

## Kalahari Plants and their traditional uses

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### 1. Introduction

This guide is intended for visitors to the Kalahari Meerkat Project who wish to have some more background about plants growing on the project's land, and their traditional uses. Guide books are available at both farm houses, on request.

This guide lists the bushmen's traditional and present uses of various Kalahari plants also growing at the KMP; uses by people in other parts of Africa are given as a reference.

Traditionally, bushman women spent 3-4 days a week gathering veldkost (wild plants), often going out in groups to search for edible or medicinal plants. Furthermore, before the advent of trade with Bantu or white settlers, all tools, construction material, weapons or clothes were made of plants or animal products.

About 400-500 local plants and their uses were known to bushmen, along with the places where they grew – not only providing a balanced nutrition, but also moisture from roots even in time of drought. Plants were used in ways similar to western phytomedicine to treat wounds and heal illnesses; other plants were rather part of healing ceremonies in which a healer would burn plants to make rain, trance to heal an ailment, or perform a charm to bring fertility. The range of ailments treated included wounds including snake bites, colds, stomach ache, tooth ache or headache, or diarrhea but also infections like malaria, tuberculosis, or syphilis. One bushman plant, *Hoodia gordonii*, even made the worldwide news since it was patented by a pharma company as a diet support due to its traditional bushman usage to suppress appetite and hunger – a law case against “bio piracy” ensued, with the parties settling to royalties being paid to bushmen organisations.

The bushmen's diet and relaxed lifestyle have prevented most of the stress-related diseases of the western world. Bushmen health, in general, is not good though: 50% of children die before the age of 15; 20% die within their first year (mostly of gastrointestinal infections). Average life expectancy is about 45-50 years; respiratory infections and malaria are the major reasons for death in adults. Only 10% become older than 60 years.

### 2. Sources

The descriptions in this guide were taken from <http://www.sigridleger.de/book/>

Sigrid Leger's book “The Hidden Gifts of Nature - A Description of Today's Use of Plants in West Bushmanland (Namibia)” is unfortunately no longer in print. The content was thus made available online by the author, and is protected by copyright for other than non-commercial purposes.

Additional information was taken from the book “Kalahari - Aus dem Pflanzenreich: Floristische und ethnobotanische Betrachtungen” by Walter A. Kremnitz et al. This German book is also out of print.

Uses of plants other than by bushmen were compiled based on data available on the internet.

This guide is intended to give an insight in the rich knowledge of bushmen. Further information on uses of other Kalahari plants is available at the sources mentioned, or on request.

### 3. Overview of bushmen's uses of several plants present at the KMP

Scientific name	English name	Parts used	Use, indication (medicine)	Other uses (not bushmen)
Acacia erioloba	Camelthorn	Gum; seeds	Candy, Coffee Surrogate	Pods as fodder (elephants!); firewood; powdered pods against ear infections; gum against gonorrhoea; powdered bark ash against headache; root infusion as mouthwash against tuberculosis (swallowed) or toothache; roasted seeds as coffee substitute.
		Wood	Beams, fencing posts; firewood	
		Root infusion	Mouthwash toothache, drink against tuberculosis	
Acacia mellifera	Black thorn	Wood	Cups, containers, walking & digging sticks	Fodder; milky sap to induce vomiting; boiled bark against belly pain, pneumonia, malaria.
		Core wood	Sticks, cups, beakers	
Boscia albitrunca	Shepherd's tree	Dried and roasted roots as flour or porridge		Fodder; leaf infusion against eye infections in cattle; flower buds like capers;
		Roasted roots as coffee surrogate		
		Brew of young roots	Hemorrhoids	
Citrullus lanatus	Tsama melon	Roastes seeds; flesh of non-bitter varieties		
Dichrostachys cinerea	Bell mimosa, Kalahari Christmas Tree, Sicklebush	Brew of leaves	Ophthalmitis	Pods and twigs as fodder; bee forage; firewood; wood for tools; bark against headache, toothache, dysentery, elephantiasis; root infusions against leprosy, syphilis coughs, as an anthelmintic, purgative and strong diuretic; leaves (beaten) against epilepsy, diuretic and laxative.
		Crushed leaves	Local anaesthesia	
		Mash of chewed roots on wound	Snake bite	
		Wood of stem	Beams	
Grewia flava	Velvet raisin, brandybush	Fruit fresh or dried		
		Fruit fermented to beer		
		Bark fibres	Baskets, mats etc.	
Searsia tenuinervis = Rhus tenuinervis	Kalahari currant	Fruit fresh or dried, also soaked as porridge		Dry roots as arrowheads; smoke to rob bee-hives, crushed leaves for prevention and cure of bee-stings.
		Leaves fresh and dried as condiment		
		Wood (pink)	Sticks and clubs	
Ziziphus mucronata	Buffalo thorn	Twigs, leaves and bark	Ceremonies	Berries fermented and distilled to spirit; root decoction against diarrhea with blood, stomach ulcers, vomiting with blood, coughing blood, tuberculosis.

