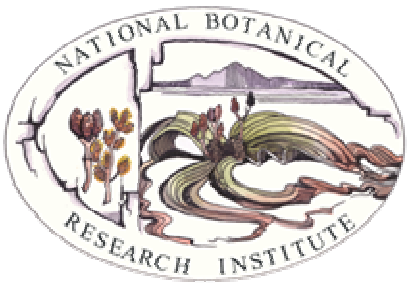

This report was generated from the SEPASAL database (www.kew.org/ceb/sepasal) in August 2007. This database is freely available to members of the public.

SEPASAL is a database and enquiry service about useful "wild" and semi-domesticated plants of tropical and subtropical drylands, developed and maintained at the Royal Botanic Gardens, Kew. "Useful" includes plants which humans eat, use as medicine, feed to animals, make things from, use as fuel, and many other uses.

Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources. By August 2007, over 700 Namibian species had been updated.

Work on updating species information, and adding new species to the database, is ongoing. It may be worth visiting the web site and querying the database to obtain the latest information for this species.

Ochna pulchra Hook.

Family: OCHNACEAE

Synonyms

None recorded

Vernacular names

!Kade Bushmen (Southern Africa)	kera [1171]
!Kung Bushmen (Southern Africa)	tee [1171]
Afrikaans (Namibia)	barnardgif [1304], boesmanbakkies [5087], lekkerbreek [5083] [5087] [5088] [5098] [5121], lekkerbreekboom [1304], morelelle [1304], ysterhout [1304], zeerbos [1304]
Afrikaans (Southern Africa)	lekkerbreek [1171] [3045] [5082]
Barakwengo-Bushmen (Namibia)	ki?l? [5087], kyal? [5087]
English (Botswana)	mickey [5093], mouse bush [5093], peeling plane [5093], peeling-bark plane [5093]
English (Namibia)	peeling plane [5111], peeling-bark ochna [5083] [5121]
English (Southern Africa)	peeling plane [1171] [3045], peeling-bark ochna [5082]
English (Zimbabwe)	peeling-bark ochna [5082]
Gciriku (Namibia) [plant]	udjwe [5087] [5098]
German (Namibia)	Fettstrauch [5083]
Herero (Namibia)	eruvize [5083] [5087] [5098]
Jul'hoan (Namibia)	!ai [5083] [5088], #kwe:i [5083], kokxuima [5083], lei [5083], lwe:i [5083]
Kung Bushmen (Namibia)	!ai [5098], !ei [5087] [5098]
Kwangali (Namibia) [fruit, plural]	nonzwe [5087]
Kwangali (Namibia) [fruit, singular]	nzwe [5087]
Kwangali (Namibia) [plant]	muzwe [5087] [5098]
Kwangali (Southern Africa)	njwe [1171]
Kxoe (Namibia)	kyala [5083] [5121]

Lozi (Namibia)	munyelenyele [5083] [5087], muywela [5083] [5087] [5121]
Lozi (Southern Africa)	munjerinjere [1171]
Luvale (Southern Africa)	kafuco [1171], mufuka [1171], wamcana [1171]
Ndebele (Southern Africa)	iminyelenyele [1171], imwima [1171], nyelenyele [1171]
Norekau Bushmen (Namibia)	!ei [5083] [5087]
Oshikwanyama (Namibia)	omumuwe [1304] [5083] [5098], omumwe [5087] [5098]
Oshindonga (Namibia)	omweeguki [5087] [5098]
Oshiwambo (Namibia)	omue [1304] [5083] [5098]
Punguvlei (Namibia)	!kaie [5111]
Rukwangali (Namibia)	ghushwe [5083], muzwe [5083] [5121], nzwe [5083]
Rumanyo (Namibia)	muzwe [5083], ndjuwe [5083], udjwe [5083]
SeTswana (Botswana)	monyelenyele [5093], motlhakolane-wa-lejwe [5093], mozwe [5093], muyui [5093]
Shambyu (Namibia) [fruit]	ndjuwe [5087]
Shambyu (Namibia) [plant]	udjwe [5087] [5098]
Shangaan (Southern Africa)	nzololo [1171]
Shona (Southern Africa)	muchedza [1171], muchoa [1171], mumbinu [1171], munino [1171], munzerenanga [1171], muparamhoswa [1171], muparamoswa [1171], muparamota [1171], murezerenange [1171], musonzoa [1171], mutswatswari [1171]
Thimbukushu (Namibia)	muywe [5083] [5087], thindhwe [5083]
Thimbukushu (Namibia) [fruit]	ndhwe [5083] [5087]
Thimbukushu (Namibia) [plant]	ghuywe [5083] [5087] [5098]
Thonga (Southern Africa)	muswe [1171]
Tswana (Southern Africa)	monyelenyele [1171]
Vasekele (Namibia)	!kaie [5111]

