


Phyllanthus emblica

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Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Malpighiales
Family:	Phyllanthaceae
Tribe:	Phyllantheae
Subtribe:	Flueggeinae
Genus:	<i>Phyllanthus</i>
Species:	<i>P. emblica</i>
Binomial name	
<i>Phyllanthus emblica</i> L. ^[1]	
Synonyms	
<i>Cicca emblica</i> Kurz <i>Emblica officinalis</i> Gaertn. <i>Mirobalanus embilica</i> Burm. <i>Phyllanthus mairei</i> Lév.	

Phyllanthus emblica (syn. *Emblica officinalis*), the **Nepalese/Indian gooseberry**, or **aamla** from Sanskrit **amalika**, is a deciduous tree of the family Phyllanthaceae. It is known for its edible fruit of the same name.

Plant anatomy and harvesting

The tree is small to medium in size, reaching 8 to 18 m in height, with a crooked trunk and spreading branches. The branchlets are glabrous or finely pubescent, 10–20 cm long, usually deciduous; the leaves are simple, sessile and closely set along branchlets, light green, resembling pinnate leaves. The flowers are greenish-yellow. The fruit is nearly spherical, light greenish yellow, quite smooth and hard on appearance, with six vertical stripes or furrows.

Ripening in autumn, the berries are harvested by hand after climbing to upper branches bearing the fruits. The taste of Indian gooseberry is sour, bitter and astringent, and it is quite fibrous. In India, it is common to eat gooseberries steeped in salt water and turmeric to make the sour fruits palatable^[citation needed]. It is also used to straighten hair.

Medical research

Indian gooseberry has undergone preliminary research, demonstrating *in vitro* antiviral and antimicrobial properties.^[2] There is preliminary evidence *in vitro* that its extracts induce apoptosis and modify gene expression in osteoclasts involved in rheumatoid arthritis and osteoporosis.^[3] It may prove to have potential activity against some cancers.^[4] One recent animal study found treatment with *E. officinalis* reduced severity of acute pancreatitis (induced by L-arginine in rats). It also promoted the spontaneous repair and regeneration process of the pancreas occurring after an acute attack.^[5]

Experimental preparations of leaves, bark or fruit have shown potential efficacy against laboratory models of disease, such as for inflammation, cancer, age-related renal disease, and diabetes.^{[6][7][8]}

A human pilot study demonstrated a reduction of blood cholesterol levels in both normal and hypercholesterolemic men with treatment.^[9] Another recent study with alloxan-induced diabetic rats given an aqueous amla fruit extract has shown significant decrease of the blood glucose, as well as triglyceridemic levels and an improvement of the liver function caused by a normalization of the liver-specific enzyme alanine transaminase activity.^[10]

Chemical research

Although these fruits are reputed to contain high amounts of ascorbic acid (vitamin C), 445 mg/100g,^[11] the specific contents are disputed, and the overall antioxidant strength of amla may derive instead from its high density of ellagitannins^[12] such as emblicanin A (37%), emblicanin B (33%), punigluconin (12%) and pedunculagin (14%).^[13] It also contains punicafolin and phyllanemblinin A, phyllanemblin other polyphenols: flavonoids, kaempferol, ellagic acid and gallic acid.^{[12][14]}

Cultural and religious significance

In the Sanskrit Buddhist tradition half an amalaka fruit was the final gift to the Buddhist sangha by the great Indian emperor Asoka. This is illustrated in the Asokavadana in the following verses: "A great donor, the lord of men, the eminent Maurya Asoka, has gone from being lord of Jambudvipa [India] to being lord of half a myrobalan." (Strong, 1983, p. 99)^[15] This deed became so famous that a stupa was created to mark the place of the event in modern day Patna and was known as the Amalaka stupa.

According to Hindu tradition, Adi Shankara composed and recited the Kanakadhara stotram in praise of Mahalakshmi to make a poor Brahmin lady get wealth, in return for a single amla presented to him as bhiksha on an auspicious dwadashi day.

According to a Tamil legend, Avvaiyar (Tamil: ஓவியையார்), a female poet, ethicist and political activist of the Sangam period was gifted with one amla by King Athiyaman to give her long life.

The tree is considered sacred by Hindus as the Vishnu is believed to dwell here. The tree is worshipped on Amalaka Ekadashi.

In other hindu myths, Amla is said to be originated from the drops of Amrit which spilled on earth accidentally ,due to the fight of Gods and Demons after ksheera sagar manthan. And hence also this religious belief makes claims that it almost cures every disease and is also good in extending the longevity of life.

