A simple ailment such as cold, indigestion or flatulence does not always require prescription medication. It is quite possible to get some measure of relief by using certain medicinal herbs. So, here are a few herbs that you must grow in your home garden so that they are readily available when you need them.

**Tulsi**

Tulsi has various [health benefits](http://www.thehealthsite.com/diseases-conditions/top-10-health-benefits-of-tulsi/)and it also helps deal with cough and cold because of its antibacterial as well as expectorant properties. Add a few tulsi leaves to boiling water to make a soothing tea; drink as such or add a few drops of honey for flavor. Juice from crushed tulsi leaves may also be applied to areas of skin that have developed an itchy rash or irritation. You may like to read about the[benefits of drinking tulsi tea.](http://www.thehealthsite.com/diseases-conditions/tulsi-tea-holy-basil-tea-health-benefits-po1214/)

**Ginger**

Ginger is a rhizome that is easy to grow even in pots. Wash the rhizome thoroughly to remove the mud, grate or cut into small pieces and steep in hot water for a few minutes to make a soothing tea. Ginger tea is one of the most effective remedies against indigestion and flatulence. Some people also squeeze a little ginger juice into a tea made from tulsi and honey and use to combat cough and cold. People with motion sickness often find that chewing or sucking on a small piece of ginger helps reduce the nausea or vomiting they encounter when travelling. Read more about the various [health benefits of ginger](http://www.thehealthsite.com/diseases-conditions/10-health-benefits-of-ginger/).

**Cilantro**

Also known as coriander leaves, cilantro is easy to grow from coriander seeds that are used as a spice. Like the seeds, the leaves of this herb also possess several[health benefits](http://http/www.thehealthsite.com/diseases-conditions/health-benefits-of-coriander/) including  digestive and carminative properties and thus, help avoid flatulence and indigestion. Cilantro may be finely chopped and sprinkled on curries, soups and salads or incorporated into green chutney to accompany sandwiches and other breakfast dishes such as idli or dosa. Chewing on a few cilantro leaves can also help mask bad breath.

**Malabar spinach/ Basella**

Malabar spinach is a creeper that grows easily in a pot provided you give it enough support. The succulent leaves and stems of this creeper are rich in folic acid and iron and this makes it a good herb for those who are [anaemic](http://www.thehealthsite.com/diseases-conditions/10-healthy-ayurvedic-herbs-you-should-grow-at-home/www.thehealthsite.com/diseases-conditions/anaemia/001/) and pregnant women. The leaves are generally roasted in a little ghee and then ground into a chutney using other ingredients such as coconut and green chillies. The roasted leaves may also be included in gravy dishes such as dal or sambar.

**Gotu kola**

Gotu kola is also a creeper whose leaves can be used for skin problems such as rash, irritation and itching. The leaves must be steeped in hot water for a few minutes and the tea so obtained may be drunk after straining. Some people also crush the leaves and apply the paste directly onto the skin to deal with itching and rash and to heal superficial wounds.

**Brahmi**

Brahmi grows well in pots provided it receives a small amount of sun. The leaves of this herb have been traditionally used to improve memory and learning, get rid of worms and also as a remedy for skin problems. A few brahmi leaves may be soaked overnight in water and made into a paste the next day with some almonds, milk and sugar candy. The liquid so obtained is considered good for improving memory and also helps eliminate intestinal worms.

**Henna**

Henna has been used from times immemorial for its cooling properties as well as its cosmetic value. The chemical in henna causes skin and hair to stain a dark brown or red color, making it a natural hair dye. Henna leaves can be ground into a paste, mixed with some curry leaves and sesame oil and applied to grey hair and also has [various other haircare benefits](http://www.thehealthsite.com/beauty/henna-herbal-home-remedy-for-beautiful-hair/). Some women also apply henna paste on the soles of the feet to deal with the hot flashes that are so common during menopause.

**Hibiscus**

Hibiscus is another plant that you can easily grow in a pot although you will need to transplant it into the soil after some time. The flowers must be soaked overnight and next morning, squeezed into a paste and applied to the scalp and hair. This treatment when done frequently helps to promote hair growth. The leaves of the hibiscus plant can also be made into a paste and combined with amla and coconut oil to prevent premature greying of hair. Hibiscus can also be effectively used to [treat lifestyle diseases like diabetes.](http://www.thehealthsite.com/news/hibiscus-a-natural-remedy-for-diabetes/)

**Curry leaves**

Curry leaves are commonly used in Indian cuisine for their flavor but they also have strong digestive properties. They also change the body’s absorption of fat and a common remedy for weight loss is to steep curry leaves in hot water for a few minutes, strain and drink the resulting tea when still warm. Apart from its various [health benefits](http://www.thehealthsite.com/diseases-conditions/10-health-benefits-of-kadi-patta-or-curry-leaves-p214/), curry leaves are also known to possess various [haircare](http://www.thehealthsite.com/beauty/beauty-tip-curry-leaves-or-kadi-patta-for-hair-loss/) and[skin care](http://www.thehealthsite.com/beauty/3-face-packs-with-curry-leaves-for-common-skin-problems-pr0215/) benefits.

**Pudina/Mint**

Pudina grows well in pots and you can use the aromatic leaves of this herb to spice up salads, chutneys or your tea. The menthol in pudina activates the action of the digestive enzymes and also relaxes the muscles of the gastrointestinal tract, providing relief from spasmodic pain caused by indigestion. Pudina is also known to possess other  [health benefits like fighting acne etc](http://www.thehealthsite.com/diseases-conditions/10-health-benefits-of-pudina-that-can-keep-you-in-mint-condition/). A few mint leaves can also be added into boiling water and the vapors inhaled to relieve nasal congestion.You may like to read about [pudina face packs for a healthy and glowing skin](http://www.thehealthsite.com/beauty/pudina-face-packs-pr0115/).

All the herbs mentioned here are quite easy to grow and do not require any special knowledge of gardening. All it takes is a little patience and effort to procure the necessary materials and a few minutes every day spent in caring for your plants. Growing these herbs will not just give you access to your own medicines; caring for them will also prove to be a wonderful stress buster!

Image source: Getty Images

*Ocimum tenuiflorum*

From Wikipedia, the free encyclopedia

*"Tulasi" redirects here. For other uses, see*[*Thulasi (disambiguation)*](http://en.wikipedia.org/wiki/Thulasi_(disambiguation))*.*

*"Tulsi" redirects here. For the 2008 film, see*[*Tulsi (film)*](http://en.wikipedia.org/wiki/Tulsi_(film))*. For the U.S. congresswoman, see*[*Tulsi Gabbard*](http://en.wikipedia.org/wiki/Tulsi_Gabbard)*.*

*"Holy Basil" redirects here. It is not to be confused with holy herb (*[*Verbena officinalis*](http://en.wikipedia.org/wiki/Verbena_officinalis)*).*

|  |  |
| --- | --- |
| ***Ocimum tenuiflorum*** | |
| [Ocimum tenuiflorum2.jpg](http://en.wikipedia.org/wiki/File:Ocimum_tenuiflorum2.jpg) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plantae) |
| (unranked): | [Asterids](http://en.wikipedia.org/wiki/Asterids) |
| Order: | [Lamiales](http://en.wikipedia.org/wiki/Lamiales) |
| Family: | [Lamiaceae](http://en.wikipedia.org/wiki/Lamiaceae) |
| Genus: | [*Ocimum*](http://en.wikipedia.org/wiki/Ocimum) |
| Species: | ***O. tenuiflorum*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Ocimum tenuiflorum*** [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) | |
| [**Synonyms**](http://en.wikipedia.org/wiki/Synonym_(taxonomy))[[1]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-1) | |
| * *Geniosporum tenuiflorum* (L.) Merr. * *Lumnitzera tenuiflora* (L.) Spreng. * *Moschosma tenuiflorum* (L.) Heynh. * *Ocimum anisodorum* F.Muell. * *Ocimum caryophyllinum* F.Muell. * *Ocimum hirsutum* Benth. * *Ocimum inodorum* Burm.f. * *Ocimum monachorum* L. * *Ocimum sanctum* L. * *Ocimum scutellarioides* Willd. ex Benth. * *Ocimum subserratum* B.Heyne ex Hook.f. * *Ocimum tomentosum* Lam. * *Ocimum villosum* Roxb. nom. illeg. * *Plectranthus monachorum* (L.) Spreng. | |

***Ocimum tenuiflorum***, also known as **Ocimum sanctum**, **holy basil**, or ***tulasī***, is an[aromatic plant](http://en.wikipedia.org/wiki/Aromatic_plant) in the family [Lamiaceae](http://en.wikipedia.org/wiki/Lamiaceae) which is native to the [Indian Subcontinent](http://en.wikipedia.org/wiki/Indian_Subcontinent) and widespread as a cultivated plant throughout the [Southeast Asian](http://en.wikipedia.org/wiki/Southeast_Asia) tropics.[[2]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Staples1999-2)[[3]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-warrier-3) It is an erect, many branched subshrub, 30–60 cm tall with hairy stems and simple [opposite](http://en.wikipedia.org/wiki/Opposite_leaves)green or purple leaves that are strongly scented. Leaves have [petioles](http://en.wikipedia.org/wiki/Petiole_(botany)) and are[ovate](http://en.wikipedia.org/wiki/Ovate), up to 5 cm long, usually slightly toothed. The flowers are purplish in elongate[racemes](http://en.wikipedia.org/wiki/Racemes) in close whorls.[[3]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-warrier-3) The two main [morphotypes](http://en.wikipedia.org/wiki/Morphotype) cultivated in India and Nepal are green-leaved (Sri or Lakshmi *tulasi*) and purple-leaved (Krishna *tulasi*).[[4]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-4) (See[Tulsi in Hinduism](http://en.wikipedia.org/wiki/Tulsi_in_Hinduism).)

*Tulasi* is cultivated for religious and medicinal purposes, and for its [essential oil](http://en.wikipedia.org/wiki/Essential_oil). It is widely known across the [Indian Subcontinent](http://en.wikipedia.org/wiki/Indian_Subcontinent) as a medicinal plant and an [herbal tea](http://en.wikipedia.org/wiki/Herbal_tea), commonly used in [Ayurveda](http://en.wikipedia.org/wiki/Ayurveda), and has an important role within the [Vaishnavite](http://en.wikipedia.org/wiki/Vaishnavite)tradition of [Hinduism](http://en.wikipedia.org/wiki/Hinduism), in which devotees perform worship involving holy basil plants or leaves.

The variety of *Ocimum tenuiflorum* used in [Thai cuisine](http://en.wikipedia.org/wiki/Thai_cuisine) is referred to as **Thai holy basil** ([Thai language](http://en.wikipedia.org/wiki/Thai_language): กะเพรา *kaphrao*);[[2]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Staples1999-2) it is not to be confused with [Thai basil](http://en.wikipedia.org/wiki/Thai_basil), which is a variety of [*Ocimum basilicum*](http://en.wikipedia.org/wiki/Ocimum_basilicum).

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum)]

* [1 Genetics](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Genetics)
* [2 Uses](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Uses)
  + [2.1 In Hinduism](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#In_Hinduism)
  + [2.2 Ayurveda](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Ayurveda)
  + [2.3 Thai cuisine](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Thai_cuisine)
  + [2.4 Insect repellent](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Insect_repellent)
* [3 Pharmacological study](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#Pharmacological_study)
* [4 References](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#References)
* [5 External links](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#External_links)

Genetics[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=1" \o "Edit section: Genetics)]

[](http://en.wikipedia.org/wiki/File:Starr_080117-1577_Ocimum_tenuiflorum.jpg)

Close-up of *tulasi* leaves

[](http://en.wikipedia.org/wiki/File:Holy_Basil_flowers.jpg)

*Tulasi* flowers

DNA barcode of various biogeographical isolates of Tulsi from the [Indian Subcontinent](http://en.wikipedia.org/wiki/Indian_Subcontinent) are now available. In a large-scale [phylogeographical](http://en.wikipedia.org/wiki/Phylogeography) study of this species conducted using [Chloroplast](http://en.wikipedia.org/wiki/Chloroplast) [genome](http://en.wikipedia.org/wiki/Genome)sequences, a group of researchers from [Central University of Punjab](http://en.wikipedia.org/wiki/Central_University_of_Punjab), Bathinda have found that this plant had been originated in North-Central India.[[5]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-5)[[6]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-6)The finding is especially interesting, as this region have played important roles in religious and cultural uprising of India and the present discovery might suggest evolution of Tulsi had been in relation with cultural migratory patterns in Indian Subcontinent.

Uses[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=2" \o "Edit section: Uses)]

**In Hinduism**[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=3" \o "Edit section: In Hinduism)]

Tulasi leaves is an essential part in the worship of God [Vishnu](http://en.wikipedia.org/wiki/Vishnu) ([Narayana](http://en.wikipedia.org/wiki/Narayana)) and his Avatars including God [Krishna](http://en.wikipedia.org/wiki/Krishna), God [Rama](http://en.wikipedia.org/wiki/Rama) and other male Vaishnava deities like [Hanuman](http://en.wikipedia.org/wiki/Hanuman),[Balarama](http://en.wikipedia.org/wiki/Balarama), [Garuda](http://en.wikipedia.org/wiki/Garuda) and many others. *Tulasi* is a sacred plant for [Hindus](http://en.wikipedia.org/wiki/Hindus) and is worshipped by Hindus as the avatar of goddess [Lakshmi](http://en.wikipedia.org/wiki/Lakshmi).[[7]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-7) Water mixed with the petals is given to the dying to raise their departing souls to heaven.[[8]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-8) *Tulasi*, which is [Sanskrit](http://en.wikipedia.org/wiki/Sanskrit) for "the incomparable one", is most often regarded as a consort of [Krishna](http://en.wikipedia.org/wiki/Krishna) in the form of[Lakshmi](http://en.wikipedia.org/wiki/Lakshmi).[[9]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Claus-9)[[10]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Simoons-10) According to the [*Brahma Vaivarta Purana*](http://en.wikipedia.org/wiki/Brahma_Vaivarta_Purana), *tulasi* is an expression of[Sita](http://en.wikipedia.org/wiki/Sita).[[11]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-11)[[*full citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citing_sources#What_information_to_include)] There are two types of tulsi worshipped in Hinduism: "Rama tulasi" has light green leaves and is larger in size; "Shyama tulasi" has dark green leaves and is important for the worship of [Hanuman](http://en.wikipedia.org/wiki/Hanuman).[[12]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Chatterjee-12) Many Hindus have tulasi plants growing in front of or near their home, often in special pots. Traditionally, *tulasi* is planted in the center of the central [courtyard](http://en.wikipedia.org/wiki/Courtyard) of Hindu houses. It is also frequently grown next to [Hanuman](http://en.wikipedia.org/wiki/Hanuman) temples, especially in[Varanasi](http://en.wikipedia.org/wiki/Varanasi).[[13]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-13)[[*full citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citing_sources#What_information_to_include)]

According to Vaishnavas, it is believed in Puranas that during Samudra Manthana when the gods win the ocean-churning against asuras, [Dhanvantari](http://en.wikipedia.org/wiki/Dhanvantari) comes up from the ocean with Amrita in hand for the gods. Dhanvantari (the divine medico) sheds happy tears and when the first drop falls in Amrita it forms Tulasi. In the ceremony of [Tulasi Vivaha](http://en.wikipedia.org/w/index.php?title=Tulasi_Vivaha&action=edit&redlink=1), *tulasi* is ceremonially married to Krishna annually on the [eleventh day of the waxing moon](http://en.wikipedia.org/wiki/Prabodhini_Ekadashi) or twelfth of the month of [*Kartika*](http://en.wikipedia.org/wiki/Kartika_(month)) in the[lunar calendar](http://en.wikipedia.org/wiki/Lunar_calendar). This day also marks the end of the four-month [*Cāturmāsya*](http://en.wikipedia.org/w/index.php?title=Chaturmasya&action=edit&redlink=1) period, which is considered inauspicious for weddings and other rituals, so the day inaugurates the annual marriage season in [India](http://en.wikipedia.org/wiki/India). The ritual lighting of lamps each evening during *Kartika* includes the worship of the *tulasi* plant, which is held to be auspicious for the home. [Vaishnavas](http://en.wikipedia.org/wiki/Vaishnava)especially follow the daily worship of *tulasi* during *Kartika*.[[14]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Flood2003-14)

Vaishnavas traditionally use [*japa mālas*](http://en.wikipedia.org/wiki/Hindu_prayer_beads) made from *tulasī* stems or roots, which are an important symbol of initiation. *Tulasi mālas* are considered to be auspicious for the wearer, and believed to put them under the protection of Hanuman. They have such a strong association with Vaishnavas, that followers of Hanuman are known as "those who bear the tulasi round the neck".[[10]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-Simoons-10)

In India, the use of holy basil (*Tulasi)* in culinary preparations is not encouraged by most Vaishnava communities as it is considered to be sacred (however, *Tulasi* leaves offered to Lord Vishnu [Krishna] may be eaten raw by themselves). According to followers of the Hare Krishna movement even uprooting or cutting a branch of a live *Tulasi* tree is considered to be a great offense. However *Tulasi* leaves may be plucked only for offering to Lord Krishna (or other Vishnu forms). The combination of *Tulasi* with meat in food preparations is considered to be extremely offensive and disrespectful to *Tulasi*.

The use of *Tulasi* as medicine is also prohibited by certain Vaishnava communities, for instance the [Hare Krishna movement](http://en.wikipedia.org/wiki/Hare_Krishna_movement)(ISKCON) considers *Tulasi* to be highly sacred and is to be used for spiritual upliftment of a person when one renders service unto *Tulasi devi* (*Tulasi* personified).[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

* [](http://en.wikipedia.org/wiki/File:Thulasi.jpg)

*Tulasi* grown in front of a house

* [](http://en.wikipedia.org/wiki/File:Ocimum_tenuiflorum.jpg)

An altar with *tulsi* plant for daily worship in a courtyard in [India](http://en.wikipedia.org/wiki/India)

**Ayurveda**[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=4" \o "Edit section: Ayurveda)]

*Tulasi* (Sanskrit:-Surasa) has been used for thousands of years in [Ayurveda](http://en.wikipedia.org/wiki/Ayurveda) for its diverse healing properties. It is mentioned in the [Charaka Samhita](http://en.wikipedia.org/wiki/Charaka_Samhita),[[15]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum" \l "cite_note-15) an ancient Ayurvedic text. *Tulsi* is considered to be an [adaptogen](http://en.wikipedia.org/wiki/Adaptogen),[[16]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum" \l "cite_note-kuhn-16) balancing different processes in the body, and helpful for adapting to stress.[[17]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-17) Marked by its strong aroma and [astringent](http://en.wikipedia.org/wiki/Astringent) taste, it is regarded in Ayurveda as a kind of "elixir of life" and believed to promote longevity.[[18]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-18)

*Tulasi* extracts are used in [ayurvedic](http://en.wikipedia.org/wiki/Ayurveda) remedies for a variety of ailments. Traditionally, *tulasi* is taken in many forms: as herbal tea, dried powder, fresh leaf or mixed with [*ghee*](http://en.wikipedia.org/wiki/Ghee). Essential oil extracted from Karpoora *tulasi* is mostly used for medicinal purposes and in herbal cosmetics, and is widely used in skin preparations and for fever, colds and infections.[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*]

**Thai cuisine**[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=5" \o "Edit section: Thai cuisine)]

[](http://en.wikipedia.org/wiki/File:Kraphao_mu_khai_dao.jpg)

*Phat kaphrao mu* -- holy basil with pork

The leaves of holy basil, known as *kaphrao* in the [Thai language](http://en.wikipedia.org/wiki/Thai_language) ([Thai](http://en.wikipedia.org/wiki/Thai_language): กะเพรา), are commonly used in [Thai cuisine](http://en.wikipedia.org/wiki/Thai_cuisine).[[19]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-katzer-19) *Kaphrao* should not be confused with *horapha* ([Thai](http://en.wikipedia.org/wiki/Thai_language):โหระพา), which is normally known as [Thai basil](http://en.wikipedia.org/wiki/Thai_basil),[[19]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-katzer-19) or with [Thai lemon basil](http://en.wikipedia.org/wiki/Thai_lemon_basil) (*maenglak*;[Thai](http://en.wikipedia.org/wiki/Thai_language): แมงลัก).

The best-known dish made with this herb is *phat kaphrao* ([Thai](http://en.wikipedia.org/wiki/Thai_language): ผัดกะเพรา) — a stir-fry of Thai holy basil with meats, seafood or, as in *khao phat kraphao*, with rice.

**Insect repellent**[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=6" \o "Edit section: Insect repellent)]

For centuries, the dried leaves have been mixed with stored grains to repel insects.[[20]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-20)In Sri Lanka this plant is used as a mosquito repellent. Sinhala: Maduruthalaa

Pharmacological study[[edit](http://en.wikipedia.org/w/index.php?title=Ocimum_tenuiflorum&action=edit&section=7" \o "Edit section: Pharmacological study)]

|  |  |  |
| --- | --- | --- |
|  |  |  |

Some of the main chemical constituents of *tulsi* are: [oleanolic acid](http://en.wikipedia.org/wiki/Oleanolic_acid), [ursolic acid](http://en.wikipedia.org/wiki/Ursolic_acid), [rosmarinic acid](http://en.wikipedia.org/wiki/Rosmarinic_acid), [eugenol](http://en.wikipedia.org/wiki/Eugenol), [carvacrol](http://en.wikipedia.org/wiki/Carvacrol), [linalool](http://en.wikipedia.org/wiki/Linalool),[β-caryophyllene](http://en.wikipedia.org/wiki/Caryophyllene) (about 8%),[[16]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-kuhn-16) [β-elemene](http://en.wikipedia.org/wiki/Elemene) (c.11.0%), and [germacrene](http://en.wikipedia.org/wiki/Germacrene) D (about 2%).[[21]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-21)

Isolated *O. sanctum* extracts have some [antibacterial](http://en.wikipedia.org/wiki/Antibacterial) activity against [*E. coli*](http://en.wikipedia.org/wiki/E._coli), *S. aureus* and *P. aeruginosa*.[[22]](http://en.wikipedia.org/wiki/Ocimum_tenuiflorum#cite_note-22)

**Best Answer:**  Tulsi or basil is a herbal remedy for a lot of common ailments. Here's a list of some medicinal uses of tulsi, from Healthlibrary:   
  
The juice of tulsi leaves can be used to bring down fever. Extract of tulsi leaves in fresh water should be given every 2 to 3 hours. In between one can keep giving sips of cold water. In children, it is every effective in bringing down the temperature.   
Tulsi is an important constituent of many Ayurvedic cough syrups and expectorants. It helps to mobilise mucus in bronchitis and asthma. Chewing tulsi leaves relieves cold and flu.   
For earache a few drops of tulsi extract, if instilled, relieves the symptoms promptly.   
The juice of fresh leaves, flower tops and slender roots is a very god antidote for snake and scorpion bite.   
Its oil is rich in vitamin C, carotene, calcium and phosphorus. Besides, it has antibacterial, antifungal and antiviral properties.   
Ayurvedic tulsi preparations have significantly reduced the symptoms of viral hepatitis.   
In diabetics it helps in lowering the blood sugar level.   
Its anti-spasmodic property can be utilised to relieve abdominal colics. The extracts are also helpful in digestive disorders.   
Tulsi leaves have properties similar to the currently available anti-TB drugs like Streptomycin and Isoniazide.   
Oil of tulsi has been used as a potent anti-malarial drug. It also has mosquito repellent properties.   
It raises the human body immunity by increasing the antibody production.   
Experimental studies on animals have shown anti-stress activity with tulsi extract.   
Tulsi has anti-fertility effect by reducing the estrogen hormone levels in females and decreasing the sperm count in men.   
It is also used to treat ringworm of the skin.

**History**

**TULSI The Wonder Drug**

**The Times of India - Mar 3, 2005**

Since time immemorial, Tulsi is not only renowned but also praised for its health promoting and disease preventing properties. Tulsi, the 'sacred basil' (Ocimum Sanctum), has captivated the imagination of man from before the times of Rigveda for its good health and environment.  
  
Tulsi is the plant that has made important contributions to the field of science from ancient times, and also to modern research due to its large number of medicinal properties. Tulsi is one herb that possesses anti-stress, anti-bacterial, antiviral, antifungal, antiprotozoal, antioxidant and anticarcinogenic properties.  
  
As sacred as Rama and Shyama, the third type of Tulsi- 'Van Tulsi' (botanically know as Ocimum Gratissimum)- is termed as the 'very grateful basil.' Though the knowledge of this type of Tulsi variety is constrained, it can be used in the same manner as Rama and Shyama. The Himalayas is the place where the Van Tulsi is mainly found but they are found in abundance in North India.  
  
Though with time, a number of herbal medicines have developed, the role of Tulsi cannot be ignored since it has played an important role in maintaining its doctrine and value in every household. Chemically, Tulsi contains alkaloids, carbohydrates, proteins glycosides, phenols, spooning, tannins and terrene.  
  
Consumption of Tulsi in its raw form is most effective as it provides us with its entire constitution instead of providing selective ingredients. The Padampuranas and Tulsi Kavachan describe Tulsi as a protector of life accompanying the human being form birth till death.  
  
Even in faults that according to Ayurveda have vatta, pitta and kapha,( literally meaning 'wind, bile and phlegm'), Tulsi plays a very important role, as Ayurveda looks at disease with a holistic view- point and disturbance of normal physiological functions of the body.  
  
Tulsi contains multiple bioactive substances as well as minerals and vitamins, normalizing the disturbed physiological functions of the body by harmonizing the different imbalance that is confirmed with the an dent Ayurvedic concepts of Tridoshas.  
  
Tulsi possesses anti- stress or adaptogenic properties having a staminator effect. The extract of Tulsi leaf helps in inhibiting the enzyme of filarial worm, and is also anti-tubercular, anti-fungal, anti-viral function as it possess the hypocholoestromic activity.  
  
The most dreaded disease- AIDS- can also be regulated with Tulsi's anti-AIDS properties. Tulsi is useful against AIDS and it markedly reduces cell-mediated immunity. Tulsi also affects the central nervous system by prolonging the time of lost reflex.  
  
In addition to this, ancient texts like Susruta Samhita, Padampurana and Garudpurana, after centuries of observation in humans, describe Tulsi as a 'child giver' and great spermatogenic agent. They report Tulsi as a fertility improver and enhance the chances of woman bearing progeny.

**Location :**Tulsi is widely grown in the Gir Wildlife Sanctuary and Sasangir National Park in India. Tulsi grows wild in tropics and warm regions.

Ginger

From Wikipedia, the free encyclopedia

*For other uses, see*[*Ginger (disambiguation)*](http://en.wikipedia.org/wiki/Ginger_(disambiguation))*.*

|  |  |
| --- | --- |
| **Ginger** | |
| [Koeh-146-no text.jpg](http://en.wikipedia.org/wiki/File:Koeh-146-no_text.jpg) | |
| 1896 color plate from [*Köhler's Medicinal Plants*](http://en.wikipedia.org/wiki/K%C3%B6hler%27s_Medicinal_Plants) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification)**[e](http://en.wikipedia.org/wiki/Template:Taxonomy/Zingiber_officinale)** | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plant) |
| *Clade*: | [Angiosperms](http://en.wikipedia.org/wiki/Flowering_plant) |
| *Clade*: | [Monocots](http://en.wikipedia.org/wiki/Monocotyledon) |
| *Clade*: | [Commelinids](http://en.wikipedia.org/wiki/Commelinids) |
| Order: | [Zingiberales](http://en.wikipedia.org/wiki/Zingiberales) |
| Family: | [Zingiberaceae](http://en.wikipedia.org/wiki/Zingiberaceae) |
| Genus: | [*Zingiber*](http://en.wikipedia.org/wiki/Zingiber) |
| Species: | ***Z. officinale*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Zingiber officinale*** [Roscoe](http://en.wikipedia.org/wiki/William_Roscoe) 1807[[1]](http://en.wikipedia.org/wiki/Ginger#cite_note-1) | |

**Ginger** (***Zingiber officinale***) is a [flowering plant](http://en.wikipedia.org/wiki/Flowering_plant) in the [family](http://en.wikipedia.org/wiki/Family_(taxonomy)) [Zingiberaceae](http://en.wikipedia.org/wiki/Zingiberaceae) whose[rhizome](http://en.wikipedia.org/wiki/Rhizome), **ginger root** or simply **ginger**, is widely used as a [spice](http://en.wikipedia.org/wiki/Spice) or a [medicine](http://en.wikipedia.org/wiki/Medicine). It is a [herbaceous](http://en.wikipedia.org/wiki/Herbaceous) [perennial](http://en.wikipedia.org/wiki/Perennial_plant) which grows annual stems about a meter tall bearing narrow green leaves and yellow flowers. Ginger is indigenous to [southern China](http://en.wikipedia.org/wiki/Southern_China), and was spread eventually to the [Spice Islands](http://en.wikipedia.org/wiki/Maluku_Islands), other parts of [Asia](http://en.wikipedia.org/wiki/Asia) and subsequently to [West Africa](http://en.wikipedia.org/wiki/West_Africa) and the [Caribbean](http://en.wikipedia.org/wiki/Caribbean).[[2]](http://en.wikipedia.org/wiki/Ginger#cite_note-origin-2) Ginger was exported to [Europe](http://en.wikipedia.org/wiki/Europe) via [India](http://en.wikipedia.org/wiki/India) in the first century AD as a result of the lucrative [spice trade](http://en.wikipedia.org/wiki/Spice_trade).[[2]](http://en.wikipedia.org/wiki/Ginger#cite_note-origin-2)[[3]](http://en.wikipedia.org/wiki/Ginger#cite_note-3) India remains the largest producer of ginger.[[2]](http://en.wikipedia.org/wiki/Ginger#cite_note-origin-2)

Other members of the family Zingiberaceae include [turmeric](http://en.wikipedia.org/wiki/Turmeric), [cardamom](http://en.wikipedia.org/wiki/Cardamom) and[galangal](http://en.wikipedia.org/wiki/Galangal). The distantly related [dicots](http://en.wikipedia.org/wiki/Dicots) in the genus [*Asarum*](http://en.wikipedia.org/wiki/Asarum) are commonly called wild ginger because of their similar taste.

