Afrika Focus, Vol. 8, Nr. 3-4, 1922, pp. 223-252

# PLANT USES BY THE TOPNAAR OF THE KUISEB VALLEY NAMIB DESERT

**Patrick VAN DAMME & Veerle VAN DEN EYNDEN & Patrick VERNEMMEN**
Laboratory for Tropical and Sub-tropical Agronomy and Ethnobotany
Faculty of Agricultural and Applied Biological Sciences
Department of Plant Production
Coupure Links, 653
B-9000 Gent BELGIUM

*SUMMARY*

*The Kuiseb Topnaar use some 50 defferent plants for food, woodfuel, consmetics, as drugs, for construction, .... The different plants are presented here and their uses discussed and compared to uses in other settings.*

## 1. Introduction

The Topnaar are the only inhabitants of the Namib desert. The name of this desert is derived from the Nama word for "endless expanse". The Namib is a long but narrow desert situated on the southwest coast of Africa and stretches from Mossamedes in Angola across the full length of Namibia to the mouth of the Olifants River in South Africa - a length of almost 2000 km. Its width varies from 90 to 120 km. This desert is considered to be the oldest desert in the world. The climate of the area has been arid or semi-arid for at least the last 80 million years. During this long history, life has adapted to the harsh conditions. The result is a high percentage of endemism amongst plants and animals. The term endemic is used to describe species which occur only in one specific area.

Apart from two perennial rivers, the Kunene and Orange River, the Namib is crossed by several ephemeral rivers. Waterflow in these rivers is only erratic and depends upon rainfall in their respective catchment areas. There is, however, a permanent subterranean waterflow, sufficient to maintain linear oases along the riverbed.

From December 1991 to June 1992, an ethnobotanical survey was conducted in collaboration with the Topnaar. All Topnaar settlements of the Kuiseb area were visited and all families interviewed. Special emphasis was placed on the older Topnaar, whose plant knowledge is the most extensive. For each plant mentioned, information on its use, the used parts and the preparation and processing method was collected. The plant specimens that could be collected in the field were identified by the authors. Because of extreme drought during this period, some plants could not be found in the field. Some of these could still be identified through literature research, relating them to the vernacular names and the plant descriptions given by the Topnaar. Others however remain unidentified to date.

Some people gave information on the use of non-plant material. This information is also included in this article.

## 2. Plants in the Kuiseb Topnaar Culture

The Topnaar are much influenced by the Western way of living. Due to this, a great part of their knowledge of plant uses is now lost. Whereas in the past they depended completely on the natural environment, this dependency has become much weaker with time.

The Topnaar of the lower Kuiseb river use one important wild food plant, the *!nara* (*Acanthosicyos horridus*). In the past this wild cucurbit was their staple food. Now corn has taken over this position, but the *!nara* still forms an important part of the Topnaars' diet. Available during 5 months of the year, the fresh *!nara* fruit is processed in such way that it can be stored for up to several years. Other food plants, besides some less important edible fruits, are short in this area.

The majority of the plants are used for medicinal purposes, even though a mobile clinic visits all villages once a month and provides the local population with medicines. Plant parts are used fresh or a decoction in water is made. The use of medicinal plants depends upon the availability of plants in the environment, the beliefs of the people, their ideas about plants, the way animals use plants, etc. It is generally known that all indigenous people look for the plants they need in the surrounding environment, to fulfill certain needs. Despite the harsh Namib environment and the scarce vegetation, also the Topnaar find medicines for all ailments.

Several plant roots are used to curdle milk in order to increase the conservation time of the milk. Also many wild herbs are used for herbal teas or

as food flavouring.

Women are known to use yet other plants to manufacture cosmetics: perfume, body powder, lotion, and the like.

Wood is not much used as a building material since garbage material is more highly prized.

Fuel is obtained from the trees found along the Kuiseb riverbed. The floods in the Kuiseb carry much dead wood and often uproot whole trees.

Witchcraft has completely disappeared due to the influence of missionaries for more than a century.

Plants are no longer used for fibres, dyes, tannins, etc.

Fodder for goats and cattle is reasonably abundant. *Acacia* pods and several herbs and shrubs form the core of the livestock's diet.

# 3. Plant Uses

The plants catalogued below are arranged by family in alphabetic order. Nonvascular, more primitive plant families are listed before the vascular plant families. Following the scientific plant name, the herbarium specimen, collected by the author, is mentioned (VdE is the abbreviation of Van den Eynden). All specimens are deposited at the National Herbarium of Namibia and duplicates are deposited at the herbarium of the DERUN. If existing, a Nama name is given, as well as the common names in English (E) and/or Afrikaans (A) as found in the literature. Each plant is briefly described and its distribution in the Kuiseb area is given. All plant uses by the Topnaar are mentioned as well as uses in other areas or by other people, as found in literature (all consulted books and articles are mentioned in the literature list). Botanical terms are explained in the glossary.

**Family**

English name of the family (if existing)

***Scientific Plant name*** [registration number of herbarium specimen]

Nama *name of the plant in Nama*

Plant description and distribution

Plant uses

*Legend to the description of plants*

## 3.1 Nonvascular Plants

### Alariaceae

***Ecklonia maxima*** (OSBECK) PAPENFUSS

Nama *huri‖ hâb, huri‖ hāb, ‖ gam|gûib*

The botanical name *Ecklonia* is derived from Ecklon (1795-1868), a pharmacist, who collected many plants in the Cape Colony. This marine plant, which can grow up to 7 m long, has a dense cluster of flat pinnae (leaves) and is found on the coasts of southern Namibia and South Africa. When mature the stipe (stem) becomes hollow and the terminal part forms a large float. This marine plant is only found where the sea water temperature does not exceed 15° C.

The stem of this seaweed is roasted and ground. The powder that is thus obtained (mixed with vaseline) is rubbed on wounds and burns. This treatment prevents infection and accelerates healing.

### Basidiomycetes

***Battarea sp.***

Nama *!ôasâb*

This light brown fungus is found on the banks of the lower Kuiseb river. It grows approximately 25 cm high, has a cap of 8 cm in diameter and exhibits a dull powdery appearence. Due to insufficient research, this fungus has not yet been conclusively identified. According to a preliminary study however, it may be *Battarea guicciardiniana* CES (K.M. JACOBSON, personal comment).

The spores are rubbed on burns to reduce the pain and hasten healing. They are also rubbed on rough spots of the body. Spores (mixed with fat or *!nara* oil or a red ground stone called *!naui* ) are used as a cosmetic. It also protects the skin from sunburn and drying out.