Distribution

Plant origin	Continent	Region	Botanical country
Native	Africa	South Tropical Africa	Angola [1332], Mozambique [5480], Zambia [5481], Zimbabwe [5419]
		Southern Africa	Botswana [5104] [5700], Caprivi Strip [5121], Namibia [5104], Transvaal [5104]
		West-Central Tropical Africa	Zaire

Descriptors

Category	Descriptors and states
DESCRIPTION	Evergreen; Single Stemmed [1171]; Deciduous [1171] [3045] [5121]; Erect; Terrestrial; Shrub [1171] [1304] [3045] [5098] [5101] [5104] [5121]; Semi-evergreen/Semi-deciduous [1332]; Tree [1171] [1304] [1332] [3045] [5082] [5088] [5098] [5101] [5104] [5111] [5121]; Perennial [5104]; Fragrant - inflorescences [5082]; Plant Height 0.3-10 m [1171] [5104]
SOILS	Deep [5111]; Boulders/Rocky [1171] [5082]; Sandy [1171] [3045] [5082] [5111]; Loamy [5111]; Dry
HABITAT	Lowland [5082]; Woodland [5082]; Shrubland/Bushland/Scrub [3045] [5082]; Hillsides/Slopes [1171] [5082] [5121]; Dunes [5121]; Watercourses [5121]; Plains [5121]
PRODUCTION AND VALUE	Potential Material Uses [1340]; Potential Environmental Uses [5121]
FURTHER DATA SOURCES	Botanical Illustration [1171] [5082] [5093] [5121]; Additional References [5203] [5311] [5351] [5370] [5612] [5741] [6053]; Regional Distribution Map [3045] [5082]; Botanical Photograph [3045] [5082] [5121]; Databases [5123] [5327]; Habit Illustration/Photograph [5082] [5088]; Grid Map [5093] [5121] [5123]
SEPASAL DATASHEET STATUS	All Data Transferred from SEPASAL Paper Files [6040]
CHEMICAL ANALYSES	Poisonous Compounds - stems [5098]; Poisonous Compounds - leaves [1340] [5098] [5121]; Vitamins - leaves [5111]; Unspecified Carbohydrates - infructescences [187]; Unspecified Lipids - infructescences [1340]; Poisonous Compounds - seeds [1340] [5098]; Unspecified Carbohydrates - seeds [187]; Unspecified Lipids - seeds [1171] [1340] [5082] [5118] [5121]; Nutritional Analyses - infructescences [187]; Nutritional Analyses - seeds [187]; Other Analyses - leaves [5098]; Proteins - infructescences [187] [1171]; Other Analyses - seeds [5082]; Proteins - seeds [187] [5118]; Vitamin B1 (thiamine) - infructescences [187]; Vitamin B1 (thiamine) - seeds [187]; Polysaccharides - unspecified parts; Vitamin B7/Vit. P-P (nicotinamide, nicotinic acid) - infructescences [187]; Vitamin B7/Vit. P-P (nicotinamide, nicotinic acid) - seeds [187]