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Ginger)]

* [1 Etymology](http://en.wikipedia.org/wiki/Ginger#Etymology)
* [2 Horticulture](http://en.wikipedia.org/wiki/Ginger#Horticulture)
* [3 Production](http://en.wikipedia.org/wiki/Ginger#Production)
* [4 Uses](http://en.wikipedia.org/wiki/Ginger#Uses)
  + [4.1 Regional use](http://en.wikipedia.org/wiki/Ginger#Regional_use)
  + [4.2 Nutritional information](http://en.wikipedia.org/wiki/Ginger#Nutritional_information)
  + [4.3 Composition and safety](http://en.wikipedia.org/wiki/Ginger#Composition_and_safety)
  + [4.4 Medicinal use and research](http://en.wikipedia.org/wiki/Ginger#Medicinal_use_and_research)
  + [4.5 Chemistry](http://en.wikipedia.org/wiki/Ginger#Chemistry)
  + [4.6 Folk medicine](http://en.wikipedia.org/wiki/Ginger#Folk_medicine)
  + [4.7 Similar ingredients](http://en.wikipedia.org/wiki/Ginger#Similar_ingredients)
* [5 See also](http://en.wikipedia.org/wiki/Ginger#See_also)
* [6 References](http://en.wikipedia.org/wiki/Ginger#References)
* [7 External links](http://en.wikipedia.org/wiki/Ginger#External_links)

[§](http://en.wikipedia.org/wiki/Ginger#Etymology)Etymology[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=1" \o "Edit section: Etymology)]

The origin of "ginger" is from the mid-14th century, from Old English *gingifer*, from Medieval Latin *gingiber*, from Latin *zingiberi*, from Greek *zingiberis*, from [Prakrit](http://en.wikipedia.org/wiki/Prakrit)(Middle Indic) *singabera*, from [Sanskrit](http://en.wikipedia.org/wiki/Sanskrit) *srngaveram*, from *srngam* "horn" + *vera*- "body", from the shape of its root. But this may be Sanskrit [folk etymology](http://en.wikipedia.org/wiki/Folk_etymology), and the word may be from an ancient Dravidian name that also produced the Malayalam name for the spice, inchi-ver, from inchi "root." Cf. gin (v.). The word apparently was readopted in Middle English from Old French *gingibre* (modern French *gingembre*).[[4]](http://en.wikipedia.org/wiki/Ginger#cite_note-W1-4)

[§](http://en.wikipedia.org/wiki/Ginger#Horticulture)Horticulture[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=2" \o "Edit section: Horticulture)]

[](http://en.wikipedia.org/wiki/File:Ginger_Plant_vs.jpg)

Ginger Plant with Flower - South India

[](http://en.wikipedia.org/wiki/File:Ornamental_Ginger.jpg)

Ornamental Ginger near [Cooktown, Queensland](http://en.wikipedia.org/wiki/Cooktown,_Queensland), Australia

Ginger produces [clusters](http://en.wikipedia.org/wiki/Inflorescence) of white and pink[flower buds](http://en.wikipedia.org/wiki/Flower_bud) that bloom into yellow flowers. Because of its aesthetic appeal and the adaptation of the plant to warm climates, ginger is often used as [landscaping](http://en.wikipedia.org/wiki/Landscaping) around[subtropical](http://en.wikipedia.org/wiki/Subtropical) homes. It is a [perennial](http://en.wikipedia.org/wiki/Perennial) [reed](http://en.wikipedia.org/wiki/Reed_bed)-like plant with annual leafy stems, about a meter (3 to 4 feet) tall. Traditionally, the rhizome is gathered when the stalk [withers](http://en.wiktionary.org/wiki/wither); it is immediately [scalded](http://en.wiktionary.org/wiki/Special:Search/scald), or washed and scraped, to kill it and prevent [sprouting](http://en.wikipedia.org/wiki/Sprouting). The fragrant [perisperm](http://en.wikipedia.org/wiki/Perisperm) of Zingiberaceae is used as [sweetmeats](http://en.wikipedia.org/wiki/Sweetmeat) by [Bantu](http://en.wikipedia.org/wiki/Bantu_peoples), also as a condiment and [sialogogue](http://en.wikipedia.org/wiki/Sialogogue).[[5]](http://en.wikipedia.org/wiki/Ginger#cite_note-5)

[§](http://en.wikipedia.org/wiki/Ginger#Production)Production[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=3" \o "Edit section: Production)]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Top 6 ginger producers, 2012** | | | | |
| **Country** | **Production (**[**tonnes**](http://en.wikipedia.org/wiki/Tonne)**)** |  |  |  |
| http://upload.wikimedia.org/wikipedia/en/thumb/4/41/Flag_of_India.svg/23px-Flag_of_India.svg.png [India](http://en.wikipedia.org/wiki/India) | 703,000 |  |  |  |
| http://upload.wikimedia.org/wikipedia/commons/thumb/f/fa/Flag_of_the_People%27s_Republic_of_China.svg/23px-Flag_of_the_People%27s_Republic_of_China.svg.png [China](http://en.wikipedia.org/wiki/China) | 425,000 |  |  |  |
| http://upload.wikimedia.org/wikipedia/commons/thumb/9/9b/Flag_of_Nepal.svg/18px-Flag_of_Nepal.svg.png   [Nepal](http://en.wikipedia.org/wiki/Nepal) | 255,208 |  |  |  |
| http://upload.wikimedia.org/wikipedia/commons/thumb/7/79/Flag_of_Nigeria.svg/23px-Flag_of_Nigeria.svg.png [Nigeria](http://en.wikipedia.org/wiki/Nigeria) | 156,000 |  |  |  |
| http://upload.wikimedia.org/wikipedia/commons/thumb/a/a9/Flag_of_Thailand.svg/23px-Flag_of_Thailand.svg.png [Thailand](http://en.wikipedia.org/wiki/Thailand) | 150,000 |  |  |  |
| http://upload.wikimedia.org/wikipedia/commons/thumb/9/9f/Flag_of_Indonesia.svg/23px-Flag_of_Indonesia.svg.png [Indonesia](http://en.wikipedia.org/wiki/Indonesia) | 113,851 |  |  |  |
| **World** | **2,095,056** |  |  |  |
| Source: Food and Agricultural Organization of the United Nations[[6]](http://en.wikipedia.org/wiki/Ginger#cite_note-6) | | | | |

From 1585, Jamaican ginger was the first oriental spice to be grown in the [New World](http://en.wikipedia.org/wiki/New_World) and imported back to Europe.[[7]](http://en.wikipedia.org/wiki/Ginger#cite_note-7)

In 2012, [India](http://en.wikipedia.org/wiki/India), with over 33% of the global production, now leads in growing ginger, replacing[China](http://en.wikipedia.org/wiki/China) in second position (~20%), followed by [Nepal](http://en.wikipedia.org/wiki/Nepal)(~12%), [Nigeria](http://en.wikipedia.org/wiki/Nigeria) and [Thailand](http://en.wikipedia.org/wiki/Thailand) (each ~7%) and[Indonesia](http://en.wikipedia.org/wiki/Indonesia) (~5%) (see adjacent table).

[§](http://en.wikipedia.org/wiki/Ginger#Uses)Uses[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=4" \o "Edit section: Uses)]

[](http://en.wikipedia.org/wiki/File:Gari_ginger.jpg)

[Gari](http://en.wikipedia.org/wiki/Gari_(ginger)), a type of pickled ginger

Ginger produces a hot, fragrant kitchen spice.[[8]](http://en.wikipedia.org/wiki/Ginger#cite_note-8)Young ginger rhizomes are juicy and fleshy with a very mild taste. They are often [pickled](http://en.wikipedia.org/wiki/Pickling) in [vinegar](http://en.wikipedia.org/wiki/Vinegar) or[sherry](http://en.wikipedia.org/wiki/Sherry) as a snack or just cooked as an ingredient in many dishes. They can also be [steeped](http://en.wikipedia.org/wiki/Steeping) in boiling water to make ginger tea, to which [honey](http://en.wikipedia.org/wiki/Honey) is often added; sliced orange or lemon fruit may also be added. Ginger can also be made into candy, or [ginger wine](http://en.wikipedia.org/wiki/Ginger_wine) which has been made commercially since 1740.

Mature ginger rhizomes are [fibrous](http://en.wikipedia.org/wiki/Fibrous) and nearly dry. The juice from ginger roots is often used as a spice in [Indian recipes](http://en.wikipedia.org/wiki/Indian_cuisine), and is a common ingredient of [Chinese](http://en.wikipedia.org/wiki/Chinese_Cuisine),[Korean](http://en.wikipedia.org/wiki/Korean_cuisine), [Japanese](http://en.wikipedia.org/wiki/Japanese_Cuisine), [Vietnamese](http://en.wikipedia.org/wiki/Vietnamese_cuisine) and many South Asian cuisines for [flavoring](http://en.wikipedia.org/wiki/Flavoring) dishes such as seafood, various meats and [vegetarian cuisine](http://en.wikipedia.org/wiki/Vegetarian_cuisine).

Fresh ginger can be substituted for ground ginger at a ratio of 6 to 1, although the flavors of fresh and dried ginger are somewhat different. Powdered dry ginger root is typically used as a flavoring for recipes such as [gingerbread](http://en.wikipedia.org/wiki/Gingerbread), [cookies](http://en.wikipedia.org/wiki/Cookie), [crackers](http://en.wikipedia.org/wiki/Cracker_(food)) and cakes, [ginger ale](http://en.wikipedia.org/wiki/Ginger_ale), and [ginger beer](http://en.wikipedia.org/wiki/Ginger_beer).

Candied ginger, or crystallized ginger, is the root cooked in sugar until soft, and is a type of [confectionery](http://en.wikipedia.org/wiki/Confectionery).

Fresh ginger may be peeled before eating. For longer-term storage, the ginger can be placed in a plastic bag and refrigerated or frozen.

[§](http://en.wikipedia.org/wiki/Ginger#Regional_use)**Regional use**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=5" \o "Edit section: Regional use)]

[](http://en.wikipedia.org/wiki/File:Gingerfield.jpg)

Ginger field

[](http://en.wikipedia.org/wiki/File:Ingwer_2_fcm.jpg)

Fresh ginger rhizome.

In [Indian cuisine](http://en.wikipedia.org/wiki/Indian_cuisine), ginger is a key ingredient, especially in thicker gravies, as well as in many other dishes, both vegetarian and meat-based. Ginger also has a role in traditional [Ayurvedic](http://en.wikipedia.org/wiki/Ayurvedic) medicine. Ginger is also an ingredient in traditional Indian drinks, both cold and hot, including spiced [Masala chai](http://en.wikipedia.org/wiki/Masala_chai). Across [India](http://en.wikipedia.org/wiki/India), ginger is variously called *adrak* in [Hindi](http://en.wikipedia.org/wiki/Hindi_language), [Punjabi](http://en.wikipedia.org/wiki/Punjabi_language) and [Urdu](http://en.wikipedia.org/wiki/Urdu), *aad* in [Maithili](http://en.wikipedia.org/wiki/Maithili_language), *aadi* in [Bhojpuri](http://en.wikipedia.org/wiki/Bhojpuri_language),*aada* in [Assamese](http://en.wikipedia.org/wiki/Assamese_language) and [Bengali](http://en.wikipedia.org/wiki/Bengali_language), *Adu* in [Gujarati](http://en.wikipedia.org/wiki/Gujarati_language), *Allam* (అల్లం) in [Telugu](http://en.wikipedia.org/wiki/Telugu_language), *hashi shunti*(ಹಸಿ ಶುಂಟಿ) in [Kannada](http://en.wikipedia.org/wiki/Kannada_language), *inji* (இஞ்சி) in [Tamil](http://en.wikipedia.org/wiki/Tamil_language) and [Malayalam](http://en.wikipedia.org/wiki/Malayalam), *inguru* (ඉඟුරු) in[Sinhalese](http://en.wikipedia.org/wiki/Sinhala_language), *alay* in [Marathi](http://en.wikipedia.org/wiki/Marathi_language), and *aduwa*(अदुवा ) in [Nepali](http://en.wikipedia.org/wiki/Nepali_language). Fresh ginger is one of the main spices used for making [pulse](http://en.wikipedia.org/wiki/Pulse_(legume)) and [lentil](http://en.wikipedia.org/wiki/Lentil) curries and other vegetable preparations. Fresh, as well as dried, ginger is used to spice tea and coffee, especially in winter. Ginger powder is also used in certain food preparations, particularly for pregnant or [nursing](http://en.wikipedia.org/wiki/Nursing) women, the most popular one being *katlu* which is a mixture of gum resin, [ghee](http://en.wikipedia.org/wiki/Ghee), nuts, and sugar. Ginger is also consumed in candied and pickled form. In Bangladesh, ginger is finely chopped or ground into a paste to use as a base for chicken and meat dishes alongside onion and garlic.

In [Japan](http://en.wikipedia.org/wiki/Japan), ginger is pickled to make [beni shoga](http://en.wikipedia.org/wiki/Beni_shoga) and [gari](http://en.wikipedia.org/wiki/Gari_(ginger)) or grated and used raw on[tofu](http://en.wikipedia.org/wiki/Tofu) or [noodles](http://en.wikipedia.org/wiki/Noodles). It is also made into a candy called *shoga no*[*sato*](http://en.wikipedia.org/wiki/Sugar)[*zuke*](http://en.wikipedia.org/wiki/Tsukemono). In the traditional [Korean](http://en.wikipedia.org/wiki/Cuisine_of_Korea) [kimchi](http://en.wikipedia.org/wiki/Kimchi), ginger is either finely minced or just juiced in order to avoid the fibrous texture and added to the ingredients of the spicy paste just before the fermenting process.

In [Burma](http://en.wikipedia.org/wiki/Burma), ginger is called *gyin*. It is widely used in cooking and as a main ingredient in [traditional medicines](http://en.wikipedia.org/wiki/Traditional_medicine). It is also consumed as a [salad](http://en.wikipedia.org/wiki/Salad) dish called *gyin-thot*, which consists of shredded ginger preserved in oil, and a variety of nuts and seeds. In Thailand it is called ขิง khing and is used to make a ginger garlic paste in cooking. In [Indonesia](http://en.wikipedia.org/wiki/Indonesia), a beverage called[*wedang jahe*](http://en.wikipedia.org/wiki/Wedang_jahe) is made from ginger and [palm sugar](http://en.wikipedia.org/wiki/Palm_sugar). Indonesians also use ground ginger root, called *jahe*, as a common ingredient in local recipes. In [Malaysia](http://en.wikipedia.org/wiki/Malaysia), ginger is called *halia* and used in many kinds of dishes, especially a soup. In the[Philippines](http://en.wikipedia.org/wiki/Philippines), it is a common ingredient in local dishes and it is brewed into a tea called *salabat*. In [Vietnam](http://en.wikipedia.org/wiki/Vietnam), the fresh leaves, finely chopped, can also be added to shrimp-and-yam soup (*canh khoai mỡ*) as a top garnish and spice to add a much subtler flavor of ginger than the chopped root.

In China, sliced or whole ginger root is often paired with savory dishes such as fish, and chopped ginger root is commonly paired with meat, when it is cooked. However, candied ginger is sometimes a component of Chinese candy boxes, and an[herbal tea](http://en.wikipedia.org/wiki/Herbal_tea) can also be prepared from ginger.

In the [Caribbean](http://en.wikipedia.org/wiki/Caribbean), ginger is a popular spice for cooking, and making drinks such as *sorrel*, a seasonal drink made during the Christmas season. [Jamaicans](http://en.wikipedia.org/wiki/Jamaica) make ginger beer both as a carbonated beverage and also fresh in their homes. Ginger tea is often made from fresh ginger, as well as the famous regional specialty Jamaican ginger cake.

[](http://en.wikipedia.org/wiki/File:Ginger_in_China_01.jpg)

Two varieties of ginger as sold in Haikou, Hainan, China

On the island of [Corfu](http://en.wikipedia.org/wiki/Corfu), Greece, a traditional drink called *τσιτσιμπύρα* (*tsitsibira*), a type of [ginger beer](http://en.wikipedia.org/wiki/Ginger_beer), is made. The people of Corfu and the rest of the Ionian islands adopted the drink from the British, during the period of the [United States of the Ionian Islands](http://en.wikipedia.org/wiki/United_States_of_the_Ionian_Islands).

In [Arabic](http://en.wikipedia.org/wiki/Arabic), ginger is called *zanjabil*, and in some parts of the Middle East, *gin�gayu (生姜湯).*[[9]](http://en.wikipedia.org/wiki/Ginger#cite_note-about1-9) From its main ingredient ginger tea derives a flavor that is spicy and stimulating.[[10]](http://en.wikipedia.org/wiki/Ginger#cite_note-buzzle1-10) Ginger, known as Adarak in Hindi, is used frequently in tea made in all parts of India as well.

In [Western cuisine](http://en.wikipedia.org/wiki/Western_cuisine), ginger is traditionally used mainly in sweet foods such as ginger ale, gingerbread, [ginger snaps](http://en.wikipedia.org/wiki/Ginger_snaps), [parkin](http://en.wikipedia.org/wiki/Parkin_(cake)), [ginger biscuits](http://en.wikipedia.org/wiki/Ginger_biscuits) and [speculaas](http://en.wikipedia.org/wiki/Speculaas). A ginger-flavored [liqueur](http://en.wikipedia.org/wiki/Liqueur) called [Canton](http://en.wikipedia.org/wiki/Canton_(liqueur)) is produced in [Jarnac](http://en.wikipedia.org/wiki/Jarnac), France. [Ginger wine](http://en.wikipedia.org/wiki/Ginger_wine) is a ginger-flavored wine produced in the United Kingdom, traditionally sold in a green glass bottle. Ginger is also used as a spice added to hot coffee and tea.

[§](http://en.wikipedia.org/wiki/Ginger#Nutritional_information)**Nutritional information**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=6" \o "Edit section: Nutritional information)]

[§](http://en.wikipedia.org/wiki/Ginger#Composition_and_safety)**Composition and safety**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=7" \o "Edit section: Composition and safety)]

In a typical spice serving amount of one US [tablespoon](http://en.wikipedia.org/wiki/Tablespoon) or 5 grams, ginger powder provides negligible content of [essential nutrients](http://en.wikipedia.org/wiki/Essential_nutrients), with the exception of the [dietary mineral](http://en.wikipedia.org/wiki/Dietary_mineral), [manganese](http://en.wikipedia.org/wiki/Manganese) which is present in the [Daily Value](http://en.wikipedia.org/wiki/Daily_Value) amount of 79% (right table for powder).

If consumed in reasonable quantities, ginger has few negative [side effects](http://en.wikipedia.org/wiki/Side_effects),[[11]](http://en.wikipedia.org/wiki/Ginger#cite_note-Spinella2001-11)and is on the [FDA](http://en.wikipedia.org/wiki/Food_and_Drug_Administration)'s "[generally recognized as safe](http://en.wikipedia.org/wiki/Generally_recognized_as_safe)" list,[[12]](http://en.wikipedia.org/wiki/Ginger#cite_note-12) though it does[interact](http://en.wikipedia.org/wiki/Drug_interaction) with some medications, including the [anticoagulant](http://en.wikipedia.org/wiki/Anticoagulant) drug, [warfarin](http://en.wikipedia.org/wiki/Warfarin).[[13]](http://en.wikipedia.org/wiki/Ginger#cite_note-13)

Allergic reactions to ginger generally result in a [rash](http://en.wikipedia.org/wiki/Rash), and although generally recognized as safe, ginger can cause [heartburn](http://en.wikipedia.org/wiki/Heartburn), bloating, gas, belching or[nausea](http://en.wikipedia.org/wiki/Nausea), particularly if taken in powdered form. Unchewed fresh ginger may result in intestinal blockage, and individuals who have had [ulcers](http://en.wikipedia.org/wiki/Peptic_ulcer), inflammatory[bowel](http://en.wikipedia.org/wiki/Bowel) disease or blocked [intestines](http://en.wikipedia.org/wiki/Intestines) may react badly to large quantities of fresh ginger.[[14]](http://en.wikipedia.org/wiki/Ginger#cite_note-Mayo-14) Ginger can also adversely affect individuals with gallstones.[[14]](http://en.wikipedia.org/wiki/Ginger#cite_note-Mayo-14)[[15]](http://en.wikipedia.org/wiki/Ginger#cite_note-UMMC-15)There are also suggestions that ginger may affect blood pressure, clotting, and heart rhythms.[[14]](http://en.wikipedia.org/wiki/Ginger#cite_note-Mayo-14)

Products of Chinese origin in [Taiwan](http://en.wikipedia.org/wiki/Taiwan) contained ginger contaminated with [DIBP](http://en.wikipedia.org/wiki/Diisobutyl_phthalate), causing some 80,000 [nutritional supplement](http://en.wikipedia.org/wiki/Nutritional_supplement) capsules made with imported ginger powder to be seized by the Public Health Department of Taiwan in June 2011.[[16]](http://en.wikipedia.org/wiki/Ginger#cite_note-16)

[§](http://en.wikipedia.org/wiki/Ginger#Medicinal_use_and_research)**Medicinal use and research**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=8" \o "Edit section: Medicinal use and research)]

According to the [American Cancer Society](http://en.wikipedia.org/wiki/American_Cancer_Society), ginger has been promoted as a cancer treatment "to keep tumors from developing", but "available scientific evidence does not support this". They add: "Recent preliminary results in animals show some effect in slowing or preventing tumor growth. While these results are not well understood, they deserve further study. Still, it is too early in the research process to say whether ginger will have the same effect in humans."[[17]](http://en.wikipedia.org/wiki/Ginger#cite_note-17)

In limited studies, ginger was found to be more effective than placebo for treating [nausea](http://en.wikipedia.org/wiki/Nausea) caused by [seasickness](http://en.wikipedia.org/wiki/Seasickness), [morning sickness](http://en.wikipedia.org/wiki/Morning_sickness) and[chemotherapy](http://en.wikipedia.org/wiki/Chemotherapy),[[18]](http://en.wikipedia.org/wiki/Ginger#cite_note-medind-18)[[19]](http://en.wikipedia.org/wiki/Ginger#cite_note-ernst-meta-19)[[20]](http://en.wikipedia.org/wiki/Ginger#cite_note-20)[[21]](http://en.wikipedia.org/wiki/Ginger#cite_note-21) although ginger was not found superior to [placebo](http://en.wikipedia.org/wiki/Placebo)for pre-emptively treating [post-operative](http://en.wikipedia.org/wiki/Postoperative_nausea_and_vomiting) nausea. Some studies advise against taking ginger during pregnancy,[[19]](http://en.wikipedia.org/wiki/Ginger" \l "cite_note-ernst-meta-19) suggesting that ginger is [mutagenic](http://en.wikipedia.org/wiki/Mutagenic), though some other studies have reported antimutagenic effects.[[19]](http://en.wikipedia.org/wiki/Ginger#cite_note-ernst-meta-19)

[§](http://en.wikipedia.org/wiki/Ginger#Chemistry)**Chemistry**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=9" \o "Edit section: Chemistry)]

[](http://en.wikipedia.org/wiki/File:GingerEssOil.png)

The essential oil of ginger

The characteristic odor and flavor of ginger is caused by a mixture of[zingerone](http://en.wikipedia.org/wiki/Zingerone), [shogaols](http://en.wikipedia.org/wiki/Shogaol) and [gingerols](http://en.wikipedia.org/wiki/Gingerol), volatile oils that compose one to three percent of the weight of fresh ginger. In laboratory animals, the gingerols increase the [motility](http://en.wikipedia.org/wiki/Motility) of the [gastrointestinal tract](http://en.wikipedia.org/wiki/Gastrointestinal_tract) and have [analgesic](http://en.wikipedia.org/wiki/Analgesic), [sedative](http://en.wikipedia.org/wiki/Sedative),[antipyretic](http://en.wikipedia.org/wiki/Antipyretic) and [antibacterial](http://en.wikipedia.org/wiki/Antibacterial) properties.[[22]](http://en.wikipedia.org/wiki/Ginger#cite_note-22) A study at the [University of Michigan](http://en.wikipedia.org/wiki/University_of_Michigan)demonstrated that gingerols can inhibit growth of [ovarian cancer](http://en.wikipedia.org/wiki/Ovarian_cancer) cells [*in vitro*](http://en.wikipedia.org/wiki/In_vitro).[[23]](http://en.wikipedia.org/wiki/Ginger#cite_note-23)[[24]](http://en.wikipedia.org/wiki/Ginger#cite_note-24)[[25]](http://en.wikipedia.org/wiki/Ginger#cite_note-25) [6]-gingerol (1-[4'-hydroxy-3'-methoxyphenyl]-5-hydroxy-3-decanone) is the major pungent principle of ginger.

Ginger contains up to three percent of a fragrant [essential oil](http://en.wikipedia.org/wiki/Essential_oil) whose main constituents are [sesquiterpenoids](http://en.wikipedia.org/wiki/Sesquiterpene), with [(−)-zingiberene](http://en.wikipedia.org/wiki/Zingiberene) as the main component. Smaller amounts of other sesquiterpenoids (β-sesquiphellandrene,[bisabolene](http://en.wikipedia.org/wiki/Bisabolene) and [farnesene](http://en.wikipedia.org/wiki/Farnesene)) and a small [monoterpenoid](http://en.wikipedia.org/wiki/Monoterpenoid) fraction ([β-phelladrene](http://en.wikipedia.org/wiki/Phellandrene),[cineol](http://en.wikipedia.org/wiki/Cineol), and [citral](http://en.wikipedia.org/wiki/Citral)) have also been identified.

The pungent taste of ginger is due to [nonvolatile](http://en.wikipedia.org/wiki/Volatility_(chemistry)) [phenylpropanoid](http://en.wikipedia.org/wiki/Phenylpropanoid)-derived compounds, particularly [gingerols](http://en.wikipedia.org/wiki/Gingerol) and [shogaols](http://en.wikipedia.org/wiki/Shogaol), which form from gingerols when ginger is dried or cooked. Zingerone is also produced from gingerols during this process; this compound is less pungent and has a spicy-sweet aroma.[[26]](http://en.wikipedia.org/wiki/Ginger#cite_note-harold-26) Ginger is also a minor chemical irritant, and because of this was used as a horse [suppository](http://en.wikipedia.org/wiki/Suppository) by pre-World War I mounted regiments for[feaguing](http://en.wikipedia.org/wiki/Feaguing).

Ginger has a [sialagogue](http://en.wikipedia.org/wiki/Sialagogue) action, stimulating the production of [saliva](http://en.wikipedia.org/wiki/Saliva), which makes swallowing easier.[[27]](http://en.wikipedia.org/wiki/Ginger#cite_note-27)

[§](http://en.wikipedia.org/wiki/Ginger#Folk_medicine)**Folk medicine**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=10" \o "Edit section: Folk medicine)]

[](http://en.wikipedia.org/wiki/File:House_rum_(Rhum_arrang%C3%A9)_in_Madagascar.jpg)

Ginger house rum, [Madagascar](http://en.wikipedia.org/wiki/Madagascar)

One traditional medical form of ginger historically was called *Jamaica ginger*; it was classified as a [stimulant](http://en.wikipedia.org/wiki/Stimulant) and [carminative](http://en.wikipedia.org/wiki/Carminative) and used frequently for[dyspepsia](http://en.wikipedia.org/wiki/Dyspepsia), [gastroparesis](http://en.wikipedia.org/wiki/Gastroparesis), slow motility symptoms, [constipation](http://en.wikipedia.org/wiki/Constipation), and [colic](http://en.wikipedia.org/wiki/Colic).[[28]](http://en.wikipedia.org/wiki/Ginger#cite_note-28) It was also frequently employed to disguise the taste of medicines.[[29]](http://en.wikipedia.org/wiki/Ginger#cite_note-achi-29)

Some studies indicate ginger may provide short-term relief of pregnancy-related nausea and vomiting.[[30]](http://en.wikipedia.org/wiki/Ginger#cite_note-Tamilnadu_Herb_Ginger-30) Studies are inconclusive about effects for other forms of nausea or in treating pain from rheumatoid arthritis, osteoarthritis, or joint and muscle injury. Side effects, mostly associated with powdered ginger, are gas, bloating, heartburn, and nausea.[[31]](http://en.wikipedia.org/wiki/Ginger#cite_note-autogenerated1-31)

Tea brewed from ginger is a common folk remedy for colds. [Ginger ale](http://en.wikipedia.org/wiki/Ginger_ale) and[ginger beer](http://en.wikipedia.org/wiki/Ginger_beer) are also drunk as *stomach settlers* in countries where the beverages are made.