PISANI (1983) says the mixture of *Battarea* spores and fat is also rubbed on infected udders of cows and ewes.

### Lichenes

***Parmelia hottentotta*** (THUNB.) ACH.

Nama *|ui‖ khaob*

A lichen is a fungus living in symbiosis with algae. Many lichens are found in the fog area of the Namib desert. *Parmelia hottentotta* has a grey-green thallus up to 4 cm high and grows on the Swartbankberg. Although several lichen species are used by the Topnaar people, *Parmelia hottentotta* is the easiest to gather because of its upright habit and large dimensions. The generic name refers to the shape of the lichen (*Parma* (Lat). shield, locket) and its specific

name to its distribution in the Hottentot territory.

The ground lichen is used as a deodorant or perfume. A decoction is drunk to cure coughs and to relieve stomach and chest pains.

## 3.2 Vascular Plants

### Amaranthaceae

***Arthraerua leubnitziae*** (KUNTZE) SCHINZ

Nama *saris*

Common name ink bush (E)

This bush is common on the gravel plains of the central and northern Namib, where often it represents the only vegetation. The eastern limit of its distribution corresponds to the limit of the coastal fog belt. The plant cannot absorb fog directly, but utilizes water that accumulates on the soil surface through its roots. The stems of this plant are segmented, succulent and forked (furcated), up to 50 cm long, with small triangular leaves that are often reduced to scales. The small flowers, surrounded by dry, greyish bracts, grow in dense inflorescences at the end of the stems. The outer part of the perianth is covered with silky hairs, the inside is scarlet.

A decoction of the roots is drunk to ease tremblings.

### Arecaceae

Palm family

***Phoenix dactylifera*** L.

Nama -

Common names dadel (A), date palm (E)

Date palms were introduced in the Kuiseb delta by the Germans, who planted them in the garden of a missionary post near Rooibank (Schepmannsdorp). Since then, these trees have spontaneously multiplied and extended their range. This tree has a cylindrical stem covered with the remains of old leaf-bases. The very large leaves are composed of long linear leaflets, which are irregularly spaced in 2 rows. Male and female small white flowers, grouped in large inflorescences, are found on separate trees.

The fruits are the well-known dates. They are eaten fresh or dried. A decoction of the roots is drunk to treat tuberculosis.

The origin of this tree lies in Arabia and North Africa, but nowadays it is cultivated in many countries. The heart of the stem is edible. The sap is drunk fresh or distilled into a spirit by people other than the Topnaar.

**Asclepiadaceae**
Milkweed family

***Hoodia currori*** (HOOKER) DECNE
Nama *!khowab, !khobab*

This succulent plant, named after Van Hood, himself a famous grower of succulents, and Dr. A.B. Curror, a plant collector in Angola in the 1840's, is found in rock crevices of inselbergs in the Namib. The 12-18-ribbed straight stem of 10-20 cm high and 2.5-5 cm thick bears conical thorns on the ribs, but has no leaves. The stem contains a clear fluid. The large salmon-purple flowers of about 6 cm in diameter have a hairy and papillose corolla and triangular corolla-lobes. Each flower develops into a pair of follicles. These fruits of about 12 cm long split open and release many winged seeds which all have a tuft of silky hair.

The stems are eaten raw after the removal of the outer skin and thorns. Eating this lowers high blood pressure, cures colds and indigestion and relieves stomach pains. The flesh is applied to the eyes to relieve eye pains. Pieces of the stem added to sugarwater give a refreshing drink.

***Orthanthera albida*** SCHINZ [VdE 3.4.a]
Nama *|arib*

This erect half-shrub, with hairless, pale greyish stems grows in washes on gravel plains and in the mountains of the Central Namib. The linear leaves of 3-50 by 1-2 mm are often reduced to scales and are absent at flowering time. The sessile flowers, which are apple-green on the inside and greyish on the outside of the corolla, grow in groups halfway up the slender stalks. The green, blackish marbled follicles are up to 10 cm long and 1-2.5 cm wide. They split open when ripe to release many brown seeds with long white hairs.

The stems are chewed to clean the teeth. Drinking a decoction of the stems or chewing the stems relieves stomach pains. For the same reason roots can be used. A decoction of the ground seeds is drunk to cure kidney and back diseases. The root is put in beer to improve its flavour. The fruits are eaten, mainly by children. Young fruits are eaten completely, but in the case of old fruits only the inner part of the peel is eaten (the outer part and the seeds are removed).

***Pergularia daemia*** (FORSK.) CHIOV. ***var. daemia*** [VdE 14.2.d, VdE 6.2.e]
Nama *!gubib, !guwib, dai!gubib, |gūtama || ōb*

The name of this strong herbaceous twiner with milky latex, which often covers shrubs and trees along riverbeds, is derived from the Latin word *pergŭla*, penthouse, as the plant can be used to overgrow penthouses. The stems are covered with 1 mm or longer stiff erect hairs and bear opposite, heart-shaped leaves of 2-12 cm long. The greenish-white flowers have a double white corona

at the base of a staminal column. The fruits are paired follicles of 5-8 cm long and 1 cm in diameter, covered with short fleshy prickles and release many seeds with long white hairs when they split open.

Latex added to drinking water creates a poison which can be used to kill any animals. A decoction of the roots is drunk as a remedy for venereal diseases and vein problems. The powder obtained by roasting the root (or leaf) and grinding it is applied to wounds.

In Botswana and South Africa (Zululand), the leaves are eaten as a wild spinach. The latex or a decoction of the roots is used in many countries as a medicine to treat several illnesses, such as venereal diseases, arthritis, muscular pains, asthma, rheumatism, snake-bites, etc. The latex may also be used as a fish poison.

***Pergularia daemia*** (FORSK.) CHIOV. ***var. leiocarpa*** (K. SCHUM.) H. HUBER [VdE 11.5.f]

Nama *!gubib, !guwib, dai-!gubib, ǀgūtama ǁ ōb*

This plant is similar to *Pergularia daemia var. daemia*, but the leaves are smaller (1.5-6 cm long) and the stems are either covered with short 0.5 mm long bristly hairs or completely hairless.

This plant is used in the same way as *Pergularia daemia var. daemia*.

