Carissa congesta

Wight

Apocynaceae

LOCAL NAMES
English (Christ's thorn,Bengal currant); Filipino (perunkila,caraunda,caranda,caramba); Hindi (karaunda,karanda); Malay (kerenda,karaunda); Thai (namdaeng,nam phrom)

BOTANIC DESCRIPTION
Carissa congesta is a rank-growing, straggly, woody, climbing shrub, usually growing to 3-5 m high, sometimes ascending to the tops of tall trees. Branches numerous and spreading, forming dense masses, set with sharp, simple or forked thorns, up to 5 cm long, in pairs in the axils of the leaves.

Leaves evergreen, opposite, oval or elliptic, 2.5-7.5 cm long; dark-green, leathery, glossy on the upper surface, lighter green and dull on the underside.

Flowers fragrant, tubular with 5 hairy lobes, twisted to the left in the bud instead of to the right as in other species; white, often tinged with pink, borne in terminal clusters of 2 to 12.

Fruits in clusters of 3-10, oblong, broad-ovoid or round, 1.25-2.5 cm long; skin fairly thin but tough, purplish-red, turning dark-purple or nearly black when ripe; smooth, glossy; enclosing very acid to fairly sweet, often bitter, red or pink juicy pulp, exuding flecks of latex. There may be 2 to 8 small, flat, brown seeds.

The name Carissa is probably derived from the Sanskrit ‘corissa’, a name for one of the Indian species of the genus.

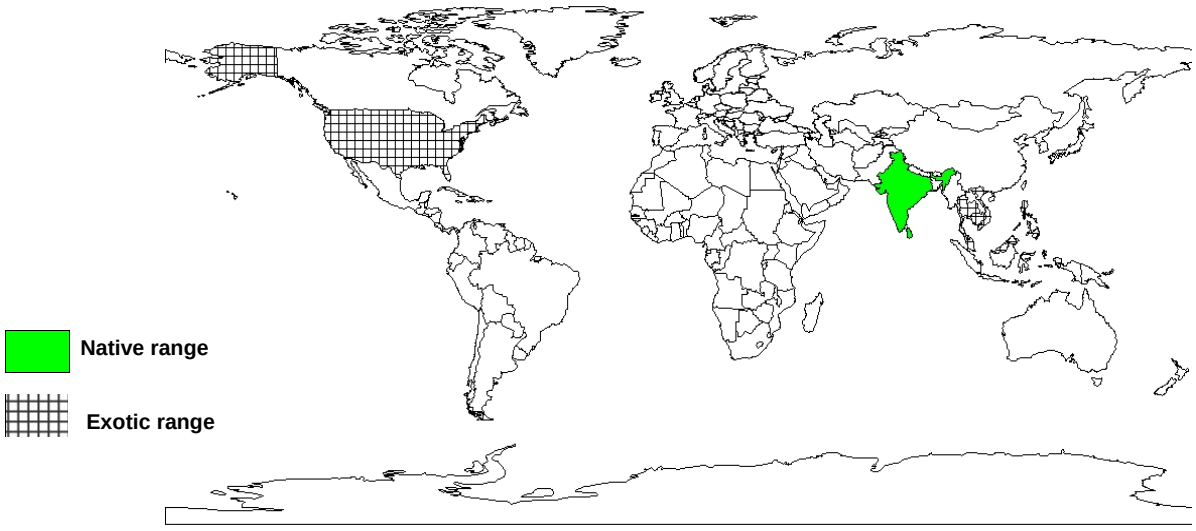
BIOLOGY
C. congesta may bloom, fruiting on and off throughout the year. The main ripening season is August and September.

ECOLOGY
C. congesta is more cold-tolerant than the carissa (Carissa macrocarpa). It grows from sea-level to 600 m in the Philippines; but up to an altitude of 1 800 m in the Himalayas; its chief requirement is full exposure to sun.

BIOPHYSICAL LIMITS
Altitude: 0-1 800 m
Soil type: The plant grows on sand or limestone. In India, it grows wild on the poorest and rockiest soils and is grown as a hedge plant in dry, sandy or rocky soils. It is most fruitful on deep, fertile, well-drained soil but if the soil is too wet, there will be excessive vegetative growth and lower fruit production.

DOCUMENTED SPECIES DISTRIBUTION

Native: India, Myanmar, Sri Lanka
Exotic: Cambodia, Malaysia, Philippines, Puerto Rico, Thailand, Trinidad and Tobago, US, Vietnam



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 unripe fruit is sour and astringent and is used for pickles. When ripe it is sweet and is used for tarts, puddings and jellies. The syrup has been successfully utilized on a small scale in soft drinks.

Fodder: C. congesta leaves are fodder for the tussar silkworm.

Fuel: It is used as fuelwood.

Timber: The white or yellow wood is hard, smooth and useful for fashioning spoons, combs, household utensils and miscellaneous products of turnery.

Tannin or dyestuff: The fruits have been employed as agents in tanning and dyeing.

Poison: A paste of the pounded roots serves as a fly repellant.

Medicine: The unripe fruit is used medicinally as an astringent. The ripe fruit is taken as an antiscorbutic and remedy for biliousness. The leaf decoction is valued in cases of intermittent fever, diarrhoea, oral inflammation and earache. The root is employed as a bitter stomachic, vermifuge and an ingredient in a remedy for itches.

Other products: The roots contain salycylic acid and cardiac glycosides causing a slight decrease in blood pressure. Also reported are carissone; the D-glycoside of B-sitosterol; glucosides of odoroside H; carindone, a terpenoid; lupeol; ursolic acid and its methyl ester; also carinol, a phenolic lignan. Bark, leaves and fruit contain an unnamed alkaloid.

SERVICES
Ornamental: C. congesta is conspicuous when in starry bloom.

Boundary or barrier or support: The plant has dense branches and sharp spreading thorns, and is suitable for fences.

TREE MANAGEMENT
The plant grows slowly when young. Once well established, it grows more vigorously and becomes difficult to control. If kept trimmed to encourage new shoots, karanda blooms and fruits profusely.

PESTS AND DISEASES
Fungus diseases recorded on the karanda in Florida are algal leaf spot and green scurf caused by Cephaleuros virescens; twig dieback from Diplodia natalensis; and stem canker induced by Dithiorella sp.

FURTHER READNG

Council for Scientific and Industrial Research Organisation (CSIRO). 1950. The Wealth of India Vol II. CSIRO.

Morton J. 1987. Karanda. p. 422–424. In: Fruits of warm climates. Julia F. Morton, Miami, FL.

SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. Agroforestree Database:a tree reference and selection guide version 4.0 (http://www.worldagroforestry.org/af/treedb/)