Nauclea diderrichii

Merr.

Rubiaceae

opepe

LOCAL NAMES
English (African peach); Trade name (opepe)

BOTANIC DESCRIPTION
Nauclea diderrichii is an evergreen tree that reaches a height of 30-40 m and a diameter of 0.9-1.5 m; bole cylindrical, slender, straight and branchless, rising to 20-30 m and a broad spherical crown with thick foliage.

The shining leaves are 15 cm long and bigger when young, elliptic, acute at the ends, keeled towards the base, and stipulate, with a pair of distinct leafy stipules at the base. It is mostly deciduous except at the ends of shoots, and the nodes are often occupied by ants.

Flowers small, green-white-yellow and tubular, in solitary terminal heads (unbranched), 3 cm across; stalks only about 1 cm.

The fruit is yellow, fleshy, in a globose head deeply pitted between the deeply fused calyx lobes. There are about 250 fruit/kg.

BIOLOGY
Flowering occurs during the period from May to December; most large trees flower annually and fruit is abundant. Fruit has been found in all months, but the heaviest fruiting is between October and February. Large trees are evergreen, but many plantation trees become leafless for a short time at the end of the rains.

Nauclea diderrichii:
29-year-old stand: N. diderrichii stand in Forestry Research Institute of Ghana trial plots at Benso in the Wet Evergreen Forest Ecological Zone of Ghana. (Dominic Blay Jr.)

Nauclea diderrichii:
Seedlings: N. diderrichii seedlings in the Fure Headwaters Forest Reserve in the Moist Evergreen Forest Ecological Zone in Ghana. (Dominic Blay Jr.)

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ECOLOGY
An evergreen species native to moist evergreen and transitional-to-moist semi-deciduous forests. The species is found throughout the tropical rainforest of West Africa and extends south to Angola. A sun-loving species, it regenerates abundantly in gaps and openings and is often almost gregarious in the transition zone between freshwater swamp and lowland forest.

BIOPHYSICAL LIMITS
Altitude: 0-500 m; Mean annual rainfall: 1600-3000 mm; Mean annual temperature: 24-30 deg C.

Soil type: It does not grow well on excessively wet soils or on lateritic ones that dry out completely in the dry season.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Benin, Cameroon, Central African Republic, Chad, Congo, Cote d'Ivoire, Democratic Republic of Congo, Gabon, Ghana, Liberia, Nigeria, Sierra Leone, Togo, Uganda

Exotic: Fiji

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.

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PRODUCTS
Food: Used in palm soup in Ghana.

Fodder: Eaten by elephants and other mammals.

Timber: A commercial timber of West Africa. The wood is yellow and darkens slightly when exposed to light. It is semi-heavy and of medium hardness; its shrinkage and nervosity are average. Because of its good mechanical properties and natural durability, which can be enhanced by preservative treatment, it is sought after as a timber for outdoor uses (harbour works, railway sleepers), buildings (carpentry, floors, facings, indoor and outdoor woodwork) and for cabinet making. The wood is also suitable for fence posts and bridges as it is moderately termite-resistant and resistant to fungi and marine borers. In Ghana, its most popular use is for mortars, but it is also used to make telegraph poles, pit props and mine-shaft guides, furniture and drums.

Medicine: A bark decoction is prescribed for anaemia, stomach-ache and indigestion, as part of an infusion for treating jaundice, bark infusion to treat gonorrhoea; a decoction of leaves is used as a wash for measles.

SERVICES
Shade or shelter: It is a good shade tree and in Uganda was successfully tried and planted by the national Forestry Department.

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TREE MANAGEMENT
The tree has been grown in taungya plantations at various spacings. The initial recommended planting density is 1100 stems/ha. The young saplings are often multistemmed, and the secondary stems must be eliminated in the early years by pruning. The plant coppices readily. The rotation cycle ranges from 30-40 years for an exploitable diameter of 50 cm.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox. The seed is extracted by drying then pounding the fruit in a mortar. Dry seed retains its viability for over a year. There are about 1 million seeds/kg.

PESTS AND DISEASES
In young plantations, infestation with bud-boring caterpillars (Orygophora mediofoveata) is frequent, without, however, seriously affecting the growth of the stands. Monkeys are known to cause top damage to exposed trees in young plantations.

FURTHER READNG

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SUGGESTED CITATION

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