* In [Burma](http://en.wikipedia.org/wiki/Burma), ginger and a local sweetener made from palm tree juice (*htan nyat*) are boiled together and taken to prevent the flu.
* In [China](http://en.wikipedia.org/wiki/China), ginger is included in several [traditional preparations](http://en.wikipedia.org/wiki/Chinese_herbology#Ginger). A drink made with sliced ginger cooked in water with brown sugar or a [cola](http://en.wikipedia.org/wiki/Cola) is used as a folk medicine for the[common cold](http://en.wikipedia.org/wiki/Common_cold).[[32]](http://en.wikipedia.org/wiki/Ginger#cite_note-32) "Ginger eggs" (scrambled eggs with finely diced ginger root) is a common home remedy for coughing.[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] The Chinese also make a kind of dried ginger candy that is fermented in plum juice and sugared, which is also commonly consumed to suppress coughing. Ginger has also been historically used to treat[inflammation](http://en.wikipedia.org/wiki/Inflammation), which several scientific studies support, though one arthritis trial showed ginger to be no better than a [placebo](http://en.wikipedia.org/wiki/Placebo) or [ibuprofen](http://en.wikipedia.org/wiki/Ibuprofen) for treatment of [osteoarthritis](http://en.wikipedia.org/wiki/Osteoarthritis).[[15]](http://en.wikipedia.org/wiki/Ginger#cite_note-UMMC-15)
* In [Colombia](http://en.wikipedia.org/wiki/Colombia), ginger is mixed with hot agua de [panela](http://en.wikipedia.org/wiki/Panela) to relieve cold and flu-like symptoms.
* In [Congo](http://en.wikipedia.org/wiki/Democratic_Republic_of_the_Congo), ginger is crushed and mixed with [mango](http://en.wikipedia.org/wiki/Mango) tree sap to make [tangawisi juice](http://en.wikipedia.org/w/index.php?title=Tangawisi_juice&action=edit&redlink=1), which is considered a [panacea](http://en.wikipedia.org/wiki/Panacea_(medicine)).
* In [India](http://en.wikipedia.org/wiki/India), ginger is applied as a paste to the temples to relieve headache, and consumed when suffering from the common cold. Ginger with lemon and [black salt](http://en.wikipedia.org/wiki/Kala_Namak) is also used for nausea.[[30]](http://en.wikipedia.org/wiki/Ginger#cite_note-Tamilnadu_Herb_Ginger-30)
* In [Indonesia](http://en.wikipedia.org/wiki/Indonesia), ginger (*jahe* in Indonesian) is used as a herbal preparation to reduce fatigue, reducing "winds" in the blood, prevent and cure rheumatism and control poor dietary habits.[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]
* In [Nepal](http://en.wikipedia.org/wiki/Nepal), ginger is called *aduwa*, अदुवा and is widely grown and used throughout the country as a spice for vegetables, used medically to treat cold and also sometimes used to flavor tea.
* In the [Philippines](http://en.wikipedia.org/wiki/Philippines), ginger is known as *luya* and is used as a [throat lozenge](http://en.wikipedia.org/wiki/Throat_lozenge) in traditional medicine to relieve sore throat. It is also brewed into a tea known as *salabat*.[[33]](http://en.wikipedia.org/wiki/Ginger#cite_note-hardon-33)[[34]](http://en.wikipedia.org/wiki/Ginger#cite_note-co-34)
* In the [United States](http://en.wikipedia.org/wiki/United_States), ginger is used to prevent [motion](http://en.wikipedia.org/wiki/Motion_sickness) and [morning sickness](http://en.wikipedia.org/wiki/Morning_sickness).[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] It is recognized as safe by the[Food and Drug Administration](http://en.wikipedia.org/wiki/Food_and_Drug_Administration)[[35]](http://en.wikipedia.org/wiki/Ginger#cite_note-35) and is sold as an unregulated [dietary supplement](http://en.wikipedia.org/wiki/Dietary_supplement). Ginger water is also used to avoid[heat cramps](http://en.wikipedia.org/wiki/Heat_cramp).[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]
* In [Peru](http://en.wikipedia.org/wiki/Peru), ginger is sliced in hot water as an infusion for stomach aches as *infusión de Kión*.
* In [Japan](http://en.wikipedia.org/wiki/Japan) it is purported to aid blood circulation.[[36]](http://en.wikipedia.org/wiki/Ginger#cite_note-36) Scientific studies investigating these effects have been inconclusive.[[31]](http://en.wikipedia.org/wiki/Ginger#cite_note-autogenerated1-31)

[§](http://en.wikipedia.org/wiki/Ginger#Similar_ingredients)**Similar ingredients**[[edit](http://en.wikipedia.org/w/index.php?title=Ginger&action=edit&section=11" \o "Edit section: Similar ingredients)]

[Myoga](http://en.wikipedia.org/wiki/Myoga) (*Zingiber mioga* Roscoe) appears in [Japanese cuisine](http://en.wikipedia.org/wiki/Japanese_cuisine); the flower buds are the part eaten.

Another plant in the *Zingiberaceae* family, [galangal](http://en.wikipedia.org/wiki/Galangal), is used for similar purposes as ginger in [Thai cuisine](http://en.wikipedia.org/wiki/Thai_cuisine). Galangal is also called Thai ginger, fingerroot ([*Boesenbergia rotunda*](http://en.wikipedia.org/wiki/Boesenbergia_rotunda)), Chinese ginger, or the Thai *krachai*.

A [dicotyledonous](http://en.wikipedia.org/wiki/Dicotyledon) native species of eastern North America, [*Asarum canadense*](http://en.wikipedia.org/wiki/Asarum_canadense), is also known as "[wild ginger](http://en.wikipedia.org/wiki/Asarum)", and its root has similar aromatic properties, but it is not related to true ginger. The plant also contains [aristolochic acid](http://en.wikipedia.org/wiki/Aristolochic_acid), a [carcinogenic](http://en.wikipedia.org/wiki/Carcinogen)compound.[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*]

**Cilantro**

**Coriander** ([UK](http://en.wikipedia.org/wiki/British_English) [/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[ˌkɒrɪˈændə](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English);[[1]](http://en.wikipedia.org/wiki/Coriander#cite_note-Collins-1) [US](http://en.wikipedia.org/wiki/American_English) [/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[ˈkɔːriˌændər](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English) or [/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[ˌkɔːriˈændər](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English);[[2]](http://en.wikipedia.org/wiki/Coriander#cite_note-Collins2-2)*Coriandrum sativum*), also known as **cilantro** ([/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[sɪˈlɑːntroʊ](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English)),[[3]](http://en.wikipedia.org/wiki/Coriander#cite_note-Collins3-3) **Chinese parsley** or **dhania**,[[4]](http://en.wikipedia.org/wiki/Coriander#cite_note-4) is an [annual](http://en.wikipedia.org/wiki/Annual_plant) [herb](http://en.wikipedia.org/wiki/Herb) in the family [Apiaceae](http://en.wikipedia.org/wiki/Apiaceae). Coriander is native to regions spanning from southern Europe and North Africa to southwestern Asia. It is a soft plant growing to 50 cm (20 in) tall. The leaves are variable in shape, broadly lobed at the base of the plant, and slender and feathery higher on the flowering stems. The [flowers](http://en.wikipedia.org/wiki/Flower) are borne in small [umbels](http://en.wikipedia.org/wiki/Umbel), white or very pale pink, asymmetrical, with the petals pointing away from the centre of the umbel longer (5–6 mm or 0.20–0.24 in) than those pointing toward it (only 1–3 mm or 0.039–0.118 in long). The [fruit](http://en.wikipedia.org/wiki/Fruit) is a globular, dry[schizocarp](http://en.wikipedia.org/wiki/Schizocarp) 3–5 mm (0.12–0.20 in) in diameter. Although sometimes eaten alone, the seeds are often used as a spice or an added ingredient in other foods.

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Coriander)]

* [1 Etymology](http://en.wikipedia.org/wiki/Coriander#Etymology)
* [2 Uses](http://en.wikipedia.org/wiki/Coriander#Uses)
  + [2.1 Leaves](http://en.wikipedia.org/wiki/Coriander#Leaves)
  + [2.2 Fruits](http://en.wikipedia.org/wiki/Coriander#Fruits)
  + [2.3 Nutrients](http://en.wikipedia.org/wiki/Coriander#Nutrients)
  + [2.4 Roots](http://en.wikipedia.org/wiki/Coriander#Roots)
* [3 History](http://en.wikipedia.org/wiki/Coriander#History)
* [4 Taste and smell](http://en.wikipedia.org/wiki/Coriander#Taste_and_smell)
* [5 Similar plants](http://en.wikipedia.org/wiki/Coriander#Similar_plants)
* [6 Health effects](http://en.wikipedia.org/wiki/Coriander#Health_effects)
* [7 References](http://en.wikipedia.org/wiki/Coriander#References)
* [8 Further reading](http://en.wikipedia.org/wiki/Coriander#Further_reading)
* [9 External links](http://en.wikipedia.org/wiki/Coriander#External_links)
* [10 External links](http://en.wikipedia.org/wiki/Coriander#External_links_2)

[§](http://en.wikipedia.org/wiki/Coriander#Etymology)Etymology[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=1" \o "Edit section: Etymology)]

First attested in English late fourteenth century, the word coriander derives from the [Old French](http://en.wikipedia.org/wiki/Old_French_language): *coriandre*, which comes from [Latin](http://en.wikipedia.org/wiki/Latin_language): *coriandrum*,[[5]](http://en.wikipedia.org/wiki/Coriander#cite_note-5) in turn from [Ancient Greek](http://en.wikipedia.org/wiki/Ancient_Greek): κορίαννον *koriannon*.[[6]](http://en.wikipedia.org/wiki/Coriander#cite_note-6)[[7]](http://en.wikipedia.org/wiki/Coriander#cite_note-7) The earliest attested form of the word is the [Mycenaean Greek](http://en.wikipedia.org/wiki/Mycenaean_Greek) 𐀒𐀪𐀊𐀅𐀙 *ko-ri-ja-da-na*[[8]](http://en.wikipedia.org/wiki/Coriander#cite_note-8) (written in [Linear B](http://en.wikipedia.org/wiki/Linear_B) syllabic script, reconstructed as *koriadnon*), similar to the name of [Minos](http://en.wikipedia.org/wiki/Minos)'s daughter[Ariadne](http://en.wikipedia.org/wiki/Ariadne), which later evolved to *koriannon* or *koriandron*.[[9]](http://en.wikipedia.org/wiki/Coriander#cite_note-Chadwick-9)

*Cilantro* is the Spanish word for coriander, also deriving from *coriandrum*. It is the common term in North America for coriander leaves, due to their extensive use in [Mexican cuisine](http://en.wikipedia.org/wiki/Mexican_cuisine).

[§](http://en.wikipedia.org/wiki/Coriander#Uses)Uses[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=2" \o "Edit section: Uses)]

All parts of the plant are edible, but the fresh leaves and the dried seeds are the parts most traditionally used in cooking. Coriander is common in [South Asian](http://en.wikipedia.org/wiki/South_Asian_cuisine), [Southeast Asian](http://en.wikipedia.org/wiki/Asian_cuisine#Southeast_Asia), [Indian](http://en.wikipedia.org/wiki/Indian_cuisine), [Middle Eastern](http://en.wikipedia.org/wiki/Middle_Eastern_cuisine), [Caucasian](http://en.wikipedia.org/wiki/Caucasian_cuisine),[[10]](http://en.wikipedia.org/wiki/Coriander#cite_note-10)[[11]](http://en.wikipedia.org/wiki/Coriander#cite_note-11) [Central Asian](http://en.wikipedia.org/wiki/Central_Asian_cuisine), [Mediterranean](http://en.wikipedia.org/wiki/Mediterranean_cuisine), [Tex-Mex](http://en.wikipedia.org/wiki/Tex-Mex), [Latin American](http://en.wikipedia.org/wiki/Latin_American_cuisine), [Brazilian](http://en.wikipedia.org/wiki/Brazilian_Cuisine), [Portuguese](http://en.wikipedia.org/wiki/Portuguese_Cuisine),[Chinese](http://en.wikipedia.org/wiki/Chinese_cuisine), [African](http://en.wikipedia.org/wiki/African_cuisine), and [Scandinavian cuisine](http://en.wikipedia.org/wiki/Scandinavian_cuisine).[[12]](http://en.wikipedia.org/wiki/Coriander#cite_note-12)[[13]](http://en.wikipedia.org/wiki/Coriander#cite_note-Samuelsson-13)

Coriander, like many spices, contains [phytochemicals](http://en.wikipedia.org/wiki/Phytochemical) which may delay or prevent the spoilage of food seasoned with this spice.[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*]

[§](http://en.wikipedia.org/wiki/Coriander#Leaves)**Leaves**[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=3" \o "Edit section: Leaves)]

[](http://en.wikipedia.org/wiki/File:A_scene_of_Coriander_leaves.JPG)

Coriander leaves

The leaves are variously referred to as coriander leaves, fresh coriander, Chinese parsley, or (in North America) cilantro.

It should not be confused with [culantro](http://en.wikipedia.org/wiki/Culantro)(*Eryngium foetidum* L.), an [apiaceae](http://en.wikipedia.org/wiki/Apiaceae)like coriander (*Coriandrum sativum* L.) but in a different [genus](http://en.wikipedia.org/wiki/Genus). Culantro has a distinctly different spiny appearance, a much more potent volatile leaf oil[[14]](http://en.wikipedia.org/wiki/Coriander" \l "cite_note-14)and a stronger smell.

The leaves have a different taste from the seeds, with [citrus](http://en.wikipedia.org/wiki/Citrus) overtones. However, some people experience an unpleasant soapy taste or a rank smell and avoid the leaves.[[15]](http://en.wikipedia.org/wiki/Coriander#cite_note-McGee-15)

The fresh leaves are an ingredient in many Indian foods (such as [chutneys](http://en.wikipedia.org/wiki/Chutney) and salads); in Chinese and Thai dishes; in Mexican cooking, particularly in [salsa](http://en.wikipedia.org/wiki/Salsa_(sauce)) and [guacamole](http://en.wikipedia.org/wiki/Guacamole) and as a garnish; and in salads in Russia and other [CIS](http://en.wikipedia.org/wiki/Commonwealth_of_Independent_States) countries. Chopped coriander leaves are a garnish on [Indian](http://en.wikipedia.org/wiki/India) dishes such as [*dal*](http://en.wikipedia.org/wiki/Dal). As heat diminishes their flavour, coriander leaves are often used raw or added to the dish immediately before serving. In Indian and Central Asian recipes, coriander leaves are used in large amounts and cooked until the flavour diminishes.[[16]](http://en.wikipedia.org/wiki/Coriander#cite_note-16) The leaves spoil quickly when removed from the plant, and lose their aroma when dried or frozen.

[§](http://en.wikipedia.org/wiki/Coriander#Fruits)**Fruits**[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=4" \o "Edit section: Fruits)]

[](http://en.wikipedia.org/wiki/File:Coriander.png)

Dried coriander fruits, often called*coriander seeds* when used as a spice

The dry fruits are known as coriander seeds. In [Indian](http://en.wikipedia.org/wiki/Cuisine_of_India) cuisine they are called*dhania*.[[17]](http://en.wikipedia.org/wiki/Coriander#cite_note-17)[[18]](http://en.wikipedia.org/wiki/Coriander#cite_note-18)

The word *coriander* in food preparation may refer solely to these seeds (as a spice), rather than to the plant. The seeds have a lemony citrus flavour when crushed, due to [terpenes](http://en.wikipedia.org/wiki/Terpene) [linalool](http://en.wikipedia.org/wiki/Linalool) and [pinene](http://en.wikipedia.org/wiki/Pinene). It is described as warm, nutty, spicy, and orange-flavoured.

The variety *C. s. vulgare* has a fruit diameter of 3–5 mm (0.12–0.20 in), while var.*microcarpum* fruits have a diameter of 1.5–3 mm (0.059–0.118 in). Large-fruited types are grown mainly by tropical and subtropical countries, e.g. Morocco, India and Australia, and contain a low volatile oil content (0.1-0.4%). They are used extensively for grinding and blending purposes in the spice trade. Types with smaller fruit are produced in temperate regions and usually have a volatile oil content of around 0.4-1.8%, so are highly valued as a raw material for the preparation of essential oil.[[19]](http://en.wikipedia.org/wiki/Coriander#cite_note-19)

It is commonly found both as whole dried seeds and in ground form. Roasting or heating the seeds in a dry pan heightens the flavour, aroma and pungency. Ground coriander seed loses flavour quickly in storage and is best ground fresh. Coriander seed is a spice in [*garam masala*](http://en.wikipedia.org/wiki/Garam_masala) and [Indian](http://en.wikipedia.org/wiki/Cuisine_of_India) curries which often employ the ground fruits in generous amounts together with [cumin](http://en.wikipedia.org/wiki/Cumin), acting as a thickener.

Roasted coriander seeds, called *dhana dal*, are eaten as a snack. They are the main ingredient of the two south Indian dishes: [*sambhar*](http://en.wikipedia.org/wiki/Sambar_(dish)) and [*rasam*](http://en.wikipedia.org/wiki/Rasam).

Outside of Asia, coriander seed is used widely in the process for [pickling](http://en.wikipedia.org/wiki/Pickling) vegetables. In Germany and South Africa (see[boerewors](http://en.wikipedia.org/wiki/Boerewors)), the seeds are used while making sausages. In Russia and Central Europe, coriander seed is an occasional ingredient in [rye](http://en.wikipedia.org/wiki/Rye) bread (e.g. [borodinsky bread](http://en.wikipedia.org/wiki/Borodinsky_bread)), as an alternative to [caraway](http://en.wikipedia.org/wiki/Caraway).

The [Zuni people](http://en.wikipedia.org/wiki/Zuni_people) have adapted it into their cuisine, mixing the powdered seeds ground with chile and using it as a condiment with meat, and eating leaves as a salad.[[20]](http://en.wikipedia.org/wiki/Coriander#cite_note-20)

Coriander seeds are used in brewing certain styles of beer, particularly some Belgian [wheat beers](http://en.wikipedia.org/wiki/Wheat_beers). The coriander seeds are used with orange peel to add a citrus character.

[§](http://en.wikipedia.org/wiki/Coriander#Nutrients)**Nutrients**[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=5" \o "Edit section: Nutrients)]

The nutritional profile of coriander seeds is different from the fresh stems and leaves. Leaves are particularly rich in [vitamin A](http://en.wikipedia.org/wiki/Vitamin_A), [vitamin C](http://en.wikipedia.org/wiki/Vitamin_C) and [vitamin K](http://en.wikipedia.org/wiki/Vitamin_K), with moderate content of [dietary minerals](http://en.wikipedia.org/wiki/Dietary_minerals) (table above). Although seeds generally have lower content of vitamins, they do provide significant amounts of [dietary fiber](http://en.wikipedia.org/wiki/Dietary_fiber), [calcium](http://en.wikipedia.org/wiki/Calcium), [selenium](http://en.wikipedia.org/wiki/Selenium), [iron](http://en.wikipedia.org/wiki/Iron), [magnesium](http://en.wikipedia.org/wiki/Magnesium) and[manganese](http://en.wikipedia.org/wiki/Manganese).[[21]](http://en.wikipedia.org/wiki/Coriander#cite_note-21)

[§](http://en.wikipedia.org/wiki/Coriander#Roots)**Roots**[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=6" \o "Edit section: Roots)]

[](http://en.wikipedia.org/wiki/File:Coriander_roots.JPG)

Coriander roots

Coriander roots have a deeper, more intense flavour than the leaves. They are used in a variety of Asian cuisines. They are commonly used in [Thai dishes](http://en.wikipedia.org/wiki/List_of_Thai_dishes), including soups and [curry pastes](http://en.wikipedia.org/wiki/Thai_curry).

[§](http://en.wikipedia.org/wiki/Coriander#History)History[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=7" \o "Edit section: History)]

[](http://en.wikipedia.org/wiki/File:Cilantro_plants.jpg)

Coriander plants

Coriander grows wild over a wide area of the Near East and southern Europe, prompting the comment, "It is hard to define exactly where this plant is wild and where it only recently established itself."[[22]](http://en.wikipedia.org/wiki/Coriander#cite_note-ZoharyHopf-22) Fifteen desiccated [mericarps](http://en.wikipedia.org/wiki/Mericarp) were found in the [Pre-Pottery Neolithic B](http://en.wikipedia.org/wiki/Pre-Pottery_Neolithic_B) level of the [Nahal Hemar](http://en.wikipedia.org/wiki/Nahal_Hemar) Cave in [Israel](http://en.wikipedia.org/wiki/Israel), which may be the oldest archaeological find of coriander. About half a litre of coriander mericarps were recovered from the tomb of [Tutankhamen](http://en.wikipedia.org/wiki/Tutankhamen), and because this plant does not grow wild in Egypt, Zohary and Hopf interpret this find as proof that coriander was cultivated by the ancient [Egyptians](http://en.wikipedia.org/wiki/Ancient_Egypt).[[22]](http://en.wikipedia.org/wiki/Coriander#cite_note-ZoharyHopf-22)

Coriander seems to have been cultivated in Greece since at least the second millennium BC. One of the [Linear B](http://en.wikipedia.org/wiki/Linear_B) tablets recovered from [Pylos](http://en.wikipedia.org/wiki/Pylos) refers to the species as being cultivated for the manufacture of perfumes, and it appears that it was used in two forms: as a spice for its seeds and as a herb for the flavour of its leaves.[[9]](http://en.wikipedia.org/wiki/Coriander#cite_note-Chadwick-9) This appears to be confirmed by archaeological evidence from the same period: the large quantities of the species retrieved from an [Early Bronze Age](http://en.wikipedia.org/wiki/Early_Bronze_Age) layer at [Sitagroi](http://en.wikipedia.org/wiki/Sitagroi) in [Macedonia](http://en.wikipedia.org/wiki/Macedonia_(region)) could point to cultivation of the species at that time.[[23]](http://en.wikipedia.org/wiki/Coriander#cite_note-23)

Coriander was brought to the British colonies in North America in 1670, and was one of the first spices cultivated by early settlers.[[24]](http://en.wikipedia.org/wiki/Coriander#cite_note-bgarat-24)

[§](http://en.wikipedia.org/wiki/Coriander#Taste_and_smell)Taste and smell[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=8" \o "Edit section: Taste and smell)]

Different people may perceive the taste of coriander leaves differently. Those who like it say it has a refreshing, lemony or lime-like flavor, while those who dislike it have a strong aversion to its taste and smell, likening it to that of soap and bugs.[[15]](http://en.wikipedia.org/wiki/Coriander#cite_note-McGee-15)[[25]](http://en.wikipedia.org/wiki/Coriander#cite_note-25) Twin studies have shown that 80% of identical twins shared the same preference for the herb, but fraternal twins agreed only about half the time, strongly suggesting a genetic component to the preference. In a genetic survey of nearly 30,000 people, two genetic variants linked to perception of coriander have been found, the most common of which is a gene involved in sensing smells.[[26]](http://en.wikipedia.org/wiki/Coriander#cite_note-26) The gene, [*OR6A2*](http://en.wikipedia.org/wiki/OR6A2), lies within a cluster of olfactory-receptor genes, and encodes a receptor that is highly sensitive to [aldehyde](http://en.wikipedia.org/wiki/Aldehyde) chemicals. Flavor chemists have found that the coriander aroma is created by a half-dozen or so substances, and most of these are aldehydes. Those who dislike the taste are sensitive to the offending[unsaturated](http://en.wikipedia.org/wiki/Saturation_(chemistry)) aldehydes, while simultaneously may also be unable to detect the aromatic chemicals that others find pleasant.[[27]](http://en.wikipedia.org/wiki/Coriander#cite_note-27) Association between its taste and several other genes, including a bitter-taste receptor, have also been found.[[28]](http://en.wikipedia.org/wiki/Coriander#cite_note-28)

[§](http://en.wikipedia.org/wiki/Coriander#Similar_plants)Similar plants[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=9" \o "Edit section: Similar plants)]

Other herbs are used where they grow in much the same way as coriander leaves.

* [*Eryngium foetidum*](http://en.wikipedia.org/wiki/Eryngium_foetidum) has a similar, but more intense, taste. It is known as *culantro*, and is found in Mexico, South America and the Caribbean.[[29]](http://en.wikipedia.org/wiki/Coriander#cite_note-Tucker.2C_A.O._1992-29)
* [*Persicaria odorata*](http://en.wikipedia.org/wiki/Persicaria_odorata) is commonly called [Vietnamese coriander](http://en.wikipedia.org/wiki/Vietnamese_coriander), or *rau răm*. The leaves have a similar odour and flavour to coriander. It is a member of the [Polygonaceae](http://en.wikipedia.org/wiki/Polygonaceae), or buckwheat family.[[29]](http://en.wikipedia.org/wiki/Coriander#cite_note-Tucker.2C_A.O._1992-29)
* *Papaloquelite* is one common name for [*Porophyllum ruderale*](http://en.wikipedia.org/wiki/Porophyllum_ruderale) subsp. *macrocephalum*, a member of the [Compositae](http://en.wikipedia.org/wiki/Compositae) or[Asteraceae](http://en.wikipedia.org/wiki/Asteraceae), the sunflower family. This species is found growing wild from Texas to Argentina.[[29]](http://en.wikipedia.org/wiki/Coriander#cite_note-Tucker.2C_A.O._1992-29)

[§](http://en.wikipedia.org/wiki/Coriander#Health_effects)Health effects[[edit](http://en.wikipedia.org/w/index.php?title=Coriander&action=edit&section=10" \o "Edit section: Health effects)]

[](http://en.wikipedia.org/wiki/File:Coriandrum_sativum_003.JPG)

Flowers of *Coriandrum sativum*

Coriander can produce an allergic reaction in some people.[30][31][32]**§**

Basella alba

From Wikipedia, the free encyclopedia

|  |  |
| --- | --- |
| **Malabar Spinach** | |
| [Basella alba-2.JPG](http://en.wikipedia.org/wiki/File:Basella_alba-2.JPG) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plant) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Core eudicots](http://en.wikipedia.org/wiki/Core_eudicots) |
| Order: | [Caryophyllales](http://en.wikipedia.org/wiki/Caryophyllales) |
| Family: | [Basellaceae](http://en.wikipedia.org/wiki/Basellaceae) |
| Genus: | [*Basella*](http://en.wikipedia.org/wiki/Basella) |
| Species: | ***B. alba*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Basella alba*** [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) | |
| [**Synonyms**](http://en.wikipedia.org/wiki/Synonym_(taxonomy))[[1]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-r-1) | |
| * *Basella rubra* [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) * *Basella oleracea* Landw. * *Basella lucida* L. * *Basella japonica* Burm.f. * *Basella cordifolia* Lam. * *Basella nigra* Lour. * *Basella crassifolia* Salisb. * *Basella volubilis* Salisb. * *Basella ramosa* J.Jacq. ex Spreng. * *Basella cananifolia* Buch.-Ham. ex Wall. * *Gandola nigra* (Lour.) Raf. | |

[](http://en.wikipedia.org/wiki/File:Basella_alba_leaves_27052014.jpg)

Leaves from [West Bengal](http://en.wikipedia.org/wiki/West_Bengal), [India](http://en.wikipedia.org/wiki/India).

A variety of *Basella alba* with deep red and purple stems in the[Philippines](http://en.wikipedia.org/wiki/Philippines).

