide, Anti-inflammatory, Hypotensive, Febrifuge, Analgesic, Spermicide, Hypoglycemic

Parts Used: Leaves, Flowers, Stems, Roots, Seeds

Notable Compounds: Oleanolic Acid, Ursolic Acid, Rosmarinic Acid, Eugenol, Carvacrol, Linalool, beta-Caryophyllene, beta-Elemene, Germacrene,Apigenin, Luteolin

Preparation Notes

Most common use is a simple infusion tea of crumbled leaves, fresh or dry.
Oil may be infused into ghee. Essential oil is a strong tonic, may be obtained by steam distillation or (preferably) rotary evaporation of an extracted solution in ethanol or ether.

References

1. "Encyclopedia of Medicinal Plants". A Chevallier
2. "The Ayurveda Encyclopedia".SS Shiva Tirtha




Wild Yam

Devil's Bones(European)

Dioscorea villosa

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Monocotidae*

Order *Dioscoreales*

Family *Dioscoreaceae*

Genus *Dioscorea*

Species *Villosa*

Descriptions

General

Winding perennial, rich in hormonally active saponins. Favorite habitat of rabbits due to the winding thickets of roots which form when the plant proliferates. The Dioscorea genus contains several closely related species with long histories of traditional use, including the Chinese Shen Yao, and the Yoruba Kokoro.

Geographic Origin

Eastern and Central North America, Central America

Habitat

Damp, open brushland

Anatomy and Biology

Typical Size: 0.5 — 8.0 m

Flowering Season: late April — late July

Roots

Long, tortuous, thin and woody rhizomes.

Stalk

Smooth, thin vine

Leaves

Drooping, cordate, conspicuously veiny (palmate), with hairy undersides, 5-10 cm long and 3-7 cm wide. Basal leaves whorled, all others aligned alternately. Set on long yellow-green petioles.

Flowers

White-green to yellow-green, sexually divergent, racemic, with 6 tepals. Female flowers are compact racemes of 7 to 20 cm length, consisting of 5-15 flowers 0.4 to 1 cm long, bearing 6 infertile stamens. Male flowers are of similar size, but clustered in panicles of one to three, developing on racemes 10-30 cm long which develop from leaf axils.

Fruit

Dry, ovoid winged brown achenes, up to 2 cm long. Each fruit contains three capsules, each bearing 1 or 2 seeds.

Propagation

Dioecious, amenable to asexual or sexual reproduction. Cross-fertilization greatly aided by wind.

Seasonal Behaviour

Flowers bloom from May to August, fruits emerge in early autumn and are dispersed by the wind.

Medical Properties

Traditional Uses

A decoction has been used by Mayan women as a form of birth control since ancient times.
The Meskwaki traditionally used a root tea to relieve pain and aid the process of childbirth.
Known to the Aztecs as a pain reliever.
Commonly used by Western practitioners as a treatment for biliary colic in the late 19th century. At times, reputed to have anticarcinogenic properties- a claim which has been vocally repudiated by the American Cancer Society.
The modern history of Dioscorea begins with the Hungarian chemist George Rosenkranz, who fled to Mexico in the early 1940s to escape the Nazi persecution. In 1944, he joined the Syntex Corporation, which had been founded the previous year by ex-Penn State Chemist Russell Marker, who had discovered that the yams contained diosgenin, a precursor to cortisone. Rosenkranz was able to recruit the flamboyant and enigmatic chemist Carl Djerassi to Mexico City, and together with Luis Miramontes they devised an economical synthetic strategy for both cortisone and progesterone from diosgenin. They used the proceeds from these products to research steroid derivatives that could withstand the acidic conditions of the stomach cavity, and in 1951 invented the orally active norethisterone, the first reversible contraceptive known to modern medicine. The chemical was patented in 1956, and its pill formulation, manufactured by Johnson and Johnson was approved by the FDA under the brand name "Ortho-Novum". A thriving trade in the "barbasco" yam developed in Southern Mexico, leading the country to establish its first doctoral chemistry program at UNAM, and breaking the monopoly of European pharmaceutical giants on human hormones, decreasing their price by a factor of over 200. The effects of economical contraceptives upon modern culture are both subtle and incalculably great, and until the development of an altenative pathway using soy-based hormones in the early 1980s, over 50 percent of all such medications were derived from the humble wild yam, representing a 280 million dollar per year industry in the United States alone.

