

Canarium luzonicum

(Blume) A.Gray

Burseraceae

+ Synonyms

Common Name: Manila Elemi

General Information

Manila Elemi is a large, evergreen tree reaching a height of more than 30 metres with a bole that can be a metre or more in diameter[360].

The plant is one of the best known and single largest source of the world's supply of elemi - a fragrant oleoresin with a range of food, medicinal and industrial applications[360]. The tree is widely harvested from the wild by local people and is also occasionally cultivated for its resin and also its edible seed[46, 63, 360].

The plant is endemic to the Philippines, where it is threatened by habitat destruction. It is classified as 'Vulnerable' in the IUCN Red List of Threatened Species(2011)[338].

Known Hazards

None known



The resin exuding from a cut in the trunk

Photograph by: [Alma Gamil](#)



Botanical References

[451](#)




Range

Southeast Asia - Philippines.

Habitat

Lowland rainforest[307]. Primary forests at low and medium elevations[338].

Properties

Conservation Status	Vulnerable
Edibility Rating	
Medicinal Rating	
Other Uses Rating	
Habit	Evergreen Tree
Height	30.00 m
Pollinators	Insects
Self-fertile	No
Cultivation Status	Cultivated, Wild

Cultivation Details

A single tree yields 4 - 5 kilos of resin[402].

Wild forms usually have three, sometimes two kernels present in the nut, each in its own compartment[63]. In the case of cultivated trees, however, only one kernel is sometimes found in each nut[63]. When this is so, the kernel is proportionately larger and the nut easier to crack[63].

Trees are dioecious, both male and female forms need to be grown if fruit and seeds are required.

Edible Uses

Seed - raw or cooked. The sweet nuts have a delicious flavour when roasted and are served like almonds[301]. They can also be used in confections, ice cream, nut milks etc, and as an adulterant to chocolate[301]. The coat surrounding the kernel should be removed since it can cause diarrhoea[63]. The shell is very thick and difficult to crack, though some thinner shelled forms have been found[63].

A sweet oil obtained from the seed is used for cooking purposes[301].

The fruit pulp is boiled and eaten[301]. Rather tasteless[63].

An oil can be extracted from the fruit pulp[301]. It has a tangy, resin-like flavour[301].

Young shoots - raw[301]. Eaten in salads[301].

Medicinal

Manila elemi (the oleoresin obtained from the tree), and the essential oil distilled from the resin, have a long history of medicinal use. They are considered to be antibacterial, antifungal, antirheumatic, antiseptic, antispasmodic and rubefacient[360].

A study on the composition of Manila elemi oil from the distillation of elemi resin yielded 39 compounds, with limonene, the most abundant at 56%[360].

A corn-sized drop of the resin is taken with water in the treatment of fevers and chills[360].

The oleoresin is applied externally to arthritic and rheumatic joints, boils, abscesses, furuncles, burns and sores[360]. It is heated and applied to the chest as a poultice to stop severe coughing[360].

The tree bark is commonly used for postpartum baths[360].

The essential oil is an ingredient of a commercial preparation called 'Lysout', a natural anti-lice foaming gel that also contains *Echinacea purpurea*[360].

Other Uses

An oily resin called Manilla elemi is obtained from incisions in the bark[46, 317]. Manila elemi is a soft and fragrant oleoresin, oily, pale yellow to greenish, of honey consistency, balsamic in odour and bitter tasting[360]. It is used in varnishes and inks; for caulking boats; torches; perfumery and for various medicinal applications[46, 317]. It can be used for the same purposes as turpentine[46].

A tannin of reasonable quality is obtained from the bark[402].

The wood is not very hard. It is used for light construction[402, 451].

This species is one of the sources of kedondong timber, which is obtained from several species in the family Burseraceae[884]. However, the tree is more highly valued for its resin and edible seed and so is little harvested for its wood. We do not have a specific description of the wood for this species, but the general description of kedondong wood is as follows:-

The heartwood is generally a light brown; it is not sharply demarcated from the 3 - 5cm wide band of lighter-coloured sapwood. The texture is moderately fine and even; the grain is interlocked to wavy; the surface is lustrous. The wood is light in weight; moderately hard; not very durable, being susceptible to fungi, dry wood borers and termites. It seasons somewhat slowly with only a slight risk of checking and distortion; once dry it is moderately stable to stable in service. The wood has a fairly high blunting effect, stellite-tipped and tungsten carbide tools are recommended; it is moderately easy to slightly difficult to plane; finishes smooth to rough; can be easy to very difficult to bore; slightly difficult to difficult to turn; nailing and screwing properties are good; gluing is correct. The wood is suitable for internal use as a general utility timber for planking, cladding, plywood, flooring, furniture, packing cases, pallets and general carpentry work[316, 848].

Propagation

Seed - we have no specific information for this species but seeds of this genus generally have a hard seed coat and

germinate erratically. Filing away some of the seed coat to allow moisture to enter more readily, without damaging the seed, will encourage a faster and more even germination[[658](#)].

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