

Aegle marmelos

This article is about the bael tree. For the Biblical demon, see **Baal (demon)**. For the professional wrestler, see **Bael (wrestler)**.

Aegle marmelos, commonly known as **bael**, **Bengal quince**,^[1] **golden apple**,^[1] **stone apple**, **wood apple**, **bili**,^[2] is a species of tree native to India. It is present throughout Southeast Asia as a naturalized species.^[3] The tree is considered to be sacred by Hindus. Its fruits are used in traditional medicine and as a food throughout its range.

1 Vernacular names

The tree is called “belpatthar ka paid” in Hindi “belada mara” and the religious tree “bilva” or “bilpatre” in Kannada, “vilvam” (வில்வமரம்) in Tamil, “beli” (බෙලි) in Sinhala.. The fruits are known as *belada hannu* (edible variety), *bilva* (sacred variety) in Kannada, “bela” in Odia, “bael” (বৈল) in Bengali and *bilva and maredu* (బిల్వమరదు) in Telugu. It is a native of India and is found widely in Asia, in countries like Burma, Thailand, Sri Lanka, etc. It is called as Sivadruma by the Hindus and is considered as a sacred herb. It is widely found in Indian Siva temples since the herb is considered sacred to Shiva, the lord of health. The leaves of the plant are being offered to Gods as part of prayers.^{[4][5]} The fruits can be eaten either freshly from trees or after drying them.

All parts of the herb (leaves, fruits, roots) are used for medicinal purposes. The herb is widely helpful to kapha and vata dosas. It is not suited to pita dosa.

2 Botanical information

Bael is the only member of the monotypic genus *Aegle*.^[3] It is a mid-sized, slender, aromatic, armed, gum-bearing tree growing up to 18 meters tall. It has a leaf with three leaflets.

3 Ecology

Bael occurs in dry forests on hills and plains of northern, central, eastern and southern India, Pakistan, southern Nepal, Sri Lanka, Myanmar, Bangladesh, Vietnam, Laos, Cambodia and Thailand. It is cultivated throughout

India, as well as in Sri Lanka, the northern Malay Peninsula, Java, the Philippines, and Fiji. It has a reputation in India for being able to grow in places that other trees cannot. It copes with a wide range of soil conditions (pH range 5-10), is tolerant of waterlogging and has an unusually wide temperature tolerance (from $-7\text{ }^{\circ}\text{C}$ to $48\text{ }^{\circ}\text{C}$). It requires a pronounced dry season to give fruit.



A ripe bael fruit in India



Bael fruit

This tree is a larval foodplant for the following two Indian Swallowtail butterflies:

- The Lime Butterfly: *Papilio demoleus*
- The Common Mormon: *Papilio polytes*

4 Fruit

The bael fruit has a smooth, woody shell with a green, gray, or yellow peel. It takes about 11 months to ripen on the tree and can reach the size of a large grapefruit or pomelo, and some are even larger. The shell is so hard it must be cracked with a hammer or machete. The fibrous yellow pulp is very aromatic. It has been described as tasting of marmalade and smelling of roses. Boning (2006) indicates that the flavor is “sweet, aromatic and pleasant, although tangy and slightly astringent in some varieties. It resembles a marmalade made, in part, with citrus and, in part, with tamarind.”^[6] Numerous hairy seeds are encapsulated in a slimy mucilage.

5 Uses

The fruit is eaten fresh or dried. If fresh, the juice is strained and sweetened to make a drink similar to lemonade. It can be made into sharbat (Hindi/Urdu) or *Bela pana* (Odia: ବେଲ ପାନା) or *bel pana* (Bengali: বেল পানা), a refreshing drink made of the pulp with water, sugar, and lime juice, mixed, left to stand a few hours, strained, and put on ice. One large bael fruit may yield five or six liters of sharbat.



Bili tree

If the fruit is to be dried, it is usually sliced and sun-dried. The hard leathery slices are then immersed in water.

The leaves and small shoots are eaten as salad greens.