[](http://en.wikipedia.org/wiki/File:Basella_alba-1.JPG)

Malabar Spinach seeds from a 2005 photo in the [Zhuji](http://en.wikipedia.org/wiki/Zhuji) countryside.

|  |  |
| --- | --- |
| **Vinespinach, (basella), raw** | |
| **Nutritional value per 100 g (3.5 oz)** | |
| [**Energy**](http://en.wikipedia.org/wiki/Food_energy) | 79 kJ (19 kcal) |
|  | |
| [**Carbohydrates**](http://en.wikipedia.org/wiki/Carbohydrate) | 3.4 g |
|  | |
| [**Fat**](http://en.wikipedia.org/wiki/Fat) | 0.3 g |
|  | |
| [**Protein**](http://en.wikipedia.org/wiki/Protein_(nutrient)) | 1.8 g |
|  | |
| [**Vitamins**](http://en.wikipedia.org/wiki/Vitamin) | |
| [Vitamin A equiv.](http://en.wikipedia.org/wiki/Vitamin_A) | (50%)  400 μg |
| [Thiamine (B1)](http://en.wikipedia.org/wiki/Thiamine) | (4%)  0.05 mg |
| [Riboflavin (B2)](http://en.wikipedia.org/wiki/Riboflavin) | (13%)  0.155 mg |
| [Niacin (B3)](http://en.wikipedia.org/wiki/Niacin) | (3%)  0.5 mg |
| [Vitamin B6](http://en.wikipedia.org/wiki/Vitamin_B6) | (18%)  0.24 mg |
| [Folate (B9)](http://en.wikipedia.org/wiki/Folic_acid) | (35%)  140 μg |
| [Vitamin C](http://en.wikipedia.org/wiki/Vitamin_C) | (123%)  102 mg |
|  | |
| [**Trace metals**](http://en.wikipedia.org/wiki/Trace_metal) | |
| [Calcium](http://en.wikipedia.org/wiki/Calcium#Nutrition) | (11%)  109 mg |
| [Iron](http://en.wikipedia.org/wiki/Iron#Biological_role) | (9%)  1.2 mg |
| [Magnesium](http://en.wikipedia.org/wiki/Magnesium_in_biology) | (18%)  65 mg |
| [Manganese](http://en.wikipedia.org/wiki/Manganese#Biological_role) | (35%)  0.735 mg |
| [Phosphorus](http://en.wikipedia.org/wiki/Phosphorus#Biological_role) | (7%)  52 mg |
| [Potassium](http://en.wikipedia.org/wiki/Potassium#In_diet) | (11%)  510 mg |
| [Zinc](http://en.wikipedia.org/wiki/Zinc#Biological_role) | (5%)  0.43 mg |
| [Link to USDA Database entry](http://ndb.nal.usda.gov/ndb/search/list?qlookup=11587&format=Full) | |
| * Units * μg = [micrograms](http://en.wikipedia.org/wiki/Microgram) • mg = [milligrams](http://en.wikipedia.org/wiki/Milligram) * IU = [International units](http://en.wikipedia.org/wiki/International_unit) | |
| Percentages are roughly approximated using[US recommendations](http://en.wikipedia.org/wiki/Dietary_Reference_Intake) for adults. Source: [USDA Nutrient Database](http://ndb.nal.usda.gov/ndb/search/list) | |

***Basella alba*** is an edible [perennial](http://en.wikipedia.org/wiki/Perennial_plant) [vine](http://en.wikipedia.org/wiki/Vine) in the [family](http://en.wikipedia.org/wiki/Family_(biology)) [Basellaceae](http://en.wikipedia.org/wiki/Basellaceae). It is found in tropical Asia and Africa where it is widely used as a [leaf vegetable](http://en.wikipedia.org/wiki/Leaf_vegetable). It is known under various [common names](http://en.wikipedia.org/wiki/Common_name), including **Pui**, **vine spinach**, **red vine spinach**, **climbing spinach**, **creeping spinach**, **buffalo spinach**, **Malabar spinach** and **Ceylon spinach** among [others](http://en.wikipedia.org/wiki/Basella_alba#Names).[[2]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-2)[[3]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-ibiscan.tripod.com-3)[[4]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-4)

*Basella alba* is native to the [Indian Subcontinent](http://en.wikipedia.org/wiki/Indian_Subcontinent), [southeast Asia](http://en.wikipedia.org/wiki/Southeast_Asia) and [New Guinea](http://en.wikipedia.org/wiki/New_Guinea). It is reportedly naturalized in the [China](http://en.wikipedia.org/wiki/China), tropical [Africa](http://en.wikipedia.org/wiki/Africa), [Brazil](http://en.wikipedia.org/wiki/Brazil), [Belize](http://en.wikipedia.org/wiki/Belize), [Colombia](http://en.wikipedia.org/wiki/Colombia), the[West Indies](http://en.wikipedia.org/wiki/West_Indies), [Fiji](http://en.wikipedia.org/wiki/Fiji) and [French Polynesia](http://en.wikipedia.org/wiki/French_Polynesia).[[1]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-r-1)

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Basella_alba)]

* [1 Description](http://en.wikipedia.org/wiki/Basella_alba#Description)
  + [1.1 Soil and climate requirements](http://en.wikipedia.org/wiki/Basella_alba#Soil_and_climate_requirements)
* [2 Food uses](http://en.wikipedia.org/wiki/Basella_alba#Food_uses)
* [3 Names](http://en.wikipedia.org/wiki/Basella_alba#Names)
* [4 References](http://en.wikipedia.org/wiki/Basella_alba#References)
* [5 External links](http://en.wikipedia.org/wiki/Basella_alba#External_links)

Description[[edit](http://en.wikipedia.org/w/index.php?title=Basella_alba&action=edit&section=1" \o "Edit section: Description)]

*Basella alba* is a fast-growing, soft-stemmed [vine](http://en.wikipedia.org/wiki/Vine), reaching 10 metres (33 ft) in length. Its thick, semi-[succulent](http://en.wikipedia.org/wiki/Succulent), heart-shaped leaves have a mild flavour and[mucilaginous](http://en.wikipedia.org/wiki/Mucilaginous) texture. The stem of the cultivar *Basella alba* 'Rubra' is reddish-purple.

**Soil and climate requirements**[[edit](http://en.wikipedia.org/w/index.php?title=Basella_alba&action=edit&section=2" \o "Edit section: Soil and climate requirements)]

*Basella alba* grows well under full sunlight in hot, humid climates and in areas lower than 500 metres (1,600 ft) above sea level. The plant is native to [tropical Asia](http://en.wikipedia.org/wiki/Malabar_(Northern_Kerala)).[[5]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-WorldCrops_Malabar_Spinach-5)Growth is slow in low temperatures resulting in low yields. Flowering is induced during the short-day months of November to February. It grows best in sandy loam soils rich in organic matter with [pH](http://en.wikipedia.org/wiki/PH) ranging from 5.5 to 8.0.

Food uses[[edit](http://en.wikipedia.org/w/index.php?title=Basella_alba&action=edit&section=3" \o "Edit section: Food uses)]

Typical of leaf vegetables, Malabar spinach is high in [vitamin A](http://en.wikipedia.org/wiki/Vitamin_A), [vitamin C](http://en.wikipedia.org/wiki/Vitamin_C), [iron](http://en.wikipedia.org/wiki/Iron), and[calcium](http://en.wikipedia.org/wiki/Calcium). It is low in calories by volume, but high in protein per calorie. The succulent[mucilage](http://en.wikipedia.org/wiki/Mucilage) is a particularly rich source of [soluble fiber](http://en.wikipedia.org/wiki/Soluble_fiber). Among many other possibilities, Malabar spinach may be used to thicken [soups](http://en.wikipedia.org/wiki/Soup) or [stir-fries](http://en.wikipedia.org/wiki/Stir_frying) with [garlic](http://en.wikipedia.org/wiki/Garlic) and [chili peppers](http://en.wikipedia.org/wiki/Chili_pepper).

In the Philippines the leaves of this vegetable is one of the main ingredients in an all vegetable dish called [utan](http://en.wikipedia.org/wiki/Utan) that is served over rice.

In [Karnataka Cuisine](http://en.wikipedia.org/wiki/Karnataka_Cuisine) (Karavali and Malnad regions), the leaves and stems are used to make Basale Soppu Saaru/Curry (Especially in combination with [Jackfruit](http://en.wikipedia.org/wiki/Jackfruit) seed). In[Bengali cuisine](http://en.wikipedia.org/wiki/Bengali_cuisine) it is widely used both in a vegetable dish, cooked with red pumpkin, and in a non-vegetarian dish, cooked with the bones of the [Ilish](http://en.wikipedia.org/wiki/Ilish) fish. In [Andhra Pradesh](http://en.wikipedia.org/wiki/Andhra_Pradesh), a southern state in India, a curry of Basella and Yam is made popularly known as Kanda Bachali Koora [Yam and Basella curry]. Also it used to make the snack item bachali koora bajji. In [Odisha](http://en.wikipedia.org/wiki/Odisha), [India](http://en.wikipedia.org/wiki/India), it is used to make Curries and Saaga (any type of dish made from green leafy vegetables is called Saaga in Odisha). In the [Western Ghats](http://en.wikipedia.org/wiki/Western_Ghats) in [Maharashtra](http://en.wikipedia.org/wiki/Maharashtra), [India](http://en.wikipedia.org/wiki/India), it is used to make [bhaji](http://en.wikipedia.org/wiki/Pakora) (भजी).

The vegetable is used in [Chinese cuisine](http://en.wikipedia.org/wiki/Chinese_cuisine). It has many names including flowing water vegetable. It is often used in stir-frys and soups. In [Vietnam](http://en.wikipedia.org/wiki/Vietnam), particularly the north, it is cooked with crab meat, [luffa](http://en.wikipedia.org/wiki/Luffa) and [jute](http://en.wikipedia.org/wiki/Jute#Food) to make soup.

In Africa, the mucilaginous cooked shoots are most commonly used.[[6]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-prota-6)

Malabar spinach can be found at many Chinese, Vietnamese, Korean, Indian, etc. grocery stores, as well as farmers' markets. It has been shown to contain certain phenolic phytochemicals and it has antioxidant properties.(citation?)

Names[[edit](http://en.wikipedia.org/w/index.php?title=Basella_alba&action=edit&section=4" \o "Edit section: Names)]

*Basella alba* is usually referred to as the "[spinach](http://en.wikipedia.org/wiki/Spinach)" equivalent of a certain country in[English](http://en.wikipedia.org/wiki/English_language), even though it is not related to the true spinach ([*Spinacia oleracea*](http://en.wikipedia.org/wiki/Spinacia_oleracea)). Examples include "Malabar spinach", "Ceylon spinach", "Indian spinach", "Surinam spinach", "Chinese spinach", or "Vietnamese spinach". Other common names include "vine spinach", "red vine spinach", "climbing spinach", "creeping spinach", "buffalo spinach", "Malabar nightshade", and "broad bologi".

In [South Asia](http://en.wikipedia.org/wiki/South_Asia), it is known as *pui shak* (পুঁই শাক) in [Bengali](http://en.wikipedia.org/wiki/Bengali_language); *poi ni bhaji* in [Gujarati](http://en.wikipedia.org/wiki/Gujarati_language);*basale soppu* in [Kannada](http://en.wikipedia.org/wiki/Kannada_language); *valchi bhaji* or *vauchi bhaji* in [Konkani](http://en.wikipedia.org/wiki/Konkani_language); *vallicheera*(വള്ളിച്ചീര ) in [Malayalam](http://en.wikipedia.org/wiki/Malayalam_language); *mayalu* (मायाळू) in [Marathi](http://en.wikipedia.org/wiki/Marathi_language); *poi saaga* (ପୋଈ ଶାଗ) in[Oriya](http://en.wikipedia.org/wiki/Oriya_language); *vel niviti* (*sudu*) in [Sinhalese](http://en.wikipedia.org/wiki/Sinhala_language); kodip pasaLi (கொடிப்பசளி) in [Tamil](http://en.wikipedia.org/wiki/Tamil_language);*bachhali* (బచ్చలి) in [Telugu](http://en.wikipedia.org/wiki/Telugu_language); and *basale* in [Tulu](http://en.wikipedia.org/wiki/Tulu_language).

In [Southeast Asia](http://en.wikipedia.org/wiki/Southeast_Asia), it is known as 'pui shak' in Bengali; *kubay* in [Ibanag](http://en.wikipedia.org/wiki/Ibanag_language); *libatu* in[Kapampangan](http://en.wikipedia.org/wiki/Kapampangan_language); *alugbati* in [Tagalog](http://en.wikipedia.org/wiki/Tagalog_language) and [Visayan languages](http://en.wikipedia.org/wiki/Visayan_languages) in the [Philippines](http://en.wikipedia.org/wiki/Philippines). It is known as *pag pang* (ผักปั๋ง) in [Thai](http://en.wikipedia.org/wiki/Thai_language); and *mồng tơi* in [Vietnamese](http://en.wikipedia.org/wiki/Vietnamese_language).[[5]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-WorldCrops_Malabar_Spinach-5)

In [East Asia](http://en.wikipedia.org/wiki/East_Asia), it is known as 木耳菜、落葵, 蚕菜, being *saan choy*, *shan tsoi*, *luo kai*,*shu chieh*, and *lo kwai* some of the pronunciations in [Cantonese](http://en.wikipedia.org/wiki/Cantonese_language); and *tsurumurasaki*(つるむらさき) in [Japanese](http://en.wikipedia.org/wiki/Japanese_language).[[5]](http://en.wikipedia.org/wiki/Basella_alba#cite_note-WorldCrops_Malabar_Spinach-5)

In [Latin America](http://en.wikipedia.org/wiki/Latin_America), it is known as *espinaca china* ([[espiˈnaka ˈtʃina]](http://en.wikipedia.org/wiki/Help:IPA_for_Spanish), "Chinese spinach") or *espinaca de Malabar* ([[espiˈnaka ðe malaˈβar]](http://en.wikipedia.org/wiki/Help:IPA_for_Spanish), "Malabar spinach") in[Spanish](http://en.wikipedia.org/wiki/Spanish_language), and *bertalha* ([[beʁˈtaʎɐ]](http://en.wikipedia.org/wiki/Help:IPA_for_Portuguese_and_Galician), etymology is tentatively "creepy green", "dense green") or *espinafre indiano* ([[ispiˈnafɾ ĩdʒiˈɐ̃nu]](http://en.wikipedia.org/wiki/Help:IPA_for_Portuguese_and_Galician), "Indian spinach") in[Portuguese](http://en.wikipedia.org/wiki/Portuguese_language).

*Centella asiatica*

From Wikipedia, the free encyclopedia

|  |  |
| --- | --- |
| ***Centella asiatica*** | |
| [Starr 020803-0094 Centella asiatica.jpg](http://en.wikipedia.org/wiki/File:Starr_020803-0094_Centella_asiatica.jpg) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plantae) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Asterids](http://en.wikipedia.org/wiki/Asterids) |
| Order: | [Apiales](http://en.wikipedia.org/wiki/Apiales) |
| Family: | [Apiaceae](http://en.wikipedia.org/wiki/Apiaceae) |
| Subfamily: | [Mackinlayoideae](http://en.wikipedia.org/wiki/Mackinlayoideae) |
| Genus: | [*Centella*](http://en.wikipedia.org/wiki/Centella) |
| Species: | ***C. asiatica*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Centella asiatica*** ([L.](http://en.wikipedia.org/wiki/Carl_Linnaeus)) [Urban](http://en.wikipedia.org/wiki/Ignatz_Urban) | |
| [**Synonyms**](http://en.wikipedia.org/wiki/Synonym_(taxonomy))[[1]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-1) | |
| *Hydrocotyle asiatica* [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) *Trisanthus cochinchinensis* [Lour.](http://en.wikipedia.org/wiki/Jo%C3%A3o_de_Loureiro) | |

***Centella asiatica***, commonly known as **centella** and **gotu kola**, is a small,[herbaceous](http://en.wikipedia.org/wiki/Herbaceous), [annual plant](http://en.wikipedia.org/wiki/Annual_plant) of the family [Mackinlayaceae](http://en.wikipedia.org/wiki/Mackinlayaceae) or subfamily Mackinlayoideae of family Apiaceae, and is native to wetlands in [Asia](http://en.wikipedia.org/wiki/Asia).[[2]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-2)[[3]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-FD-3) It is used as a [medicinal herb](http://en.wikipedia.org/wiki/Medicinal_herb) in [Ayurvedic medicine](http://en.wikipedia.org/wiki/Ayurvedic_medicine), [traditional African medicine](http://en.wikipedia.org/wiki/Traditional_African_medicine), and [traditional Chinese medicine](http://en.wikipedia.org/wiki/Traditional_Chinese_medicine). It is also known as the **Asiatic pennywort** or **Indian pennywort** in English, among various other names in other languages.

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Centella_asiatica)]

* [1 Description](http://en.wikipedia.org/wiki/Centella_asiatica#Description)
* [2 Habitat](http://en.wikipedia.org/wiki/Centella_asiatica#Habitat)
* [3 Culinary use](http://en.wikipedia.org/wiki/Centella_asiatica#Culinary_use)
* [4 Chemistry](http://en.wikipedia.org/wiki/Centella_asiatica#Chemistry)
* [5 Medicinal effects](http://en.wikipedia.org/wiki/Centella_asiatica#Medicinal_effects)
* [6 Other names](http://en.wikipedia.org/wiki/Centella_asiatica#Other_names)
* [7 Folklore](http://en.wikipedia.org/wiki/Centella_asiatica#Folklore)
* [8 See also](http://en.wikipedia.org/wiki/Centella_asiatica#See_also)
* [9 References](http://en.wikipedia.org/wiki/Centella_asiatica#References)
* [10 External links](http://en.wikipedia.org/wiki/Centella_asiatica#External_links)

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Description)Description[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=1" \o "Edit section: Description)]

Centella grows in tropical swampy areas.[[4]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-MH-4) The stems are slender, creeping [stolons](http://en.wikipedia.org/wiki/Stolon), green to reddish-green in color, connecting plants to each other. It has long-stalked, green, rounded apices which have smooth texture with palmately netted veins. The leaves are borne on pericladial petioles, around 2 cm. The rootstock consists of[rhizomes](http://en.wikipedia.org/wiki/Rhizome), growing vertically down. They are creamish in color and covered with root hairs.[[5]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-5)

The [flowers](http://en.wikipedia.org/wiki/Flower) are white or pinkish to red in color, born in small, rounded bunches (umbels) near the surface of the soil. Each flower is partly enclosed in two green bracts. The hermaphrodite flowers are minute in size (less than 3 mm), with 5-6 corolla lobes per flower. Each flower bears five stamens and two [styles](http://en.wikipedia.org/wiki/Gynoecium). The fruit are densely reticulate, distinguishing it from species of Hydrocotyle which have smooth, ribbed or warty fruit.[[3]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-FD-3) The crop matures in three months, and the whole plant, including the roots, is harvested manually.

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Habitat)Habitat[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=2" \o "Edit section: Habitat)]

Centella grows along ditches and in low, wet areas. In Indian and Southeast Asian centella, the plant frequently suffers from high levels of bacterial contamination, possibly from having been harvested from sewage ditches. Because the plant is aquatic, it is especially sensitive to pollutants in the water, which are easily incorporated into the plant.

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Culinary_use)Culinary use[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=3" \o "Edit section: Culinary use)]

*Bai bua bok* served as a refreshing drink in Thailand

Centella is used as a leafy green in Sri Lankan cuisine, where it is called *gotu kola*. In [Sinhalese](http://en.wikipedia.org/wiki/Sinhala_Language), *gotu* is translated as "conical shape" and *kola* as "leaf". It is most often prepared as *malluma* (මැල්ලුම), a traditional accompaniment to [rice](http://en.wikipedia.org/wiki/Rice) and curry, and goes especially well with vegetarian dishes, such as [*dhal*](http://en.wikipedia.org/wiki/Dhal), and [jackfruit](http://en.wikipedia.org/wiki/Jackfruit) or[pumpkin](http://en.wikipedia.org/wiki/Pumpkin) curry. It is considered quite nutritious. In addition to finely chopped *gotu kola*, *malluma* almost always contains grated [coconut](http://en.wikipedia.org/wiki/Coconut), and may also contain finely chopped green [chilis](http://en.wikipedia.org/wiki/Chili_pepper), [chili powder](http://en.wikipedia.org/wiki/Chili_powder), [turmeric](http://en.wikipedia.org/wiki/Turmeric) powder and [lime](http://en.wikipedia.org/wiki/Lime_(fruit)) (or [lemon](http://en.wikipedia.org/wiki/Lemon)) juice. A variation of the nutritious porridge known as *kola kenda* is also made with *gotu kola*by the Sinhalese people of Sri Lanka. *Kola Kenda* is made with very well-boiled red rice (with extra liquid), coconut milk and *gotu kola*, which is pureed. The porridge is accompanied with [jaggery](http://en.wikipedia.org/wiki/Jaggery) for sweetness. Centella leaves are also used in sweet "pennywort" drinks.

In [Indonesia](http://en.wikipedia.org/wiki/Indonesia), the leaves are used for *sambai oi peuga-ga*, an [Aceh](http://en.wikipedia.org/wiki/Aceh) type of salad, and is also mixed into [*asinan*](http://en.wikipedia.org/wiki/Asinan) in [Bogor](http://en.wikipedia.org/wiki/Bogor).

In [Vietnam](http://en.wikipedia.org/wiki/Vietnam) and [Thailand](http://en.wikipedia.org/wiki/Thailand), this leaf is used for preparing a drink or can be eaten in raw form in salads or [cold rolls](http://en.wikipedia.org/wiki/Spring_roll). In Bangkok, vendors in the famous [Chatuchak Weekend Market](http://en.wikipedia.org/wiki/Chatuchak_Weekend_Market) sell it alongside coconut, [roselle](http://en.wikipedia.org/wiki/Roselle_(plant)), [chrysanthemum](http://en.wikipedia.org/wiki/Chrysanthemum_tea), orange and other health drinks.

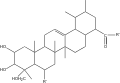
In [Malay cuisine](http://en.wikipedia.org/wiki/Malay_cuisine) the leaves of this plant are used for [*ulam*](http://en.wikipedia.org/wiki/Ulam_(salad)), a type of Malay salad.[[6]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-recipe-6)

It is one of the constituents of the Indian summer drink *thandaayyee*.

In [Bangladeshi cuisine](http://en.wikipedia.org/wiki/Bangladeshi_cuisine) mashed centella is eaten with rice and is popular for its medicinal properties.

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Chemistry)Chemistry[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=4" \o "Edit section: Chemistry)]

*Centella asiatica* has large amounts of pentacyclic [triterpenoids](http://en.wikipedia.org/wiki/Triterpenoid) including asiaticoside, brahmoside, asiatic acid, and brahmic acid also known as madecassic acid. Other products include centellose, centelloside, and madecassoside.[[7]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-7)[[8]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-8)[[9]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-9)

* [](http://en.wikipedia.org/wiki/File:Triterpene-Centella_asiatica.svg)

The [triterpene](http://en.wikipedia.org/wiki/Triterpene)compounds of Centella asiatica

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Medicinal_effects)Medicinal effects[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=5" \o "Edit section: Medicinal effects)]

According to the [American Cancer Society](http://en.wikipedia.org/wiki/American_Cancer_Society), although centella is promoted for its health benefits, "available scientific evidence does not support claims of its effectiveness for treating cancer or any other disease in humans".[[10]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-10) Side effects are rare but may include skin allergy and burning sensations (with external use), headache, stomach upset, nausea, and dizziness. Extreme drowsiness may occur with high doses of centella, and individuals should refrain from taking this herb with medications that promote sleep or reduce anxiety. Because there is little or no information regarding the safety of centella on breast feeding and pregnant women, nursing and pregnant women are advised to refrain from taking this herb.[[11]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-11)

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Other_names)Other names[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=6" \o "Edit section: Other names)]

In [South Asia](http://en.wikipedia.org/wiki/South_Asia), other common names of centella include

ଥାଲକୂଡ଼ି (Thalkudi) in [Oriya](http://en.wikipedia.org/wiki/Oriya_language)[[12]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-12) సరస్వతి ఆకు (*sarswathi aku*) in [Telugu](http://en.wikipedia.org/wiki/Telugu_language); കുടവൻ (*kudavan*), മുത്തിൾ (*muththil*), or കുടങ്ങൽ (*kudangal*) in [Malayalam](http://en.wikipedia.org/wiki/Malayalam); থানকুনি (*thankuni*) in [Bengali](http://en.wikipedia.org/wiki/Bengali_language); ගොටුකොල (*gotu kola*) in [Sinhala](http://en.wikipedia.org/wiki/Sinhala_language); ब्राम्ही / ब्राह्मी (*brahmi*) in [Marathi](http://en.wikipedia.org/wiki/Marathi_language): ಒಂದೆಲಗ (*ondelaga*) in [Kannada](http://en.wikipedia.org/wiki/Kannada_language); வல்லாரை (*vallaarai*) in [Tamil](http://en.wikipedia.org/wiki/Tamil_language); *brahmi booti* in [Hindi](http://en.wikipedia.org/wiki/Hindi_Language); *perook* in [Manipuri](http://en.wikipedia.org/wiki/Manipuri_language); মানিমুনি (*manimuni*) in [Assamese](http://en.wikipedia.org/wiki/Assamese_language); *timare* in [Tulu](http://en.wikipedia.org/wiki/Tulu_language); *tangkuanteh* in [Paite](http://en.wikipedia.org/wiki/Paite_language); ब्रह्मबुटि (*brahmabuti*) or घोडताप्रे (*ghod-tapre*) in Nepali; and खोलचा घायँ (*kholcha ghyan*) in Newari (Nepal Bhasa).

In India, particularly, it is popularly known by a variety of names: *bemgsag, brahma manduki, brahmanduki, brahmi, ondelaga or ekpanni* (south India, west India), *sarswathi aku* (Andhra Pradesh), *gotu kola, khulakhudi, mandukparni, mandookaparni,* or *thankuni* (Bengal), depending on region. [*Bacopa monnieri*](http://en.wikipedia.org/wiki/Bacopa_monnieri) is the more widely known *Brahmi*; both have some common therapeutic properties in Vedic texts and are used for improving memory. *C. asiatica* is called *brahmi*particularly in north India,[[13]](http://en.wikipedia.org/wiki/Centella_asiatica" \l "cite_note-Daniel_2005_225-13)[[14]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-14) although that may be a case of mistaken identity introduced during the 16th century, when*brahmi* was confused with *mandukaparni*, a name for *C. asiatica*.[[15]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-15) [[16]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-nrdcr-16) Probably the earliest study of *mandookaparni* as*medya rasayana* (improving the mental ability) was carried out at the Dr. A. Lakshmipathy Research Centre (now under CCRAS).[[17]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-17)

In [Southeast Asia](http://en.wikipedia.org/wiki/Southeast_Asia), it is known as ស្លឹកត្រចៀកក្រាញ់ (*sleuk tracheakkranh*) in [Khmer](http://en.wikipedia.org/wiki/Khmer_language); မြင်းခွာပင်(ျမင္းခြာရြက္) (*mying khwar which means "Horse Hoof leaf"* ) in [Burmese](http://en.wikipedia.org/wiki/Burmese_language); ใบบัวบก (*bai bua bok*) in [Thai](http://en.wikipedia.org/wiki/Thai_language); *rau má* ("mother vegetable") in[Vietnamese](http://en.wikipedia.org/wiki/Vietnamese_language); *pegagan* or *antanan* in [Indonesian](http://en.wikipedia.org/wiki/Indonesian_language); *takip-kohol* (literally "[snail lid](http://en.wikipedia.org/wiki/Operculum_(gastropod))")[[18]](http://en.wikipedia.org/wiki/Centella_asiatica#cite_note-18) or *yahong yahong* ("little bowl") in [Filipino](http://en.wikipedia.org/wiki/Filipino_language); and *pegagan* or *pegaga* in [Malay](http://en.wikipedia.org/wiki/Malay_language).

In [East Asia](http://en.wikipedia.org/wiki/East_Asia), it is known as 雷公根 (*lei gong gen*; literally "thunder god's root") or 崩大碗 ("chipped big bowl") in [Chinese](http://en.wikipedia.org/wiki/Chinese_language); and 병풀 (*byeong-pul*, 甁—, literally "bottle/jar grass") in Korean.

[§](http://en.wikipedia.org/wiki/Centella_asiatica#Folklore)Folklore[[edit](http://en.wikipedia.org/w/index.php?title=Centella_asiatica&action=edit&section=7" \o "Edit section: Folklore)]

*Gotu kola* is a minor feature in the longevity tradition of the [T'ai chi ch'uan](http://en.wikipedia.org/wiki/T%27ai_chi_ch%27uan) master [Li Ching-Yuen](http://en.wikipedia.org/wiki/Li_Ching-Yuen). He purportedly lived to be 197 or 256, due in part to his usage of traditional [Chinese herbs](http://en.wikipedia.org/wiki/Chinese_herbs), including *gotu kola*.

*Bacopa monnieri*

From Wikipedia, the free encyclopedia

|  |  |
| --- | --- |
| ***Bacopa monnieri*** | |
| [Starr 010818-0007 Bacopa monnieri.jpg](http://en.wikipedia.org/wiki/File:Starr_010818-0007_Bacopa_monnieri.jpg) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plantae) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Asterids](http://en.wikipedia.org/wiki/Asterids) |
| Order: | [Lamiales](http://en.wikipedia.org/wiki/Lamiales) |
| Family: | [Plantaginaceae](http://en.wikipedia.org/wiki/Plantaginaceae) |
| Genus: | [*Bacopa*](http://en.wikipedia.org/wiki/Bacopa) |
| Species: | ***B. monnieri*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Bacopa monnieri*** ([L.](http://en.wikipedia.org/wiki/Carl_Linnaeus)) [Pennell](http://en.wikipedia.org/wiki/Francis_W._Pennell)[[1]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-1) | |
| [**Synonyms**](http://en.wikipedia.org/wiki/Synonym_(taxonomy)) | |
| *Bacopa monniera* *Indian Pennywort*[*[verification needed](http://en.wikipedia.org/wiki/Wikipedia:Verifiability" \o "Wikipedia:Verifiability)*](L.) Pennell *Bramia monnieri* (L.) Pennell *Gratiola monnieria* L. *Herpestes monnieria* (L.) Kunth *Herpestis fauriei* H.Lev. *Herpestis monniera* *Herpestris monnieria* *Lysimachia monnieri* L. *Moniera cuneifolia* Michx. | |

***Bacopa monnieri*** (**waterhyssop**, **brahmi**,[[2]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-GRIN-2) **thyme-leafed gratiola**, **water hyssop**, **herb of grace**,[[2]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-GRIN-2) **Indian pennywort**[[2]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-GRIN-2)) is a [perennial](http://en.wikipedia.org/wiki/Perennial_plant), creeping [herb](http://en.wikipedia.org/wiki/Herb)native to the wetlands of southern India, Australia, Europe, Africa, Asia, and North and South America.[[2]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-GRIN-2) Bacopa is an important medicinal herb used in [Ayurveda](http://en.wikipedia.org/wiki/Ayurveda), where it is also known as "Brahmi," after [Brahmā](http://en.wikipedia.org/wiki/Brahm%C4%81), the creator God of the Hindu pantheon. Bacopa has traditionally been employed as a neurological tonic and cognitive enhancer, and it is currently being studied for its possible neuroprotective properties.[[3]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Pase_2013-3)[[4]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-4)[[5]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Aguiar_and_Borowski_2013-5)

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Bacopa_monnieri)]

* [1 Description](http://en.wikipedia.org/wiki/Bacopa_monnieri#Description)
* [2 Ecology](http://en.wikipedia.org/wiki/Bacopa_monnieri#Ecology)
* [3 Traditional uses](http://en.wikipedia.org/wiki/Bacopa_monnieri#Traditional_uses)
  + [3.1 Nomenclature](http://en.wikipedia.org/wiki/Bacopa_monnieri#Nomenclature)
* [4 Chemical constituents](http://en.wikipedia.org/wiki/Bacopa_monnieri#Chemical_constituents)
* [5 Pharmacology](http://en.wikipedia.org/wiki/Bacopa_monnieri#Pharmacology)
* [6 Toxicology](http://en.wikipedia.org/wiki/Bacopa_monnieri#Toxicology)
* [7 International naming](http://en.wikipedia.org/wiki/Bacopa_monnieri#International_naming)
* [8 See also](http://en.wikipedia.org/wiki/Bacopa_monnieri#See_also)
* [9 References](http://en.wikipedia.org/wiki/Bacopa_monnieri#References)
* [10 Further reading](http://en.wikipedia.org/wiki/Bacopa_monnieri#Further_reading)
* [11 External links](http://en.wikipedia.org/wiki/Bacopa_monnieri#External_links)

Description[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=1" \o "Edit section: Description)]

[](http://en.wikipedia.org/wiki/File:Bacopa_monnieri_W_IMG_1612.jpg)

*Bacopa monnieri* in[Hyderabad, India](http://en.wikipedia.org/wiki/Hyderabad,_India)

The [leaves](http://en.wikipedia.org/wiki/Leaf) of this plant are succulent, oblong and 4–6 millimeters thick. Leaves are oblanceolate and are arranged oppositely on the stem. The [flowers](http://en.wikipedia.org/wiki/Flower) are small and white, with four or five petals. Its ability to grow in water makes it a popular [aquarium](http://en.wikipedia.org/wiki/Aquarium)plant. It can even grow in slightly [brackish](http://en.wikipedia.org/wiki/Salinity) conditions. Propagation is often achieved through cuttings.[[6]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Purdue-6)

Ecology[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=2" \o "Edit section: Ecology)]

It commonly grows in [marshy](http://en.wikipedia.org/wiki/Marsh) areas throughout [India](http://en.wikipedia.org/wiki/India), [Nepal](http://en.wikipedia.org/wiki/Nepal), [Sri Lanka](http://en.wikipedia.org/wiki/Sri_Lanka), [China](http://en.wikipedia.org/wiki/China),[Pakistan](http://en.wikipedia.org/wiki/Pakistan), [Taiwan](http://en.wikipedia.org/wiki/Taiwan), and [Vietnam](http://en.wikipedia.org/wiki/Vietnam). It is also found in [Florida](http://en.wikipedia.org/wiki/Florida), [Hawaii](http://en.wikipedia.org/wiki/Hawaii) and other southern states of the [United States](http://en.wikipedia.org/wiki/United_States) where it can be grown in damp conditions by a pond or bog garden.[[7]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-7) This plant can be grown hydroponically.