Medical Categories: Contraceptive, Antispasmodic, Cholagogue, Anti-asthmatic, Hypotensive, Anti-inflammatory

Parts Used: Roots

Notable Compounds: Diosgenin, other Saponins, beta-Sitosterol

Preparation Notes

Root is generally gathered in the first year of the plant's life. Fresh or dried roots are tinctured in alcohol for use as an antispasmodic.
To extract saponins, the roots must be decocted. After approximately 20 minutes, the decoction solution becomes soapy, and now exhibits anti-inflammatory properties. However, decoction must be performed for at least an hour or two in order to extract the hormonally active constituents, easily determined by a marked change in the color of the solution to deep red.

References

1. "The Earthwise Herbal". M Wood
2. "Field Guide to Medicinal Plants and Herbs of Eastern and Central North America". S Foster, J Duke
3. "Encyclopedia of Medicinal Plants". A Chevallier
4. Encyclopedia of Life
5. "Steroids made it possible". C Djerassi






Fennel

Fenkel(European)

Marathon(Greek)

Foeniculum vulgare

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotae*

Order *Apiales*

Family *Apiaceae*

Genus *Foeniculum*

Species *Vulgare*

Subspecies: *Dulce*, *Roman*, *Saxon*, *Bitter*, *Indian*

Descriptions

General

Attractive, bright green perennial, with fine, highly branched leaves. Fennel is a prized a food source for a diverse array of animals, including humans. Smells of licorice or anise.
Name derived from Latin "foenum", for hay, subsequently adopted into Old English "finol".

Geographic Origin

Mediterranean, though long found across Europe and India

Habitat

Calcareous soil in temperate climates.

Strains

Dulce

Florence Fennel is a smaller, thicker annual, which requires richer soil. It is very popular in Italian cuisine, and is an important ingredient in Italian sausages.

Anatomy and Biology

Typical Size: 1.0 — 2.0 m

Flowering Season: early July — August

Roots

White bulb

Stalk

Thick, white, and bulblike at its base, giving rise to several green stems not unlike onions in appearance.

Leaves

Dark green, soft, feathery, tripartite needles.

Flowers

Umbels of small yellow blooms.

Fruit

The commonly consumed "seeds" are, in fact, the achene-like fruits of the plant. Pale green-gray or yellow-brown, elliptical and slightly curved, of varying length. Fragrantly aromatic.

Propagation

Typically by seed.

Seasonal Behaviour

Seeds are sown in early April, germinating quickly and blooming by July. Seeds are generally gathered in early autumn.

Medical Properties

Traditional Uses

Fennel was known to the Greeks, where it was found in the town of Marathon (for which the modern race is named).
It was well appreciated by the Romans, for both culinary and medical purposes. Pluny notes that it is often consumed by snakes around the time of their moulting. Traditionally cooked with fish. Stems are eaten fresh in salad, or boiled in soup. The plant and its usage diffused with the Roman expansion across all of Europe, and was retained by most Latin cultures after the subsequent contraction. It is very rich in numerous minerals, including Iron, Calcium, and Magnesium, and is unusually high in protein for its status as a plant.
In the Middle East, it is believed to increase milk production in females, and libido in both genders. It is considered a relative of the North Ameriacan "Osha", which is also in common medical use.
Both Romans and medieval Europeans believed the herb to enhance vision. Early Anglo-Saxons used the plant along with Mugwort, Nettle, Thyme, and five other herbs in a popular formula to treat poisoning and infection.
Fennel is often incorporated into herbal liqeurs, most notably absinthe.

Medical Categories: Carminative, Lactagogue, Diuretic, Emmenagogue, Antitoxic, Hypotensive, Aphrodisiac, Antispasmodic

Parts Used: Seeds, Fruit, Shoots, Leaves, Roots

Notable Compounds: Foeniculoside, Anethole, Fenchone, Methylchavicol, Bergapten

Preparation Notes

While use in tea is known, tincturing is generally considered to be more effective.
Essential oil may be extracted by steam distillation.
To promote vision, boiled roots and seed are applied to the eyes as an eyewash or poultice.

References

1. "A Modern Herbal". S Grieve
2. "The Earthwise Herbal". M Wood
3. "Encyclopedia of Medicianal Plants". A Chevallier
4. "Field Guide to Medicinal Plants and Herbs of Eastern and Central North America". S Foster, J Duke

Gotu Kola

Brahmi, Mandukparni, Ondelaga, Ekpanni, Sarswathi Aku, Khulakhudi(Ayurvedic)

Ji Xue Cao(Chinese)

Indian Pennywort, Hierba de Clavo, Sombrerito(European)

Centella asiatica

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Eudicotidae*

Order *Apiales*

Family *Apiaceae*

Genus *Centella*

Species *Asiatica*

Descriptions

General

Low, creeping perennial found in hot, moist climates. From Singhalese, for "cup-shaped leaf". Often confused with Bacopa monnieri, due to their similar appearance, properties, and designation within Ayurvedic medicine, gotu kola can be distinguished by the violet hue to its flowers.

