

LOCAL NAMES

English (swizzle stick); Yoruba (asofeyeje)

BOTANIC DESCRIPTION

Rauvolfia vomitoria is a shrub or small tree up to 8 m. Older parts of the plant contain no latex. The branches are whorled and the nodes enlarged and lumpy.

Leaves in threes, elliptic-acuminate to broadly lanceolate.

Flowers are minute, sweet-scented, branches of inflorescences are distinctly puberulous with hardly any free corolla lobes.

Fruits are fleshy and red in colour.

The generic name *Rauvolfia* (sometimes mis-spelt *Rauwolfia*), commemorates a 16th century German physician, Leonhart Rauwolf, who travelled widely to collect medicinal plants. The specific epithet *vomitoria* refers to the purgative and emetic properties of the bark.

BIOLOGY

R. vomitoria is a hermaphroditic species. Fruit dispersal is by birds.

ECOLOGY

Occurs naturally in gallery forests but is mostly found in forest regrowth where fallow periods are prolonged. *R. vomitoria* is associated with palms, *Trema guineensis* and *Combretum* spp., and is one of the last species to disappear in this particular seral stage. *R. vomitoria* is considered endangered.

BIOPHYSICAL LIMITS

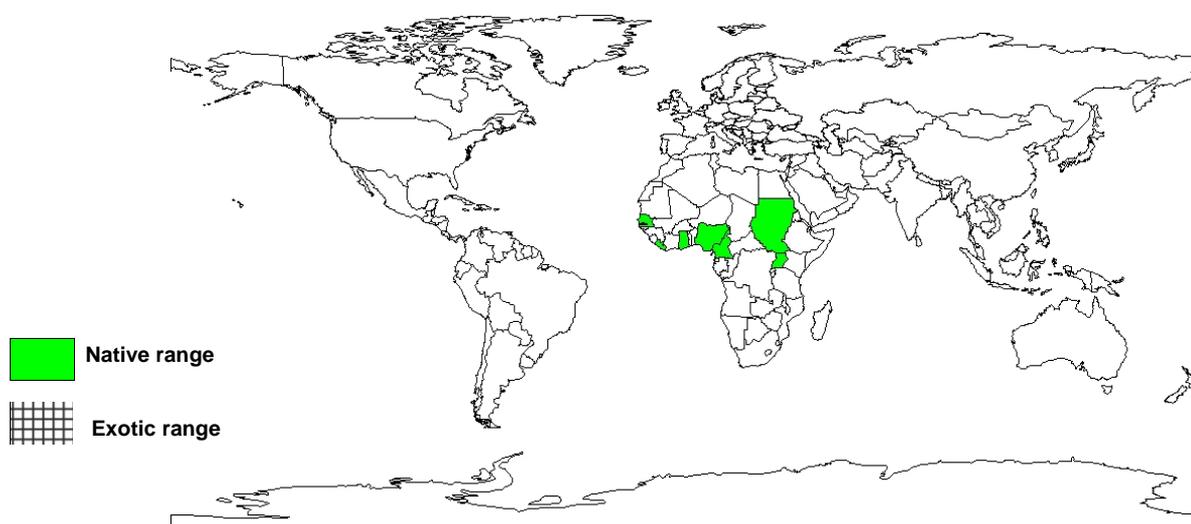
Mean annual temperature: 26 deg C

Mean annual rainfall: 1 375 mm

DOCUMENTED SPECIES DISTRIBUTION

Native: Cameroon, Democratic Republic of Congo, Ghana, Liberia, Nigeria, Senegal, Sudan, Uganda

Exotic:



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

Fodder: Not a preferred browse species, crude protein content 9.3% (Mecha et al. 1980).

Apiculture: The sweet-scented flowers are frequented by bees.

Fuel: Used as firewood for instance in Sierra Leone.

Fibre: *R.vomitoria* bark yields a good bast fibre.

Timber: Kakapenpen yields a white and fine grained wood which reddens with age and has a fairly hard heartwood. This wood is a substitute for boxwood.

Latex or rubber: A latex exudes from the young stems.

Tannin or dyestuff: A yellow dye is obtained from the bark.

Poison: The members of this family usually have toxic properties. In Gabon, the bark and root powder, are mixed with water or palm oil to kill fleas and vermin. The root bark extracts are reportedly poisonous.

Medicine: This tree is used medicinally in many African countries. *R. vomitoria* is used by Nigerian traditional healers to treat psychiatric patients. The dried root of *R. vomitoria*, administered orally at (doses of 400, 600 or 800 mg/day), showed antipsychotic effects. Overall side effects are minimal. *R. vomitoria* is used to treat leprosy in the Democratic Republic of Congo. The seed extract is procured for general illness. Amyrin palmitate, present in a Ghanaian antiarthritic herbal preparation with *R. vomitoria* has curative properties. The bark has purgative and emetic properties. The root extracts have arbotifacient properties.

Other products:

Two new indole alkaloids, 3-epi-rescinnamine and 3,4-dimethoxybenzoyl-reserpic acid methyl ester, are isolated from the root bark of *R. vomitoria*. The seeds are used in making decorative necklaces.

SERVICES

Shade or shelter: A good shade provider.

Nitrogen fixing: Forms root nodules with vesicular arbuscular mycorrhiza.

Ornamental: Widely planted as an ornamental and avenue tree.

Boundary or barrier or support: It is suitable for live fences. The pliable branches are used to support bird traps.

Intercropping: The tree is a wild host of the pathogen causing 'collar crack' of cacao. Despite these reports it is used as a shade bearer for young cacao trees and as a support for vanilla in Gabon.

Other services:

In Ivory Coast, the 'Serpent Sect' of the Man region consider the plant fetish. The young twigs with the side branches trimmed short serve as mixers for drinks, hence the English name swizzle stick.

TREE MANAGEMENT

Roots for medicinal use may be harvested non-destructively annually by cutting them 10 cm from the taproot.

FURTHER READING

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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/>)