Uses

Major use	Use group	Specific uses
FOOD	Infructescences	oils/fats; fruits [1171] [1332] [1340]; fruits, oils/fats [1304] [5098] [5111]
	Seeds	seed oil, oils/fats [1340] [5082] [5088] [5098] [5118] [5121]; sugar; kernels, raw [1171]
ANIMAL FOOD	Fertile Plant Parts	seeds, concentrates
	Aerial Parts	stems, browse; old leaves, cattle [1340]; forage [1582]
MATERIALS	Unspecified Materials	seeds, soap [5082] [5098]; fruits, polishers [1304]; fruits, skin cosmetics [5111]; fruits [1340]; seed oil, soap [5098]
	Wood	carved wood; wood, carved wood, pipes (smokers') [5088] [5111]; wood, mortars [5088] [5111]; wood, carved wood, spoons [5088]; wood, wood, ornaments [3045]; stems, wood, arrows [1304]; wood, carved wood, snuff boxes [1304]; trunks, wood, mortars [5101]
	Tannins/Dyestuffs	inks [1340]
	Lipids	seed oil, oils, polishers [5121]
SOCIAL USES	'Religious' Uses	leafy stems/branches, ritual/religion/magic [5098]; inner bark, ritual/religion/magic [5098]; leaves, ritual/religion/magic [1304]
MEDICINES	Infections/Infestations	leaves, humans, malaria, oral ingestion [5098]; roots, humans, malaria, oral ingestion [5098]
	Injuries	bark, humans, burns, external applications [5111]

Picture

None recorded

Notes

VERNACULAR NAMES

Afrikaans (Namibia), lekkerbreek:
Refers to the fact that twigs are easily broken, they do not bend much before snapping cleanly [5121] .
English (southern Africa), mermaid tree:
Sometimes it is refered to as the "mermaid tree", the stem being scaly at the bottom and smooth and sensuous at the top [5082] .
Watt and Breyer-Brandwijk (1962) list many southern and Eastern African vernacular names [1340] .

DISTRIBUTION

Africa:
Found in Transvaal, Namibia, Angola, Zimbabwe, Zambia and western Mozambique [1171] .
Namibia:
Widespread and generally common in the northeast [5121] .

RARITY/CONSERVATION

Namibia:
Protected by the forestry legislation [5121] .

DESCRIPTION

Bark:
Smooth, blue-grey, flaking off in thick strips to expose a cream-coloured to orange-brown underbark; on thinner branches the growth of successive years is clearly differentiated by colour [5121] .
Flowers:
Pale, greenish-yellow; petals falling early; sepals pink to red, 12 x 8 mm [5121] .
Flowers:
Yellow, in dense racemes of 100 mm long; one single flower is about 10 mm [5111] .
Fruits:
A black berry, about 14 mm long; enclosed in the conspicuous persistent calyx [5121] .
Fruits:
Kidney-shaped, one-seeded, black drupes on the red, swollen receptacle [5101] .
Height:
0.3-9 m [5104] .
Height:
1-8 m or more [5121] .
Height:
3-7 m [5082] .
Height:
Up to 10 m [1171] .
Height:
Up to 4 m [5101] [5111] .
Height:
Up to 5 m [5098] .
Height:
Up to 9 m, usually up to 5 m in Ovamboland [1304] .

Leaves:
Simple, elliptic, 50-110 mm long, leathery; shiny, green-yellow above, duller below [5121] .
Leaves:
Strikingly yellow-green in the beginning, turning darker green in the rainy season [5111] .

FOOD - INFRUCTESCENCES

Fruits, oils/fat:
The Bushmen boil the fruit in water and skim a fat from the surface and use it as food [1332] .
Fruits, oils/fat:
The fruit has a fat which is eaten by Bushmen in Namibia but is considered inedible by Ovambos [1304] .
Fruits, oils/fat:
The fruit is used to prepare oil for cooking purposes. The fruits are boiled and the oil then separates from the kernel and flesh. The oil is skimmed off and the remaining mixture is eaten, mainly by older people [5111] .
Fruits:
Green fruits are eaten by the Kung after being roasted in ash. When ripe, the fruits are cooked and eaten with pips [1332] .
Fruits:
The berry is a major foodstuff of Bushmen because of its protein and fat content (Tanaka 1976). In areas where the nutritious fruits of Ricinodendron, Guibourtia and Tylosema esculentum are unavailable or scarce, the fatty fruits of this plant are probably a valuable source of food [1171] .
Fruits:
The thin mesocarp of the fruit is said to be edible (Codd 1951) [1171] [1340] .

