

LOCAL NAMES

Afrikaans (rivierbloutee); Amharic (grawa); English (vernonia tree, bitter leaf); Luganda (mululuza, muburizi); Tigrigna (grawa)

BOTANIC DESCRIPTION

Vernonia amygdalina is a bushy shrub or well-formed tree up to 7 m in height. Bark light grey or brown, rather rough and longitudinally flaking; branches brittle.

Leaves lanceolate to oblong; up to 28 x 10 cm, but usually about 10-15 x 4-5 cm. Leathery, medium to dark green, with or without sparse hairs above, with fine, soft, pale hairs below and conspicuous net-veining; apex and base tapering, base always almost symmetric, margin entire or very finely toothed; petiole usually very short but may be 1-2 cm long.

Flower heads thistlelike, small, creamy-white, sometimes slightly touched with mauve, about 10 mm long, grouped in dense heads, axillary and terminal, forming large flat clusters about 15 cm in diameter but not conspicuous; sweetly scented, especially in the evening.

Fruit a small nutlet, with minute glands and bristly hairs on the body and a long tuft of bristly hairs at the top.

The genus was named in honour of an English botanist, William Vernon, traveller and plant collector in North America in the 17th century. The specific name means 'like an almond'—the allusion is not clear.



Vernonia amygdalina (Paul Latham)

ECOLOGY

Afro-montane rainforest, undifferentiated afro-montane forest (broadleaved forest, mixed Podocarpus forest) and dry single-dominant afro-montane forest (Juniperus and Juniperus-Olea); also in secondary montane evergreen bushland and sometimes forming clumps in upland wooded grassland. Elsewhere also in lowland humid rangeland, savannah and riverine fringes, often associated with termite mounds.

BIOPHYSICAL LIMITS

Altitude: (min. 600) 1250-2800 m, Mean annual rainfall: 750-2000 mm

Soil type: Light shallow soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Cote d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Kenya, Liberia, Malawi, Mali, Mauritania, Niger, Nigeria, Rwanda, Sao Tome et Principe, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Yemen, Republic of, Zambia, Zimbabwe

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

Food: Leaves, although rather bitter to taste, are eaten as raw vegetables. 'Chewsticks' from the roots and twigs are regarded as an appetizer.

Fodder: Produces a large mass of forage from the leaves and shoots and therefore is a good fodder species.

Fuel: Both firewood and charcoal are derived from *V. amygdalina*.

Apiculture: Produces very light, fine flavoured honey.

Timber: The genus *Vernonia* is a well-known group of timber trees.

Medicine: An infusion from the roots is given to children suffering from infection by a trematode (*Enterobius vermicularis*). A cold infusion of the root bark, together with other plants, is given in daily doses to treat bilharzia. The bark and root are taken as a tonic by people suffering from fevers; leaves are also pounded, the juice extracted and drunk for fever. The leaves are pounded and mixed with warm water for bathing to treat spots on the skin and nausea.

SERVICES

Erosion control: Soil conservation is enhanced with this tree.

Ornamental: Useful as an ornamental.

Boundary or barrier or support: The termite-resistant branches are useful as stakes for lining out plantations and as a live fence.

Other services: A drought and termite resistant tree.

Vernonia amygdalina

Del.

Asteraceae

TREE MANAGEMENT

A medium to fast growing tree suited to coppicing.

FURTHER READNG

Bejar E and Malone MH. 1993. Pharmacological and chemical screening of *Byrsonima crassifolia*, a medicinal tree from Mexico. Part I. *Journal of Ethnopharmacology*. 39(2): 141-158.

Bekele-Tesemma A, Birnie A, Tengnas B. 1993. Useful trees and shrubs for Ethiopia. Regional Soil Conservation Unit (RSCU), Swedish International Development Authority (SIDA).

Coates-Palgrave K. 1988. Trees of southern Africa. C.S. Struik Publishers Cape Town.

Crane E (ed.). 1976. Honey: A comprehensive survey. Bee Research Association.

Dale IR, Greenway PJ. 1961. Kenya trees and shrubs. Buchanan's Kenya Estates Ltd.

Eggeling. 1940. Indigenous trees of Uganda. Govt. of Uganda.

Friis I. 1992. Forests and forest trees of northeast tropical Africa. Her Majesty's Stationery Office, London.

ICRAF. 1992. A selection of useful trees and shrubs for Kenya: Notes on their identification, propagation and management for use by farming and pastoral communities. ICRAF.

Katende AB et al. 1995. Useful trees and shrubs for Uganda. Identification, Propagation and Management for Agricultural and Pastoral Communities. Regional Soil Conservation Unit (RSCU), Swedish International Development Authority (SIDA).

Kokwaro JO. 1976. Medicinal plants of East Africa. East African Literature Bureau.

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/>)