Traditional uses[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=3" \o "Edit section: Traditional uses)]

Bacopa has been used in traditional [Ayurvedic treatment](http://en.wikipedia.org/wiki/Ayurveda) for [epilepsy](http://en.wikipedia.org/wiki/Epilepsy) and [asthma](http://en.wikipedia.org/wiki/Asthma).[[8]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-rajani-8) It is also used in Ayurveda for [ulcers](http://en.wikipedia.org/wiki/Ulcers), [tumors](http://en.wikipedia.org/wiki/Tumors), [ascites](http://en.wikipedia.org/wiki/Ascites), [enlarged spleen](http://en.wikipedia.org/wiki/Enlarged_spleen), [indigestion](http://en.wikipedia.org/wiki/Indigestion),[inflammations](http://en.wikipedia.org/wiki/Inflammation), [leprosy](http://en.wikipedia.org/wiki/Leprosy), [anemia](http://en.wikipedia.org/wiki/Anemia), and [biliousness](http://en.wikipedia.org/wiki/Biliousness).[[6]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Purdue-6)

**Nomenclature**[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=4" \o "Edit section: Nomenclature)]

*Brahmi* is also the name given to [*Centella asiatica*](http://en.wikipedia.org/wiki/Centella_asiatica), particularly in [North India](http://en.wikipedia.org/wiki/North_India), and [Kerala](http://en.wikipedia.org/wiki/Kerala)where it is also identified in [Malayalam](http://en.wikipedia.org/wiki/Malayalam) as *muttil* (മുത്തിള്‍) or *kodakan*. This identification of *brāhmī* as *C. asiatica* has been in use for long in northern India, as Hēmādri's Commentary on Aṣṭāṅgahṛdayaṃ (Āyuṛvēdarasāyanaṃ) treats *maṇḍūkapaṛṇī*(*C. asiatica*) as a synonym of *brahmi*,[[9]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Warrier_et_al-9)[[10]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-10) although that may be a case of mistaken identification that was introduced during the 16th century.[[11]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-11)

Bacopa monnieri was initially described around the 6th century A.D. in texts such as the Charaka Samhita, Atharva-Veda, and Susrut Samhita as a medhya rasayana–class herb taken to sharpen intellect and attenuate mental deficits. The herb was allegedly used by ancient Vedic scholars to memorize lengthy sacred hymns and scriptures.

Chemical constituents[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=5" \o "Edit section: Chemical constituents)]

The best characterized compounds in *Bacopa monnieri* are [dammarane](http://en.wikipedia.org/wiki/Dammarane)-type [triterpenoid](http://en.wikipedia.org/wiki/Triterpenoid) [saponins](http://en.wikipedia.org/wiki/Saponins) known as [bacosides](http://en.wikipedia.org/wiki/Bacoside), with[jujubogenin](http://en.wikipedia.org/w/index.php?title=Jujubogenin&action=edit&redlink=1) or [pseudo-jujubogenin](http://en.wikipedia.org/w/index.php?title=Pseudo-jujubogenin&action=edit&redlink=1) [moieties](http://en.wikipedia.org/wiki/Moiety_(chemistry)) as [aglycone](http://en.wikipedia.org/wiki/Aglycone) units.[[12]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-12) Bacosides comprise a family of 12 known [analogs](http://en.wikipedia.org/wiki/Structural_analog).[[13]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-13)Other saponins called [bacopasides](http://en.wikipedia.org/wiki/Bacopaside) I–XII have been identified more recently.[[14]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-14) The [alkaloids](http://en.wikipedia.org/wiki/Alkaloid) [brahmine](http://en.wikipedia.org/w/index.php?title=Brahmine&action=edit&redlink=1), [nicotine](http://en.wikipedia.org/wiki/Nicotine), and[herpestine](http://en.wikipedia.org/w/index.php?title=Herpestine&action=edit&redlink=1) have been catalogued, along with [D-mannitol](http://en.wikipedia.org/wiki/D-mannitol), [apigenin](http://en.wikipedia.org/wiki/Apigenin), [hersaponin](http://en.wikipedia.org/w/index.php?title=Hersaponin&action=edit&redlink=1), [monnierasides](http://en.wikipedia.org/w/index.php?title=Monnieraside&action=edit&redlink=1) I–III, [cucurbitacin](http://en.wikipedia.org/wiki/Cucurbitacins) and[plantainoside](http://en.wikipedia.org/w/index.php?title=Plantainoside&action=edit&redlink=1) B.[[15]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-15)[[16]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-16)[[17]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-17)

The constituent most studied has been [bacoside A](http://en.wikipedia.org/wiki/Bacoside_A), which was found to be a blend of [bacoside A3](http://en.wikipedia.org/w/index.php?title=Bacoside_A3&action=edit&redlink=1), [bacopacide II](http://en.wikipedia.org/w/index.php?title=Bacopacide_II&action=edit&redlink=1),[bacopasaponin C](http://en.wikipedia.org/w/index.php?title=Bacopasaponin_C&action=edit&redlink=1), and a jujubogenin isomer of [bacosaponin C](http://en.wikipedia.org/w/index.php?title=Bacosaponin_C&action=edit&redlink=1).[[18]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-18) These assays have been conducted using whole plant extract, and bacoside concentrations may vary depending upon the part from which they are extracted. In one *Bacopa monnieri* sample, Rastogi et al. found this bacoside profile—bacopaside I (5.37%), bacoside A3 (5.59%), bacopaside II (6.9%), bacopasaponin C isomer (7.08%), and bacopasaponin C (4.18%).[[19]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-19)

Pharmacology[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=6" \o "Edit section: Pharmacology)]

*Bacopa monnieri* displays [*in vitro*](http://en.wikipedia.org/wiki/In_vitro) [antioxidant](http://en.wikipedia.org/wiki/Antioxidant) and cell-protective effects.[[20]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-20) It also inhibits [acetylcholinesterase](http://en.wikipedia.org/wiki/Acetylcholinesterase), activates[choline acetyltransferase](http://en.wikipedia.org/wiki/Choline_acetyltransferase), and increases cerebral blood flow.[[21]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-21) In rats, bacoside A enhances antioxidation, increasing[superoxide dismutase](http://en.wikipedia.org/wiki/Superoxide_dismutase), [catalase](http://en.wikipedia.org/wiki/Catalase), and [glutathione peroxidase](http://en.wikipedia.org/wiki/Glutathione_peroxidase) activities.[[22]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-EOBAOB-22) *Bacopa monnieri* augments Th1 and Th2 [cytokine](http://en.wikipedia.org/wiki/Cytokine)production.[[23]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-23)

Several studies have suggested that *Bacopa monnieri* extracts may have protective effects in animal models of[neurodegeneration](http://en.wikipedia.org/wiki/Neurodegeneration).[[24]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-dhanasekaran-24)[[25]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-25)[[26]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-26)[[27]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-27)[[28]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-28)[[29]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-29)[[30]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-30) There have also been preliminary clinical studies suggesting improvement of cognitive function in humans.[[3]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Pase_2013-3)[[*unreliable medical source?*](http://en.wikipedia.org/wiki/Wikipedia:Identifying_reliable_sources_(medicine))]

Toxicology[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=7" \o "Edit section: Toxicology)]

The rat [LD50](http://en.wikipedia.org/wiki/Median_lethal_dose) was found to be 2400 mg/kg following a single oral administration.[[31]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-31) Aqueous extracts of *Bacopa monnieri*may elevate serum [thyroxine](http://en.wikipedia.org/wiki/Thyroxine) and have adverse effects on [spermatogenesis](http://en.wikipedia.org/wiki/Spermatogenesis), sperm count, and fertility in male mice.[[32]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-Singh2009-32)

The most commonly reported adverse side effects of *Bacopa monnieri* in humans are nausea, increased intestinal motility, and gastrointestinal upset.[[33]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-33)[[34]](http://en.wikipedia.org/wiki/Bacopa_monnieri#cite_note-34)[[*non-primary source needed*](http://en.wikipedia.org/wiki/Wikipedia:No_original_research#Primary.2C_secondary_and_tertiary_sources)]

International naming[[edit](http://en.wikipedia.org/w/index.php?title=Bacopa_monnieri&action=edit&section=8" \o "Edit section: International naming)]

The plant is known by many names in many international languages, including:

* ബ്രഹ്മി in [Malayalam](http://en.wikipedia.org/wiki/Malayalam)
* நீர்ப்பிரமி (*Niirpirami*)/ Valaarai in [Tamil](http://en.wikipedia.org/wiki/Tamil_language)
* ผักมิ (*Phak mi*), พรมมิ (*Phrommi*) in Thai
* ලුනු විල*Lunuwila* in Sinhalese (Sri Lanka)
* ʻaeʻae in Hawaiian (Hawaii)
* Rau Đắng in Vietnamese
* פְּשֵטָה שרועה ("psheta sru'a") in Hebrew
* Kleines Fettblatt in German

# Henna

From Wikipedia, the free encyclopedia

*For other uses, see*[*Henna (disambiguation)*](http://en.wikipedia.org/wiki/Henna_(disambiguation))*.*

|  |  |
| --- | --- |
| **Henna** | |
| [Lawsonia inermis Ypey36.jpg](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_Ypey36.jpg) | |
| *Lawsonia inermis* | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plant) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Rosids](http://en.wikipedia.org/wiki/Rosids) |
| Order: | [Myrtales](http://en.wikipedia.org/wiki/Myrtales) |
| Family: | [Lythraceae](http://en.wikipedia.org/wiki/Lythraceae) |
| Genus: | ***Lawsonia*** |
| Species: | ***L. inermis*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Lawsonia inermis*** [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus)  [Henna 2014-02-22 04-37.jpg](http://en.wikipedia.org/wiki/File:Henna_2014-02-22_04-37.jpg) | |

**Henna** (***Lawsonia inermis***, also known as **hina**, the **henna tree**, the **mignonette tree**, and the **Egyptian privet**)[[1]](http://en.wikipedia.org/wiki/Henna" \l "cite_note-1)[[2]](http://en.wikipedia.org/wiki/Henna#cite_note-howstuffworks-2) is a [flowering plant](http://en.wikipedia.org/wiki/Flowering_plant) and the sole species of the***Lawsonia*** genus. The English name "henna" comes from the [Arabic](http://en.wikipedia.org/wiki/Arabic) حِنَّاء‎ ([ALA-LC](http://en.wikipedia.org/wiki/ALA-LC_romanization):*ḥinnāʾ*; pronounced [[ħɪnˈnæːʔ]](http://en.wikipedia.org/wiki/Help:IPA_for_Arabic)) or, colloquially حنا‎, loosely pronounced as /ħinna/.

The name *henna* also refers to the [dye](http://en.wikipedia.org/wiki/Dye) prepared from the plant and the art of temporary [tattooing](http://en.wikipedia.org/wiki/Tattoo) based on those dyes (see also [mehndi](http://en.wikipedia.org/wiki/Mehndi)). Henna has been used since antiquity to dye skin, hair and fingernails, as well as fabrics including [silk](http://en.wikipedia.org/wiki/Silk), [wool](http://en.wikipedia.org/wiki/Wool)and [leather](http://en.wikipedia.org/wiki/Leather). The name is used in other skin and hair dyes, such as *black henna* and*neutral henna*, neither of which is derived from the henna plant.[[3]](http://en.wikipedia.org/wiki/Henna#cite_note-3)[[4]](http://en.wikipedia.org/wiki/Henna#cite_note-4)

Historically, henna was used for cosmetic purposes in [Ancient Egypt](http://en.wikipedia.org/wiki/Ancient_Egypt) or [Carthage](http://en.wikipedia.org/wiki/Carthage), as well as other parts of [North Africa](http://en.wikipedia.org/wiki/North_Africa), the [Horn of Africa](http://en.wikipedia.org/wiki/Horn_of_Africa), the [Arabian Peninsula](http://en.wikipedia.org/wiki/Arabian_Peninsula), and[South Asia](http://en.wikipedia.org/wiki/South_Asia). Bridal henna nights remain an important custom in many of these areas, particularly among traditional families.

## Contents

  [[hide](http://en.wikipedia.org/wiki/Henna)]

* [1 Description](http://en.wikipedia.org/wiki/Henna#Description)
* [2 Cultivation](http://en.wikipedia.org/wiki/Henna#Cultivation)
* [3 Preparation and application](http://en.wikipedia.org/wiki/Henna#Preparation_and_application)
  + [3.1 Body art](http://en.wikipedia.org/wiki/Henna#Body_art)
  + [3.2 Hair dye](http://en.wikipedia.org/wiki/Henna#Hair_dye)
    - [3.2.1 History](http://en.wikipedia.org/wiki/Henna#History)
    - [3.2.2 Today](http://en.wikipedia.org/wiki/Henna#Today)
* [4 Traditions of henna as body art](http://en.wikipedia.org/wiki/Henna#Traditions_of_henna_as_body_art)
  + [4.1 Regions](http://en.wikipedia.org/wiki/Henna#Regions)
* [5 As a medicine](http://en.wikipedia.org/wiki/Henna#As_a_medicine)
* [6 Health effects](http://en.wikipedia.org/wiki/Henna#Health_effects)
  + [6.1 Regulation](http://en.wikipedia.org/wiki/Henna#Regulation)
* [7 "Natural henna," "neutral henna" and "black henna"](http://en.wikipedia.org/wiki/Henna#.22Natural_henna.2C.22_.22neutral_henna.22_and_.22black_henna.22)
  + [7.1 "Natural henna"](http://en.wikipedia.org/wiki/Henna#.22Natural_henna.22)
  + [7.2 "Neutral henna"](http://en.wikipedia.org/wiki/Henna#.22Neutral_henna.22)
  + [7.3 "Black henna"](http://en.wikipedia.org/wiki/Henna#.22Black_henna.22)
  + [7.4 Para-phenylenediamine](http://en.wikipedia.org/wiki/Henna#Para-phenylenediamine)
* [8 Gallery](http://en.wikipedia.org/wiki/Henna#Gallery)
* [9 See also](http://en.wikipedia.org/wiki/Henna#See_also)
* [10 References](http://en.wikipedia.org/wiki/Henna#References)
* [11 External links](http://en.wikipedia.org/wiki/Henna#External_links)

## [§](http://en.wikipedia.org/wiki/Henna#Description)Description[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=1" \o "Edit section: Description)]

Henna is a tall [shrub](http://en.wikipedia.org/wiki/Shrub) or small tree, standing 1.8 to 7.6 m tall (6 to 25 ft). It is [glabrous](http://en.wikipedia.org/wiki/Glabrousness#In_botany)and multi-branched, with spine-tipped branchlets. The leaves grow opposite each other on the stem. They are glabrous, sub-[sessile](http://en.wikipedia.org/wiki/Sessility_(botany)), [elliptical](http://en.wikipedia.org/wiki/Elliptical), and [lanceolate](http://en.wikipedia.org/wiki/Leaf_shape) (long and wider in the middle; average dimensions are 1.5–5.0 cm x 0.5–2 cm or 0.6–2 in x 0.2–0.8 in), [acuminate](http://en.wikipedia.org/wiki/Acuminate) (tapering to a long point), and have depressed veins on the [dorsal](http://en.wikipedia.org/wiki/Dorsal_(anatomy)) surface.[[2]](http://en.wikipedia.org/wiki/Henna#cite_note-howstuffworks-2) Henna flowers have four [sepals](http://en.wikipedia.org/wiki/Sepal) and a 2 mm (0.079 in) [calyx](http://en.wikipedia.org/wiki/Calyx_(botany)) tube, with 3 mm (0.12 in) spread lobes. Its petals are obvate, with white or red [stamens](http://en.wikipedia.org/wiki/Stamens) found in pairs on the rim of the calyx tube. The [ovary](http://en.wikipedia.org/wiki/Ovary) is four-celled, 5 mm (0.20 in) long, and erect. Henna fruits are small, brownish capsules, 4–8 mm (0.16–0.31 in) in diameter, with 32–49 seeds per fruit, and open irregularly into four splits.[[5]](http://en.wikipedia.org/wiki/Henna#cite_note-5)

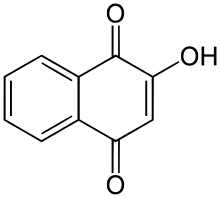
## [§](http://en.wikipedia.org/wiki/Henna#Cultivation)Cultivation[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=2" \o "Edit section: Cultivation)]

The henna plant is native to northern Africa, western and [southern Asia](http://en.wikipedia.org/wiki/South_Asia), and northern [Australasia](http://en.wikipedia.org/wiki/Australasia), in semi-arid zones and tropical areas.[[2]](http://en.wikipedia.org/wiki/Henna#cite_note-howstuffworks-2)[[6]](http://en.wikipedia.org/wiki/Henna#cite_note-6) It produces the most dye when grown in temperatures between 35 and 45 °C (95 and 113 °F).[[7]](http://en.wikipedia.org/wiki/Henna#cite_note-7) During the onset of precipitation intervals, the plant grows rapidly, putting out new shoots. Growth subsequently slows. The leaves gradually yellow and fall during prolonged dry or cool intervals. It does not thrive where minimum temperatures are below 11 °C (52 °F). Temperatures below 5 °C (41 °F) will kill the henna plant.

## [§](http://en.wikipedia.org/wiki/Henna#Preparation_and_application)Preparation and application[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=3" \o "Edit section: Preparation and application)]

### [§](http://en.wikipedia.org/wiki/Henna#Body_art)Body art[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=4" \o "Edit section: Body art)]

|  |  |
| --- | --- |
| [http://upload.wikimedia.org/wikipedia/en/thumb/9/99/Question_book-new.svg/50px-Question_book-new.svg.png](http://en.wikipedia.org/wiki/File:Question_book-new.svg) | This section **does not**[**cite**](http://en.wikipedia.org/wiki/Wikipedia:Citing_sources)**any**[**references or sources**](http://en.wikipedia.org/wiki/Wikipedia:Verifiability). Please help improve this section by [adding citations to reliable sources](http://en.wikipedia.org/wiki/Help:Introduction_to_referencing/1). Unsourced material may be challenged and [removed](http://en.wikipedia.org/wiki/Wikipedia:Verifiability#Burden_of_evidence). *(June 2013)* |

[](http://en.wikipedia.org/wiki/File:HNQ.svg)

[Lawsone](http://en.wikipedia.org/wiki/Lawsone), an active compound in Henna

Whole, unbroken henna leaves will not stain the skin. Henna will not stain skin until the [lawsone](http://en.wikipedia.org/wiki/Lawsone) molecules are made available (released) from the henna leaf. Dried henna leaves will stain the skin if they are mashed into a paste. The lawsone will gradually migrate from the henna paste into the outer layer of the skin and bind to the [proteins](http://en.wikipedia.org/wiki/Protein) in it, creating a fast stain.



Video of Henna being applied

Since it is difficult to form intricate patterns from coarse crushed leaves, henna is commonly traded as a powder made by drying, [milling](http://en.wikipedia.org/wiki/Mill_(grinding)) and [sifting](http://en.wikipedia.org/wiki/Sieve) the leaves. The dry powder is mixed with one of a number of liquids, including water, lemon juice, or strong tea, and other ingredients, depending on the tradition. Many artists use sugar or molasses in the paste to improve consistency and keep it stuck to the skin better. The henna mix must rest for 1 to 48 hours before use, to release the lawsone from the leaf matter. The timing depends on the crop of henna being used. Essential oils with high levels of [monoterpene](http://en.wikipedia.org/wiki/Monoterpene) alcohols, such as [tea tree](http://en.wikipedia.org/wiki/Tea_tree), [cajeput](http://en.wikipedia.org/wiki/Cajeput), or [lavender](http://en.wikipedia.org/wiki/Lavender), will improve skin stain characteristics. Other essential oils, such as eucalyptus and clove, are also useful but are too irritating and should not be used on skin.

[](http://en.wikipedia.org/wiki/File:Henna_for_hair.jpg)

Henna powder

The paste can be applied with many traditional and innovative tools, starting with a basic stick or twig. In Morocco, a syringe is common. In India, a plastic cone similar to those used to pipe icing onto cakes. In the Western world, a cone is common, as is a Jacquard bottle, which is otherwise used to paint silk fabric. A light stain may be achieved within minutes, but the longer the paste is left on the skin, the darker and longer lasting the stain will be, so it needs to be left on as long as possible. To prevent it from drying or falling off the skin, the paste is often sealed down by dabbing a sugar/lemon mix over the dried paste, or simply adding some form of sugar to the paste. After time the dry paste is simply brushed or scraped away.

Henna stains are orange when the paste is first removed, but darkens over the following three days to a deep reddish brown. Soles and palms have the thickest layer of skin and so take up the most lawsone, and take it to the greatest depth, so that hands and feet will have the darkest and most long-lasting stains. Some also believe that steaming or warming the henna pattern will darken the stain, either during the time the paste is still on the skin, or after the paste has been removed. It is debatable whether this adds to the color of the end result as well. Chlorinated water and soaps may spoil the darkening process; alkaline products may hasten the darkening process. After the stain reaches its peak color, it holds for a few days, then gradually wears off by way of [exfoliation](http://en.wikipedia.org/wiki/Exfoliation_(cosmetology)).

### [§](http://en.wikipedia.org/wiki/Henna#Hair_dye)Hair dye[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=5" \o "Edit section: Hair dye)]

#### [§](http://en.wikipedia.org/wiki/Henna#History)History[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=6" \o "Edit section: History)]

[](http://en.wikipedia.org/wiki/File:Old_Punjabi_Woman.JPG)

Elderly [Punjabi](http://en.wikipedia.org/wiki/Punjabi_people) woman whose hair is dyed with henna.

Henna has been used as a cosmetic hair dye for 6,000 years. In [Ancient Egypt](http://en.wikipedia.org/wiki/Ancient_Egypt), it is known to have been worn. Henna has also traditionally been used for centuries in other parts of [North Africa](http://en.wikipedia.org/wiki/North_Africa), the [Horn of Africa](http://en.wikipedia.org/wiki/Horn_of_Africa), the [Arabian Peninsula](http://en.wikipedia.org/wiki/Arabian_Peninsula), the [Near East](http://en.wikipedia.org/wiki/Near_East)and [South Asia](http://en.wikipedia.org/wiki/South_Asia).

In Ancient Egypt, [Ahmose-Henuttamehu](http://en.wikipedia.org/wiki/Ahmose-Henuttamehu) (17th Dynasty, 1574 BCE): Henuttamehu was probably a daughter of [Seqenenre Tao](http://en.wikipedia.org/wiki/Seqenenre_Tao) and [Ahmose Inhapy](http://en.wikipedia.org/wiki/Ahmose_Inhapy). Smith reports that the mummy of Henuttamehu's own hair had been dyed a bright red at the sides, probably with henna.[[8]](http://en.wikipedia.org/wiki/Henna#cite_note-8)

In Europe, henna was popular among women connected to the [aesthetic movement](http://en.wikipedia.org/wiki/Aestheticism)and the [Pre-Raphaelite](http://en.wikipedia.org/wiki/Pre-Raphaelite_Brotherhood) artists of England in the 1800s. [Dante Gabriel Rossetti](http://en.wikipedia.org/wiki/Dante_Gabriel_Rossetti)'s wife and muse, [Elizabeth Siddal](http://en.wikipedia.org/wiki/Elizabeth_Siddal), had naturally bright red hair. Contrary to the cultural tradition in Britain that considered red hair unattractive, the Pre-Raphaelites fetishized red hair. Siddal was portrayed by Rossetti in many paintings that emphasized her flowing red hair.[[9]](http://en.wikipedia.org/wiki/Henna#cite_note-9) The other Pre-Raphaelites, including [Evelyn De Morgan](http://en.wikipedia.org/wiki/Evelyn_De_Morgan) and [Frederick Sandys](http://en.wikipedia.org/wiki/Frederick_Sandys), academic classicists such as [Frederic Leighton](http://en.wikipedia.org/wiki/Frederic_Leighton,_1st_Baron_Leighton), and French painters such as [Gaston Bussière](http://en.wikipedia.org/wiki/Gaston_Bussi%C3%A8re) and the [Impressionists](http://en.wikipedia.org/wiki/Impressionism) further popularized the association of henna-dyed hair and young bohemian women.

Opera singer [Adelina Patti](http://en.wikipedia.org/wiki/Adelina_Patti) is sometimes credited with popularizing the use of henna in Europe in the late 1800s. Parisian courtesan [Cora Pearl](http://en.wikipedia.org/wiki/Cora_Pearl) was often referred to as La Lune Rousse (the red-haired moon) for dying her hair red. In her memoirs, she relates an incident when she dyed her pet dog's fur to match her own hair.[[10]](http://en.wikipedia.org/wiki/Henna#cite_note-10) By the 1950s, [Lucille Ball](http://en.wikipedia.org/wiki/Lucille_Ball) popularized "henna rinse" as her character, Lucy Ricardo, called it on the television show [I Love Lucy](http://en.wikipedia.org/wiki/I_Love_Lucy). It gained popularity among young people in the 1960s through growing interest in Eastern cultures.[[11]](http://en.wikipedia.org/wiki/Henna#cite_note-11)

[Muslim](http://en.wikipedia.org/wiki/Muslim) men may use henna as a dye for hair and most particularly their [beards](http://en.wikipedia.org/wiki/Beard). This is considered [*sunnah*](http://en.wikipedia.org/wiki/Sunnah), a commendable tradition of the Prophet [Muhammad](http://en.wikipedia.org/wiki/Muhammad). Furthermore, a [*hadith*](http://en.wikipedia.org/wiki/Hadith) (narration of the Prophet) holds that he encouraged Muslim women to dye their nails with henna to demonstrate femininity and distinguish their hands from the hands of men; thus some Muslim women in the Middle East apply henna to their finger and toenails as well as their hands.

The use of [Mehndi](http://en.wikipedia.org/wiki/Mehndi) and turmeric is also described in the earliest [Hindu](http://en.wikipedia.org/wiki/Hindu) [Vedas](http://en.wikipedia.org/wiki/Veda).

#### [§](http://en.wikipedia.org/wiki/Henna#Today)Today[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=7" \o "Edit section: Today)]

[](http://en.wikipedia.org/wiki/File:Henna_hair_colour_squares.jpeg)

Cosmetic henna for colouring hair.

Commercially packaged henna, intended for use as a cosmetic hair dye, is available in many countries, and is now popular in [India](http://en.wikipedia.org/wiki/India), as well as the Middle East, Europe, Australia, Canada and the United States. The color that results from dying with henna depends on the original color of the hair, as well as the quality of the henna, and can range from orange to auburn to burgundy. Henna can be mixed with other natural hair dyes including Cassia Obovata for lighter shades of red or even blond, or with indigo to achieve brown and black shades. Some products sold as "henna" include these other natural dyes. Others may include metal salts that can interact with other chemical treatments, or oils and waxes that may inhibit the dye, or even chemical dyes which are common allergens. Any product that comes in a cream, block, or paste form has some sort of additives.

