UNIVERSITY OF COPENHAGEN

Københavns Universitet

Combretum glutinosum Perrot. ex DC.

Vautier, Helen; Sanon, Mathurin; Sacandé, Moctar; Schmidt, Lars

Published in:
Seed Leaflet

Publication date:
2007

Document version
Publisher's PDF, also known as Version of record

Citation for published version (APA):
Vautier, H., Sanon, M., Sacandé, M., & Schmidt, L. (Ed.) (2007). *Combretum glutinosum Perrot. ex DC. Seed Leaflet*, (128).

Download date: 13. Nov. 2026

FOREST & LANDSCAPE

SEED LEAFLET

No. 128 December 2007

Combretum glutinosum Perrot. ex DC.

Taxonomy and nomenclature

Family: Combretaceae

Synonyms: *Combretum cordofanum* Engl. & Diels, *C. passargei* Engl. & Diels, *C. leonense* Engl. & Diels.

Vernacular/common names: dooki (Pulaar); kantakara (Hausa); rat (Wolof); jambakatan kè (Maninka).

Distribution and habitat

Combretum glutinosum is distributed throughout the Sahel belt from Senegal to Cameroon, and eastwards to the Sudan. It grows in various savannah type forests on many soil types, but thrives best on sandy and free draining soils. The species is drought resistant, being present in areas where the mean annual rainfall is 300-700 mm, but sometimes as low as 200 mm. In dry areas often in seasonally inundated areas. It is a fast growing species, widely distributed and often abundant and gregarious.

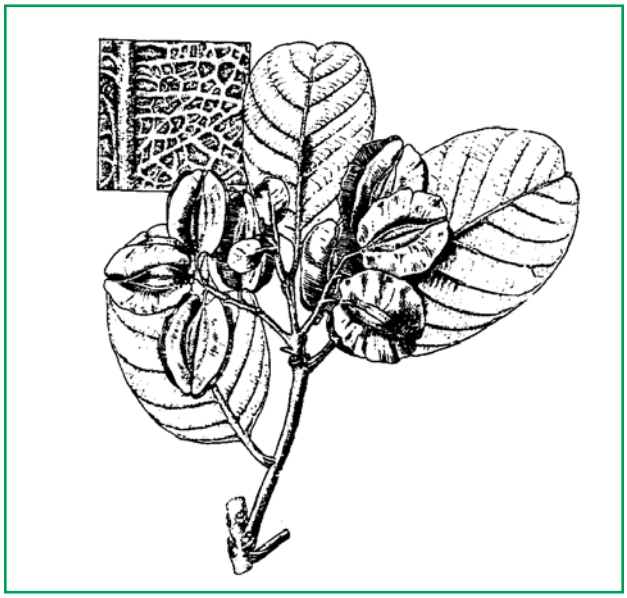
Uses

The leaves are browsed by ruminants, and it is the preferred browse species for adult giraffes. Extracts from the bark, leaves and especially the roots produce a yellow dye. The yellowish wood is hard and extremely durable, and it is used in construction, for fenceposts, framework for huts, tool handles and general carpentry. It also makes good fuelwood and charcoal. Many medicinal uses have been reported, using the roots, stems, leaves, bark and fruit. It is used in the treatment of influenza, rheumatism, intestinal worms, coughs, colic, impotence, haemorrhoids, constipation, anorexia, malaria, wounds and syphilis.

Botanical description

Combretum glutinosum is a bushy shrub or small tree growing up to 12 m. It is a deciduous species sprouting in the middle of the dry season. The trunk is usually twisted and low branched, with a rounded, open crown. The lower branches characteristically point downwards. The bark is grey-black and may be smooth or rough with fissures on the upper surface and red to orange slash. Young stems are velvety to tomentose, and greyish in colour. The thick leathery green leaves are glutinous above when young, and white, strongly reticulate and densely hairy beneath. The leaves are opposite, verticillate in threes or sometimes subopposite; they are very variable in shape and size, even on the same tree. The blades are elliptic, ovate to obovate, 9-18 cm long and 4-8 cm across. The petiole is tomentose, 5-15 mm long. The nerves are pinnate, prominent on both surfaces, with 7-15 pairs of pubescent lateral nerves fusing towards the apex. In the west of the distribution area the young leaves tend to be sticky.

