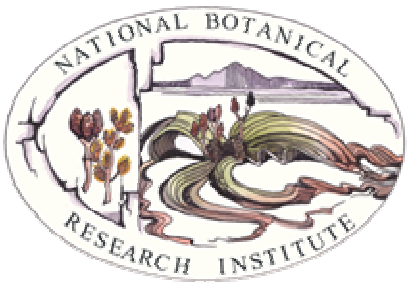

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Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources.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

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In names list include: synonyms vernacular names **and display:** All names per page

Your query found 3 taxa

Sclerocarya birrea (A.Rich.)Hochst. subsp. birrea [1362] [1669]

Family: ANACARDIACEAE

Synonyms

Spondias birrea A.Rich.
Poupartia birrea (A.Rich.)Aubrév.

Vernacular names

Arabic (Sudan)	homeid, hameid, el hemaidai
Bambara (Chad)	gna [1782], kuna [1782], kunan [1782], n'guna [2211]
Boran (Kenya)	didissa [2211]
Borana (Kenya)	didisa [2719]
Chonyi (Kenya)	fula (fruit) [2719], mfula [2719]
Dagbani (Ghana)	mu-mugga [2211]
Digo (Kenya)	mngongo [2719], mng'ongo [2719]
English	cider tree [2719], morula [2719]
French	prunier [1782]
French (Burkina)	prunier [2659]
Giriama (Kenya)	mfula [2719], mufula [2719], tulafula (fruit) [2719], fula [2719]
Gourmanche	bu namagbu [1782], namabu [1782]
Hausa	dan'a, dania [1782] [2211]
Ilchamus (Kenya)	imang'wai [2719], imang'wa [2719]
Issala	burunogo [2211]
Kamba (Kenya)	muuw'a [2719], mauw'a (fruit) [2719]
Luo (Kenya)	ong'ong'o (Gwasi) [2719], ng'ong'o (Kanyamwa) [2719], olemo [2719], mang'u (Kadem) [2719]
Maa (Kenya)	olmang'uai [2719], ilmang'ua (plural) [2719]
Maasai	olmangwai
Marakwet (Kenya)	arol [2719], oroluo (singular) [2719]
More	bunamagabu [1782], noabega [1782], noabegha [1782], nobega [1782]
Nankani	nanogba [2211]
Peul	beri [1782], edi [1782], eri [1782], hedehi [1782], hedi [1782] [2211], kede [1782], here
Pokot (Kenya)	oroluo [2719], oroluwo [2719]
Sabaot (Kenya)	kotelalam [2719]
Sebei	katetalam [2211]
Serer (West Tropical	ari [1782]

Africa)	
Sonrai	diney [2211]
Swahili (Kenya)	mng'ongo [2719], mongo [2719], mungango [2719]
Tamachek	tauila'h [1782], touhila [1782], tuwila [2211]
Teso (Kenya)	ekajikai [2719]
Tugen (Kenya)	tololokwo [2719]
Turkana (Kenya)	ekajiket [2719]
Wolof (Senegal)	ber [1782], birr [1782] [2211]
mbeere (Kenya)	mukomothi [2719]

Distribution

Plant origin	Continent	Region	Botanical country
Native	Africa	East Tropical Africa	Kenya [1362] [2211], Tanzania [1362], Uganda [1362] [2211]
		Northeast Tropical Africa	Chad [1362] [2211], Ethiopia [1362] [2211], Sudan [1360] [2211]
		West Tropical Africa	Benin [1360] [2211], Burkina [2211], Ghana [1360] [2211], Guinea, Guinea-Bissau [1360] [2211], Ivory Coast [1360] [2211], Mali [1360] [2211], Niger [1360] [2211], Nigeria [1360] [2211], Senegal [1360] [1362] [2211], The Gambia [1360] [2211], Togo [1360] [2211]
Status Unknown	Africa	South Tropical Africa	Angola