As with henna in body art, the dried leaf powder should be mixed with a mild acid such as lemon juice, orange juice, or vinegar and left to stand. The resulting paste is then applied to the hair, and covered with plastic wrap to keep it from drying out. This paste should be left in the hair for several hours in order for the dye to permanently bind to the hair strands. The paste is then washed away leaving hair that is permanently dyed. Sometimes henna is mixed with hot or boiling water and used immediately. This gives a color that may fade, and which is not as rich or deep.[[12]](http://en.wikipedia.org/wiki/Henna#cite_note-12)

## [§](http://en.wikipedia.org/wiki/Henna#Traditions_of_henna_as_body_art)Traditions of henna as body art[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=8" \o "Edit section: Traditions of henna as body art)]

The different words for henna in ancient languages imply that it had more than one point of discovery and origin, as well as different pathways of daily and ceremonial use.

[](http://en.wikipedia.org/wiki/File:Mehndi_on_hand_with_camel.jpg)

Mehndi on a hand.

Henna has been used to adorn young women's bodies as part of social and holiday celebrations since the late [Bronze Age](http://en.wikipedia.org/wiki/Bronze_Age) in the eastern [Mediterranean](http://en.wikipedia.org/wiki/Mediterranean). The earliest text mentioning henna in the context of marriage and fertility celebrations comes from the [Ugaritic](http://en.wikipedia.org/wiki/Ugarit) legend of [Baal](http://en.wikipedia.org/wiki/Baal) and [Anath](http://en.wikipedia.org/wiki/Anath),[[13]](http://en.wikipedia.org/wiki/Henna#cite_note-13) which has references to women marking themselves with henna in preparation to meet their husbands, and Anath adorning herself with henna to celebrate a victory over the enemies of Baal.

[](http://en.wikipedia.org/wiki/File:Mendhi.jpg)

Henna body art

Wall paintings excavated at [Akrotiri](http://en.wikipedia.org/wiki/Akrotiri_(Santorini)) (dating prior to the eruption of [Thera](http://en.wikipedia.org/wiki/Santorini) in 1680 BCE) show women with markings consistent with henna on their nails, palms and soles, in a tableau consistent with the henna bridal description from Ugarit.[[14]](http://en.wikipedia.org/wiki/Henna#cite_note-14) Many statuettes of young women dating between 1500 and 500 BCE along the Mediterranean coastline have raised hands with markings consistent with henna. This early connection between young, fertile women and henna seems to be the origin of the Night of the Henna, which is now celebrated worldwide.

[](http://en.wikipedia.org/wiki/File:Fartuun_Birimo-b.jpg)

[Somali](http://en.wikipedia.org/wiki/Somali_people) singer Fartuun Birimo wearing henna hand and arm designs.

The Night of the Henna was celebrated by most groups in the areas where henna grew naturally: Jews,[[15]](http://en.wikipedia.org/wiki/Henna#cite_note-brauer-15) Muslims,[[16]](http://en.wikipedia.org/wiki/Henna#cite_note-westermarck14-16) Sikhs, Hindus, Christians and Zoroastrians, among others, all celebrated marriages by adorning the[bride](http://en.wikipedia.org/wiki/Bride), and often the [groom](http://en.wikipedia.org/wiki/Bridegroom), with henna.

Across the henna-growing region, [Purim](http://en.wikipedia.org/wiki/Purim),[[15]](http://en.wikipedia.org/wiki/Henna#cite_note-brauer-15)[Eid](http://en.wikipedia.org/wiki/Eid_ul-Fitr),[[17]](http://en.wikipedia.org/wiki/Henna#cite_note-17) [Diwali](http://en.wikipedia.org/wiki/Diwali),[[18]](http://en.wikipedia.org/wiki/Henna#cite_note-18) [Karva Chauth](http://en.wikipedia.org/wiki/Karva_Chauth), [Passover](http://en.wikipedia.org/wiki/Passover),[Nowruz](http://en.wikipedia.org/wiki/Nowruz), [Mawlid](http://en.wikipedia.org/wiki/Mawlid), and most saints' days were celebrated with some henna. Favorite horses, donkeys, and salukis had their hooves, paws, and tails hennaed. Battle victories, births, circumcision, birthdays, [Zār](http://en.wikipedia.org/wiki/Z%C4%81r), as well as weddings, usually included some henna as part of the celebration. When there was joy, there was henna, as long as henna was available.[*[neutrality](http://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view" \o "Wikipedia:Neutral point of view) is*[*disputed*](http://en.wikipedia.org/wiki/Talk:Henna)][[16]](http://en.wikipedia.org/wiki/Henna#cite_note-westermarck14-16)

[](http://en.wikipedia.org/wiki/File:Henna_on_foot_in_Morocco.jpg)

Henna pattern on foot in [Morocco](http://en.wikipedia.org/wiki/Morocco).

Henna was regarded as having [Barakah](http://en.wikipedia.org/wiki/Barakah) ("blessings")[*[where?](http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Countering_systemic_bias" \o "Wikipedia:WikiProject Countering systemic bias)*][[*when?*](http://en.wikipedia.org/wiki/Wikipedia:Manual_of_Style/Dates_and_numbers#Chronological_items)], and was applied for luck as well as joy and beauty.[[19]](http://en.wikipedia.org/wiki/Henna#cite_note-westermarck26-19) Brides typically had the most henna, and the most complex patterns, to support their greatest joy, and wishes for luck. Some bridal traditions were very complex, such as those in Yemen, where the Jewish bridal henna process took four or five days to complete, with multiple applications and resist work.

The fashion of "[Bridal Mehndi](http://en.wikipedia.org/wiki/Mehndi)" in Pakistan, Northern Libya and in North Indian diasporas is currently growing in complexity and elaboration, with new innovations in glitter, gilding, and fine-line work. Recent technological innovations in grinding, sifting, temperature control, and packaging henna, as well as government encouragement for henna cultivation, have improved dye content and artistic potential for henna.

Though traditional henna artists were [Nai](http://en.wikipedia.org/wiki/Nai_(caste)) caste in India, and barbering castes in other countries (lower social classes), talented contemporary henna artists can command high fees for their work.[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] Women in countries where women are discouraged from working outside the home can find socially acceptable, lucrative work doing henna.[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)][Morocco](http://en.wikipedia.org/wiki/Morocco), [Mauritania](http://en.wikipedia.org/wiki/Mauritania),[[20]](http://en.wikipedia.org/wiki/Henna#cite_note-20) [Yemen](http://en.wikipedia.org/wiki/Yemen), [Libya](http://en.wikipedia.org/wiki/Libya), [Somalia](http://en.wikipedia.org/wiki/Somalia), [Sudan](http://en.wikipedia.org/wiki/Sudan), as well as [India](http://en.wikipedia.org/wiki/India) and many other countries have thriving women's henna businesses. These businesses are often open all night for [Eid](http://en.wikipedia.org/wiki/Eid_al-Fitr), [Diwali](http://en.wikipedia.org/wiki/Diwali) and [Karva Chauth](http://en.wikipedia.org/wiki/Karva_Chauth). Many women may work together during a large wedding, wherein hundreds of guests have henna applied to their body parts. This particular event at a marriage is known as the Mehndi Celebration or Mehndi Night[*[where?](http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Countering_systemic_bias" \o "Wikipedia:WikiProject Countering systemic bias)*][[*by whom?*](http://en.wikipedia.org/wiki/Wikipedia:Manual_of_Style/Words_to_watch#Unsupported_attributions)], and is mainly held for the bride and groom.

### [§](http://en.wikipedia.org/wiki/Henna#Regions)Regions[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=9" \o "Edit section: Regions)]

[](http://en.wikipedia.org/wiki/File:Henna_Istanbul.jpg)

Henna being sold at the Egyptian Bazaar in [Istanbul](http://en.wikipedia.org/wiki/Istanbul), [Turkey](http://en.wikipedia.org/wiki/Turkey).

Bridal henna nights are a popular tradition in North Africa, the Horn of Africa, the Arabian Peninsula, the Near East and South Asia.

**Algeria**

In [Algeria](http://en.wikipedia.org/wiki/Algeria), the bride's mother-in-law traditionally presents her with jewelry and paints the henna on her hands.

**India**

In [India](http://en.wikipedia.org/wiki/India) [Mehndi](http://en.wikipedia.org/wiki/Mehndi) designs are very popular and special [Mehndi nights](http://en.wikipedia.org/wiki/Henna_night) form an integral part of Hindu, Muslim and Sikh weddings. Traditionally it is thought that the darker the henna on the bride's hand, the more intensely her husband will love her. Mehndi application is an important part of many [Hindu](http://en.wikipedia.org/wiki/Hindu) festivals (such as [Karva Chauth](http://en.wikipedia.org/wiki/Karva_Chauth) and[Diwali](http://en.wikipedia.org/wiki/Diwali)), as well as during [Eid](http://en.wikipedia.org/wiki/Eid). It is a common practice among north Indians, particularly elderly ones, to dye their hair using Henna.

**Saudi Arabia**

In [Saudi Arabia](http://en.wikipedia.org/wiki/Saudi_Arabia), prenuptial [Henna nights](http://en.wikipedia.org/wiki/Henna_night) are common. Traditionally the bride’s hands are painted with henna by a one of her female relatives, the belief being that the relative must be happily married or else she will bring bad luck to the bride.[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*]

**Pakistan**

In [Pakistan](http://en.wikipedia.org/wiki/Pakistan), henna is used on hands and feet by brides before their wedding, and by many women for [Eid al-Fitr](http://en.wikipedia.org/wiki/Eid_al-Fitr) and [Eid al-Adha](http://en.wikipedia.org/wiki/Eid_al-Adha). Often the (women) friends and relatives of groom design or choose the design for the hands and feet of bride. It is also used by men to color their hair.

**Israel**

In [Israel](http://en.wikipedia.org/wiki/Israel), [Mizrahi](http://en.wikipedia.org/wiki/Mizrahi_Jews) and [Sephardic](http://en.wikipedia.org/wiki/Sephardic) Jewish women sometimes choose to have a hennah party about a week before the wedding. The hennah party is smaller than the wedding, as only closer friends and family members are invited. The bride and groom wear traditional costumes as do some of the main guests. There is much dancing and music, especially when the hennah is brought out. The hennah is usually presented in a deep dish with lit candles in it and carried by the grandmother. She applies the hennah onto the palms of the bride and groom and they are blessed. Subsequently, guests stain their palms with hennah as well. There are variations in customs and dress between the different Jewish communities (Yemenite, Moroccan, Indian, etc.).

**Somalia**

In [Somalia](http://en.wikipedia.org/wiki/Somalia), henna is worn by [Somali](http://en.wikipedia.org/wiki/Somali_people) women on their hands, arms, feet and neck during weddings, [Eid ul-Fitr](http://en.wikipedia.org/wiki/Eid_ul-Fitr), [Ramadan](http://en.wikipedia.org/wiki/Ramadan), and other festive occasions. Somali henna designs are similar to those in the Arabian peninsula, often featuring flower motifs and triangular shapes. The palm is also frequently decorated with a dot of henna and the fingertips are dipped in the dye. Henna parties are usually held before the wedding takes place.

**Tunisia**

In [Tunisia](http://en.wikipedia.org/wiki/Tunisia), prenuptial henna celebrations last for seven days. On the 3rd day, the bride wears a traditional dress and has henna painted on her hands and feet. As for the groom, his pinky finger is painted with henna on the 6th day.

**Turkey**

In [Turkey](http://en.wikipedia.org/wiki/Turkey), henna is sold in convenience stores and markets. Among these are the Egyptian Bazaar in [Istanbul](http://en.wikipedia.org/wiki/Istanbul).

## [§](http://en.wikipedia.org/wiki/Henna#As_a_medicine)As a medicine[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=10" \o "Edit section: As a medicine)]

Henna is known as a traditional Ayurveda medicine. It shows various health benefits such as hypoglycaemic and hypolipidemic activities, inhibits the tuberculosis bacteria, and useful in skin diseases. Moreover, henna extract prevents the liver damage occurred from exposure of carbon tetrachloride.[[21]](http://en.wikipedia.org/wiki/Henna#cite_note-21)

According to *Ayurveda for All* by Murli Manohar, boiled aqueous extract of henna is effective remedy for the urinary stones.[[22]](http://en.wikipedia.org/wiki/Henna#cite_note-22)

## [§](http://en.wikipedia.org/wiki/Henna#Health_effects)Health effects[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=11" \o "Edit section: Health effects)]

Henna is known to be dangerous to people with glucose-6-phosphate dehydrogenase deficiency ([G6PD deficiency](http://en.wikipedia.org/wiki/G6PD_deficiency)), which is more common in males than females. Infants and children of particular ethnic groups are especially vulnerable.[[23]](http://en.wikipedia.org/wiki/Henna#cite_note-Henna_and_Glucose-6-phosphate_dehydrogenase_deficiency-23) Though user accounts cite few other negative effects of natural henna paste, save for occasional allergic reactions, pre-mixed henna body art pastes may have ingredients added to darken stain, or to alter stain color. The health risks involved in pre-mixed paste can be significant. The United States [Food and Drug Administration](http://en.wikipedia.org/wiki/Food_and_Drug_Administration) (FDA) does consider these risks to be [adulterants](http://en.wikipedia.org/wiki/Adulterants)and therefore illegal for use on skin.[[24]](http://en.wikipedia.org/wiki/Henna#cite_note-FDA_product_safety-24) Some pastes have been noted to include: [silver nitrate](http://en.wikipedia.org/wiki/Silver_nitrate), [carmine](http://en.wikipedia.org/wiki/Carmine), [pyrogallol](http://en.wikipedia.org/wiki/Pyrogallol), disperse orange dye, and chromium.[[25]](http://en.wikipedia.org/wiki/Henna#cite_note-pmid16842550-25) These have been found to cause allergic reactions, chronic inflammatory reactions, or late-onset allergic reactions to hairdressing products and textile dyes.[[26]](http://en.wikipedia.org/wiki/Henna#cite_note-pmid17713170-26)[[27]](http://en.wikipedia.org/wiki/Henna#cite_note-pmid11668106-27)

### [§](http://en.wikipedia.org/wiki/Henna#Regulation)Regulation[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=12" \o "Edit section: Regulation)]

The U.S. FDA has not approved henna for direct application to the skin. It is unconditionally approved as a hair dye, and can only be imported for that purpose.[[24]](http://en.wikipedia.org/wiki/Henna#cite_note-FDA_product_safety-24)[[28]](http://en.wikipedia.org/wiki/Henna#cite_note-28) Henna imported into the U.S. that appears to be for use as body art is subject to seizure,[[29]](http://en.wikipedia.org/wiki/Henna#cite_note-29) though prosecution is rare.

## [§](http://en.wikipedia.org/wiki/Henna#.22Natural_henna.2C.22_.22neutral_henna.22_and_.22black_henna.22)"Natural henna," "neutral henna" and "black henna"[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=13)]

### [§](http://en.wikipedia.org/wiki/Henna#.22Natural_henna.22)"Natural henna"[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=14)]

Natural henna stains only a rich red brown. Products sold as "black henna" or "neutral henna" do not contain henna, but are instead made from other plants, or from other substances altogether.

### [§](http://en.wikipedia.org/wiki/Henna#.22Neutral_henna.22)"Neutral henna"[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=15)]

"Neutral henna" does not change the color of hair. This is not henna powder; it is usually the powder of the plant [*Senna italica*](http://en.wikipedia.org/wiki/Senna_italica) (often referred to by the synonym *Cassia obovata*) or closely related *Cassia* and *Senna* species.

### [§](http://en.wikipedia.org/wiki/Henna#.22Black_henna.22)"Black henna"[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=16)]

[](http://en.wikipedia.org/wiki/File:Sudan_Culture_Woman_with_Jabana.jpg)

Woman with henna stained hands in [Khartoum, Sudan](http://en.wikipedia.org/wiki/Khartoum).

"Black henna" powder may be derived from [indigo](http://en.wikipedia.org/wiki/Indigo_dye) (from the plant [*Indigofera tinctoria*](http://en.wikipedia.org/wiki/Indigofera_tinctoria)). It may also contain unlisted dyes and chemicals.[[30]](http://en.wikipedia.org/wiki/Henna#cite_note-30) "Black henna" may contain [*p*-phenylenediamine](http://en.wikipedia.org/wiki/P-Phenylenediamine) (PPD), which can stain skin black quickly, but can cause severe allergic reactions and permanent scarring. The FDA specifically forbids PPD to be used for that purpose, and may prosecute those who produce "black henna."[[31]](http://en.wikipedia.org/wiki/Henna#cite_note-31) Artists who injure clients with "Black Henna" in the U.S. may be sued for damages.[[32]](http://en.wikipedia.org/wiki/Henna#cite_note-32)

The name "Black Henna" arose from imports of plant-based hair dyes into the West in the late 19th century. Partly fermented, dried [indigo](http://en.wikipedia.org/wiki/Indigofera_tinctoria) was called "black henna" because it could be used in combination with henna to dye hair black. This gave rise to the belief that there was such a thing as "black henna" which could dye skin black. Indigo will not dye skin black. Pictures of indigenous people with black body art (either alkalized henna or from some other source) also fed the belief that there was such a thing as "black henna."

### [§](http://en.wikipedia.org/wiki/Henna#Para-phenylenediamine)Para-phenylenediamine[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=17" \o "Edit section: Para-phenylenediamine)]

In the 1990s, henna artists in Africa, India, Bali, the Arabian Peninsula and the West began to experiment with [para-phenylenediamine](http://en.wikipedia.org/wiki/P-Phenylenediamine) (PPD) based black hair dye, applying it as a thick paste as they would apply henna, in an effort to find something that would quickly make jet black temporary body art. PPD can cause severe allergic reactions, with blistering, intense itching, permanent scarring, and permanent chemical sensitivities.[[33]](http://en.wikipedia.org/wiki/Henna#cite_note-33)[[34]](http://en.wikipedia.org/wiki/Henna#cite_note-34) Estimates of allergic reactions range between 3% and 15%. Henna does not cause these injuries.[[35]](http://en.wikipedia.org/wiki/Henna#cite_note-35) "Black henna" made with PPD can cause lifelong sensitization to coal tar derivatives.[[36]](http://en.wikipedia.org/wiki/Henna#cite_note-Lifelong_damage_from_black_henna-36) "Black henna" made with gasoline, kerosene, lighter fluid, paint thinner, and benzene has been linked to adult leukemia.[[37]](http://en.wikipedia.org/wiki/Henna#cite_note-37)

The most frequent serious health consequence of having a "black henna temporary tattoo" is sensitization to hair dye and related chemicals. If a person has had a "black henna tattoo", and later dyes their hair with chemical hair dye, the allergic reaction may be life-threatening and require hospitalization.[[38]](http://en.wikipedia.org/wiki/Henna#cite_note-38) Because of the epidemic of para-phenylenediamine allergic reactions, chemical hair dye products now post warnings on the labels: "Temporary 'black henna' tattoos may increase your risk of allergy. Do not colour your hair if: ... – you have experienced a reaction to a temporary 'black henna' tattoo in the past."[[39]](http://en.wikipedia.org/wiki/Henna#cite_note-39)

Para-phenylenediamine is illegal for use on skin in western countries, though enforcement is difficult. Physicians have urged governments to legislate against "black henna" because of the frequency and severity of injuries, especially to children.[[40]](http://en.wikipedia.org/wiki/Henna#cite_note-40)To assist prosecution of vendors, government agencies encourage citizens to report injuries and illegal use of "PPD black henna".[[41]](http://en.wikipedia.org/wiki/Henna#cite_note-41)[[42]](http://en.wikipedia.org/wiki/Henna#cite_note-42) When used in hair dye, the PPD amount must be below 6%, and application instructions warn that the dye not touch the scalp and the dye must be quickly rinsed away. "Black henna" pastes have PPD percentages from 10% to 80%, and are left on the skin for half an hour.[[25]](http://en.wikipedia.org/wiki/Henna#cite_note-pmid16842550-25)[[43]](http://en.wikipedia.org/wiki/Henna#cite_note-43)

Para-phenylenediamine "black henna" use is widespread, particularly in tourist areas.[[44]](http://en.wikipedia.org/wiki/Henna#cite_note-44) Because the blistering reaction appears 3 to 12 days after the application, most tourists have left and do not return to show how much damage the artist has done. This permits the artists to continue injuring others, unaware they are causing severe injuries. The high profit margins of "black henna" and the demand for body art that emulates "tribal tattoos" further encourage artists to deny the dangers.[[45]](http://en.wikipedia.org/wiki/Henna#cite_note-45)[[46]](http://en.wikipedia.org/wiki/Henna#cite_note-46)

It is not difficult to recognize and avoid para-phenylenediamine "black henna":[[47]](http://en.wikipedia.org/wiki/Henna" \l "cite_note-47)

* if a paste stains torso skin black in less than ½ hour, it has PPD in it.
* if the paste is mixed with peroxide, or if peroxide is wiped over the design to bring out the color, it has PPD in it.

Anyone who has an itching and blistering reaction to a black body stain should go to a doctor, and report that they have had an application of para-phenylenediamine to their skin.

PPD sensitivity is lifelong. A person who has become sensitized through "black henna tattoos" may have future allergic reactions to perfumes, printer ink, chemical hair dyes, textile dye, photographic developer, sunscreen and some medications. A person who has had a "black henna tattoo" should consult their physician about health consequences of[para-phenylenediamine](http://en.wikipedia.org/wiki/Para-phenylenediamine) sensitization.[[48]](http://en.wikipedia.org/wiki/Henna#cite_note-48)

## [§](http://en.wikipedia.org/wiki/Henna#Gallery)Gallery[[edit](http://en.wikipedia.org/w/index.php?title=Henna&action=edit&section=18" \o "Edit section: Gallery)]

* [](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_(Mehndi)_in_Hyderabad,_AP_W_IMG_0528.jpg)

in [Hyderabad, India](http://en.wikipedia.org/wiki/Hyderabad,_India).

* [](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_(Mehndi)_in_Hyderabad,_AP_W_IMG_0527.jpg)

in [Hyderabad, India](http://en.wikipedia.org/wiki/Hyderabad,_India).

* [](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_(Mehndi)_in_Hyderabad,_AP_W_IMG_0524.jpg)

in [Hyderabad, India](http://en.wikipedia.org/wiki/Hyderabad,_India).

* [](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_(Mehndi)_in_Hyderabad,_AP_W2_IMG_0524.jpg)

in [Hyderabad, India](http://en.wikipedia.org/wiki/Hyderabad,_India).

* [](http://en.wikipedia.org/wiki/File:Lawsonia_inermis_in_Malaysia.jpg)

A branch of henna tree in Malaysia

From Wikipedia, the free encyclopedia

*For other uses, see*[*Hibiscus (disambiguation)*](http://en.wikipedia.org/wiki/Hibiscus_(disambiguation))*.*

|  |  |
| --- | --- |
| ***Hibiscus*** | |
| [Hibiscus flower TZ.jpg](http://en.wikipedia.org/wiki/File:Hibiscus_flower_TZ.jpg) | |
| [*Hibiscus rosa-sinensis*](http://en.wikipedia.org/wiki/Hibiscus_rosa-sinensis) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plant) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Rosids](http://en.wikipedia.org/wiki/Rosids) |
| Order: | [Malvales](http://en.wikipedia.org/wiki/Malvales) |
| Family: | [Malvaceae](http://en.wikipedia.org/wiki/Malvaceae) |
| Subfamily: | [Malvoideae](http://en.wikipedia.org/wiki/Malvoideae) |
| Tribe: | [Hibisceae](http://en.wikipedia.org/wiki/Hibisceae) |
| Genus: | ***Hibiscus*** [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) |
| [**Species**](http://en.wikipedia.org/wiki/Species) | |
| [232 species](http://en.wikipedia.org/wiki/Hibiscus#Species) | |
| [**Synonyms**](http://en.wikipedia.org/wiki/Synonym_(taxonomy)) | |
| *Bombycidendron* Zoll. & Moritzi *Bombycodendron* Hassk. *Brockmania* W.Fitzg. *Pariti* Adans. *Wilhelminia* Hochr.[[1]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-GRIN-1) | |

***Hibiscus*** ([/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[hɨˈbɪskəs](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[[2]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-2) or [/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[haɪˈbɪskəs](http://en.wikipedia.org/wiki/Help:IPA_for_English#Key)[/](http://en.wikipedia.org/wiki/Help:IPA_for_English)[[3]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-3)) is a genus of [flowering plants](http://en.wikipedia.org/wiki/Flowering_plant) in the[mallow](http://en.wikipedia.org/wiki/Malva) family, [Malvaceae](http://en.wikipedia.org/wiki/Malvaceae). It is quite large, containing several hundred species that are native to warm-[temperate](http://en.wikipedia.org/wiki/Temperate), [subtropical](http://en.wikipedia.org/wiki/Subtropics) and [tropical](http://en.wikipedia.org/wiki/Tropics) regions throughout the world. Member species are often noted for their showy [flowers](http://en.wikipedia.org/wiki/Flower) and are commonly known simply as **hibiscus**, or less widely known as **rose mallow**. The genus includes both[annual](http://en.wikipedia.org/wiki/Annual_plant) and [perennial](http://en.wikipedia.org/wiki/Perennial_plant) [herbaceous plants](http://en.wikipedia.org/wiki/Herbaceous_plant), as well as [woody](http://en.wikipedia.org/wiki/Woody_plant) [shrubs](http://en.wikipedia.org/wiki/Shrub) and small [trees](http://en.wikipedia.org/wiki/Tree). The generic name is derived from the [Greek](http://en.wikipedia.org/wiki/Greek_language) word ἱβίσκος (*hibískos*), which was the name [Pedanius Dioscorides](http://en.wikipedia.org/wiki/Pedanius_Dioscorides) (ca. 40–90) gave to [*Althaea officinalis*](http://en.wikipedia.org/wiki/Althaea_officinalis).[[4]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-4)

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Hibiscus)]

* [1 Description](http://en.wikipedia.org/wiki/Hibiscus#Description)
* [2 Uses](http://en.wikipedia.org/wiki/Hibiscus#Uses)
  + [2.1 Symbolism and culture](http://en.wikipedia.org/wiki/Hibiscus#Symbolism_and_culture)
  + [2.2 Landscaping](http://en.wikipedia.org/wiki/Hibiscus#Landscaping)
  + [2.3 Paper](http://en.wikipedia.org/wiki/Hibiscus#Paper)
  + [2.4 Beverage](http://en.wikipedia.org/wiki/Hibiscus#Beverage)
  + [2.5 Food](http://en.wikipedia.org/wiki/Hibiscus#Food)
  + [2.6 Health benefits](http://en.wikipedia.org/wiki/Hibiscus#Health_benefits)
* [3 Precautions and Contraindications](http://en.wikipedia.org/wiki/Hibiscus#Precautions_and_Contraindications)
  + [3.1 Pregnancy and Lactation](http://en.wikipedia.org/wiki/Hibiscus#Pregnancy_and_Lactation)
  + [3.2 Contraindications](http://en.wikipedia.org/wiki/Hibiscus#Contraindications)
* [4 Adverse Effects](http://en.wikipedia.org/wiki/Hibiscus#Adverse_Effects)
  + [4.1 Drug Interactions](http://en.wikipedia.org/wiki/Hibiscus#Drug_Interactions)
* [5 Species](http://en.wikipedia.org/wiki/Hibiscus#Species)
  + [5.1 Formerly placed here](http://en.wikipedia.org/wiki/Hibiscus#Formerly_placed_here)
* [6 Photos](http://en.wikipedia.org/wiki/Hibiscus#Photos)
* [7 References](http://en.wikipedia.org/wiki/Hibiscus#References)
* [8 External links](http://en.wikipedia.org/wiki/Hibiscus#External_links)

[§](http://en.wikipedia.org/wiki/Hibiscus#Description)Description[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=1" \o "Edit section: Description)]

The [leaves](http://en.wikipedia.org/wiki/Leaf) are [alternate](http://en.wikipedia.org/wiki/Phyllotaxis), ovate to lanceolate, often with a toothed or lobed margin. The [flowers](http://en.wikipedia.org/wiki/Flower) are large, conspicuous, trumpet-shaped, with five or more [petals](http://en.wikipedia.org/wiki/Petal), color from white to pink, red, orange, purple or yellow, and from 4–18 cm broad. Flower color in certain species, such as [*H. mutabilis*](http://en.wikipedia.org/wiki/Hibiscus_mutabilis) and [*H. tiliaceus*](http://en.wikipedia.org/wiki/Hibiscus_tiliaceus), changes with age.[[5]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-5)The [fruit](http://en.wikipedia.org/wiki/Fruit) is a dry five-lobed [capsule](http://en.wikipedia.org/wiki/Capsule_(fruit)), containing several [seeds](http://en.wikipedia.org/wiki/Seed) in each lobe, which are released when the capsule [dehisces](http://en.wikipedia.org/wiki/Dehiscence_(botany)) (splits open) at maturity. It is of red and white colours. It is an example of complete flowers.

[§](http://en.wikipedia.org/wiki/Hibiscus#Uses)Uses[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=2" \o "Edit section: Uses)]

[](http://en.wikipedia.org/wiki/File:Hawaiian_Flower.JPG)

A white [*Hibiscus arnottianus*](http://en.wikipedia.org/wiki/Hibiscus_arnottianus) in Hawaii.

[](http://en.wikipedia.org/wiki/File:Hibiscus_hirtus_Lesser_Mallow_flower_Yeleswaram_EastGodavari.JPG)

[*Hibiscus hirtus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hirtus&action=edit&redlink=1)

[](http://en.wikipedia.org/wiki/File:Hibiscus_at_Kolkata.jpg)

A pink hibiscus in winter.