***Trichocaulon pedicellatum*** SCHINZ

Nama *ǀgoab*

This leafless succulent grows on mountains, e.g. the Swartbankberg, in rocky crevices. The 12-30-ribbed short columnar stem, found erect or procumbent, bears 1-3 mm long thorns on the ribs. As the word *pedicellatum*, derived from the Latin word *pedicellus* (flower stalk) indicates, the red-brown flowers are stalked and grow in clusters on the top of the stem. They are about 1.5 cm in diameter, hairless but papillose on the inside and have a double corona. The fruits are long, slender follicles.

This plant is used in the same way as *Hoodia currori*, but tastes very bitter.

## Asteraceae

Daisy family

***Aspilia eenii*** S. MOORE [VdE 5.4.i]

Nama *damadawib*

The slender, up to 12 cm long and 1-1.5 cm wide leaves of *Aspilia eenii* grow opposite each other and are covered with short hispid hairs. This plant is striking due to its large bright yellow flowerheads of about 3 cm in diameter, which flower the whole year round. It is frequently found in the Kuiseb delta.

The root may be put in milk to induce curdling and to improve its flavour. This makes a sort of yoghurt, that lasts longer than fresh milk.

***Blumea decurrens*** (VAHL) MERXM. [VdE 2.4.e]

Nama *tunub*

*Blumea* is named after C.L. Blume (1796-1862), a former director of the National Herbarium of the Netherlands. This half-shrub, growing on the bank of the Kuiseb and widespread in central and northern Namibia, is densely covered with silvery hairs. The linear leaves (up to 3 cm long and 5 mm wide) continue as wings on the stem. *Decurrens*, from the Latin verb *decurrere* (to run down) refers to these winged stems. The whitish-yellow flowerheads are short and tubular and grouped in terminal inflorescences.

A decoction of the leaves or the roots is drunk to relieve stomach pains. This extraction is also used to wash the body; it acts against acne. The leaves are put in the shoes to relieve painful feet. The stalks were in the past used in the construction of huts and are nowadays still used to thatch roofs. This p ractice makes the roof impermeable.

The Ovambo of northern Namibia use heated leaves as a facial poultice to relieve colds. In Botswana the steam of boiled leaves is inhaled to cure flu.

***Kleinia longiflora*** DC.

Nama -

Common names sambokbossie (A)

Mr. J.T. Klein (1685-1759) from Danzig was the author of several botanical books. This 60-75 cm high half-shrub, named after him, has erect, succulent stems, which are ribbed when dry. The slender leaves are slightly succulent, about 5 cm long and 3-4 mm wide and fall off quickly. The homogamous flowerheads have 5 or 6 bright-red flowers. This plant is common near the Swartbankberg and grows mostly in calcareous conditions.

A decoction of the stems is drunk to relieve toothache and headache.

The Ovambo drink this same decoction to induce vomiting. An extract of fresh roots is used in Botswana for the same purpose.

***Pechuel-Loeschea leubnitziae*** (KUNTZE) O. HOFFM. [VdE 9.2.a]

Nama *autsi!khanneb*

Common names bitterbush, stinkbush (E), bitterbos (A)

The genus *Pechuel-Loeschea* grows only in southern Africa and *P. leubnitziae* is the only existing species. This up to 2 m high shrub is very common along riverbeds throughout the whole Namib. Thick stands may form on riverbanks and it is one of the most common plants in the Kuiseb area. The plant looks greyish because of the fine pubescence covering all plant parts. The linear leaves contain aromatic oils and have a characteristic smell. Numerous lilac, tubular flowerheads embellish the shrub. They look like small shaving brushes.

This plant is used medicinally in different ways. An extract of the leaves

is drunk to treat gonorrhoea, fever, colds, chest and stomach pains. The vernacular names refer to the very bitter taste of this extract. The extract is also used cutaneously for the treatment of measles, sores and skin disorders and for the desinfection of wounds. The extract may also be heated to produce vapour. The patient both exposes his body to the vapour as well as inhales it to cure colds and coughs and to treat skin disorders. The crushed fresh or dried leaves are applied to wounds. Warmed leaves are used as a poultice to relieve both painful feet and headaches. An extract of the root is drunk as a tuberculosis remedy.

The Himba men mix roasted, ground roots with fat and rub this on their neck as a cosmetic. They also drink an extract of the roots to treat gonorrhoea or use it cutaneously for venereal and skin diseases. The Ovambo drink a leaf decoction for fever and inhale plant fumes to relieve colds.

***Senecio marlothianus*** O. HOFFM. [VdE 4.4.g]

Nama *!gâ!gaub*

This tomentose pubescent herb has inverted egg-shaped leaves, with serrated margins. The white-yellowish flowerheads grow solitary on very long, leafless stalks of 10-25 cm. The flowerheads are cylindrical, about 1 cm in diameter, and homogamous (all flowers on the flowerhead have the same shape and are bisexual). *Senecio*, from the Latin word *senex*, old man, alludes to the appearance of white fluff on the fruits shortly after flowering. This plant is most common in the more humid areas of Namibia, but grows also in the Kuiseb riverbed. The specific name *marlothianus* is derived from H.W.R. Marloth (1855-1931), who studied the flora of South Africa extensively.

The root can be added to home-brewed corn beer to flavour it. The root is wrapped in a cloth, put in the sun, crushed and then added to the beer.

***Tagetes minuta*** L. [VdE 2.4.d, VdE 18.4.k]

Nama -

Comon names stinkbos, kakiebos (A), khaki bush (E)

On the bank of the Kuiseb further east of Homeb grows this annual herb, a native of South America. It exudes a strong, pungent smell. The opposite, pinnate leaves with linear leaflets are covered with oil-glands. The small yellow flowerheads are composed of 2 or 3 whitish-yellow bisexual flowers and 2 to 4 yellow sterile, petal-like flowers. The involucre is also covered with oil-glands.

The leaves can be added to tea to flavour it. The dried, ground leaves are also used as a perfume.

The volatile oil, distilled from the plant, may be used as a repellent for blowfly and as a pesticide. In South America and southern Africa, an infusion or decoction of the plant is used as a lotion for haemorrhoids, and is drunk

to relieve stomach pains and to deworm a patient. This decoction also acts diuretically and purgatively. Powdered leaves are sniffed by Zimbabweans to stop nose bleeds.