Descriptors

Category	Descriptors and states
DESCRIPTION	Deciduous [1782] [2719] [2774]; Erect; Dioecious [2719]; Terrestrial; Shrub [2719]; Tree [1597] [1782] [2719] [2774]; Perennial; Plant Height 3-15 m [1597] [2211] [2719]; d.b.h. <= 100 cm [2211]
SOILS	Laterites [2211]; Boulders/Rocky [1597] [2719]; Gravels/Stony [2211]; Sandy [2211] [2719]; Dry [2211] [2719]; Loams [2719]
HABITAT	Woodland [1362] [1597]; Shrubland/Bushland/Scrub [1597]; Wooded Grassland [1362] [1597] [1782] [2211] [2719]; Hillsides/Slopes [1362] [1597] [2719]; Outcrops/Kopjes/Inselbergs [1362]; Watercourses [1597] [2719]; Altitude 100-1800 m a.s.l. [1362] [1597] [2719]
WOOD PROPERTIES	Workability - Easy [1782]; Degradation on Drying - Common [1782]
PRODUCTION AND VALUE	Traded Locally [1782]
FURTHER DATA SOURCES	Included in PROTABASE [5450]; Regional Distribution Map [5361] [5450]; PROTA - Precursor volume [5361]
SEPASAL	All Data Transferred from SEPASAL Paper Files; Nomenclature Checked

DATASHEET STATUS	
CHEMICAL ANALYSES	Poisonous Compounds - aerial parts [1782]; Unspecified Flavonoids - bark [2211]; Unspecified Flavonoids - leaves [2211]; Unspecified Lipids - infructescences [2211]; Unspecified Lipids - seeds [2211]; Tannins - bark [2211]; Tannins - leaves [2211]; Amino-Acids - infructescences [2211]; Essential Oil Analyses - seeds [2719]; Amino-Acids - seeds [2211]; Vitamin C (ascorbic acid) - infructescences
CLIMATE	Annual Rainfall 200-1100 mm [1523] [1782] [2211]

Uses

Major use	Use group	Specific uses
FOOD	Bark	savoury preparations [2719]
	Leaves	famine food [2659]
	Infructescences	fruits, raw [229] [623] [1782] [2719]; fruits, alcoholic beverages [549] [2719]; fruits, non-alcoholic beverages [549] [1782]; infusions/tisanes [1110]; fruits, wines [2719]
	Seeds	kernels [1188] [1782]
FOOD ADDITIVES	Infructescences	fruit juice, sweeteners (non-sugar) [549]
ANIMAL FOOD	Fertile Plant Parts	fruits, goats [2719]; fruits, game mammals [2719]
	Aerial Parts	bovines, browse [549]; fodder, dry season [549]; camels, browse [549]; leafy stems/branches, fodder [1782]; browse [1334]
INVERTEBRATE FOOD		edible insects/caterpillars/larvae [549]
MATERIALS	Fibres	bark, cord/string/twine [1334] [1782]; bark [549] [2719]
	Wood	floors [1334]; fences [1334] [1782]; furniture [1334] [1782]; veneer [1334]; axe handles [549]; wood, plates/bowls [549] [623] [1782] [2719]; carved wood [1334] [1782] [2719]; mortars [549] [1782] [2719]; saddles [1334] [1782]; membranophones; pestles [1782]; turned wood [1782]; depilatories [549]; containers/holders [549]; match sticks [1334]; shoes [1334]; printing agents [1334]; wood, stools [2719]; wood, beehives [2719]
	Tannins/Dyestuffs	wood, dyes [1782]; gum, inks [549] [1782]; bark, dyes [2719]
	Lipids	kernels, oils [1782]
	Other Materials/Chemicals	bark, cleansers [2719]
FUELS	Miscellaneous Fuels	wood, fire starters
	Fuelwood	
VERTEBRATE POISONS	Mammals	leaves [1782]; seeds, humans [2719]; seeds, game mammals [2719]; seeds, goats [2719]
MEDICINES	Unspecified Medicinal Disorders	mammals [1782]; bark, humans [3039]; bark, humans [2719]; roots, humans [2719]
	Blood System Disorders	bark, humans, spleen [2719]
	Digestive System Disorders	bark, humans, laxative [549] [1782]; fruits, humans, laxative [549]; bark, humans, stomachic [549]; mammals [549]; humans, purgative [549]; bark, humans, diarrhoea [2719]; humans, teeth [2719]
	Endocrine System Disorders	bark, humans, diabetes mellitus, oral ingestion [2211]; leaves, humans, diabetes mellitus, oral ingestion [2211]
	Infections/Infestations	bark, humans, malaria, lotions [1782]; roots, infestations; roots, scabies [549]; bark, humans, leprosy [549] [1782]; bark, humans,