Traditional uses of amlaki

Medicinal use

In traditional Indian medicine, dried and fresh fruits of the plant are used. All parts of the plant are used in various Ayurvedic/Unani medicine (*Jawarish amla*) herbal preparations, including the fruit, seed, leaves, root, bark and flowers.^[16] According to Ayurveda, amla fruit is sour (*amla*) and astringent (*kashaya*) in taste (*rasa*), with sweet (*madhura*), bitter (*tikta*) and pungent (*katu*) secondary tastes (*anurasas*).^[16] Its qualities (*gunas*) are light (*laghu*) and dry (*ruksha*), the postdigestive effect (*vipaka*) is sweet (*madhura*), and its energy (*virya*) is cooling (*shita*).^[12]

According to Ayurveda, amla balances all three doshas. While amla is unusual in that it contains five out of the six tastes recognized by Ayurved, it is most important to recognize the effects of the "virya", or potency, and "vipaka", or post-digestive effect. Considered in this light, amla is particularly helpful in reducing *pitta* due to its cooling energy.^[16] and balances both Pitta and *vata* by virtue of its sweet taste. The *kapha* is balanced primarily due to its drying action. It may be used as a *rasayana* (rejuvenative) to promote longevity, and traditionally to enhance digestion (*dipanapachana*), treat constipation (*anuloma*), reduce fever (*jvaraghna*), purify the blood (*raktaprasadana*), reduce cough (*kasahara*), alleviate asthma (*svasahara*), strengthen the heart (*hrdaya*), benefit the eyes (*chakshushya*), stimulate hair growth (*romasanjana*), enliven the body (*jivaniya*), and enhance intellect (*medhya*).^[16]

In Ayurvedic polyherbal formulations, Indian gooseberry is a common constituent, and most notably is the primary ingredient in an ancient herbal *rasayana* called *Chyawanprash*.^[12] This formula, which contains 43 herbal ingredients as well as clarified butter, sesame oil, sugar cane juice, and honey, was first mentioned in the Charaka Samhita as a premier rejuvenative compound.^{[17][18]}

In Chinese traditional therapy, this fruit is called *yuganzi* (余甘子), which is used to cure throat inflammation.

Emblica officinalis tea may ameliorate diabetic neuropathy. In rats it significantly reduced blood glucose, food intake, water intake and urine output in diabetic rats compared with the non- diabetic control group.^[19]

Culinary use

Particularly in South India, the fruit is pickled with salt, oil, and spices. Amla is eaten raw or cooked into various dishes. In Andhra Pradesh, tender varieties are used to prepare *dal* (a lentil preparation), and *amle ka murabbah*, a sweet dish indigenous to the northern part of India (wherein the berries are soaked in sugar syrup for a long time till they are imparted the sweet flavor); it is traditionally consumed after meals.



A jar of South Indian Andhra amla pickle

Other uses

Popularly used in inks, shampoos and hair oils, the high tannin content of Indian gooseberry fruit serves as a mordant for fixing dyes in fabrics.^[16] Amla shampoos and hair oil are traditionally believed to nourish the hair and scalp and prevent premature grey hair.^[citation needed]

Alternative names for Indian gooseberry

Names of this tree in Indian and other languages include:

amalika (अम्लिका) in Sanskrit

aamla (आमला) in Hindi

aamla (આમલા) in Gujarati

aavnlaa (awla) (or *awla*) in اردو

aavala (आवळा) (or *awla*) in Marathi

ambare (अमबरे) in Garo language

avaalo (आवाळो) in Konkani

sunhlu in Mizo

amala (अमला) in Nepali

amloki (আমলকী) in Bengali

amlakhi in Assamese

anlaa (ଆଁଳା) in Oriya

Aula (ਔਲਾ) in Punjabi

nellikka (നല്ലികക്ക) in Malayalam

heikru in Manipuri

halilaj or *ihlilaj* (اهليلج هليلج) in Arabic

sohmylleng in Khasi

rasi usiri (రాశి ఉసిరికాయ) (or *rasi usirikai*) in Telugu

nellikai (நெல்லிக் காய் / నేలాలి కాయ / ಗುಡ್ಡದ ನೇಲಾಲಿ) *nellikaa* or *nellikaayi* in Tamil and Kannada

neli (නෙලි) in Sinhala

mak kham bom in Lao

ma kham pom (มะขามป้อม) in Thai

anmole (庵摩勒) in Chinese

Kantout Prei (កន្ទុកព្រី) in Khmer

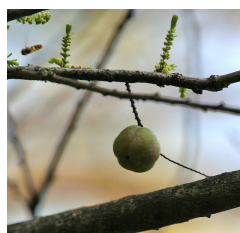
skyu ru ra (སྐུ་རུ་ར་) in Tibetan

melaka in Malay, A state in Malaysia, Malacca was named after this tree.

zee phyu thee (ဦးဖျူထီး) in Myanmar

Also found are the names *emblic*, *emblic myrobalan*, *malacca tree* and the variants in spelling *aola*, *ammalaki*, *aamvala*, *aawallaa*, *dharty*, *nillika*, and *nellikya*.

Gallery



Fruit with young leaves and flower buds.



New leaves.



Flowering twigs.



Tree trunk.



Bark of the Indian gooseberry.

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Further reading

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