

## Garcinia

See list of *Garcinia* species

*Garcinia* is a genus of flowering plants in the family Clusiaceae native to Asia, America, Australia, tropical and southern Africa, and Polynesia. The number of species is disputed; Plants of the World Online (POWO) recognise up to 400.[1] Commonly, the plants in this genus are called saptrees, mangosteens (which may also refer specifically to *Garcinia mangostana*), or garcinias, and is one of several plants known as by the name "monkey fruit".

Many species are threatened by habitat destruction, and at least one species, *G. cadelliana*, from South Andaman Island, is almost or even completely extinct already.[2]

The fruits are a food source for several animals, such as the archduke butterflies (*Lexias* spp.) of tropical eastern Asia which relish the sap of overripe mangosteens.

The genus is named after French botanist Laurent Garcin (1683–1751).[3]

*Garcinia* species are evergreen trees and shrubs, dioecious and in several cases apomictic. The fruit is a berry with fleshy endocarp,[4] which in several species is delicious. Among neotropical *Garcinia* several species are dioecious (*G. leptophylla*, *G. macrophylla* and *G. magnifolia*), although female trees have often been observed to have some degree of self-fertility.

The fruit of most species of *Garcinia* are eaten locally; some species' fruits are highly esteemed in one region, but unknown just a few hundred kilometres away. The best-known species is *Garcinia mangostana*, which is now cultivated throughout Southeast Asia and other tropical countries, having become established in the late 20th century. Less well-known, but still of international importance, are kandis (*G. forbesii*) with small round red fruits with subacid taste and melting flesh, the lemon drop mangosteen (*G. intermedia*) with yellow fruit that look like a wrinkled lemon, and the thin-skinned orange button mangosteen (*G. prainiana*).

In addition, mangosteen rind (exocarp) extract is used as a spice. It figures prominently in Kodava culture, and *G. multiflora* is used to flavour and colour the famous bún riêu soup of Vietnam, where this plant is known as h■t ■i■u màu. *Garcinia gummi-gutta* yields a spice widely used in South Asia, in particular in Kerala, where it is called kodumpulli.

Most species in *Garcinia* are known for their gum resin, brownish-yellow from xanthonoids such as mangostin, and used as purgative or cathartic, but most frequently – at least in former times – as a pigment. The colour term gamboge refers to this pigment.

Extracts of the exocarp of certain species – typically *G. gummi-gutta*, but also *G. mangostana* – are often contained in appetite suppressants, but their effectiveness at normal consumption levels is unproven, while at least one case of severe acidosis caused by long-term consumption of such products has been documented.[5] Furthermore, they may contain significant amounts of hydroxycitric acid, which is somewhat toxic and might even destroy the testicles after prolonged use.[6]

Bitter kola (*G. kola*) seeds are used in folk medicine.[7] *G. mannii* is popular as a chew stick in western Africa,[8] freshening the breath and cleaning the teeth.

*G. subelliptica*, called fukugi in Japanese, is the floral emblem of Mobuto and Tarama on Okinawa. The Malaysian town of Beruas – often spelled "Bruas" – derives its name from the seashore mangosteen (*G. hombroniana*), known locally as pokok bruas. It has been used for many years by certain[which?] African tribes as a tonic believed to increase 'energy levels' and to possess digestive and fat-busting properties[dubious – discuss][citation needed].

*Garcinia mangostana* (purple mangosteen) with white, edible endocarp

*Garcinia gardneriana* (bacupari)

*Garcinia hombroniana*

*Garcinia madruno*

As of December 2018[update], Kew's Plants of the World Online lists nearly 400 accepted species.[1] Selected species include:

The genetic diversity of 22 *Garcinia* accessions was analyzed using peroxidase, RAPD markers, and gene sequence-specific amplification polymorphism (GSSAP).[9] Genetic diversity assessment revealed low genetic variation among them.[9] Phylogenetic analysis indicated that *Garcinia* species clustered into five groups at a mean similarity coefficient of 0.54.[9] This study showed that the *G. mangostana* accessions can be clearly distinguished by combined peroxidase, RAPD, and gene sequence-specific amplification polymorphism.[9]