**Caesalpiniaceae**

Cassia family

***Parkinsonia africana*** SONDER [VdE 1.4.d]

Nama -

Common names peulboom (A), wild green-hair tree (E)

This tree takes its name from J. Parkinson (1567-1650) an English pharmacist, royal botanist and himself an owner of a botanical garden. *Parkinsonia africana* grows in bare, arid areas and near dry riverbeds. Some trees are found in the mountains of the Kuiseb valley. Growing up to 6 m high, this thorny tree has bipinnate leaves composed of one pair of pinnae of 4-20 cm long, and 5-15 pairs of minuscule elliptic leaflets (5 by 1.5 mm) with thorny stipules. The yellow flowers develop into long linear reddish-brown pods up to 12 cm long and 0.8 cm wide, slightly constricted between the seeds.

The roasted and ground seeds can be added to coffee to improve its taste. In the past the wood was used to make pipes as it does not crack when hot.

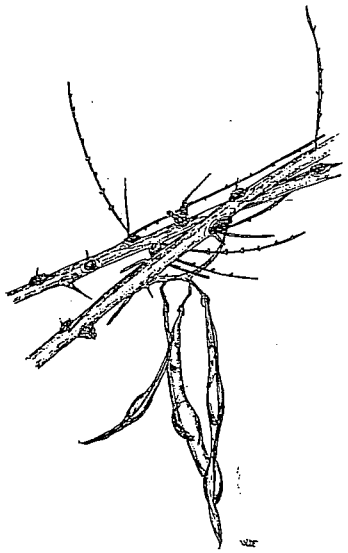

*Figure 1: Parkinsonia africana*

## Capparaceae

Caper family

***Boscia albitrunca*** (BURCH.) GILG & BENEDICT [VdE 20.6.d]

Nama *|hunib*

Common names witgat, witstamboom (A), caper bush, shepherd's tree (E)

*Boscia* is named after the French professor in agriculture, L.A.G. Bosc. As the name *albitrunca* (*albus* (Lat.) white; *truncus* (Lat.) trunk) suggests, this small tree has a smooth, flaking white bark with some grey or yellow patches. The tree grows in the more humid savannah area east of the Namib. Its green leathery, lanceolate leaves grow single or clustered on twigs. The small flowers are greenish-yellow, star-shaped, without petals but with numerous yellow stamens and grow in dense racemes. The fruit is a round, pale yellow, smooth-skinned berry about 1 cm in diameter. Each berry consists of a fleshy white pulp surrounding a single hard seed.

A decoction of the leaves is dripped into the ears to relieve earaches.

There exist many other uses of this tree in southern Africa. The berries are edible and can also be made into a sweet drink by mixing them with water or milk. Young roasted and ground roots are used as a coffee substitute. The roots are also prepared as a food in several ways and are used in the fermentation of beer and the curdling of milk. Medicinally *Boscia albitrunca* is used as a remedy against several diseases: a root infusion to treat haemorrhoids and the green fruits against epilepsy.

***Boscia foetida*** SCHINZ ***ssp. foetida*** [VdE 19.6.j, VdE 13.2.c]

Nama *xaube|hunis*

Common names stinkbush, smelly shepherd's tree (E), stinkdoorn, witgatboom (A)

This shrub or small tree of up to 5 m in height, is common on riverbanks and washes throughout the Namib. Its branches are stout, covered by a smooth, grey bark and often end in a spine. The small inversed egg-shaped to lanceolate leaves are leathery, hairless and grow in clusters. As the species name (*foetidus* (Lat.) stinking, smelly) suggests, the small yellowish-green flowers of 2-3 mm long, smell unpleasantly. The fruits are spherical berries, yellowish-brown, densely hairy and about 1 cm in diameter.

A decoction of the leaves and twigs is dripped into the ears to relieve earaches and into the eyes to relieve eye pains.

The Bushmen use a decoction of the leaves for the same purposes. The berries and roots are edible. Before eating the roots, they are first pounded and cooked into a porridge. The root is also used as a chicory substitute. A decoction of the plant is drunk to stimulate lactation and relieve back pains.

These last uses occur all over southern Africa.

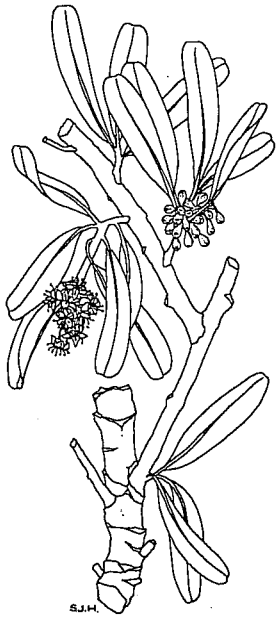

*Figure 2: Boscia foetida ssp. foetida*

***Capparis hereroensis*** SCHINZ [VdE 21.4.a]

Nama *sirub*

This shrub owes its specific name to its distribution in the Herero territory. It also grows in the sand dunes of the Kuiseb delta and the Southern Namib. It traps windblown sand and thus forms hummocks. The long stalked leaves are oblong, 3-6 cm long, 1-3 cm wide and leathery. The stipules are transformed into short thorns. The large, white, tetramerous solitary flowers of approximately 3-4 cm in diameter, develop into large green elliptic berries of 5 cm long, with dark green lines on their surface. The generic name is derived from the Arab word for caper (*kabar*).

The Topnaar eat these fruits raw. Some authors note that this plant is poisonous. It is not mentioned however which plant part is meant.

***Maerua schinzii*** PAX [VdE 13.2.h, 14.2.a, 21.6.e]

Nama *goradab, goardab*

Common names kwarda, lammerdrol (A)

This is a shrub or small tree of up to 7 m high which exhibits simple, oblong, alternate leaves, 4-6 cm long and 1.5-3 cm wide. These are leathery

and covered with rough hairs. It can be found throughout the Namib, along the rivers, in mountain ranges and on inselbergs. The white flowers have very short or no petals, and numerous white stamens which give the flowers a star-shaped appearance. The fruit is a long, narrow green capsule, constricted between the seeds like a string of pearls. The specific name goes back to H. Schinz, professor in botany and director of the Botanical Garden of Zürich, who visited South West Africa (Namibia) in the late 19th century.

The body can be washed with a decoction of the leaves to treat skin disorders and acne and in cases of fever or weakness. The Topnaar people use a decoction of the leaves instead of soap to wash themselves. The body is also washed with this decoction when an improvement in mood is required.

Pounded leaves are sniffed by the Ovambos to relieve headaches. The Bushmen use the root as a tonic, by chewing it or wearing it around the neck as an amulet.