The Tamil Siddhars call the plant *koovilam* (கூவிளம்) and use the fragrant leaves for medicinal purposes, including dyspepsia and sinusitis. A confection called *ilakam* (இளகம்) is made of the fruit and used to treat tuberculosis and loss of appetite.^[7]

In the system of Ayurveda this drug finds several and frequent therapeutic uses in different forms and recipes. They are prescribed in a number of diseases such as gastro intestinal diseases, piles, oedema, jaundice, vomiting, obesity, pediatric disorders, gynecological disorders, urinary complaints and as a rejuvenative. Besides the wide medicinal utility the plant and its certain parts (leaves and fruits) are of religious importance since the tree is regarded as one of the sacred trees of Indian heritage.^[8]

Aegeline (N-[2-hydroxy-2(4-methoxyphenyl) ethyl]-3-phenyl-2-propenamide) is a known constituent of the bael leaf and consumed as a dietary supplement for a variety of purposes.^{[9][10][11][12]}

6 Religious significance-The Holy Bael



Bael leaves used in worship of a lingam - icon of Shiva.

The fruit is also used in religious rituals.

In **Hinduism** the tree is sacred. It is used in the worship of Shiva, who is said to favour the leaves. The tri-foliolate form of leaves symbolize the **trident** that Shiva holds in his right hand. The fruits were used in place of coconuts before large-scale rail transportation became available. The fruit is said to resemble a skull with a white, bone-like outer shell and a soft inner part, and is sometimes called *seer phael* (head-fruit). However, it is quite likely that, the term 'Seer Phal' has coined from the Sanskrit term '*ShreePhal*', which again is a common name for this fruit. Many Hindus have bael trees in their gardens.

In the traditional **Newari** culture of **Nepal**, the bael tree is part of a fertility ritual for girls known as the *Bel baha*. Girls are “married” to the bael fruit and as long as the fruit is kept safe and never cracks the girl can never become widowed, even if her human husband dies. This was seen to be protection against the social disdain suffered by widows in the Newari community.

6.1 Medicinal uses

Research has found the essential oil of the Bael tree to be effective against 21 types of bacteria.^[13] It is prescribed for smooth bowel movement to patients suffering from constipation and other gastrointestinal problems.

Research also indicates that unripe Bael fruit is effective in combating giardia and rotavirus. While unripe Bael fruit did not show antimicrobial properties, it did inhibit bacteria adherence to and invasion of the gut (i.e. the ability to infect the gut).^[14]

7 Local names

- South-East Asia
 - Burmese: ဝေလ်ပျံး 'ou' shi' / or /ဝေလ် ဖိ?/
 - Indonesian: *Maja*
 - Khmer: វៀរ /pniv/
 - Lao: ໝາກຕຸ້ມ IPA: [maʔk.tù:m]
 - Malay: *pokok maja batu* (tree)
 - Thai: มะตูม: rtgs: matum, IPA: [ma.tū:m] (tree: ต้นมะตูม IPA: [tôn.ma.tū:m]; fruit ลูกมะตูม IPA: [lû:k.ma.tū:m])
- South Asia
 - Assamese: বেল
 - Hindi: बेल (Bel)
 - Gujarati: બીલી
 - Urdu: (Bael)بیل (Sirphal)سری پھل
 - Nepali: बेल: (Bel or Wood Apple)

- Odia: Baela ବେଲ
- Bengali: বেল (Bell)
- Kannada: ಬೆಲೆಬೆಲೆ (edible variety)
- Kannada: *bilvÀpatre* Mara (sacred variety tree)
- Konkani: *gorakamli*
- Malayalam: കൂവളം (koo-valam)
- Marathi: बेल (Bel)
- Punjabi: ਬਲਿ (Bil)
- Sanskrit : बलिव (Bilva)Shreephala, shaandilya, shailoosha, maalooru
- Sindhi: ڪاٺ گدرو
- Sinhalese: බෙලි (Beli)
- Tamil: விலவம் (Vilvam)
- Telugu: మరెడు (maredu)
- *Sir Phal* (old Hindi)

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9 Further reading

H.K.Bakhru (1997). *Foods that Heal. The Natural Way to Good Health*. Orient Paperbacks. ISBN 81-222-0033-8.

10 External links

- Chisholm, Hugh, ed. (1911). "Bael Fruit". *Encyclopædia Britannica* **3** (11th ed.). Cambridge University Press.
- Picture Gallery of dried bael fruits
- Caldecott, Todd (2006). *Ayurveda: The Divine Science of Life*. Elsevier/Mosby. ISBN 0-7234-3410-7. Contains a detailed monograph on *Aegle marmelos* (Bilwa) as well as a discussion of health benefits and usage in clinical practice. Available online at <http://www.toddcaldecott.com/index.php/herbs/learning-herbs/387-bilva>
- God shiva Bel patra leaves(Scripture reference) http://shaligramrudraksha.com/?page_id=1033

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