Geographic Origin

South Asia

Habitat

Tropical swampy areas.

Anatomy and Biology

Typical Size: 0.1 — 1.0 m

Flowering Season: early January — early December

Roots

Vertically oriented cream-colored hairy rhizomes.

Stalk

Green to reddish green, long, weak, and flexible.

Leaves

Up to 2 cm, circular to cup-shaped.

Flowers

Tiny, white, pink, or red, on umbels close to the ground. Hermaphroditic, with 5 or 6 lobes.

Fruit

Wrinkled, dry, and small.

Propagation

Freely divides asexually by separation of its stolonic roots.

Medical Properties

Traditional Uses

Long used in Ayurvedic Medicine to improve memory, and enhance the crown chakra. Sometimes cooked with the lentil curry dhal.
Known to the Chinese since at least the time of the Shennong Herbal (2nd century AD) as an agent to increase longevity .
Widely eaten and drunk across Southeast Asia.
In typically articulate fashion, the American Cancer Society reports that "Although at least one laboratory study of tumor cells showed reduced cell growth with gotu kola, available scientific evidence does not support claims of its effectiveness for treating cancer or any other disease in humans." Naturally, it does not have FDA approval for such a purpose.

Medical Categories: Adaptogen, Nootropic, Emollient, Anti-inflammatory, Febrifuge

Parts Used: Leaves

Notable Compounds: Brahmic Acid, Germacrene, beta-Carophyllene, beta-Elemene, alpha-Copaene, Myrcene, gamma-Terpenene, alpha-Pinene, beta-Sitosterol, Campesterol, Stigmasterol, Hydrocotyline, Betulinic Acid

Preparation Notes

May be eaten raw in salad, or blended into juice, or dried and used in tincture or tea.

References

1. Mountain Rose Herbs
2. Encyclopedia of Life

Withania

Ashwagandha(Ayurvedic)

Indian Ginseng, Winter Cherry, Poison Gooseberry(European)

Withania sominfera

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Solanaceae*

Order *Solanales*

Family *Eudicotidae*

Genus *Withania*

Species *Sominfera*

Descriptions

General

Perennial shrub with a long history of use in Ayurvedic medicine.

Geographic Origin

Nothern India

Habitat

Most prevalent in dry, hot climates, at higher altitudes.

Anatomy and Biology

Typical Size: 0.3 — 1.2 m

Flowering Season: May — early August

Roots

Musty-smelling, hard, brown, woody, and straight.

Stalk

Light green, robust, and fuzzy

Leaves

Dull medium-to-dark green, between 10 and 12 cm long, and elliptic to ovate in geometry.

Flowers

Small white or yellow cups of 0.5 to 1.5 cm diameter, comprising 5 tepals and occurring predominately at leaf axils.

Fruit

Small, bright red berries up to 1 cm in diameter, loosely encased in a dry papery calyx.

Propagation

May be propagated from seed or cutting in spring. Fruit and root are harvested in autumn.

Seasonal Behaviour

Fruits harvested in early autumn.

Medical Properties

Traditional Uses

Ashwagandha is one of the most important and revered herbs in all of Ayurvedic medicine. Primary uses include treatment for chronic stress and fatigue due to overwork.
Recommended by Dioscorides as a general health tonic.
Berries used to separate lipoprotein curds from solution in cheesemaking.
Modern studies have found correlations between consumption and increased blood hemoglobin concentrations, which is logical given its high iron content.

Medical Categories: Adaptogen, Nootropic, Aphrodisiac, Nervine, Anxiolytic, Anticarcinogenic, Hypotensive

Parts Used: Root, Leaves, Berries

Notable Compounds: Withaferin A, Withaniol, other withanolides, Ashwagandhine, Somniferene, Tropine, Cuscohygrine, Linoleic Acid, beta-Sitosterol, Deoxyphysalolactone, Dihydrowithaferin, Withalactone, Daucosterol, Quresimine

Preparation Notes

Decoctions are commonly made from the root, and dried powdered leaves may be drank as a tea. Berries are typically eaten raw.