The inflorescence is an axillary, spike-like raceme, generally more or less tomentose, c. 4-5 cm long. The petals and filaments are greenish-yellow to cream in colour, 2.5-3 mm diameter. The flowers have 4 petals and are densely hairy.



Combretum glutinosum. From: Berhaut, J. Flore Illustrée du Sénégal, Direction des Eaux et Forêts, Government du Sénégal, 1975

Flowering and fruiting habit

Fire may be a factor that triggers leaf flushing and flowering, thus preventing destruction of flowers or new leaves. Flowering occurs in the dry season, with the earlier the bush fires, the earlier the flowering. The timing of flowering and fruiting varies with location. In Burkina Faso and Mali flowers develop from December to March (mid to late dry season), but can continue until July. Fruiting begins in January, and can continue until November, although it is often much shorter - from March until May (late dry season).

Forest & Landscape Denmark • Hørsholm Kongevej 11 • DK-2970 Hørsholm
Email: SL-International@life.ku.dk • Website: www.SL.ku.dk

Fruit and seed description

Fruit: The fruit is a four winged elliptic samara, 2.5-4 cm long and 1.5-3 cm across, with a notched apex and base. The fruit is somewhat sticky (mainly at the centre), glabrous or shortly pubescent, without scales (species character), reddish in colour, turning beige or yellowish.

Seed: There are approximately 20,000 seeds per kg. The seed oil content can reach c. 24%.

Photo: Helen Vautier

Clean seeds of *C. glutinosum* including a longitudinal cut showing the rolled cotyledons.

Harvest and processing

Fruits are harvested from the trees by shaking fruit bearing branches. Storability of most Combretum spp. is best if seeds are not extracted until just before sowing because seeds are fragile and prone to damaged if extracted.

Storage and viability

Seeds exhibit 'orthodox' storage behaviour. 95% germination has been achieved following drying to moisture contents in equilibrium with 15% relative humidity and freezing for 1 month at -20°C at RBG Kew. Seeds have been stored at Wakehurst Place since 1999. X-rayed collections showed 80-100% viability. Seeds collected at Kassou in Burkina western regions germinated to 86% after 18 month storage in a cool room at 4°C.

Dormancy and pretreatment

Removing the covering structures from the seeds, improves the rate of germination. Extraction is done manually by pulling apart opposite wings.

Sowing and germination

At temperatures of 15 to 35°C 70% of seeds germinate; the optimum temperature for germination is between 25 and 30°C, where 100% of seeds germinate.

Table 1. Germination data from MSBP, of seeds were sown on 1% agar.

Pretreatment	Temp (°C)	Light regime	Germ(%)
-	30	8/16	75
Scarified (covering structures removed)	26	12/12	95

Selected readings

Arbonnier, M. 2004. Trees, shrubs and lianas of West African dry zones. CIRAD, Montpellier; Museum national d'histoire naturelle, Paris.

Devineau, J.L. 1999. Seasonal rhythms and phenological plasticity of savanna woody species in a fallow farming system (south-west Burkina Faso). Journal of Tropical Ecology, 15, pp. 497-513.

Seed Information Database (SID). 2004. http://www.rbgkew.org.uk/data/sid (release 6.0)

Steentoft, M. 1988. Flowering plants in West Africa. Cambridge University Press, Cambridge.

Vogt, K. 1995. A field worker's guide to the identification, propagation and uses of common trees and shrubs of dryland Sudan. SOS Sahel International, London.

THIS NOTE WAS PREPARED IN COLLABORATION WITH CENTRE NATIONAL SEMENCES FORESTIÈRES BURKINA FASO

Authors: Helen Vautier
Mathurin Sanon
Moctar Sacandé
Editor: Lars Schmidt

Millennium Seed Bank project
Wakehurst Place, Ardingly
West Sussex
RH17 6TN, UK
Phone: +44-1444 894100
Fax: +44-1444 894110
Email: msbsci@kew.org
Website: www.kew.org/msbp

Seedleaflets are a series of species wise extension leaflets for tropical forest species with special emphasis on seed technology. Leaflets are compiled from existing literature and research available at the time of writing. In order to currently improve recommendations, FLD encourage feedback from users and researchers who have experience with the species. Comments, corrections, improvements and amendments will be incorporated into future edited leaflets. Please write your comments to: SL-International@life.ku.dk