## Cucurbitaceae

Cucumber family

***Acanthosicyos horridus*** WELW. ex HOOK F.

Nama *!nara(b)*

Common names nara bush, butterpits (seeds) (E)

The scientific name describes the plant perfectly. *Acanthosicyos* is a composition of the Greek words *akantha* (thorn, spine) and *sikuos* (cucumber, gherkin), together meaning a spiny cucurbit. *Horridus*, from the Latin verb *horrere*, to shudder, to be rough, again refers to its roughness and spinosity.

2-3 cm long paired, straight, sharp spines grow on longitudinally grooved stems. The plant has no leaves. Photosynthesis occurs in the green spines, stems and flowers. Male and female flowers grow on seperate plants in the axils of the thorns. They are yellow-greenish and about 3 cm in diameter. The female flowers, easily recognized by the inferior warty ovary, develop into green melon-shaped fruits, up to 15 cm in diameter and covered with small, thorny protuberances. Many cream-coloured seeds, called butterpits, are embedded in an orange-yellow protein-rich pulp.

This shrub is endemic to the coastal part of the Namib desert and grows only in sand dunes where subterranean water is present. The plants trap sand and thus form hummocks, which can be up to several meters high. The thick taproot goes as deep as the water table and root lengths of 40 m have been measured. In the Kuiseb area, *Acanthosicyos horridus* grows mainly south of the river, close to the coast. It often is the only plant species found in the dunes. The Topnaar call this area where only large *!nara* hummocks occur the *!nara* fields.

Archaeological studies indicate that the *!nara* has been a food for humans living in the Namib desert during the past 8000 years. SANDELOWSKY (1990) discovered *!nara* seed shells of 8000 years old at Mirabib Hill Shelter in the Central Namib desert. The patterns of breakage on the shells closely resemble those observed on seed shells collected from the yards of present day Topnaar houses.

In the past the *!nara* was the staple food of the Topnaar living in the lower Kuiseb valley, consequently also called *!Naranin* (people of the *!nara*). Today the *!nara* still plays an important role in their diet.

The harvesting season of the *!nara* lasts from about November till May. Many Topnaar families still move to the *!nara* fields for some months to harvest and process the *!nara* fruits locally. When the fruits are ripe, they are collected and buried in the soil or put in the sun for a few days to make them softer.

In the traditional preparation, the fruits are peeled and boiled for some hours, until the pips are released from the pulp and the pulp becomes deeply orange and thick. Then the pips are separated from the pulp by sieving. The pips are dried in the sun for a few days and thereafter stored in bags. They are eaten like nuts or ground and added to dishes. A portion of the pips are sold to Walvisbay traders, who export them to Cape Town, where they are eaten raw (called butterpits) or used in confectionery. The taste is similar to that of almonds and the pips are highly nutritious: they contain up to 57 % oil (peanuts e.g. contain 42- 52 % oil), which has a high percentage of poly-unsaturated fatty acids, and 31 % protein. The boiled pulp is poured on the sand or on bags and dried in the sun for a few days. This dried pulp forms flat cakes called *≠goakaribeb*. These cakes can be chewed or added to porridge. This preparation and drying allows the Topnaar to store the *!nara* for months and eat it the whole year through.

The fresh fruit can also be eaten raw and has a pleasant fruity taste but contains cucurbitacins which burn the mouth. Eating the fresh fruit relieves stomach pains. The raw pips, separated from the pulp by rubbing them in the sand, are eaten raw or roasted.

The *!nara* is not only an important food plant. A decoction of the very bitter roots is called a life elixir and is used to cure many internal diseases, such as venereal diseases, stomach pains, nausea, kidney problems, arteriosclerosis and chest pains. For curing the same ailments the roots can be chewed. Some people say it cures all diseases and heals you within a day. The crushed root, mixed with fat is rubbed on wounds to hasten healing.

Oil from the raw or boiled pips is used to moisturize the skin and protect it from sunburn. For this treatment the pips are ground in a mortar and this mixture is rubbed on the skin. The remaining seed shells and kernels are

wiped off afterwards.

The peels of the fruit are fed to donkeys and goats and the pips to chicken.

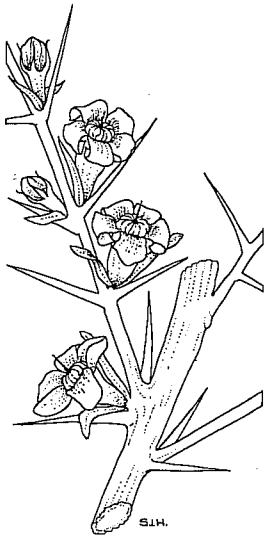

*Figure 3: Acanthosicyos horridus*

***Citrullus ecirrhosus*** COGN.

Nama *tsamab*

Common names tsama melon, bitter apple (E), bitterappel (A)

*Citrullus* is the diminitive form of *Citrus*, meaning low plant with lemon-like fruits (much larger than the real lemon though). This poorly branched creeper without tendrils is found in washes on the gravel plains or in dry riverbeds of the Central Namib. The leaves are deeply 3-5-lobed and have stiff white hairs on the veins of the upperside and the whole underside. Male and female yellow flowers grow on the same plant, solitary in the leaf axils. The large fruits are spherical, about 8 cm in diameter, and dark green mottled. The bitter, inedible pulp surrounds many brown-black seeds, which are roasted and eaten.

The seeds are also eaten by the Bushmen of the Kalahari. The Ovambos mix the seed oil with red ochre to make a cosmetic.

## Cyperaceae

Sedge family

***Cyperus marginatus*** THUNB. [VdE 19.6.c, VdE 23.3.e, VdE 8.2.f, VdE 12.5.e]

Nama *|harub*

*Cyperus* is derived from the Greek word *kupeiros*, meaning a plant with fragrant roots, as some species indeed have fragrant roots (e.g. *C. rotundus*). *Cyperus marginatus* grows on moist places in riverbeds. This perennial grassy herb has a woody rhizome, cylindrical leafless stems of 30-90 cm high and small, inconspicuous flowers, arranged in many finger-shaped spikelets.

The stalks are used to thatch roofs. In the past the Topnaar plaited mats with *Cyperus* stalks.

