

LOCAL NAMES

English (Rosewood, Palisander, Nicaraguan rosewood)

BOTANIC DESCRIPTION

A small to medium-sized tree 15-20 m high with trunk diameters of up to 60 cm; usually of poor form, twisted and branches at a low height with a wide and open crown and a few slim branches.

Leaves alternate, petiolate and imparipinnate, with 7-15 leaflets. Leaflets are alternate, oblong or ovate-oblong, 2.5-12 cm long, and 2-3.5 cm wide. They are leathery and shiny on upper surface, obtuse base and acuminate apex.

Flowers white, pea-like, terminal panicles 4-18 cm long, appearing with or before the new leaves.

Fruits long, flat pod, ovate to orbicular, generally attenuate at base, 6-13 cm long, and 1.5-2.5 cm wide; indehiscent with 1-5 seeds that are oblong, flattened, laterally compressed, 4-9 mm long and 4-6 mm wide, dark brown to blackish brown.

Bark blackish with fissures and exfoliates small plates.

BIOLOGY

Pollination is by bees. Flowering occurs after 4 or 5 years, from January to March with fruits maturing from March to May. Seeds with intact fruits are dispersed by wind. Seed germination is epigeal with root protrusion beginning at 5-8 days.

ECOLOGY

Dalbergia retusa is a species of tropical dry forest, woodland and scrublands and slopes, occurring in rocky ground and pastureland. It is often associated with *Tabebuia ochracea*, *Astronium graveolens*, *Tabebuia impetiginosa*, *Sideroxylon capiri* and *Swietenia macrophylla*. *Dalbergia retusa* is generally a subcanopy species that grows well in open areas.

BIOPHYSICAL LIMITS

Altitude: 0-800 m

Temperature: 24-30°C

Rainfall: <2000 mm

Soil type: The species grows in soils of varying pH, texture, drainage and fertility. It can grow on degraded acid soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama

Exotic: Tanzania



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

Timber: *Dalbergia retusa* wood is highly favored in the cutlery trade for handles, inlay work, brush backs and small tool handles, musical and scientific instruments, jewelry boxes, chessmen, butts of billiard cues, and other specialty items because of its attractive colour, texture, and waterproof characteristics. The wood is hard, heavy, strong, and sometimes brittle. It has excellent drying properties and is free of surface and end checking, easy to work with smooth finishing.

Poison: Wood dust may cause dermatitis or respiratory allergies.

SERVICES

Ornamental: Attractive when grown as a houseplant.

TREE MANAGEMENT

Dalbergia retusa should be planted at a spacing of 2x2 m (or 3x3 m). Due to its high branching rate, pruning is necessary to maintain a desirable shape. Pruning of 2-year-old saplings produces good results. 17-year-old trees may reach 13 cm d.b.h. and 8 m in height. The species responds well to fire. In areas experiencing periodic burning new saplings and small trees can be numerous.

GERMPLASM MANAGEMENT

Fruits should be collected from the tree or the ground, placed on the floor, and exposed to sunlight for 1-2 days for 3-4 hours to dry the pericarp and open the samara. Seeds should then be manually extracted and cleaned. Seeds average from 4000-20000 per kg.

Seed behaviour is orthodox. Seeds should be stored at 6-8% m.c in sealed containers at 5 °C and remain viable for up to 5 years with 60% germination. Seeds should be immersed in running water for 12-24 hours before sowing. Seeds that have been stored for sometime should be placed in hot water (60 °C) for 1 minute and then transferred to running water at 20 °C for 24 hours before sowing. Fresh seeds have 80-90% germination.

Seeds should be planted at a depth of 1 cm in germination boxes filled with sand. They should later be transferred to nursery bags. Seedlings must be transferred to the field at 3-5 months, when they reach 25-30 cm in height. Young seedlings (1-5 weeks old) are sensitive to dryness and direct sunlight exposure. Pruning of at least 50% foliage at the nursery stage is recommended.

PESTS AND DISEASES

The seeds are attacked by *Ctenocolum salvini* (Bruchidae, Coleoptera); the larvae develop in young fruits and destroy the embryo. The fungi *Alternaria* and *Aspergillus* also attack seeds.

FURTHER READING

Anon. 1979. Tropical legumes: Resources for the future. National Academy of Sciences, Washington, D.C.

Boutelje JB. 1980. Encyclopedia of world timbers, names and technical literature. Swedish Forest Products Research Laboratory, Stockholm.

Chudnoff M. 1984. Tropical timbers of the world. Agricultural Handbook 607. USDA Forest Service, Washington, DC. 464 pp.

Flynn JH. 1994. A guide to the useful woods of the world. King Philip Publishing Co., Maine, U.S.A.

Mitchell J & Rook A. 1979. Botanical Dermatology: Plants and Plant Products Injurious to the Skin. Greengrass Ltd. Vancouver.

Terrell EE & Terrell EE. 1986. A checklist of names for 3,000 vascular plants of economic importance. USDA, Ag Handbook No. 505. Washington, DC.

Titmuss FH. 1971. Commercial timbers of the world. The Technical Press Ltd., London.

SUGGESTED CITATION

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