FOOD - SEEDS

Kernels, raw:
The !Khu Bushmen remove the seeds from the fruit, dry them and crack them open between the teeth, eating only the kernel [1171] .
Seed oil, oils/fat:
In the Balovale district of Northen Rhodesia (Zambia) the seed is boiled to obtain the oil, which is esteemed as an edible fat (Gilges 1953) although it has an unpleasant odour [1171] [1340] .
Seed oil, oils/fat:
Ripe seed has a high oil content, which is used for cooking [5121] .
Seed oil, oils/fat:
Seeds which are rich in fat and protein are boiled in water and the edible oil is skimmed off [5118] .
Seed oil, oils/fat:
The seed oil is regarded as edible in some places of southern Africa [5082] .

ANIMAL FOOD - AERIAL PARTS

Forage:
It is one of the important woody shrubs of mixed scrub [1582] .
old leaves, cattle:
The mature leaf is regarded as good cattle feed in Botswana (Uys et al. 1952) [1340] .

MATERIALS

Fruits:
There is a possibility of the fruit being a commercial source of oil [1340] .
Wood properties:
The wood is pale brown with a curious papery feel when planed smooth [3045] .
Wood properties:
The wood is tough but liable to crack, and the branches are brittle [1340] [5082] .

MATERIALS - UNSPECIFIED MATERIALS

Fruits, seeds:
The oil from the fruit pericarp and or the seed has been used by the Bushmen of Lake N'gami for greasing the head [1340] .
Polishers, fruits:
Fat obtained from the fruits by boiling them in water is cooled to solidify and is used to polish iron, in recent times to polish guns [1304] .
Skin cosmetics, fruits:
Before vaseline was available almost everywhere, the oil from the fruit was used as a base for skin care products [5111] .
Soap, seed oil:
The seeds yield an unpleasant-smelling greenish brown oil which is used to make soap [3045] .

MATERIALS - WOOD

Arrows, stems:
Wood from smaller stems is used by boys to make arrows [1304] .
Carved wood, mortars, pipes (smoker's):
The wood is used for making tobacco pipes and for smaller mortars [5088] [5111] .
Carved wood, snuff boxes:
Snauff boxes are carved from the wood [1304] .
Ornaments:
The wood is suitable for small ornaments [3045] .

MATERIALS - TANNINS/DYESTUFFS

Inks:
The Kgatla make an ink from the tree (Miller 1948) [1340] .

MATERIALS - LIPIDS

Polishers, seed oil, oils:
Ripe seed has a high oil content, which is used for polishing metal [5121] .

SOCIAL USES - 'RELIGIOUS' USES

Leafy stems/branches, bark, ritual/religion/magic:
In order to drive evil powers from dreams at night, the Ovambo people of Namibia hung up branches in the bedroom, or they smoke the inner bark on embers at the relevent location [5098] .

SOCIAL USES - MISCELLANEOUS SOCIAL USES

Branches:
If people wish to fight, one will carry a branch, thus rendering his opponent powerless [1304] .
Leaves:
The Kwanyama women eat the leaves to make men powerless who might wish to trouble them [1304] .

MEDICINES - INFECTIONS/INFESTATIONS

Leaves, roots, humans, malaria, oral ingestion:
In the Okavango the leaves and roots are taken together with Combretum zeyheri as a malaria remedy. It can also be combined with Burkea africana, Combretum zeyheri and Diospyros chamaethamnus for the same treatment [5098] .

MEDICINES - INJURIES

Bark, humans, burns, external applications:
The bark is used to treat burns. The bark is pounded to a fine powder and placed on the burns daily until they are

healed [5111] .

MEDICINES - NUTRITIONAL DISORDERS

Young leaves, humans, tonic, oral ingestion:
The young leaves give a strengthening tonic for babies. They are mashed and soaked in water for a certain time. Then the water is squeezed out and it is either given pure or mixed with milk as a drink to the babies. It is said to be rich in vitamins and to make babies fat [5111] .

ENVIRONMENTAL USES - ORNAMENTALS

Live plant in situ, gardens:
The plant is of horticultural potential for frost-free areas as the bark, flowers and fruit are attractive [5121] .