**Ebenaceae**

Ebony family

***Euclea pseudebenus*** E. MEYER ex A.DC. [VdE 17.1.b]

Nama *tsabis, tsawis*

Common names black ebony, Cape ebony, false ebony (E), swartebbe, basterebbehout (A)

*Euclea pseudebenus* grows along all dry riverbeds in the Namib. It is called false ebony (*pseudebenus*) as its black heartwood resembles ebony. This tree's pendant branches bear slender leathery leaves, which are ten times longer than wide. The botanical name *Euclea*, meaning glory in Greek, is most appropriate when one sees this shady tree with abundant foliage growing in dry riverbeds. Male and female white-yellowish flowers grow on separate trees. The female flowers develop into spherical fleshy pea-sized berries.

The wood of this tree is used as fuelwood, for the construction of houses and kraals and in the manufacture of utensils. The roots are chewed to clean the teeth. The leaves are browsed by livestock and the berries can be fed to chickens.

The fruits are edible but quite astringent. The heartwood is extensively used in southern Africa for wood carving.

**Euphorbiaceae**

Spurge family

***Ricinus communis*** L. [VdE 31.3.n, VdE 21.6.p]

Nama *|khēras*

Common names castor bean (E), kasterolieboom (A)

This shrub, reaching up to 4 m high, is a very common alien in all river valleys of the Namib. The base of the shrub is woody whilst the upper branches are herbaceous, having large palmately lobed leaves up to 30 cm long. The unisexual flowers grow on the same plant, male flowers at the top and female flowers at the base of terminal spikes. The spiny, dehiscent fruit (about 2.5 cm long) is composed of 3 carpels, each containing 1 mottled seed. These seeds resemble sheep ticks, called *ricinus* in Latin.

In cases of mumps or toothache, the *Ricinus* seeds are ground, boiled and rubbed on the swollen cheek (or fat is rubbed on the swollen cheek). The whole is covered with a warmed leaf and a compress. The roasted and ground seeds are applied on burns and wounds. A warmed leaf can be used as a poultice on wounds and skin diseases, also on painful knees or breasts and on the throat in cases of throat pains.

*Ricinus communis* is used worldwide as a medicine to treat several diseases, e.g. rheumatism, fever, diarrhoea, nervous disorders, ulcers, toothache, earache, external parasites, bilharziasis, ... The unbroken seed is strongly purgative, but at the same time extremely toxic: 2 or 3 seeds are lethal.

**Fabaceae**

Pea family

***Cullen obtusifolia*** (DC) STIRTON [VdE 15.2.f, 4.4.n, 7.2.h.]

Nama *!honab*

This perennial herb is densely covered with white hairs and glands and secretes a sweet aromatic smell. It is found in the Kuiseb riverbed following a flood, as well as in mountains and dunes. As its name indicates (*obtusus* (Lat.), obtuse and *folium* (Lat.), leaf) its trifoliate leaves are indeed obtuse and have dentate margins. Small purple papilionaceous flowers develop into small oval pods. Three such flowers are grouped in a hairy, glandular bract.

The leaves or the whole plant can be added to tea for flavouring. This tea whets the appetite. Adding the root to milk gives the milk a good taste and curdles it into a kind of yoghurt. An extraction of the plant in water or milk, or tea made from it, is drunk for the relief of stomach pains and post-natal pains. This is also given to goats after parturition. The Damara also use the root to curdle milk.

***Tephrosia dregeana*** E. MEYER [VdE 14.2.g, 17.1.a]

Nama *!henaǀhab*

The word *Tephrosia* is of Greek origin and refers to the ashy colour of this plant's leaves. *Dregeana* goes back to J.F. Drège (1794-1881) who travelled widely in southern Africa and collected many botanical specimens there. This annual or perennial herb, up to 1 m high, grows on the gravel plains of the Central Namib and in the Kuiseb canyon. The odd-pinnate leaves consist of 2-5 pairs of linear leaflets (3-9 by 0.2-0.8 cm). The small lilac papilionaceous flowers, growing in racemes, develop into small yellowish-green pods, 15-30 by 3-4.5 mm. These are slightly beaked and contain 3-5 seeds.

The Kuiseb's Topnaar add the root of this herb to milk to curdle it into yoghurt.

**Geraniaceae**

Geranium family, Cranesbill family

***Monsonia sp.*** L.

Nama *harapab, rabab, bosui (seeds), surube (unripe seeds)*

*Monsonias* in the Namib are erect or creeping herbs with opposite, heart-shaped leaves and stipules. The flowers develop into a 5-partite, beaked splitting fruit. During the present research, only the seeds of this herb were seen. These tear-shaped orange-brown seeds are 2-3 mm long and surrounded by a darker brown shell. The plant could thus not be identified to the species level.

The seeds are collected by ants. The Topnaar gather these seeds from the ant nests and add them to tea or roast and grind them and add them to coffee for a better flavour. Also the leaves are used to improve the flavour of tea. Baked seeds can be eaten.

**Lamiaceae**

Mint family, Sage family

***Ocimum canum*** SIMS [VdE 8.2.ç]

Nama ǁ*gammeb, ǀgaubeb, !gaubab*

The fragrant leaves of this annual herb give a fresh flavour to tea. These leaves are slender, 1-4.5 cm long and hairy (*canum* (Lat.) grey, hairy). The plant grows in the Kuiseb riverbed after floods or rain. Typical for the mint family are the quadrangular stems, which reach a height of about 30 cm, and the labiate flowers arranged in whorls. The flowers of *Ocimum canum* are pink-violet. The generic name is derived from the Greek verb *azein*, to smell strongly.

The crushed roots are used as a body powder.

In Tanzania, the leaf is used as a remedy for bilharziasis and snake-bites. In West Africa the plant is burnt to repel mosquitos. The smoke of the burning leaves may be inhaled by the Sotho of South Africa to stop nose-bleeding. The same smoke is in Zimbabwe inhaled or the body is washed with an infusion to stop convulsions.

**Liliaceae**

Lily family

***Aloe asperifolia*** A. BERGER

Nama *aukoreb*

The Greek word *aloe* means a bitter component of vegetative origin. The leaves of most *Aloes* contain a bitter juice. This stemless, succulent plant has fleshy, falcate, grey-green leaves of 15-25 by 4-7 cm with thorns on the

margins. They grow in rosettes, supported by 3-4 mm wide stipules. The specific name, *asper* (Lat.) meaning rough and *folium* (Lat.) leaf, refers to the roughness of the leaf surface. 28 mm long scarlet tubular flowers grow grouped together in a 70-80 cm high inflorescence. *Aloe asperifolia* grows in washes and crevices of calcareous mountains, such as the Swartbankberg.