References

1. "Encyclopedia of Medicinal Plants". A Chevallier
2. James Duke Ethnobotanical Database
3. "The Ayurveda Encyclopedia". SS Shiva Tirtha

Osha

Bear Medicine, Chuchupati, Washi, Guariaca, Ha'Ich'Idee, Ha'il Chii'gah, Kwiyag'A Tukapi(Indigenous)

Lovage, Mountain Ginseng, Mountain Carrot, Loveroot, Indian Parsley(European)

Hierba de Cochino(Spanish)

Ligusticum porteri

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Apiaceae*

Order *Apiales*

Family *Eudicotidae*

Genus *Ligusticum*

Species *Porteri*

Descriptions

General

Perennial herb endemic to the Southwestern mountains and high deserts. Infamously similar to poison hemlock in appearance, it should only be harvested by experts highly familiar with its identification and distinction from its deadly cousin. Primary distinguishing characteristics of Osha include a strong leaf fragrance upon bruising (once described as "an acrid celery-butterscotch scent, vaguely reminescent of Thai cooking", a lack of purple coloration in the stem and leaves, a slightly larger size, and a predilection for drier environments. Closely related to the European Lovage plants, and the Chinese Kao Pau.

Geographic Origin

Rocky Mountains and Southwestern Deserts of North America

Habitat

Appearing to be an obligatory symbiont with a strain of mycorrhizal fungi unique to the Southwestern mountains, Osha has never been successfully grown outside of the region.

Anatomy and Biology

Typical Size: 0.4 — 2.0 m

Flowering Season: July — August

Roots

Fibrous, dark brown, wrinkled and hairy. Highly astringent to the taste when fresh.

Stalk

Yellow-green or gray-white. Often present as a rosette of five or six substalks in older specimens.

Leaves

Finely divided, tripinnate, oppositely oriented, generally concentrated near the basal end of the stalk. Up to a foot or two in length.

Flowers

Umbrels of small white flowers

Fruit

Achenic seeds reminiscent of fennel.

Propagation

Easily divided for asexual propagation, and prone to forming large clumps in nature.

Seasonal Behaviour

Celery-scented seeds similar to those of fennel are released from late August to early September, marking the beginning of the traditional harvest.

Medical Properties

Traditional Uses

Osha was almost certainly first identified by Native Americans who noticed that bears would invariably seek it out when emerging from hibernation, and that snakes and insects tended to avoid it. Therefore, Paiute hunters often applied the herb to their moccasins.
Historically consumed for general well-being, and specifically to increase respiratory capacity.
The root is commonly chewed or burned as incense during healing ceremonies
Used externally by the Zuni to treat general body aches and sore throats.
Traditionally gathered in the afternoon, to minimize encounters with its most notable patron- the brown bear.

Medical Categories: Expectorant, Antibacterial, Diaphoretic, Anesthetic, Hemostatic, Stimulant, Pulmonary, Empathogen

Parts Used: Roots

Notable Compounds: Ligustilide, Digustilide, alpha-Pinene, Limonene, Umbelliferone, Timolol, Ferulic Acid, Furanocoumarin, Oxytocin

Preparation Notes

Decoct the crushed root as a treatment for sore throats.
Ground fresh root is often tinctured.

References

1. "Medicinal Plants of the Mountain West". M Moore



Vervain

Wild Hyssop, Simpler's Joy, Herba Sacree, Yn Lus, Echtes Eisenkraut, Ijzerhard, Zeleznik Lekarsky, Rohtorautayrtti(European)

Ma Bian Cao(Chinese)

Verbena officinalis

Kingdom *Plantae*

Class *Verbenaceae*

Family *Verbenaceae*

Genus *Verbena*

Species *Officinalis*

Subspecies: *africana*, *eremicola*, *gaudichaudi*, *macrostachya*, *monticola*, *halei*, *hastata*

Descriptions

General

Common Vervain is but one member of a very large genus, consisting of over 250 perennial herbs. The vervains are known for their ability to attract a wide variety of flying visitors, especially butterflies, hummingbirds, and bees.
Latin name derived from "good product of spring".

Geographic Origin

Europe and Northern Africa

Habitat

Commonly found in sunny, grassy areas with dry, calcareous soil

Anatomy and Biology

Typical Size: 0.6 — 1.5 m

Flowering Season: May — early August

Stalk

Squarish, hairy, somewhat resinous, often in shrubby clumps.

Leaves

Lobed to lanceolate, toothed and hairy, 2 to 4 cm in length.

Flowers

Tiny racemic mauve to lilac, emerging from terminal spikes.

Propagation

Readily self-fertilizes

Seasonal Behaviour

Germinates in early spring, flowers from late spring through midsummer, and dies back in the fall.

