

LOCAL NAMES

Burmese (thinbozihpyoo); English (country gooseberry, star gooseberry, plum, Otaheite gooseberry, damsel, Malay gooseberry); Filipino (karmay, bangkiling, iba); French (cerisier de Tahiti); Indonesian (cerme, ceremai, caramele); Lao (Sino-Tibetan) (mak nhom, nhom baanz, nhom ban); Malay (kemangul, chermala, chermai); Spanish (grosella); Thai (ma rom); Vietnamese (t[aaf]m ru[ooj]t, ch[uf]m ru[ooj]t)

BOTANIC DESCRIPTION

Phyllanthus acidus is a small, glabrous tree up to 10 m tall with phyllanthoid branching, bark rough, grey, with prominent lenticels; cataphylls not persistent, blackish-brown, their stipules triangular-ovate; deciduous branchlets ascending, (20-)25-52 cm long, with 25-40 leaves.

Leaves pinnate, 20-40 cm long. Leaflets alternate, simple, entire, shortly petiolate, broadly ovate to ovate-lanceolate, (4-)5-9 cm x (2-)2.5-4.5 cm, base obtuse to rounded, apex acute, petiole 2.5-4 mm long, stipules triangular-acuminate.

Flowers small, pink, in dense, cushion-shaped cymes at the nodes of leafless branches on older wood, and usually also on proximal branchlets of current year's growth, pale green to reddish; male flowers 4-merous, filaments and anthers free, dehiscing vertically; female flowers on a stout pedicel, 4-merous, disk deeply lobed or split, styles connate, deeply bifid, staminodes present, ovary superior.

Fruit drupaceous, obovate, 1-1.5 cm x (1.2-)1.5-2(-2.5) cm when fresh, shallowly 6- or 8-lobed, greenish yellow to creamy-white; flesh firm, sour with a hard, bony, grooved stone containing 6-8 smooth seeds.

Phyllanthus, the generic name is derived from the Greek 'phullon'-leaf and 'anthos'-flowers from the fact that members of this genus have flowers in dense clusters in leaf axils.

BIOLOGY

Otaheite gooseberry is monoecious. Flowering and fruiting is mostly in January-May in the Caribbean and throughout the year in Java. The tree flowers between February-April in Florida. Fruits mature in 90-100 days. *P. acidus* trees start producing a substantial crop at the age of 4 years. The peak fruiting season in the Philippines is in April to June. The fruits often explosively dehisce dispersing their seeds.



Flowers and foliage (Trade winds fruit)

ECOLOGY

Otaheiti gooseberry grows well in the tropics at low and medium altitudes in places with a short or prolonged dry season. The tree prefers hot, humid tropical lowlands. In north-eastern Brazil, the tree has been found in coastal forest and in Southeast Asia it is cultivated on humid sites, up to 1 000 m altitude.

BIOPHYSICAL LIMITS

Altitude: 0-1 000 m

Soil type: It tolerates a variety of soils including very sandy soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Brazil, Colombia

Exotic: India, Indonesia, Laos, Madagascar, Malaysia, Myanmar, Philippines, Thailand, US, Vietnam, Zanzibar



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Food: The mature sour fruits may be eaten fresh but usually they are sprinkled with salt to neutralize the acidity. Used in cooking to flavor dishes, the fruits are excellent raw materials for processing into pickle and sweetened dried fruits; fruit juice is used in cold drinks and fruit to make vinegar. In Malaysia, ripe and unripe fruit are served as a relish, syrup or sweet preserve. The fruits, combined with other fruits are used in chutney or jam, because of their setting properties. Young leaves are cooked as a vegetable in Indonesia, Thailand and India.

Fuel: The tree is used as fuelwood.

Timber: The wood is fairly hard, strong, tough and durable if seasoned. It is used for utensils and other small objects.

Tannin or dyestuff: The bark is used in India as a tanning agent.

Poison: Extract from the plant has shown nematocidal activity against the pine wood nematode, *Bursaphelenchus xylophilus*. The juice of the root bark is weakly poisonous.

Medicine: The latex is credited with emetic and purgative activity. In Indonesia the bark is heated with coconut oil and spread on eruptions on feet and hands. An infusion of the root is taken to alleviate asthma in Java. In Borneo, roots are used in the treatment of psoriasis of the feet. A leaf decoction is applied to urticaria, a decoction of the bark is used to treat bronchial catarrh in Philippines. The fruit is used as a laxative in Myanmar. In India, the fruits are taken as a liver tonic to enrich the blood.

Other products: Triterpenoids (phyllanthol and ?-amyrin) have been isolated from the Otaheiti gooseberry. The root bark contains saponins, gallic acid and tannins.

TREE MANAGEMENT

It is grown at a spacing of 8 m x 8 m in Indonesia.

PESTS AND DISEASES

Caterpillars of *Parallelia absentimacula* and *P. joviana* feed on the cerme in Indonesia. The only serious pest is the oriental fruitfly (*Dacus dorsalis*) which infests maturing fruits.

FURTHER READING

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SUGGESTED CITATION

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