A decoction of the leaves is drunk to treat arteriosclerosis, kidney problems, asthma, epilepsy and colds. The decoction is drunk by people and livestock to induce discharge of the afterbirth. The same decoction is given to donkeys when they have eaten poisonous plants. The leaves are chewed or a decoction of it is drunk for the relief of stomach and chest pains. A leaf is added to the drinking water of chickens should they suffer from a disease, the symptoms of which are falling over and paralysis.

***Aloe dichotoma*** MASSON

Nama ǁ*garab*

Common names kokerboom (A), quiver tree (E)

In the past, the hollow branches and bark of this tree were used as a quiver for arrows. The common names are derived from this use. This tree which can grow up to 6 m high has a very thick trunk and is found in the mountains of the pro-Namib. The branches are bifurcated (*dichotomos* (Gk.) means split in two) and have a smooth bark. 25-35 cm long and 5 cm wide, triangular, bluish-green leaves with serrated margins grow in rosettes at the end of the branches. The fleshy yellow flowers, up to 35 mm long, are arranged in about 30 cm long spikes.

A decoction of the root is drunk to treat tuberculosis and asthma.

## Mesembryanthemaceae

***Brownanthus kuntzei*** (SCHINZ)IHLENF. & BITTRICH [VdE 9.5.c]

Nama ǂ*naugub*

Common name wonderplant (A)

This so-called wonderplant is a succulent bush with segmented stems which resemble parts of a finger, and are covered with glittering papillae. The plant has small opposite leaves which shrivel and fall off when old. At the top of the stems develop small white flowers of about 1 cm in diameter with numerous white filiform petals and white stamens. The bush grows in washes in and around mountains, in old riverbeds, and on the gravel plains along the coast, where it traps windblown sand and thus forms small hummocks. This plant's name is derived from the South African botanist N.E. Brown and the Greek word for flower, *anthos*.

Exposing the chest to vapour obtained by boiling the whole plant is a treatment for colds, fever and flu. Inhalation of this vapour induces vomiting

and thus relieves nausea. A decoction of the stems can be drunk to relieve stomach pains, to solve constipation and to whet the appetite. The same decoction is given to animals if their stomach is inflated or if they are infestated with a tape-worm.

**Mimosaceae**

Mimosa family, Acacia family

***Acacia albida*** DEL. [VdE 12.4.g]

Nama *anas*

Common names ana tree (E), anaboom (A)

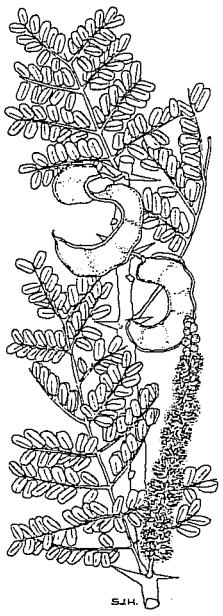

*Figure 4: Acacia albida*

The name *Acacia* is derived from the Greek word *akakia*, meaning spiny tree. *Albida* in turn refers to its white wood, twigs and thorns. This tree is the largest *Acacia* found in southern Africa and may reach heights up to 30 m. The tree is common on riverbanks and often grows together with *Acacia erioloba*. It has spreading, drooping branches and a rounded crown. The bark is dark brown to dull grey. The paired straight or slightly curved thorns are

whitish with reddish-brown tips and are up to 4 cm long. The bipinnate leaves consist of 3-6 pairs of pinnae and 7-16 pairs of small, grey-green leaflets. The leaves are smaller in drier circumstances thus reducing water loss through transpiration, and are shed at the beginning of the rainy season. The tree remains leafless until the beginning of the dry season. The cream-coloured flowers are arranged in axillar spikes (resembling brushes) and develop into large orange to reddish-brown contorted pods of 2-3 cm wide and 10-20 cm long. These pods contain very hard, brown, lenticular seeds that are protein rich (29 %).

The pods of the ana tree are the most important fodder for the goats and cattle in the Kuiseb area. Also the leaves are browsed. The wood is used as a fuel and, due to its hardness, as timber (e.g. for drinking troughs) and for furniture. The stems are used as poles for the construction of houses, kraals and fences and the bark as roofing material and wall covering.

During times of famine, the seeds are eaten by people in Zimbabwe. The tree also yields an edible gum. The Ovambo use bark strips as a dental floss. A decoction of the bark is taken against diarrhoea and fever in Tanzania.

***Acacia erioloba*** E. MEYER [VdE 17.4.a]

Nama ǁ*ganab*

Common names camel thorn (E), kameeldoringboom (A)

This large tree, 20 m or more in height, is found most commonly on riverbanks and also in the most arid regions of the Namib. The 7 cm long straight thorns, occurring in pairs, are whitish in colour and often thickened at their base. The bipinnate leaves consist of 1-3 pairs of pinnae and 8-12 pairs of small leathery leaflets. The small bright yellow flowers grow in spherical inflorescences. The pods are thick, woody and sickle-shaped, 7-10 by 3-5 cm and covered with velvety gray hairs, as expressed in its specific name (*erion* (Gk.), wool and *lobos* (Gk.), pod). They contain dark, reddish-brown, lenticular seeds which are very nutritious. Furthermore both leaves and pods contain small quantities of hydrocyanic acid, which is poisonous in large quantities.

This tree, together with *Acacia albida* forms the main perennial vegetation along the Kuiseb river. The wood is used as fuelwood and is said to be the best fuel available in the area. It produces little smoke and good quality charcoal. In the past, the Topnaar of the lower Kuiseb used to make charcoal of this tree and sell it, but this is now forbidden by the Ministry of Wildlife, Conservation and Tourism. The wood is too hard for construction purposes, but is sometimes used for furniture and fences. It is termite resistant. The pods and leaves are eaten by livestock. In periods of food scarcity, the pulp of the pods is also eaten by the Topnaar themselves. The gum, exuded from the branches, dissolved in boiling water, is drunk to cure coughs, tuberculosis and

colds. The powder obtained from between the stem and the bark is liberally applied to the body as a perfume, or is used to scent the house.

The Ovambo apply heated pods to swellings and ashes of the wood to injuries. In Namibia, a bark decoction is drunk to cure diarrhoea and a root decoction is drunk as a cough remedy. The same root decoction is used in Botswana to stop nose bleeds. The seeds are used as a coffee substitute all over southern Africa.