		syphilis [549] [1782]; bark, humans, digestive system [549] [1782]; bark, humans, lotions [1782]; roots, humans, schistosomiasis, potions [549]
	Inflammation	bark, external applications [549]; bark, humans, eyes, external applications [549]
	Pain	bark, humans, teeth, analgesic, potions [1782]; bark, humans, analgesic [549]; bark, humans, head, analgesic, ointments [1782]; bark, humans, eyes, ointments [1782]; bark, humans, teeth, analgesic [549]
	Poisonings	bark, humans, snake bites, potions [549] [1782]; leaves, humans, snake bites, potions [549] [1782]; roots, humans, snake bites, potions [1782]; bark, humans, snake bites, external applications [1782]; leaves, humans, snake bites, external applications [1782]; roots, humans, snake bites, external applications [1782]
	Skin/Subcutaneous Cellular Tissue Disorders	bark [549]
ENVIRONMENTAL USES [1782] [2719]	Shade/Shelter	

Picture

None recorded

Notes

NOMENCLATURE/TAXONOMY

A quite variable species, especially in leaf shape, fruit size and taste. The two subspecies may be distinguished by the shape of the leaflets; ssp. Birrea; leaflets are usually shorter with obtuse or acute tips, and ssp. caffra (Sond.) Kokwaro (syn:
S. caffra Sond.); leaflets have narrower and more elongate tips [2719] .

DISTRIBUTION

Found from Senegal to Ethiopia and widespread in Kenya, e.g. in Lambwe Valley; Ruma National Park, Moyale, Ortum; West Pokot and Baringo [2719] .

DESCRIPTION

Branches:
Branchlets thick [1597] .
Flowers:
Whitish-purple to red, the males in 7-22cm long racemes, the females much shorter; petals 4-6mm long [1597] .
Fruits:
Yellow, obovoid, 2.5-7.5cm long [1597] .
Height:
3.5-15m [1597] .
Leaflets:
Obtuse or acute at the apex, usually less than 3cm long [1597] .
Leaves:
With 7-21 leaflets, these elliptic or (ob)ovate, 1-9 by 0.7-3.5cm, margins entire or (on young growth) serrate-dentate [1597] .
Nuts:
Contain 2 or 3 seeds with oily kernels [549] .

Height:
15 m [2719] .
Crown:
Rather dense rounded d [2719] .
Bark:
Grey, finely fissured, scaling [2719] .
Leaves:
Pinnate, borne at tips of branchlets that end bluntly. Leaflet margins entire or undulate [2719] .
Flowers:
Female flowers reddish, borne on long stalks at the tips of branches [2719] .
Fruits:
Light green, oval or nearly globose, 3-4 cm long, turning yellow on ripening. Fruit skin tough, leathery, enclosing a juicy white pulp and a single large hard nut [2719] .
Bark:
Grey, cracked [1597] .

FOOD - BARK

Savoury preparations:
Added to boiling Balanites pedicellaris cotyledons in the last hour of the 10 hours of cooking to improve taste and colour by the Pokot [2719] .

FOOD - LEAVES

Famine food:
The leaves are eaten in Mali in times of scarcity [2659] .

FOOD - INFRUCTESCENCES

Dessert fruit, raw:
Ripe fruit eaten raw, fruit cover removed often after squeezing the fruit several times and the cream fruit pulp sucked. Pleasantly acidic and strongly scented [2719] .
Fruits, Juices:
Make a refreshing drink [2719] .
Fruits, alcoholic drinks:
In southern Africa, the fruits are used for making a kind of alcoholic drink [2719] .
Fruits:
The fruit pulp has a pleasant acid taste [1782] .
Fruits:
If ripe (fallen) fruit is eaten in large amounts humans and animals may become intoxicated [1782] .

FOOD - SEEDS

Seeds:
Are edible. The stone is cracked and the contents eaten raw by the Pokot, Kamba [2719] .

FOOD ADDITIVES - INFRUCTESCENCES

Fruit juice:
Boiled down to thick black consistency and used for sweetening guinea-corn gruel [549] .

ANIMAL FOOD - FERTILE PLANT PARTS

Fruits, goats:
Eaten by goats. The seeds are regurgitated and are still of value to humans among the Pokot [2719] .

ANIMAL FOOD - AERIAL PARTS

Browse:
Good for all stock [1334] .
Fodder, dry season:
Branches are sometimes lopped for fodder in the dry season although the leaves and shoots are said to be slightly poisonous [1782] .

INVERTEBRATE FOOD

Edible insects/caterpillars/larvae:
A borer which attacks the tree is eaten by some people [549] .