#### 4. Camelthorn (*Acacia erioloba*)



**Description:** A fairly common tree which grows mainly on loamy sands of the omurambas. It flowers in early spring (September and October) and is one of the first trees to flower. The flowers form bright yellow balls of about 0,8cm diameter. The fruits are grey, velvety pods in a half moon shape and become visible from December onwards. The reddish brown seeds are ripe from mid May onwards.

**Use:** The tree is slow growing and consequently the wood is very hard. It makes an excellent fire wood with long lasting heat and fire. It is traditionally considered to be the best fuel wood. It is also used for poles, for hoehandles and for the pestle for pounding mahango, maize, etc.. Camelthorn is said to have soil improving qualities due to its ability of fixing aerial nitrogen.

**Medical use:** The roots are used to treat tooth ache and TB. In both cases the outer skin of middle aged roots (finger to arm thickness) is scraped away and the root itself is cut into 3-5cm long pieces. In the treatment of tooth ache, these pieces are put into cold water, brought to the boil and cooked for 5-10minutes, then removed from the water. After the infusion has cooled down a little bit, it should be swilled around the mouth, especially around the area of the tooth ache, and then spat out; it should never be swallowed. In the treatment of TB, the roots are boiled in water for about 3 minutes and the infusion is drunk 3 times a day for 1-2 months until the patient recovers. Every 3rd day a fresh infusion has to be prepared.

#### 5. Tsama melon (*Citrullus lanatus*)



**Description:** A widely distributed, annual, herbaceous creeper with long shoots up to 3-4m lying on the ground. The leaves are very rough. Yellow flowers, both male and female, are on the same plant, appearing from December to May. The fruit is a round melon up to 20cm in diameter with a greenish yellow skin and longitudinal bands of darker green. The flesh is mostly pale yellow containing many seeds which can be blue, light red, grey or white in colour.

**Use:** The roasted seeds of bitter and non-bitter varieties and the flesh of only the non-bitter varieties are eaten. Bitter varieties are regarded as being poisonous and people even refuse to use these leaves for compost production in order to avoid poisoning the soil. The seeds of selected, non-bitter melons are planted on the fields in between maize, mahango and sorghum. The flesh is more a source of refreshment and water, while the roasted seeds are a food source. The seeds are roasted in hot ash and then either eaten just like this or pounded and prepared like a soup.

#### 6. Brandybush, Velvet Raisin (*Grewia flava*)



**Description:** A common shrub up to 2m tall, that is widely distributed. The bark is grey-brown to black and the leaves are greyish-green with fine hairs on the upper side and hairier and lighter green on the under side. The flowers are yellow and star-shaped and the orange-brown fruits are of a medium size (10mm) and ripen from February onwards.

**Use:** The fruits are gathered from February up to August and are eaten in large quantities, because they have more flesh than other *Grewia* species. They are also mashed, soaked for a while in water and eaten as a porridge.

The Klaarwater Hottentots distill a spirit from the berries. The Bushmen from Botswana use the fruits to make a beer. Fruit often appears in their folktales. Khadi (the name of a native drink) appears to involve multiple plants including the fruits of *Grewia* species. *Grewia* species have been reported to contain many alkaloids including traces of B-carbolines. The production of the brew khadi is known to have arisen after the introduction of sugar by the Europeans but there is a distinct possibility that the plants involved reflects a prior ethnomedicinal familiarity to indigenous people. While the primary intoxicant of khadi appears to be alcohol, the complex of plants involved and the potential pharmacological interactions is an area in serious need of in-depth study.

## 7. Kalahari currant (*Rhus tenuinervis* = *Searsia tenuinervis*)



**Description:** A common shrub up to 1,50m tall which grows on deep sands as well as loamy sands of the omurambas. The leaves are 3-foliate, hairy and slightly toothed on the upper half. Flowers and fruits have not been observed by the author.

**Use:** The very small, brown fruits are eaten raw by children and their taste is said to be sweet.

**Medical use:** The roots provide a remedy for treating cough. The roots are put into cold water, heated until the water boils and then removed. The infusion is taken three times per day until the patient feels better.

## 8. Buffalo thorn (*Ziziphus mucronata*)



**Description:** A small, many branched tree up to 4m tall which grows on loamy sands in omurambas. The leaves are 3-veined from the base and often, there is one straight and one hooked spine at the leaf axil. The flowers are said to be small and yellowish and form clusters. The fruit is almost circular, about 1,5cm in diameter and bright red when ripe.

**Use:** The fruits are used to distill a strong spirit. They are firstly mashed and then soaked in water for 2 days before being distilled.

**Medical use:** The roots are used for treating diarrhea with blood in the stool or stomach ulcers. The roots are cut into pieces, boiled in water and then they are removed. The decoction is drunk 3 times per day for up to 2 weeks, but it has to be prepared freshly every day. The same decoction is also used for treating vomiting with blood, coughing blood and TB.