[](http://en.wikipedia.org/wiki/File:Hibiscus_lobatus_(Lahan_Jaswand)_in_Hyderabad,_AP_W_IMG_9075.jpg)

[*Hibiscus lobatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_lobatus&action=edit&redlink=1)

[](http://en.wikipedia.org/wiki/File:Hibiscus_hispidissimus_at_Kadavoor.jpg)

[*Hibiscus hispidissimus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hispidissimus&action=edit&redlink=1) (Wild Hibiscus)

[§](http://en.wikipedia.org/wiki/Hibiscus#Symbolism_and_culture)**Symbolism and culture**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=3" \o "Edit section: Symbolism and culture)]

Hibiscus species represent nations: [*Hibiscus syriacus*](http://en.wikipedia.org/wiki/Hibiscus_syriacus) is the national flower of [South Korea](http://en.wikipedia.org/wiki/South_Korea), and [*Hibiscus rosa-sinensis*](http://en.wikipedia.org/wiki/Hibiscus_rosa-sinensis) is the national flower of [Malaysia](http://en.wikipedia.org/wiki/Malaysia). The hibiscus is the national flower of [Haiti](http://en.wikipedia.org/wiki/Haiti). The red hibiscus is the flower of the [Hindu](http://en.wikipedia.org/wiki/Hindu) [goddess](http://en.wikipedia.org/wiki/Goddess) [Kali](http://en.wikipedia.org/wiki/Kali), and appears frequently in depictions of her in the art of [Bengal](http://en.wikipedia.org/wiki/Bengal), India, often with the goddess and the flower merging in form. The hibiscus is used as an offering to goddess Kali and Lord [Ganesha](http://en.wikipedia.org/wiki/Ganesha) in Hindu worship.

In the Philippines, the *gumamela* (local name for hibiscus) is used by children as part of a bubble-making pastime. The flowers and leaves are crushed until the sticky juices come out. Hollow [papaya](http://en.wikipedia.org/wiki/Papaya) stalks are then dipped into this and used as straws for blowing bubbles.

The hibiscus flower is traditionally worn by [Tahitian](http://en.wikipedia.org/wiki/Tahiti) and [Hawaiian](http://en.wikipedia.org/wiki/Hawaii) girls. If the flower is worn behind the left ear, the woman is married or in a relationship. If the flower is worn on the right, she is single or openly available for a relationship. The hibiscus is Hawaii's state flower.

[Nigerian](http://en.wikipedia.org/wiki/Nigerian) author [Chimamanda Ngozi Adichie](http://en.wikipedia.org/wiki/Chimamanda_Ngozi_Adichie) named her first novel [*Purple Hibiscus*](http://en.wikipedia.org/wiki/Purple_Hibiscus)after the delicate flower.

The bark of the hibiscus contains strong [bast fibres](http://en.wikipedia.org/wiki/Bast_fibre) that can be obtained by letting the stripped bark set in the sea to let the organic material rot away.

[§](http://en.wikipedia.org/wiki/Hibiscus#Landscaping)**Landscaping**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=4" \o "Edit section: Landscaping)]

Many species are grown for their showy [flowers](http://en.wikipedia.org/wiki/Flower) or used as landscape [shrubs](http://en.wikipedia.org/wiki/Shrub), and are used to attract butterflies, bees, and hummingbirds.[[6]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-6)

[§](http://en.wikipedia.org/wiki/Hibiscus#Paper)**Paper**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=5" \o "Edit section: Paper)]

One species of *Hibiscus*, known as [kenaf](http://en.wikipedia.org/wiki/Kenaf) (*Hibiscus cannabinus*), is extensively used in [paper](http://en.wikipedia.org/wiki/Paper)-making.

[§](http://en.wikipedia.org/wiki/Hibiscus#Beverage)**Beverage**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=6" \o "Edit section: Beverage)]

*Main article:*[*Hibiscus tea*](http://en.wikipedia.org/wiki/Hibiscus_tea)

The tea made of hibiscus flowers is known by many names in many countries around the world and is served both hot and cold. The beverage is well known for its color, tanginess and flavor.

It is known as *bissap* in West Africa, "Gul e Khatmi" in Urdu & Persian, *agua de jamaica* in Mexico and Honduras (the flower being *flor de jamaica*) and *gudhal*(गुड़हल) in India. Some refer to it as *roselle*, a common name for the hibiscus flower. In [Jamaica](http://en.wikipedia.org/wiki/Jamaica), [Trinidad](http://en.wikipedia.org/wiki/Trinidad) and many other islands in the Caribbean, the drink is known as*sorrel* ([*Hibiscus sabdariffa*](http://en.wikipedia.org/wiki/Hibiscus_sabdariffa); not to be confused with [*Rumex acetosa*](http://en.wikipedia.org/wiki/Rumex_acetosa), a species sharing the common name *sorrel*). In Ghana, the drink is known as *soobolo* in one of the local languages.

Roselle is typically boiled in an enamel-coated large stock pot as most West Indians believe the metal from aluminum, steel or copper pots will destroy the natural minerals and vitamins.[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*]

In [Cambodia](http://en.wikipedia.org/wiki/Cambodia), a cold beverage can be prepared by first steeping the petals in hot water until the colors are leached from the petals, then adding lime juice (which turns the beverage from dark brown/red to a bright red), sweeteners (sugar/honey) and finally cold water/ice cubes.

In Egypt,[*[citation needed](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed" \o "Wikipedia:Citation needed)*] Sudan and the Arab world, hibiscus tea is known as *karkadé*(كركديه), and is served as both a hot and a cold drink.

[§](http://en.wikipedia.org/wiki/Hibiscus#Food)**Food**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=7" \o "Edit section: Food)]

Dried hibiscus is edible, and it is often a delicacy in Mexico. It can also be candied and used as a garnish.[[7]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-7)

The [roselle](http://en.wikipedia.org/wiki/Roselle_(plant)) (*Hibiscus sabdariffa*) is used as a [vegetable](http://en.wikipedia.org/wiki/Vegetable). The species Hibiscus suratensis Linn synonymous to Hibiscus aculeatus G. Don is noted in Visayas Philippines being a souring ingredient for almost all local vegetables and menus. Known as Labog in the Visayan area, (or Labuag/Sapinit in Tagalog), the species is a very good ingredient in cooking native chicken soup. Certain species of hibiscus are also beginning to be used more widely as a natural source of [food coloring](http://en.wikipedia.org/wiki/Food_coloring) ([E163](http://en.wikipedia.org/wiki/Anthocyanin)),[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] and replacement of [Red #3 / E127](http://en.wikipedia.org/wiki/Erythrosine).[[*citation needed*](http://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

*Hibiscus* species are used as food plants by the [larvae](http://en.wikipedia.org/wiki/Caterpillar) of some [Lepidopteran](http://en.wikipedia.org/wiki/Lepidoptera) species, including [*Chionodes hibiscella*](http://en.wikipedia.org/wiki/Chionodes),[*Hypercompe hambletoni*](http://en.wikipedia.org/wiki/Hypercompe), the [nutmeg moth](http://en.wikipedia.org/wiki/Nutmeg_(moth)), and the [turnip moth](http://en.wikipedia.org/wiki/Turnip_Moth).

[§](http://en.wikipedia.org/wiki/Hibiscus#Health_benefits)**Health benefits**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=8" \o "Edit section: Health benefits)]

[](http://en.wikipedia.org/wiki/File:Bunga_raya_belum_kembang.jpg)

Hibiscus bud

[](http://en.wikipedia.org/wiki/File:Hujung_bunga_raya_merah.jpg)

Hibiscus stigma

The tea is popular as a natural [diuretic](http://en.wikipedia.org/wiki/Diuretic); it contains [vitamin C](http://en.wikipedia.org/wiki/Vitamin_C) and minerals, and is used traditionally as a mild medicine.

A 2008 USDA study shows consuming hibiscus tea lowers [blood pressure](http://en.wikipedia.org/wiki/Blood_pressure) in a group of pre[hypertensive](http://en.wikipedia.org/wiki/Hypertension) and mildly hypertensive adults. Three cups of tea daily resulted in an average drop of 8.1 mmHg in their systolic blood pressure, compared to a 1.3 mmHg drop in the volunteers who drank the placebo beverage. Study participants with higher blood pressure readings (129 or above) had a greater response to hibiscus tea: their systolic blood pressure went down by 13.2 mmHg. These data support the idea that drinking hibiscus tea in an amount readily incorporated into the diet may play a role in controlling blood pressure, although more research is required.[[8]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-USDA_BP-8)

Studies have demonstrated the anti-hypertensive effects of *H. sabdariffa* in both humans and animals.[[9]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-9) It has been proposed that the antihypertensive effects of *H. sabdariffa* is due to its [angiotensin-converting enzyme](http://en.wikipedia.org/wiki/Angiotensin-converting_enzyme) inhibiting activity.[[10]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-10) In a randomized, controlled clinical trial involving 39 patients with mild to moderate hypertension, [Captopril](http://en.wikipedia.org/wiki/Captopril) was compared to an extract of *H. sabdariffa* for antihypertensive effects. Subjects taking an extract of *H.sabdariffa*, consumed daily before breakfast for four weeks, found reduction in [blood pressure](http://en.wikipedia.org/wiki/Blood_pressure) similar to Captopril.[[11]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-11) Another randomized, placebo clinical trial involving 54 study participants with moderate hypertension demonstrated a reduction in both systolic and diastolic blood pressure. However upon discontinuation of treatment, both systolic and diastolic blood pressures were subsequently elevated.[[12]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-12)

[*Hibiscus rosa-sinensis*](http://en.wikipedia.org/wiki/Hibiscus_rosa-sinensis) has a number of medical uses in [Chinese herbology](http://en.wikipedia.org/wiki/Chinese_herbology).[[13]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-pfaf-13) Lokapure Sachin.G.et al. their research indicates some potential in cosmetic skin care; for example, an extract from the flowers of *Hibiscus rosa- sinensis* has been shown to function as an anti-solar agent by absorbing [ultraviolet radiation](http://en.wikipedia.org/wiki/Ultraviolet_radiation).[[14]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-14)

In the Indian traditional system of medicine, [Ayurveda](http://en.wikipedia.org/wiki/Ayurveda), hibiscus, especially white hibiscus and red hibiscus (*Hibiscus rosa-sinensis*), is considered to have medicinal properties. The roots are used to make various concoctions believed to cure ailments such as cough, hair loss or hair greying. As a hair treatment, the flowers are boiled in oil along with other spices to make a medicated hair oil. The leaves and flowers are ground into a fine paste with a little water, and the resulting lathery paste is used as a shampoo plus conditioner.

Hibiscus tea also contains [bioflavonoids](http://en.wikipedia.org/wiki/Bioflavonoids), which are believed to help prevent an increase in LDL cholesterol, which can increase the buildup of plaque in the arteries.[[15]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-15)

A previous animal study demonstrated the effects of *H.sabdariffa* extract on [atherosclerosis](http://en.wikipedia.org/wiki/Atherosclerosis) in rabbits. Notably, a reduction in [triglyceride](http://en.wikipedia.org/wiki/Triglyceride), [cholesterol](http://en.wikipedia.org/wiki/Cholesterol), and [low-density lipoprotein](http://en.wikipedia.org/wiki/Low-density_lipoprotein) was observed in rabbits consuming a high cholesterol diet (HCD) in addition to *H.sabdariffa* extract compared to rabbits only fed HCD, suggesting a beneficial effect.[[16]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-16) Furthermore, the *H. sabdariffa* seed is abundant in [phytosterol](http://en.wikipedia.org/wiki/Phytosterol) and [tocopherol](http://en.wikipedia.org/wiki/Tocopherol), plant forms of cholesterol that have [antioxidant](http://en.wikipedia.org/wiki/Antioxidant) and LDL cholesterol lowering effects.[[17]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-17)

[§](http://en.wikipedia.org/wiki/Hibiscus#Precautions_and_Contraindications)Precautions and Contraindications[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=9" \o "Edit section: Precautions and Contraindications)]

[§](http://en.wikipedia.org/wiki/Hibiscus#Pregnancy_and_Lactation)**Pregnancy and Lactation**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=10" \o "Edit section: Pregnancy and Lactation)]

While the mechanism is not well understood, previous animal studies have demonstrated both an inhibitory effect of *H. sabdariffa* on [muscle tone](http://en.wikipedia.org/wiki/Muscle_tone) and the anti-fertility effects of *Hibiscus rosa-sinensis*, respectively.[[18]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref1-18)[[19]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref2-19) The extract of *H. sabdariffa* has been shown to stimulate contraction of the rat bladder and uterus;[[18]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref1-18) the *H.rosa-sinensis* extract has exhibited contraceptive effects in the form of [estrogen](http://en.wikipedia.org/wiki/Estrogen) activity in rats.[[19]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref2-19) These findings have not been observed in humans. The *Hibiscus rosa-sinensis* is also thought to have [emmenagogue](http://en.wikipedia.org/wiki/Emmenagogue) effects which can stimulate [menstruation](http://en.wikipedia.org/wiki/Menstruation) and, in some women, cause an [abortion](http://en.wikipedia.org/wiki/Abortion).[[20]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-20)[[21]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-21)[[22]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref3-22) Due to the documented adverse effects in animal studies and the reported pharmacological properties, the *H. sabdariffa* and *H.rosa-sinensis* are not recommended for use during [pregnancy](http://en.wikipedia.org/wiki/Pregnancy).[[22]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-ref3-22)Additionally, they are not recommended while [breastfeeding](http://en.wikipedia.org/wiki/Breastfeeding) due to the lack of reliable information on its safety and use.

[§](http://en.wikipedia.org/wiki/Hibiscus#Contraindications)**Contraindications**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=11" \o "Edit section: Contraindications)]

[§](http://en.wikipedia.org/wiki/Hibiscus#Adverse_Effects)Adverse Effects[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=12" \o "Edit section: Adverse Effects)]

[§](http://en.wikipedia.org/wiki/Hibiscus#Drug_Interactions)**Drug Interactions**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=13" \o "Edit section: Drug Interactions)]

It is postulated that *H. sabdariffa* interacts with [diclofenac](http://en.wikipedia.org/wiki/Diclofenac), [chloroquine](http://en.wikipedia.org/wiki/Chloroquine) and [acetaminophen](http://en.wikipedia.org/wiki/Paracetamol) by altering the [pharmacokinetics](http://en.wikipedia.org/wiki/Pharmacokinetics). In healthy human volunteers, the *H. sabdariffa* extract was found to reduce the excretion of diclofenac upon co-administration.[[23]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-23) Additionally, co-administration of Karkade (*H. sabdariffa*), a common Sudanese beverage, was found to reduce chloroquine [bioavailability](http://en.wikipedia.org/wiki/Bioavailability).[[24]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-24) However, no statistically significant changes were observed in the pharmacokinetics of acetaminophen when administered with the Zobo (*H.sabdariffa*) drink.[[25]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-25) Further studies are needed to demonstrate clinical significance.

[§](http://en.wikipedia.org/wiki/Hibiscus#Species)Species[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=14" \o "Edit section: Species)]

In temperate zones, probably the most commonly grown [ornamental](http://en.wikipedia.org/wiki/Ornamental_plant) species is [*Hibiscus syriacus*](http://en.wikipedia.org/wiki/Hibiscus_syriacus), the common garden hibiscus, also known in some areas as the "Rose of Althea" or "Rose of Sharon" (but not to be confused with the unrelated[*Hypericum calycinum*](http://en.wikipedia.org/wiki/Hypericum_calycinum), also called "Rose of Sharon"). In tropical and subtropical areas, the [Chinese hibiscus](http://en.wikipedia.org/wiki/Hibiscus_rosa-sinensis) (*H. rosa-sinensis*), with its many showy [hybrids](http://en.wikipedia.org/wiki/Hybrid_(biology)), is the most popular hibiscus.

Several hundred species are known, including:

|  |  |
| --- | --- |
| * [*Hibiscis acapulcensis*](http://en.wikipedia.org/w/index.php?title=Hibiscis_acapulcensis&action=edit&redlink=1) * [*Hibiscus acetosella*](http://en.wikipedia.org/wiki/Hibiscus_acetosella) [Welw.](http://en.wikipedia.org/wiki/Welw.) ex [Hiern.](http://en.wikipedia.org/wiki/William_Philip_Hiern)—False Roselle * [*Hibiscus acicularis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_acicularis&action=edit&redlink=1) * [*Hibiscus aculeatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_aculeatus&action=edit&redlink=1)—Comfortroot * [*Hibiscus altissimus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_altissimus&action=edit&redlink=1) * [*Hibiscus andongensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_andongensis&action=edit&redlink=1) * [*Hibiscus angolensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_angolensis&action=edit&redlink=1) * [*Hibiscus aponeurus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_aponeurus&action=edit&redlink=1)[[26]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-26) * [*Hibiscus archeri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_archeri&action=edit&redlink=1)—Archer's Hibiscus * [*Hibiscus aridicola*](http://en.wikipedia.org/w/index.php?title=Hibiscus_aridicola&action=edit&redlink=1) * [*Hibiscus arnottianus*](http://en.wikipedia.org/wiki/Hawaiian_hibiscus) [A.Gray](http://en.wikipedia.org/wiki/Asa_Gray)—*Kokiʻo ʻula* ([Hawaii](http://en.wikipedia.org/wiki/Hawaii)) * [*Hibiscus asper*](http://en.wikipedia.org/w/index.php?title=Hibiscus_asper&action=edit&redlink=1)—Bush Roselle * [*Hibiscus austroyunnanensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_austroyunnanensis&action=edit&redlink=1) * [*Hibiscus barbosae*](http://en.wikipedia.org/w/index.php?title=Hibiscus_barbosae&action=edit&redlink=1) * [*Hibiscus benguellensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_benguellensis&action=edit&redlink=1) * [*Hibiscus berberidifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_berberidifolius&action=edit&redlink=1) * [*Hibiscus bernieri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_bernieri&action=edit&redlink=1) * [*Hibiscus bifurcatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_bifurcatus&action=edit&redlink=1)—Fork-bracted Rosemallow * [*Hibiscus biseptus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_biseptus&action=edit&redlink=1)—Arizona Rosemallow * [*Hibiscus bojerianus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_bojerianus&action=edit&redlink=1) * [*Hibiscus boryanus*](http://en.wikipedia.org/wiki/Hibiscus_boryanus)—Foulsapate Marron * [*Hibiscus brackenridgei*](http://en.wikipedia.org/wiki/Hibiscus_brackenridgei) A.Gray—[Hawaiian hibiscus](http://en.wikipedia.org/wiki/Hawaiian_hibiscus) *Maʻo hau hele* * [*Hibiscus burtt-davyi*](http://en.wikipedia.org/w/index.php?title=Hibiscus_burtt-davyi&action=edit&redlink=1) * [*Hibiscus caerulescens*](http://en.wikipedia.org/w/index.php?title=Hibiscus_caerulescens&action=edit&redlink=1) * [*Hibiscus caesius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_caesius&action=edit&redlink=1)—Dark-eyed Hibiscus ([South Africa](http://en.wikipedia.org/wiki/South_Africa)) * [*Hibiscus calyphyllus*](http://en.wikipedia.org/wiki/Hibiscus_calyphyllus)—Lemonyellow Rosemallow ([Tropical Africa](http://en.wikipedia.org/wiki/Tropical_Africa)) * [*Hibiscus cameronii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_cameronii&action=edit&redlink=1)—Cameron's Hibiscus, Pink Hibiscus * [*Hibiscus cannabinus*](http://en.wikipedia.org/wiki/Hibiscus_cannabinus) L.—[Kenaf](http://en.wikipedia.org/wiki/Kenaf) * [*Hibiscus castroi*](http://en.wikipedia.org/w/index.php?title=Hibiscus_castroi&action=edit&redlink=1) * [*Hibiscus cisplatinus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_cisplatinus&action=edit&redlink=1)—Rosa Del Rio * [*Hibiscus citrinus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_citrinus&action=edit&redlink=1)- * [*Hibiscus clayi*](http://en.wikipedia.org/wiki/Hawaiian_hibiscus) [O.Deg.](http://en.wikipedia.org/wiki/Otto_Degener) & [I.Deg.](http://en.wikipedia.org/w/index.php?title=Isa_Degener&action=edit&redlink=1)—Hawaiian red hibiscus (Hawaii) * [*Hibiscus clypeatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_clypeatus&action=edit&redlink=1)—Congo Mahoe * [*Hibiscus coccineus*](http://en.wikipedia.org/wiki/Hibiscus_coccineus) ([Medik.](http://en.wikipedia.org/wiki/Friedrich_Kasimir_Medikus)) [Walter](http://en.wikipedia.org/wiki/Thomas_Walter_(botanist))—Scarlet Rosemallow * [*Hibiscus colimensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_colimensis&action=edit&redlink=1) * [*Hibiscus columnaris*](http://en.wikipedia.org/w/index.php?title=Hibiscus_columnaris&action=edit&redlink=1)—Mahot Rempart * [*Hibiscus comoensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_comoensis&action=edit&redlink=1) * [*Hibiscus congestiflorus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_congestiflorus&action=edit&redlink=1) * [*Hibiscus costatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_costatus&action=edit&redlink=1) * [*Hibiscus coulteri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_coulteri&action=edit&redlink=1)—Desert Rosemallow * [*Hibiscus cuanzensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_cuanzensis&action=edit&redlink=1) * [*Hibiscus dasycalyx*](http://en.wikipedia.org/wiki/Hibiscus_dasycalyx)—Neches River Rosemallow * [*Hibiscus denudatus*](http://en.wikipedia.org/wiki/Hibiscus_denudatus) [Benth.](http://en.wikipedia.org/wiki/George_Bentham)—Pale Face ([Southwestern United States](http://en.wikipedia.org/wiki/Southwestern_United_States), Northwestern [Mexico](http://en.wikipedia.org/wiki/Mexico)) * [*Hibiscus dimidiatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_dimidiatus&action=edit&redlink=1) * [*Hibiscus dioscorides*](http://en.wikipedia.org/wiki/Hibiscus_dioscorides) [A.G.Mill.](http://en.wikipedia.org/w/index.php?title=Anthony_G._Miller&action=edit&redlink=1) ([es](http://es.wikipedia.org/wiki/Anthony_G._Miller)/[pt](http://pt.wikipedia.org/wiki/Anthony_G._Miller)) (Yemen) * [*Hibiscus diplocrater*](http://en.wikipedia.org/w/index.php?title=Hibiscus_diplocrater&action=edit&redlink=1) * [*Hibiscus diriffan*](http://en.wikipedia.org/wiki/Hibiscus_diriffan) A.G.Mill. (Yemen) * [*Hibiscus diversifolius*](http://en.wikipedia.org/wiki/Hibiscus_diversifolius)—Swamp Hibiscus * [*Hibiscus dongolensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_dongolensis&action=edit&redlink=1) * [*Hibiscus donianus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_donianus&action=edit&redlink=1) * [*Hibiscus elatus*](http://en.wikipedia.org/wiki/Hibiscus_elatus)—Mahoe * [*Hibiscus elegans*](http://en.wikipedia.org/w/index.php?title=Hibiscus_elegans&action=edit&redlink=1) * [*Hibiscus engleri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_engleri&action=edit&redlink=1)—Wild Hibiscus * [*Hibiscus escobariae*](http://en.wikipedia.org/wiki/Hibiscus_escobariae) * [*Hibiscus excellii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_excellii&action=edit&redlink=1) * [*Hibiscus ferrugineus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_ferrugineus&action=edit&redlink=1) * [*Hibiscus ficalhoanus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_ficalhoanus&action=edit&redlink=1) * [*Hibiscus flavoroseus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_flavoroseus&action=edit&redlink=1) * [*Hibiscus fragilis*](http://en.wikipedia.org/wiki/Hibiscus_fragilis) DC.—Mandrinette ([Mascarene Islands](http://en.wikipedia.org/wiki/Mascarene_Islands)) * [*Hibiscus fragrans*](http://en.wikipedia.org/w/index.php?title=Hibiscus_fragrans&action=edit&redlink=1) * [*Hibiscus fritzscheae*](http://en.wikipedia.org/w/index.php?title=Hibiscus_fritzscheae&action=edit&redlink=1) * [*Hibiscus furcellatus*](http://en.wikipedia.org/wiki/Hawaiian_hibiscus) [Desr.](http://en.wikipedia.org/wiki/Louis_Auguste_Joseph_Desrousseaux)—Lindenleaf rosemallow ([Caribbean](http://en.wikipedia.org/wiki/Caribbean), [Florida](http://en.wikipedia.org/wiki/Florida), [Central America](http://en.wikipedia.org/wiki/Central_America), [South America](http://en.wikipedia.org/wiki/South_America),[Hawaii](http://en.wikipedia.org/wiki/Hawaii)) * [*Hibiscus fugosioides*](http://en.wikipedia.org/w/index.php?title=Hibiscus_fugosioides&action=edit&redlink=1) * [*Hibiscus furcellatus*](http://en.wikipedia.org/wiki/Hibiscus_furcellatus)—Salad Hibiscus * [*Hibiscus fuscus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_fuscus&action=edit&redlink=1) | * [*Hibiscus genevii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_genevii&action=edit&redlink=1) Bojer (Mauritius) * [*Hibiscus gilletii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_gilletii&action=edit&redlink=1) * [*Hibiscus gossweileri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_gossweileri&action=edit&redlink=1) * [*Hibiscus grandidieri*](http://en.wikipedia.org/w/index.php?title=Hibiscus_grandidieri&action=edit&redlink=1) * [*Hibiscus grandiflorus*](http://en.wikipedia.org/wiki/Hibiscus_grandiflorus) [Michx.](http://en.wikipedia.org/wiki/Andr%C3%A9_Michaux)—Swamp rosemallow ([Southeastern United States](http://en.wikipedia.org/wiki/Southeastern_United_States)) * [*Hibiscus grandistipulatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_grandistipulatus&action=edit&redlink=1) * [*Hibiscus grewiifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_grewiifolius&action=edit&redlink=1) * [*Hibiscus hamabo*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hamabo&action=edit&redlink=1) * [*Hibiscus hastatus*](http://en.wikipedia.org/wiki/Hibiscus_hastatus) * [*Hibiscus heterophyllus*](http://en.wikipedia.org/wiki/Hibiscus_heterophyllus)—Native rosella * [*Hibiscus hirtus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hirtus&action=edit&redlink=1)—Lesser Mallow * [*Hibiscus hispidissimus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hispidissimus&action=edit&redlink=1) * [*Hibiscus huellensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_huellensis&action=edit&redlink=1) * [*Hibiscus hybridus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_hybridus&action=edit&redlink=1) * [*Hibiscus indicus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_indicus&action=edit&redlink=1) * [*Hibiscus insularis*](http://en.wikipedia.org/wiki/Hibiscus_insularis) [Endl.](http://en.wikipedia.org/wiki/Stephan_Ladislaus_Endlicher)—Phillip Island hibiscus ([Phillip Island](http://en.wikipedia.org/wiki/Phillip_Island_(Norfolk_Island))) * [*Hibiscus integrifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_integrifolius&action=edit&redlink=1) * [*Hibiscus jaliscensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_jaliscensis&action=edit&redlink=1) * [*Hibiscus kochii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_kochii&action=edit&redlink=1) * [*Hibiscus kokio*](http://en.wikipedia.org/wiki/Hibiscus_kokio)—Red Rosemallow * [*Hibiscus labordei*](http://en.wikipedia.org/w/index.php?title=Hibiscus_labordei&action=edit&redlink=1) * [*Hibiscus laevis*](http://en.wikipedia.org/wiki/Hibiscus_laevis) [All.](http://en.wikipedia.org/wiki/Carlo_Allioni) (=*H. militaris*)—Halberd-leaved rosemallow (central and eastern [North America](http://en.wikipedia.org/wiki/North_America)) * [*Hibiscus lasiocarpos*](http://en.wikipedia.org/wiki/Hibiscus_lasiocarpos)—Woolly Rosemallow * [*Hibiscus lasiococcus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_lasiococcus&action=edit&redlink=1) * [*Hibiscus lavaterioides*](http://en.wikipedia.org/w/index.php?title=Hibiscus_lavaterioides&action=edit&redlink=1) * [*Hibiscus laxiflorus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_laxiflorus&action=edit&redlink=1) * [*Hibiscus leptocladus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_leptocladus&action=edit&redlink=1) ([Northwest Australia]) * [*Hibiscus leviseminus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_leviseminus&action=edit&redlink=1) * [*Hibiscus lilacinus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_lilacinus&action=edit&redlink=1)—Lilac Hibiscus * [*Hibiscus liliiflorus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_liliiflorus&action=edit&redlink=1)—Rodrigues Tree Hibiscus * [*Hibiscus longifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_longifolius&action=edit&redlink=1) * [*Hibiscus longisepalus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_longisepalus&action=edit&redlink=1) * [*Hibiscus ludwigii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_ludwigii&action=edit&redlink=1) * [*Hibiscus lunariifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_lunariifolius&action=edit&redlink=1) * [*Hibiscus macrogonus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_macrogonus&action=edit&redlink=1) * [*Hibiscus macrophyllus*](http://en.wikipedia.org/wiki/Hibiscus_macrophyllus)—Largeleaf Rosemallow * [*Hibiscus macropodus*](http://en.wikipedia.org/wiki/Hibiscus_macropodus) * [*Hibiscus makinoi*](http://en.wikipedia.org/w/index.php?title=Hibiscus_makinoi&action=edit&redlink=1)—Okinawan Hibiscus * [*Hibiscus malacophyllus*](http://en.wikipedia.org/wiki/Hibiscus_malacophyllus) [Balf.f.](http://en.wikipedia.org/wiki/Isaac_Bayley_Balfour) ([Yemen](http://en.wikipedia.org/wiki/Yemen)) * [*Hibiscus malacospermus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_malacospermus&action=edit&redlink=1) * [*Hibiscus martianus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_martianus&action=edit&redlink=1)—Heartleaf Rosemallow * [*Hibiscus moscheutos*](http://en.wikipedia.org/wiki/Hibiscus_moscheutos) [Welw.](http://en.wikipedia.org/wiki/Friedrich_Welwitsch) ex [Hiern.](http://en.wikipedia.org/wiki/William_Philip_Hiern)—Crimsoneyed Rosemallow (Central and Eastern North America) * [*Hibiscus mutabilis*](http://en.wikipedia.org/wiki/Hibiscus_mutabilis) L.—Cotton Rosemallow, Confederate Rose (East Asia) * [*Hibiscus paramutabilis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_paramutabilis&action=edit&redlink=1) * [*Hibiscus pedunculatus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_pedunculatus&action=edit&redlink=1) * [*Hibiscus pernambucensis*](http://en.wikipedia.org/w/index.php?title=Hibiscus_pernambucensis&action=edit&redlink=1)—Seaside Mahoe * [*Hibiscus phoeniceus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_phoeniceus&action=edit&redlink=1)—Brazilian Rosemallow * [*Hibiscus platanifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_platanifolius&action=edit&redlink=1) * [*Hibiscus quattenensis*](http://en.wikipedia.org/wiki/Hibiscus_quattenensis) * [*Hibiscus poeppigii*](http://en.wikipedia.org/w/index.php?title=Hibiscus_poeppigii&action=edit&redlink=1)—Poeppig's Rosemallow * [*Hibiscus radiatus*](http://en.wikipedia.org/wiki/Hibiscus_radiatus)—Monarch Rosemallow * [*Hibiscus rosa-sinensis*](http://en.wikipedia.org/wiki/Hibiscus_rosa-sinensis) L.—Chinese hibiscus ([East Asia](http://en.wikipedia.org/wiki/East_Asia)) * [*Hibiscus sabdariffa*](http://en.wikipedia.org/wiki/Roselle_(plant)) L.—Roselle, Omutete, or Sorrel * [*Hibiscus schizopetalus*](http://en.wikipedia.org/wiki/Hibiscus_schizopetalus)—Fringed Rosemallow * [*Hibiscus scottii*](http://en.wikipedia.org/wiki/Hibiscus_scottii) * [*Hibiscus socotranus*](http://en.wikipedia.org/wiki/Hibiscus_socotranus) * [*Hibiscus sinosyriacus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_sinosyriacus&action=edit&redlink=1) * [*Hibiscus splendens*](http://en.wikipedia.org/wiki/Hibiscus_splendens) * [*Hibiscus stenanthus*](http://en.wikipedia.org/wiki/Hibiscus_stenanthus) Balf.f. (Yemen) * [*Hibiscus striatus*](http://en.wikipedia.org/wiki/Hibiscus_striatus)—Striped Rosemallow * [*Hibiscus syriacus*](http://en.wikipedia.org/wiki/Hibiscus_syriacus) L. (Type species)—Rose of Sharon ([Asia](http://en.wikipedia.org/wiki/Asia)) * [*Hibiscus tiliaceus*](http://en.wikipedia.org/wiki/Hibiscus_tiliaceus) L.—Sea hibiscus ([Australia](http://en.wikipedia.org/wiki/Australia), [Southeast Asia](http://en.wikipedia.org/wiki/Southeast_Asia), [Oceania](http://en.wikipedia.org/wiki/Oceania)) * [*Hibiscus trilobus*](http://en.wikipedia.org/w/index.php?title=Hibiscus_trilobus&action=edit&redlink=1)—Threelobe Rosemallow * [*Hibiscus trionum*](http://en.wikipedia.org/wiki/Hibiscus_trionum) L.—Flower-of-an-Hour * [*Hibiscus vitifolius*](http://en.wikipedia.org/w/index.php?title=Hibiscus_vitifolius&action=edit&redlink=1)—Tropical Rose Mallow * [*Hibiscus waimeae*](http://en.wikipedia.org/wiki/Hibiscus_waimeae) [A.Heller](http://en.wikipedia.org/wiki/Amos_Arthur_Heller)—*Kokiʻo keʻokeʻo* (Hawaii) |