MATERIALS

Wood properties:
Soft and medium-light [1782] .
Wood properties:
Low strength [1782] .
Wood properties, degradation on drying:
Dries rapidly with severe distortion and a tendency to collapse, splits strongly [1782] .
Wood properties, workability:
Easily worked with well sharpened tools [1782] .
Wood properties, workability:
Saws well when seasoned [1782] .
Wood properties, workability:
Holds nails, not easy to impregnate [1782] .
Wood properties, workability:
Easy to turn and carve [1782] .
Wood properties, finish:
Easy to polish [1782] .

MATERIALS - FIBRES

Bark:
A strong fibre is made from the bark [549] [1782] .

MATERIALS - WOOD

Match sticks:
Used in Sudan in match manufacture [1334] .
Shoes:
Used as shoe heels [1334] .
Printing agents:
Used to make printer's blocks [1334] .
As trees attain large diameters the wood is preferred for pestles, mortars, bowls and various crafts, saddles, furniture and fencing [1782] .
Containers/holders:
Milking vessels [549] .
Plates/bowls:
Used to make bowls and platters [549] .
Depilatories:
Ash is used to dehair goat skins before tanning [549] .

MATERIALS - TANNINS/DYESTUFFS

Wood, dyes:

The ashes are used for dyeing [1782] .
Gum, inks:
An ink is made from the light coloured gum mixed with soot and water [1782] .

MATERIALS - LIPIDS

Infructescences:
The fruit and kernels of the seeds are oily, yielding 60 litres of oil per ton of fruit [2211] .

MATERIALS - OTHER MATERIALS/CHEMICALS

Cleansers, bark:
Used for cleaning gourds used in beer brewing. It is left for 3-4 days then washed out [2719] .

FUELS - FUELWOOD

A source of soft fuelwood, takes time to dry [2719] .

VERTEBRATE POISONS - MAMMALS

Seeds, humans:
Children are advised against swallowing the seed as it can easily cause choking [2719] .
Leaves:
The leaves are said to be slightly poisonous [1782] .

MEDICINES - UNSPECIFIED MEDICINAL DISORDERS

Roots, humans:
Decoction added to milk as child's health drink by the Pokot, Maasai [2719] .
Bark, humans:
Decoction added to milk as child's health drink by the Pokot, Maasai [2719] .
Mammals:
Uses in veterinary medicine are recorded occasionally [1782] .

MEDICINES - BLOOD SYSTEM DISORDERS

Bark, humans, spleen:
Decoction used for adults with enlarged spleen [2719] .

MEDICINES - DIGESTIVE SYSTEM DISORDERS

Bark, humans, diarrhoea:
Decoction used for diarrhoea [2719] .
Bark, humans, liver:
Decoction used for liver diseases by the Pokot [2719] .
Humans, teeth:
Medicine for toothache by the Swahili [2719] .
Bark, laxative:
Bark decoction, usually mixed with parts of other medicinal plants, is used as a laxative [1782] .
Mammals:
Veterinary appetite stimulant [549] .
Bark, stomachic:
Bark infusion taken for stomach pains [549] .

MEDICINES - ENDOCRINE SYSTEM DISORDERS

Leaves, bark:
The plant can be used to regulate glycaemia and it improves carbohydrate consumption at muscle level. A decoction of the leaves or bark is used in the treatment of sugar diabetes [2211] .

MEDICINES - INFECTIONS/INFESTATIONS

Bark, humans, dysentery:
Used for the treatment of dysentery by the Pokot [2719] .
Bark:
Bark (mainly root bark) decoctions are used to treat dysentery and infections [1782] .
Bark, lotions:
Bark decoction, usually mixed with parts of other medicinal plants, is used as a lotion to treat malaria and other infections of children [1782] .
Bark:
Bark decoction, usually mixed with parts of other medicinal plants, is used to treat syphilis and leprosy [1782] .
Roots, scabies:
Used for washing scabies [549] .
Roots, schistosomiasis:
Roots pounded with water and taken for schistosomiasis [549] .
Bark, digestive system:
Bark infusion mixed with natron taken for dysentery [549] .

MEDICINES - INFLAMMATION

Bark, external applications:
Anti-inflammatory [549] .
Bark, eyes:
Used externally for blepharitis [549] .