TOXICITY/POISONOUS COMPOUNDS

Immature leaves, mature leaves:
Tests have shown that extracts of both immature and mature leaf produce toxic effects when administered subcutaneously to the South African clawed toad, the effect being predominantly on the vascular system (Uys 1952) [1340] .
In Botswana, the immature leaf has been suspected of poisoning stock. The immature leaf is said to destroy the lining of the stomach and after a period, when the animal behaves as though intoxicated, it dies (Uys 1952). The leaf is odourless and so there is nothing to deter an animal from eating it. Repeated daily feeding of the leaf and flower to a sheep has resulted in its death on the sixth day, the animal developing on the fifth day an acute diarrhoe, tympanites and respiratory symptoms. Post-mortem examination reveals general cyanosis, with pronounced hyperaemia of the lungs, ruminal contents in the respiratory tract and acute catarrhal duodenitis and jejunitis (Steyn 1931) [1340] .
Leaves:
The young leaves are toxic [5121] .
Seeds:
The unpleasant-smelling greenish brown oil yielded by the seed has been reported to be poisonous, but in some places it is regarded as edible and is much esteemed [5082] .
The cake obtained after the oil is extracted contains no alkaloid but has been suggested (Steyn 1949) that preliminary toxicity tests are essential before it can be considered safe as a stock feed [1340] .
The shoots, leaves and seeds are poisonous. Experiments have shown the both young and mature leaves contain active toxin. Symptoms of poisoning manifest mainly in the vascular system, also respiratory distress, severe haemorrhage and diarrhoea. Autopsy shows rumen contents in the respiratory tract, general cyanosis, hyperaemia of the lungs, acute catarrhal inflammation in the duodenum and jejunum [5098] .

CHEMICAL ANALYSES - MISCELLANEOUS

Fruit and seed:
Moisture 63.2 g/100g, ash 0.9 g/100g, protein 6.3 g/100g, fat 7.5 g/100g, fibre 1.5 g/100g, carbohydrate 20.6 g/100g, energy value 735 kJ/100g, Ca 34.1 mg/100g, Mg 45.9 mg/100g, Fe 1.0 mg/100g, Na 1.74 mg/100g, K 232 mg/100g, Cu 2.65 mg/100g, Zn 1.85 mg/100g, P 74.6 mg/100g, thiamin 0.04 mg/100g, riboflavin 0.08 mg/100g, nicotinic acid 0.9 mg/100g [187] .
Fruits, kernel, oil:
A yield of 32.9% of oil was obtained from the whole fruit, with a residuum of 7% in the cake (Facer 1925). Another report gives 0.5% from the fruit and 0.8 to 0.9% from the kernel (IMperial Bureau of Animal Nutrition 1936) [1340] .
Seeds:
The seeds are rich in fat and protein [5118] .
Seeds:
The seeds yield an unpleasant-smelling greenish brown oil [5082] .

CONSTRAINTS - MISCELLANEOUS

The wood is liable to crack, and the branches are brittle [1340] [5082] .

ALTITUDE

Southern Africa:
450-1615 m [5104] .
Southern Africa:
Occurs at medium to low altitudes [5082] .

TOPOGRAPHY/SITES

Namibia:
Found in various habitats but mostly plains [5121] .

SOILS

Namibia:
Widely distributed on deep sands and loamy sands in west Bushmanland, Namibia [5111] .
Southern Africa:
Very characteristic of rocky sandstone slopes and sandy areas [1171] [5082] .

VEGETATION

Southern Africa:
Occurs in open woodland and bushveld [5082] .

FLOWERING/FRUITING/SEED SET

Flowering, Namibia:
August to November [5121] .
Flowering, Namibia:
Flowers together with the new leaves, from September onwards and is amongst the first trees to flower after the dry season [5111] .
Flowering, southern Africa:
August to November [5082] .
Fruiting, Namibia:
October to January [5118] [5121] .
Fruiting, southern Africa:
October to January [5082] .

CYTOLOGY

For the genus, x = 7 (polyploidy) [5150] .

ACKNOWLEDGEMENTS AND DATASHEET PROGRESS

Updated for southern Africa by M. Sinkela; checked by A. Jarvis; SEPASAL Namibia, National Botanical Research Institute; November 2005 .

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