Gnetum costatum

K. Schumann

Gnetaceae

BOTANIC DESCRIPTION
Dioecious tree, 15-20 m tall; bark reddish-brown outside, tan inside.

Leaves obovate to elliptical, 15-18 cm long, thin, slightly thicker than in G. gnemon, yellowish when dry, tapering at both ends, petiole 0.5 cm, secondary nerves bent, joining.

Male inflorescences solitary, axillary, simple, yellowish, 6-7 cm long, whorls with hairs and sessile flowers remote, 3 mm broad, male flowers with tender long-exserted sporophyll (stamen), female flowers sterile, ovate, beaked, finely whitish pubescent, up to 10 in a ring. Female inflorescences similar, their flowers immersed in dense whitish hairs, flowers long-acuminate, finely whitish pubescent.

Fruit nut-like, obliquely-fusiform, 4 cm x 1 cm, red or pink, tapering at base, acuminate at top, its outer envelope thin, fleshy, showing the longitudinal ribs of the hard middle envelope when dry.

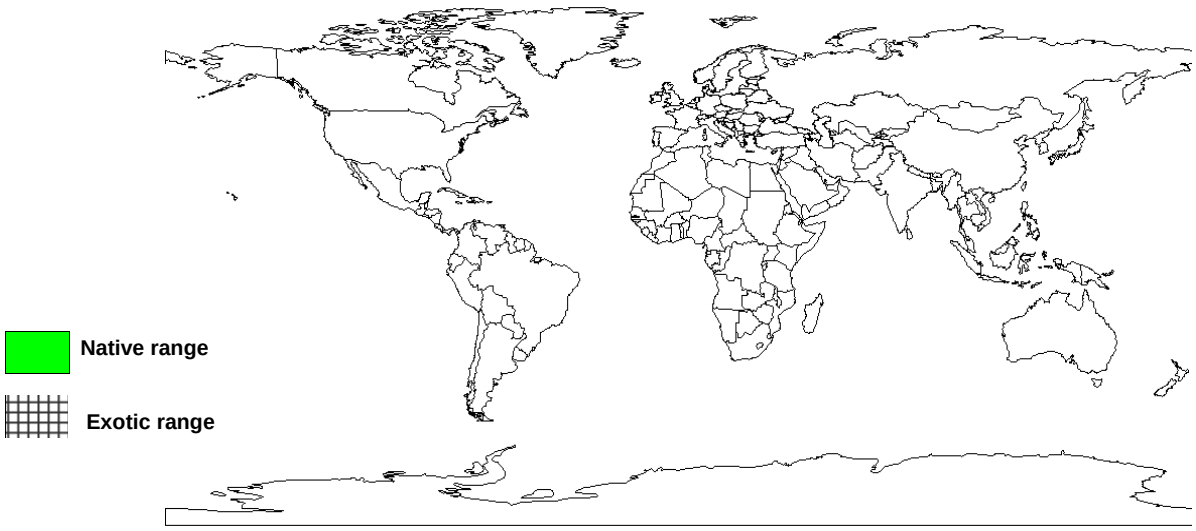
Seed fusiform, furrowed.

BIOLOGY

ECOLOGY
The tree occurs in rain forests at altitudes up to 1350 m. It is common on ridge tops, along or near river banks and also in secondary or distrubed forest. In New Guinea the species is commonly found in mixed forest of Lithocarpus, Anisoptera and Hopea species. It does not occur in swamps or in areas with a high water table. Areas experiencing both wet and dry seasons seem to be ideal for the species.

BIOPHYSICAL LIMITS
Altitude: Up to 1350 m.

DOCUMENTED SPECIES DISTRIBUTION



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: Fruits, often with the leaves and inflorescences (both male and female) are boiled with other vegetables together in one pot and served. The fruits require a longer time to boil than those of G. gnemon in order to remove the bitter taste. Coconut milk is normally added to improve the taste. The kernels, leaves and inflorescences contain starch (40-45%) and protein (8-10%).

Fibre: The inner bark provides a fibre which is used for making string bags known as 'bilum'. A similar fibre is also extracted from other Gnetum species, that of G. gnemon being most commonly used.

Timber: The wood is of no commercial value.

SERVICES

TREE MANAGEMENT

GERMPLASM MANAGEMENT

PESTS AND DISEASES

FURTHER READNG

Banka RA. 1991. Gnetum costatum K. Schumann. In:Verheij EWM & Coronel RE (Eds): Plant Resources of South_East Asia No 2. Edible fruits and nuts. Pudoc, the Netherlands. Pp. 181-182.

Henderson CP and Hancock IR. 1988. A guide to the useful plants of Solomon Islands, Research Dept., Ministry of Agriculture and Lands, Honiara, Solomon Islands.

Markgraf F. 1951. Gnetaceae. In: van Steenis, CGGJ. (Eds): Flora Malesiana, Series 1. Vol. 4. pp. 336, 341.

Walter A, Sam C. 2002. Fruits of Oceania. ACIAR Monograph No. 85. Canberra.329 pp.

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/)