MEDICINES - PAIN

Bark, toothache:
Bark (mainly root bark) decoctions are used to treat toothache [1782] .
Bark, ointments:
Together with butter applied as an ointment for headaches and pains of the eyes [1782] .
Bark, teeth, analgesic:
Chewed as an analgesic for toothache [549] .
Bark, analgesic:
Bark infusion eases labour pains [549] .

MEDICINES - POISONINGS

Snake bites:
Leaves, bark and roots are used externally (as a rub) and internally (beverage) for snakebite [1782] .

MEDICINES - SKIN/SUBCUTANEOUS CELLULAR TISSUE DISORDERS

Bark:
Used to treat skin eruptions [549] .

NUTRITIONAL VALUE

Fruits, vitamin C:
Exceptionally high in vitamin C [2719] .

TOXICITY/POISONOUS COMPOUNDS

Fruits, mammals:
Ripe fruits in Botswana fall from the tree to the ground where they ferment naturally and can be quite intoxicating to humans, goats and wild game [2719] .
Leaves and shoots said to be slightly poisonous [1782] .

CHEMICAL ANALYSES - MISCELLANEOUS

Fruit pulp, kernels:
Contain glucides, amino-acids (glutamic and arginine acid), and lipids (oleic, myristic and stearic acid) [2211] .
Leaves, bark:
Contain catechic and gallic tannins and flavonoids [2211] .
Kernels:
Stones contain up to 6% oil [1782] .
Kernels:
Contain 64% oleic acid, 17% myristic acid [549] .

RAINFALL

May be as low as 300 mm per annum; in higher rainfall areas, 450 - 800 mm the tree is often conspicuous as an emergent through the canopy of the neighbouring savanna trees [2211] .
200 - 700 (1100) mm [1782] .
(200) 400 - 800 (1100) mm [1523] .

ALTITUDE

500-1,600 m [2719] .
800-1800m [1597] .

TOPOGRAPHY/SITES

Rocky hills [1597] .
Often on rocky hills [1362] .
A widely distributed in the dry zones [2719] .
Occur on dry rocky riverbeds [2719] .

SOILS

Usually on sandy soils, sometimes on lateritic or stony soils [2211] .
Few specific requirements; found on sandy or stony soils and on lateritic crusts [1782] .

VEGETATION

Riverine woodland [1597] .
Mixed deciduous woodland, wooded grassland [1362] .
The dryer savannas of northern tropical Africa [2211] .
Open dry savanna and Sahel zone [1782] .

FLOWERING/FRUITING/SEED SET

Fruiting, Kenya:
Fruits in April-May in Kerio Valley, Baringo, Makueni and Sultan Hamud, in July in Homa Bay and Lambwe Valley [2719] .
Fruiting, Botswana:
Fruiting has been achieved in about 3 years in grafted plants [2719] .
Fruiting:
In the Sahel and northern Senegal fruits are borne from April-June, at the end of the dry season [229] [1782] .

Flowering, Sahel:
January-April/May [1782] .

GERMINATION

Due to the hard coat, seeds require pre-treatment by nicking or applying concentrated sulphuric acid to enhance germination [2719] .

SEED WEIGHT

400 seeds/kg [1782] .
400-450 seeds per Kg [2774] .

PROPAGATION FROM SEED

This species does not readily propagate itself by seed [2719] .
Propagated by seed. Seeds should be soaked the night prior to sowing [1782] .

PROPAGATION - VEGETATIVE

Botswana:
Varieties with exceptionally large fruit have been bred [2719] .
Propagated by cuttings and gregarious root suckering [1782] .

'CROP' MANAGEMENT

The species does not respond well to coppicing [2719] .

TRADE

Fruits sold by the Pokot [2719] .
The oily, edible stone is occasionally sold on local markets [1782] .
The edible fruits are commonly sold in West African markets [549] .

ACKNOWLEDGEMENTS AND DATASHEET PROGRESS

Data transferred from Traditional Food Plants of Kenya by Maryam Imbumi, KENRIK, National Museums of Kenya, August 2004, Beentje 1994 .
Data transferred from original datasheet with additional information from von Maydell (1990) (M Daily-Hunt 1/3/96) [1782] .

ADDITIONAL DATA SOURCES

Treated at the species level in PROTA (Plant Resources of Tropical Africa) [5361] [5450] .

MISCELLANEOUS NOTES

May be locally uncommon in Kenya [2719] .
This is the marula fruit which is much valued in southern Africa, especially in Botswana [2719] .

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