[§](http://en.wikipedia.org/wiki/Hibiscus#Formerly_placed_here)**Formerly placed here**[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=15" \o "Edit section: Formerly placed here)]

|  |  |
| --- | --- |
| * [*Abelmoschus esculentus*](http://en.wikipedia.org/wiki/Okra) (L.) Moench (as *H. esculentus* L.) * [*Abelmoschus ficulneus*](http://en.wikipedia.org/wiki/Abelmoschus_ficulneus) (L.) Wight & Arn. (as *H. ficulneus* L.) * [*Abelmoschus manihot* subsp. *manihot*](http://en.wikipedia.org/wiki/Abelmoschus_manihot) (as *H. manihot* L.) * [*Abelmoschus manihot* var. *pungens*](http://en.wikipedia.org/wiki/Abelmoschus_manihot) (Roxb.) Hochr. (as *H. pungens* Roxb.) * [*Abelmoschus manihot* var. *tetraphyllus*](http://en.wikipedia.org/wiki/Abelmoschus_manihot) (Roxb. ex Hornem.) Borss. Waalk. (as *H. tetraphyllus* Roxb. ex Hornem.) * [*Abelmoschus moschatus* subsp. *moschatus*](http://en.wikipedia.org/wiki/Abelmoschus_moschatus) (as *H. abelmoschus* L.) * [*Abelmoschus moschatus* subsp. *tuberosus*](http://en.wikipedia.org/wiki/Abelmoschus_moschatus) (Span.) Borss. Waalk. (as *H. sagittifolius* Kurz) * [*Alyogyne cuneiformis*](http://en.wikipedia.org/w/index.php?title=Alyogyne_cuneiformis&action=edit&redlink=1) (DC.) Lewton (as *H. cuneiformis* DC.) * [*Alyogyne hakeifolia*](http://en.wikipedia.org/wiki/Alyogyne_hakeifolia) (Giord.) Alef. (as *H. hakeifolius* Giord.) * [*Alyogyne huegelii*](http://en.wikipedia.org/wiki/Alyogyne_huegelii) (Endl.) Fryxell (as *H. wrayae* Lindl.) * [*Alyogyne pinoniana*](http://en.wikipedia.org/w/index.php?title=Alyogyne_pinoniana&action=edit&redlink=1) (Gaudich.) Fryxell (as *H. pinonianus*Gaudich.) | * [*Firmiana simplex*](http://en.wikipedia.org/wiki/Firmiana_simplex) (L.) W.Wight (as *H. simplex* L.) * [*Lagunaria patersonia* subsp. *patersonia*](http://en.wikipedia.org/wiki/Lagunaria) (as *H. patersonius* Andrews) * [*Kosteletzkya adoensis*](http://en.wikipedia.org/w/index.php?title=Kosteletzkya_adoensis&action=edit&redlink=1) (Hochst. ex A. Rich.) Mast. (as *H. adoensis* Hochst. ex A.Rich.) * [*Kosteletzkya pentacarpos*](http://en.wikipedia.org/w/index.php?title=Kosteletzkya_pentacarpos&action=edit&redlink=1) (L.) Ledeb. (as *H. pentacarpos*L.) * [*Kosteletzkya tubiflora*](http://en.wikipedia.org/w/index.php?title=Kosteletzkya_tubiflora&action=edit&redlink=1) (DC.) Blanch. & McVaugh (as *H. tubiflorus* DC.) * [*Kosteletzkya virginica*](http://en.wikipedia.org/wiki/Kosteletzkya_virginica) (L.) C.Presl ex A.Gray (as *H. virginicus*L.) * [*Pavonia arabica*](http://en.wikipedia.org/w/index.php?title=Pavonia_arabica&action=edit&redlink=1) Hochst. & Steud. ex Boiss. (as *H. flavus*Forssk.) * [*Pavonia spinifex*](http://en.wikipedia.org/w/index.php?title=Pavonia_spinifex&action=edit&redlink=1) (L.) Cav. (as *H. spinifex* L.) * [*Radyera farragei*](http://en.wikipedia.org/w/index.php?title=Radyera_farragei&action=edit&redlink=1) (F.Muell.) Fryxell & S.H.Hashmi (as *H. farragei* F.Muell.) * [*Thespesia lampas*](http://en.wikipedia.org/wiki/Thespesia_lampas) (Cav.) Dalzell (as *H. lampas* Cav.) * [*Thespesia populnea*](http://en.wikipedia.org/wiki/Thespesia_populnea) (L.) Sol. ex Corrêa (as *H. populneoides*Roxb. or *H. populneus* L.)[[27]](http://en.wikipedia.org/wiki/Hibiscus#cite_note-GRINSpecies-27) |

[§](http://en.wikipedia.org/wiki/Hibiscus#Photos)Photos[[edit](http://en.wikipedia.org/w/index.php?title=Hibiscus&action=edit&section=16" \o "Edit section: Photos)]

* [](http://en.wikipedia.org/wiki/File:Hibiscus-Yellow-5-09.jpg)

A yellow hibiscus in[Houston](http://en.wikipedia.org/wiki/Houston).

* [](http://en.wikipedia.org/wiki/File:Hibiscus_flower_in_Waikiki,_Hawaii.jpg)

Hibiscus flower in[Waikiki](http://en.wikipedia.org/wiki/Waikiki), [Hawaii](http://en.wikipedia.org/wiki/Hawaii)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_8800.jpg)

A hibiscus, showing[pistil](http://en.wikipedia.org/wiki/Pistil) and [stamens](http://en.wikipedia.org/wiki/Stamen)

* [](http://en.wikipedia.org/wiki/File:Mudha_Mandaram.JPG)

Hibiscus Flower

* [](http://en.wikipedia.org/wiki/File:Hibiscus1Prvn.JPG)

Hibiscus Flower

* [](http://en.wikipedia.org/wiki/File:HibiscusPrvn.JPG)

Hibiscus Flower

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Hibiscus_rosa-sinensis.jpg)

Hibiscus rosa-sinensis,[Mallorca](http://en.wikipedia.org/wiki/Mallorca" \o "Mallorca).

* [](http://en.wikipedia.org/wiki/File:Hibiscus_(4909573650).jpg)

Hibiscus

* [](http://en.wikipedia.org/wiki/File:Hibiscus_from_Kerala,_India_01.JPG)

Hibiscus from [Kerala](http://en.wikipedia.org/wiki/Kerala), [India](http://en.wikipedia.org/wiki/India)

* [](http://en.wikipedia.org/wiki/File:Multilayer_Yellow_Hibiscus.png)

MultiLayer Yellow hibiscus[Velachery](http://en.wikipedia.org/wiki/Velachery)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Yellow_Alone.JPG)

Yellow hibiscus

* [](http://en.wikipedia.org/wiki/File:Hibiscus_six.jpg)

Yellow hibiscus with red

* [](http://en.wikipedia.org/wiki/File:Hibiscus_one.jpg)

Orange coloured hibiscus

* [](http://en.wikipedia.org/wiki/File:2007-07-09Hibiscus_syriacus05.jpg)

Hibiscus syriacus

* [](http://en.wikipedia.org/wiki/File:Hibiscus_(8).jpg)

White hibiscus with pink touch

* [](http://en.wikipedia.org/wiki/File:Hibiscus_white_at_Karnal.jpg)

All white hibiscus in [Karnal](http://en.wikipedia.org/wiki/Karnal)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_moscheutos9.jpg)

Hibiscus moscheutos

* [](http://en.wikipedia.org/wiki/File:Hibiscus_(4).jpg)

Pink and white hibiscus

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Painted_Lady.jpg)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Brilliant.jpg)

Hibiscus Brilliant

* [](http://en.wikipedia.org/wiki/File:Hibiscus_bleu_1.jpg)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_sdd1.JPG)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_eight.jpg)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_pink.jpg)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_furcellatus_(5112678927).jpg)

Hibiscus furcellatus

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Falcon.jpg)

* [](http://en.wikipedia.org/wiki/File:Sleepy_Hibiscus_(Hibiscus_furcellatus)_(8058834522).jpg)

* [](http://en.wikipedia.org/wiki/File:Bunga_Hibiscus.jpg)

Hibiscus in Bhopal

* [](http://en.wikipedia.org/wiki/File:Hibiscus-stages.jpg)

At left, a flower emerges from a bud. At right, the same flower less than 18 hours later.

* [](http://en.wikipedia.org/wiki/File:Hibiscus_splendens.JPG)

[Hibiscus splendens](http://en.wikipedia.org/wiki/Hibiscus_splendens), a [rainforest](http://en.wikipedia.org/wiki/Rainforest)plant from eastern [Australia](http://en.wikipedia.org/wiki/Australia).

* [](http://en.wikipedia.org/wiki/File:Giant_Hibiscus_(13).JPG)

Hardy Giant Hibiscus

* [](http://en.wikipedia.org/wiki/File:2007-07-09Hibiscus_syriacus05.jpg)

Hibiscus syriacus in Bensheim.

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Aish.JPG)

Red-layered hibiscus in[Trivandrum](http://en.wikipedia.org/wiki/Trivandrum)

* [](http://en.wikipedia.org/wiki/File:Japanese_Lantern_(Hibiscus_schizopetalus).jpg)

*Hibiscus schizopetalus*flower in Trivandrum,[Kerala](http://en.wikipedia.org/wiki/Kerala" \o "Kerala), India.

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Tricolor.jpg)

Tricolor hibiscus in[Malaysia](http://en.wikipedia.org/wiki/Malaysia)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_from_Kerala,_India_10.JPG)

Hibiscus from Kerala, India

* [](http://en.wikipedia.org/wiki/File:Spain,_autumn_2011_097.jpg)

Red hibiscus in [Alicante](http://en.wikipedia.org/wiki/Alicante).

* [](http://en.wikipedia.org/wiki/File:Bunga_Raya_Merah.jpg)

Red hibiscus : The National Flower of [Malaysia](http://en.wikipedia.org/wiki/Malaysia)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_from_Kerala,_India_04.JPG)

Hibiscus from Kerala, India

* [](http://en.wikipedia.org/wiki/File:Hibiscus_from_Kerala,_India_05.JPG)

Hibiscus from Kerala, India

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Yellow.jpg)

Pink hibiscus in [Malaysia](http://en.wikipedia.org/wiki/Malaysia)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_Costa_Rica_La_Fortuna.JPG)

Hibiscus from [La Fortuna, Costa Rica](http://en.wikipedia.org/wiki/La_Fortuna,_Costa_Rica)

* [](http://en.wikipedia.org/wiki/File:Hibiscus_in_Washington,_D.C.jpg)

A hibiscus at the United States Botanic Garden located in Washington, D.C

# §editCurry tree

|  |  |
| --- | --- |
| **Curry Leaf Tree** | |
| [Curry Trees.jpg](http://en.wikipedia.org/wiki/File:Curry_Trees.jpg) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plantae) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Rosids](http://en.wikipedia.org/wiki/Rosids) |
| Order: | [Sapindales](http://en.wikipedia.org/wiki/Sapindales) |
| Family: | [Rutaceae](http://en.wikipedia.org/wiki/Rutaceae) |
| Genus: | [*Murraya*](http://en.wikipedia.org/wiki/Murraya) |
| Species: | ***M. koenigii*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Murraya koenigii*** ([L.](http://en.wikipedia.org/wiki/Carolus_Linnaeus)) Sprengel[[1]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-1) | |

The **curry tree** (***Murraya koenigii***) is a [tropical](http://en.wikipedia.org/wiki/Tropical) to [sub-tropical](http://en.wikipedia.org/wiki/Sub-tropical) [tree](http://en.wikipedia.org/wiki/Tree) in the family[Rutaceae](http://en.wikipedia.org/wiki/Rutaceae) (the rue family, which includes rue, citrus, and satinwood), which is native to [India](http://en.wikipedia.org/wiki/India) and [Sri Lanka](http://en.wikipedia.org/wiki/Sri_Lanka).

Its leaves are used in many dishes in India and neighbouring countries. Often used in curries, the leaves are generally called by the name 'curry leaves,' although they are also literally 'sweet neem leaves' in most Indian languages (as opposed to ordinary [neem](http://en.wikipedia.org/wiki/Neem) leaves which are very bitter and in the family [Meliaceae](http://en.wikipedia.org/wiki/Meliaceae), not Rutaceae).

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Curry_tree)]

* [1 Description](http://en.wikipedia.org/wiki/Curry_tree#Description)
* [2 Uses](http://en.wikipedia.org/wiki/Curry_tree#Uses)
* [3 Propagation](http://en.wikipedia.org/wiki/Curry_tree#Propagation)
* [4 Chemical constituents](http://en.wikipedia.org/wiki/Curry_tree#Chemical_constituents)
* [5 References](http://en.wikipedia.org/wiki/Curry_tree#References)
* [6 External links](http://en.wikipedia.org/wiki/Curry_tree#External_links)

Description[[edit](http://en.wikipedia.org/w/index.php?title=Curry_tree&action=edit&section=1" \o "Edit section: Description)]

[](http://en.wikipedia.org/wiki/File:Curry_Tree_flower.JPG)

The small flowers are white and fragrant.

[](http://en.wikipedia.org/wiki/File:CurryLeaf_Fruits.jpg)

Ripe and unripe fruits.

[](http://en.wikipedia.org/wiki/File:Kadi_Patta_(Murraya_koenigii)_flowers_&_leaves_at_Jayanti,_Duars_W_Picture_167.jpg)

[Jayanti](http://en.wikipedia.org/wiki/Jayanti) in [Buxa Tiger Reserve](http://en.wikipedia.org/wiki/Buxa_Tiger_Reserve) in[Jalpaiguri](http://en.wikipedia.org/wiki/Jalpaiguri) district of [West Bengal](http://en.wikipedia.org/wiki/West_Bengal),[India](http://en.wikipedia.org/wiki/India" \o "India).

It is a small tree, growing 4–6 m (13–20 feet) tall, with a trunk up to 40 cm (16 in) diameter. The aromatic [leaves](http://en.wikipedia.org/wiki/Leaf) are [pinnate](http://en.wikipedia.org/wiki/Pinnation), with 11-21 leaflets, each leaflet 2–4 cm (0.79–1.57 in) long and 1–2 cm (0.39–0.79 in) broad. The plant produces small white[flowers](http://en.wikipedia.org/wiki/Flower) which can self-pollinate to produce small shiny-black [berries](http://en.wikipedia.org/wiki/Berry) containing a single, large viable seed. Though the berry pulp is edible -- with a sweet but medicinal flavor -- in general, neither the pulp nor seed are used for culinary purposes.

The species name commemorates the botanist [Johann König](http://en.wikipedia.org/wiki/Johann_Gerhard_K%C3%B6nig).

Uses[[edit](http://en.wikipedia.org/w/index.php?title=Curry_tree&action=edit&section=2" \o "Edit section: Uses)]

The leaves are highly valued as seasoning in [southern](http://en.wikipedia.org/wiki/South_Indian_cuisine) and west-coast [Indian cooking](http://en.wikipedia.org/wiki/Indian_cuisine), and [Sri Lankan cooking](http://en.wikipedia.org/wiki/Sri_Lankan_cuisine) ( කරපිංචා), especially in curries, usually fried along with the chopped onion in the first stage of the preparation. They are also used to make [thoran](http://en.wikipedia.org/wiki/Thoran),[vada](http://en.wikipedia.org/wiki/Vada_(food)" \o "Vada (food)), [rasam](http://en.wikipedia.org/wiki/Rasam) and [kadhi](http://en.wikipedia.org/wiki/Kadhi). In their fresh form, they have a short shelf life and do not keep well in the refrigerator. They are also available dried, though the aroma is largely inferior.

The leaves of *Murraya koenigii* are also used as an [herb](http://en.wikipedia.org/wiki/Herb) in [Ayurvedic medicine](http://en.wikipedia.org/wiki/Ayurveda). They are believed to possess [anti-diabetic](http://en.wikipedia.org/wiki/Anti-diabetic_medication) properties.[[2]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-2)[[3]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-3)[[*unreliable medical source?*](http://en.wikipedia.org/wiki/Wikipedia:Identifying_reliable_sources_(medicine))][[4]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-pmid-4)

Although most commonly used in curries, leaves from the curry tree can be used in many other dishes to add flavor. In Cambodia, Khmer toast the leaves in an open flame or roast it until crispy and then crush it into a soured soup dish called Maju Krueng.

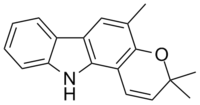
In the absence of [tulsi](http://en.wikipedia.org/wiki/Tulsi) leaves, curry leaves are used for rituals and [pujas](http://en.wikipedia.org/wiki/Puja_(Hinduism)).

Propagation[[edit](http://en.wikipedia.org/w/index.php?title=Curry_tree&action=edit&section=3" \o "Edit section: Propagation)]

Seeds must be ripe and fresh to plant; dried or shrivelled fruits are not viable. One can plant the whole fruit, but it is best to remove the pulp before planting in potting mix that is kept moist but not wet.

Stem cuttings can be also used for [propagation](http://en.wikipedia.org/wiki/Plant_propagation).

Chemical constituents[[edit](http://en.wikipedia.org/w/index.php?title=Curry_tree&action=edit&section=4" \o "Edit section: Chemical constituents)]

[](http://en.wikipedia.org/wiki/File:Girinimbine.png)

[Girinimbine](http://en.wikipedia.org/w/index.php?title=Girinimbine&action=edit&redlink=1) structure

Some of the primary alkaloids found in the Curry Tree leaves, stems, and seeds are as follows: Mahanimbine, girinimbine, koenimbine, isomahanine, mahanine, Indicolactone, 2-methoxy-3-methyl-carbazole.[[5]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-5)

A 2011 study of [girinimbine](http://en.wikipedia.org/w/index.php?title=Girinimbine&action=edit&redlink=1), a [carbazole](http://en.wikipedia.org/wiki/Carbazole) [alkaloid](http://en.wikipedia.org/wiki/Alkaloid) isolated from this plant, found that it inhibited the growth and induced [apoptosis](http://en.wikipedia.org/wiki/Apoptosis) in human [hepatocellular carcinoma](http://en.wikipedia.org/wiki/Hepatocellular_carcinoma), HepG2 cells [*in vitro*](http://en.wikipedia.org/wiki/In_vitro).[[6]](http://en.wikipedia.org/wiki/Curry_tree#cite_note-6)

*Mentha arvensis*

From Wikipedia, the free encyclopedia

|  |  |
| --- | --- |
| ***Mentha arvensis*** | |
| [Mentha arvensis 2005.08.28 09.49.00.jpg](http://en.wikipedia.org/wiki/File:Mentha_arvensis_2005.08.28_09.49.00.jpg) | |
| [**Scientific classification**](http://en.wikipedia.org/wiki/Biological_classification) | |
| Kingdom: | [Plantae](http://en.wikipedia.org/wiki/Plantae) |
| (unranked): | [Angiosperms](http://en.wikipedia.org/wiki/Angiosperms) |
| (unranked): | [Eudicots](http://en.wikipedia.org/wiki/Eudicots) |
| (unranked): | [Asterids](http://en.wikipedia.org/wiki/Asterids) |
| Order: | [Lamiales](http://en.wikipedia.org/wiki/Lamiales) |
| Family: | [Lamiaceae](http://en.wikipedia.org/wiki/Lamiaceae) |
| Genus: | [*Mentha*](http://en.wikipedia.org/wiki/Mentha) |
| Species: | ***M. arvensis*** |
| [**Binomial name**](http://en.wikipedia.org/wiki/Binomial_nomenclature) | |
| ***Mentha arvensis*** [L.](http://en.wikipedia.org/wiki/Carl_Linnaeus) | |

[](http://en.wikipedia.org/wiki/File:Mentha_arvensis_-_p%C3%B5ldm%C3%BCnt_Keila.jpg)

***Mentha arvensis*** (**field mint** (पुदीना/ *Pudina*,"Podina" in [Hindi](http://en.wikipedia.org/wiki/Hindi)), **wild mint** or **corn mint**) is a species of [mint](http://en.wikipedia.org/wiki/Mentha) with a [circumboreal](http://en.wikipedia.org/wiki/Circumboreal_Region) distribution. It is native to the[temperate](http://en.wikipedia.org/wiki/Temperate) regions of [Europe](http://en.wikipedia.org/wiki/Europe) and western and central [Asia](http://en.wikipedia.org/wiki/Asia), east to the [Himalaya](http://en.wikipedia.org/wiki/Himalaya) and eastern [Siberia](http://en.wikipedia.org/wiki/Siberia), and [North America](http://en.wikipedia.org/wiki/North_America).[[1]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-empp-1)[[2]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-grin-2)[[3]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-fnwe-3)

**Contents**

  [[hide](http://en.wikipedia.org/wiki/Mentha_arvensis)]

* [1 Description](http://en.wikipedia.org/wiki/Mentha_arvensis#Description)
* [2 Subspecies](http://en.wikipedia.org/wiki/Mentha_arvensis#Subspecies)
* [3 Uses](http://en.wikipedia.org/wiki/Mentha_arvensis#Uses)
* [4 References](http://en.wikipedia.org/wiki/Mentha_arvensis#References)
* [5 External links](http://en.wikipedia.org/wiki/Mentha_arvensis#External_links)

Description[[edit](http://en.wikipedia.org/w/index.php?title=Mentha_arvensis&action=edit&section=1" \o "Edit section: Description)]

Wild mint is a [herbaceous](http://en.wikipedia.org/wiki/Herbaceous) [perennial plant](http://en.wikipedia.org/wiki/Perennial_plant) generally growing to 10–60 cm (3.9–23.6 in) and rarely up to 100 cm (39 in) tall. It has a creeping rootstock from which grow erect or semi-sprawling squarish stems. The [leaves](http://en.wikipedia.org/wiki/Leaf) are in opposite pairs, simple, 2–6.5 cm (0.79–2.56 in) long and 1–2 cm (0.39–0.79 in) broad, hairy, and with a coarsely serrated margin. The [flowers](http://en.wikipedia.org/wiki/Flower) are pale purple (occasionally white or pink), in whorls on the stem at the bases of the leaves. Each flower is 3 to 4 mm (0.12 to 0.16 in) long and has a five-lobed hairy calyx, a four-lobed corolla with the uppermost lobe larger than the others and four stamens. The fruit is a two-chambered carpel.[[3]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-fnwe-3)[[4]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-blamey-4)[[5]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-rhs-5) [[6]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-6)

Subspecies[[edit](http://en.wikipedia.org/w/index.php?title=Mentha_arvensis&action=edit&section=2" \o "Edit section: Subspecies)]

There are six [subspecies](http://en.wikipedia.org/wiki/Subspecies):[[1]](http://en.wikipedia.org/wiki/Mentha_arvensis" \l "cite_note-empp-1)

* *Mentha arvensis* subsp. *arvensis*.
* *Mentha arvensis* subsp. *agrestis* ([Sole](http://en.wikipedia.org/wiki/William_Sole)) Briq.
* *Mentha arvensis* subsp. *austriaca* (Jacq.) Briq.
* *Mentha arvensis* subsp. *lapponica* (Wahlenb.) Neuman
* *Mentha arvensis* subsp. *palustris* (Moench) Neumann
* *Mentha arvensis* subsp. *parietariifolia* (Becker) Briq.

The related species [*Mentha canadensis*](http://en.wikipedia.org/wiki/Mentha_canadensis) is also included in *M. arvensis* by some authors as two varieties, *M. arvensis* var. *glabrata* Fernald (in reference to North American plants) and *M. arvensis* var. *piperascens* Malinv. ex L. H. Bailey (in reference to eastern Asian plants).[[7]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-grin1-7)[[8]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-CRCNames-8)

[](http://en.wikipedia.org/wiki/File:Mentha_arvensis_Jammu_India.JPG)

Pudina - Mentha arvensis in an Indian kitchen garden.

Uses[[edit](http://en.wikipedia.org/w/index.php?title=Mentha_arvensis&action=edit&section=3)]

In ayurveda, Pudina is considered as appetizer and useful in gastric troubles.[[9]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-9) In Europe, wild mint was traditionally used to treat flatulence, digestional problems, gall bladder problems and coughs. The Aztecs used it for similar purposes and also to induce sweating and they used the infusion to cure insomnia. The oil was extracted and r[menthone](http://en.wikipedia.org/wiki/Menthone), [isomenthone](http://en.wikipedia.org/wiki/Menthone), [neomenthol](http://en.wikipedia.org/wiki/Neomenthol), [limonene](http://en.wikipedia.org/wiki/Limonene), [methyl acetate](http://en.wikipedia.org/wiki/Methyl_acetate), [piperitone](http://en.wikipedia.org/wiki/Piperitone), [beta-caryophyllene](http://en.wikipedia.org/wiki/Caryophyllene), [alpha-pinene](http://en.wikipedia.org/wiki/Alpha-pinene), [beta-pinene](http://en.wikipedia.org/wiki/Beta-pinene),  ubbed into the skin for aches and pains. The Native Americans also used it in several traditional ways. Nowadays it is use[tannins](http://en.wikipedia.org/wiki/Tannin) and [flavonoids](http://en.wikipedia.org/wiki/Flavonoid)d in many countries for various ailments. Mint extracts and [menthol](http://en.wikipedia.org/wiki/Menthol)-related chemicals are used in food, drinks, cough medicines, creams and cigarettes.[[10]](http://en.wikipedia.org/wiki/Mentha_arvensis#cite_note-Boston-10)

Chemical substances that can be extracted from wild mint include menthol,