

LOCAL NAMES

Bemba (pupwechulu,pupwe); English (kundanyoka knobwood,knob wood); Luganda (ntaleyedungu); Lunda (chipupa); Nyanja (mlunguchulu); Shona (mukundanyoka); Swahili (mjafari)

BOTANIC DESCRIPTION

Zanthoxylum chalybeum is a deciduous spiny shrub or tree up to 12 m, crown rounded but open. Bark pale grey; smooth dark with scales and prickles. The bole has characteristic large, conical, woody knobs with sharp prickles. The branches also bear scattered thorns with conspicuous dark scales.

Leaves compound, usually 3-5 pairs of shiny leaflets plus a terminal leaflet; leaflets oblong to elliptic or lanceolate, 2.5-7 x 1-2.5 cm, with a strong citrus smell when crushed; sparsely dotted with pellucid glands; petiole 1-5 cm long, the petiole and rachis with small, hooked prickles scattered along the length.

Flowers sweet scented, inconspicuous, yellowish-green, in short sprays (racemes or panicles) 5-10 cm long, produced immediately below the leaves at the base of the new branchlets.

Fruit spherical, about 5 mm in diameter, reddish-brown, splitting to allow the shiny black seeds to partly protrude.

Zanthoxylum means 'yellow wood', from the Greek 'xanthos' (yellow) and 'xylon' (wood). The specific epithet chalybeum means steel grey.

BIOLOGY

Male and female flowers are on different trees.



Zanthoxylum chalybeum (Patrick Maundu)

ECOLOGY

Z. chalybeum is a tree of medium to low altitudes in dry woodland or grassland, often on termite mounds.

BIOPHYSICAL LIMITS

Altitude: 0-1 600 m

Mean annual rainfall: 750-1 500 mm

DOCUMENTED SPECIES DISTRIBUTION

Native: Burundi, Democratic Republic of Congo, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, Swaziland, Tanzania, Uganda, 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: When dried, the leaves can be brewed to make a kind of tea.

Fodder: The leaves and fruit are eaten by goats throughout the year. The branches are sometimes lopped for feed.

Fuel: *Z. chalybeum* is a good firewood tree; it burns easily.

Timber: Timber is very hard, heavy, elastic and highly durable. It works well, although it is difficult to nail; finishes and polishes well and has been used for carving, turnery and walking sticks. The twigs are used as toothbrushes.

Medicine: Bark extracts are said to cure malaria.

TREE MANAGEMENT

Coppicing and pollarding are recommended.

GERMPLASM MANAGEMENT

There are approximately 30 000 seeds/kg.

FURTHER READNG

Beentje HJ. 1994. Kenya trees, shrubs and lianas. National Museums of Kenya.

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

Drummond BR. 1981. Common trees of the Central Watershed Woodlands of Zimbabwe. National Resources Board.

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).

Mbuya LP et al. 1994. Useful trees and shrubs for Tanzania: Identification, Propagation and Management for Agricultural and Pastoral Communities. Regional Soil Conservation Unit (RSCU), Swedish International Development Authority (SIDA).

Storrs AEG. 1995. Know your trees: some common trees found in Zambia. Regional Soil Conservation Unit (RSCU).

Young JA, Young CG. 1992. Seeds of woody plants in North America. Dioscorides Press, Oregon, USA.

SUGGESTED CITATION

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 Agroforestry Database: a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)