Medical Properties

Traditional Uses

The history of vervain is mired in curious superstitions, and it has held religious significance in a number of cultures.
The earliest written records are from Ancient Greece (Hippocrates) and Rome (Pliny). Pliny's commentary in the Historia Naturalis is highly intriguing, indicating that it was commonly held to possess cleansing energy, and also had been used for more occult purposes by the Magi, and the Gauls. It was believed to have held importance to the pre-Roman Druids as well.
In the Middle Ages, vervain was used in Wales as a treatment for infected or inflamed lymph nodes, and according to English tradition, had been used to staunch the wounds of Christ after his crucifixion, and was effective as a repellant of malevolent witchcraft.

Medical Categories: Nervine, Vulnerary, Anti-inflammatory, Aphrodisiac, Diaphoretic, Febrifuge, Galactagogue, Abortifacent,Oneirogenic, Soporific, Antioxidant, Astringent

Parts Used: Flowers, Leaves, Upper Stalk

Notable Compounds: Oleanolic Acid, beta-Sitosterol, Ursolic Acid, Verbenalin, Verbenol, Verbascoside, Apigenin, Hastatoside, Aucubin

Preparation Notes

Traditionally gathered at night, while praying aloud. Typically used fresh, or dried immediately after harvesting.
Chop the upper 2/3 of the flowering plant, infuse into tea or tincture in alcohol.
The honey made from Vervain nectar is

References

1. "Backyard Medicine" . J Bruton-Seal, M Seal
2. Wikipedia
3. "A Modern Herbal". M Grieve

Hawthorn

Mayblossom, Motherdie, Gazels, Ladies' Meat, Hagedorn(European)

Crataegus monogyna

Kingdom *Plantae*

Phylum *Angiospermae*

Class *Rosaceae*

Order *Rosales*

Family *Eudicotidae*

Genus *Crataegus*

Species *Monogyna*

Descriptions

General

Long-lived deciduous tree (often reaching over 500 years in age), long used to form natural hedges. Fertilized by an infamously wide variety of flying animals.

Geographic Origin

Europe

Habitat

Found wild along the edges of woodlands. Used for hedges since medieval times due to its resistance to strong winds. Prefers calcareous soil.

Anatomy and Biology

Typical Size: 4.0 — 12.0 m

Flowering Season: late April — early June

Stalk

Grey-brown, fissured bark with orange-tinted outer wood. The smaller stems possess sharp thorns 1-2 cm in length.

Leaves

Deeply lobed, spreading, obovate, 2-4 cm in length

Flowers

Fragrant cymose corymbs of 5-25 white flowers, each 10-15 mm wide. Several thin red stames surround a single style.

Fruit

Bright red spherical pomes, fading to a dark red at maturity, 1-2 cm in diamter.

Propagation

Hermaphroditic. Pollinated by a wide assortment of flies and bees. Fruits are eaten by a wide assortment of birds from autumn to early winter, effectively dispersing the seeds.

Seasonal Behaviour

Flowers in late spring, producing fruit throughout the summer and into autumn.

Medical Properties

Traditional Uses

Venerated as a fertility symbol by the Gaels in pre-Roman times, an association which has been vestigially preserved by the traditional wearing of crowns of hawthorn blossoms in May Day celebrations.
Traditionally valued as a firewood for its clean, hot burning characteristics, and for use in carving and furniture due to its hardness and strength.
In medieval England, was used to aid urination, and assist in the passing of kidney stones.
Its most famous use in modern herbal medicine, as a tonic to strengthen the heart, does not appear to have been recognized until the late 19th century, when a noted Irish cardiologist divulged the secret ingredient of his well-reputed tinctures upon his deathbed. Dr. WC Jennings, hearing of this treatment technique, adopted it into his own practice, becoming a lifelong advocate of its use in strengthening a weak heartbeat and poor circulation through his correspondence with several notable medical journals over the next few decades. Evaluations of its efficacy for this purpose in modern medical trials are almost uncontestedly affirmative.

Medical Categories: Circulatory Tonic, Diuretic, Nervine, Astringent

Parts Used: Fruit, Bark, Leaves, Flowers

Notable Compounds: Crataegin, Pycnogenol, Hyperoside, Quercetin, Schaftoside

Preparation Notes

Berries are often tinctured into liqueurs, or preserved as jellies, jams, and syrups.
Bark and leaves are typically prepared as a tea.
Flowers occasionally eaten in salads.

References

1. "A Modern Herbal". M Grieve
2. "Backyard Medicine". J Bruton-Seal, M Seal
3. Encyclopedia of Life
4. "Encyclopedia of Medicinal Plants". A Chevallier