***Acacia tortilis*** (FORSK.) HAYNE ***ssp. heteracantha*** (BURCH.) BRENAN [VdE 18.6.c]

Nama *ǀnarab, ǀnaras*

Common names umbrella thorn (E), basterkameeldoring, krulpeul, haak-en-steek (A)

Some *Acacia tortilis* trees are found on the bank of the Kuiseb. They can grow up to 10 m high and bear thorns that are either short and hooked or long and straight (up to 7 cm long). This characteristic of the thorns is represented by the name *heteracantha*, derived from the Greek words *heteros*, heterogeneous and *akantha*, thorn. These thorns are whitish, occur in pairs, and are often thickened at their base. The bipinnate leaves consist of 5-8 pairs of pinnae and 9-16 pairs of very small linear leaflets. The yellow flowers form small, spherical inflorescences somewhat resembling balls. The pods of this tree are flat and spirally contorted, up to 6 mm wide. The name *tortilis* is of Latin origin (*torquere*) and means contorted or winding.

The gum, called *hairan* in Nama, is edible. The pods are a nutritious fodder.

***Prosopis glandulosa*** TORREY [VdE 15.2.g]

Nama *ǀnarab*

Common names honey locust (E), soetpeul (A)

A native of the U.S.A., *Prosopis* was introduced to southern Africa primarily as an ornamental but it also provided shade and fodder. This shrub or small tree, up to 10 m high, is tolerant to extreme temperatures, drought and overgrazing. It is tending, therefore, to replace the native vegetation of southern Africa. It grows on the bank of the lower Kuiseb river between Ururas and Rooibank. The branches are armed with paired or solitary straight spines. The bipinnate leaves have 1-2 pairs of pinnae and 7-22 pairs of ovate leaflets. The numerous, small yellow flowers are arranged in a long spike. The pods are about 20 cm long, straight and beaked at the end.

The pods are eaten by both people and livestock.

The pods are used by American Indians to make a stew or an alcoholic beverage. The gum exuded by the tree has been used as a substitute for arabic gum in the manufacture of adhesives and drops.

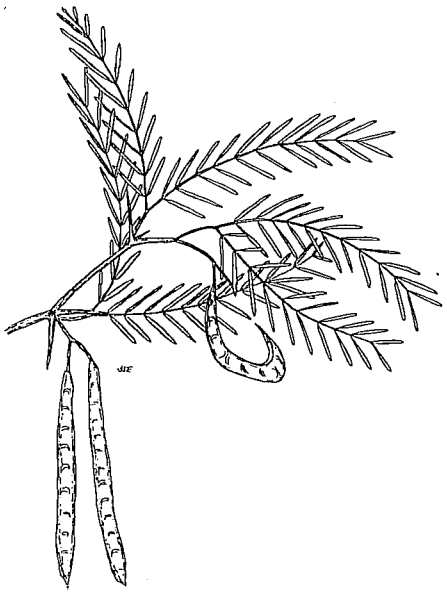

*Figure 5: Prosopis glandulosa*

**Moraceae**

Fig and Mulberry family

***Ficus sycomorus*** L. [VdE 12.4.a]

Nama ǀ*nomas*

Common names sycamore fig (E), wildevye, gewone trosvy (A)

*Ficus* is the Latin name for fig, and *sycomorus* is derived from the Greek word *sukomôros*, meaning mulberry. This wild fig tree grows up to 25 m high and is characteristically wider than it is high. It grows along the Kuiseb, although it can be found on riverbanks all over southern Africa. The bark is smooth, yellowish-brown to grey in colour and sometimes flakey. The slightly heart-shaped leaves, of up to 15 cm in length, have rough, dark green surfaces and exude a milky latex when damaged. The figs are smaller than their cultivated equivalent, 1.5-2.5 cm in diameter and grow in panicles on the main branches and the trunk. They are covered with soft hair and turn yellow when ripe.

The wild figs are eaten fresh or dried. The raw fruits can be put in a jar with sugar, which makes a kind of jam. The dried and ground fruits are used as a substitute for coffee.

A spirit is distilled from the fruits in Zambia and northern Namibia. The latex and a bark decoction are used as a remedy for chest and stomach complaints and coughs in tropical Africa. The latex is applied to inflammations.

To increase milk production when breast feeding, women in Botswana drink a bark decoction and fruits and leaves are fed to cows. The Masai use the bark as an antidiarrhoeal.

## Myrothamnaceae

***Myrothamnus flabellifolius*** WELW. [VdE 20.6.e]

Nama *!khōtorotorosen, tōtōsen, !khōtortorsen, !khō ǂgō ǂgōsen*

Common names resurrection bush (E), teebossie (A)

This plant's generic name is composed of 2 Greek words; *muron*, meaning balm and *thamnos* meaning shrub, hence together meaning a fragrant shrub. This bush has red-brown erect stems. The small opposite leaves, 5-10 mm long, fold like a fan when dry, giving the impression that the plant is completely dead. This characteristic is the source of its specific name; *flabellum* (Lat.) meaning fan and *folium* (Lat.) leaf. After the first good rains, however, the leaves unfold and are green. Even when a branch is cut off and put into some water its leaves come alive. This explains the plant's common name resurrection bush. The red-brown unisexual flowers grow in catkin-like inflorescences on separate plants. The resurrection bush grows on riverbanks, in gravel plain washes and on mountain slopes.

Leaves and stems are added to tea. They are also used as a spice.

All over southern Africa, this plant is used as a medicine. The smoke of burnt leaves is inhaled to relieve asthma and chest pains and to ease epilepsy. A leaf infusion is drunk to cure colds, kidney problems, flu, to relieve backaches and menstrual pains. The leaves can be chewed to ease inflammation of the gums. The powdered root is sniffed or a root decoction is drunk to relieve headache.

## Pedaliaceae

Sesame family

***Rogeria longiflora*** (ROYEN) D. GAY EX DC. [VdE 7.2.m]

Nama *dau|anab, ǁgam|awib*

As is the case with all Pedaliaceae, *Rogeria's* leaves smell foul. This annual herb, up to 2 m high, has large rhombic-triangular leaves. The approximately 7 cm long white, spurred flowers, which grow in groups in the leaf axils are very attractive. The most distinctive feature, however, are the woody, 4-6 cm long fruits with 2 large cone-shaped thorns. This plant is very common in the Kuiseb riverbed.

The roasted and ground seeds, sometimes mixed with fat, are applied to wounds to stop bleeding. This mixture is also rubbed on burns to provide relief from pains. Warmed leaves are used as a poultice on women's breasts

to cure cracked nipples.

**Rutaceae**

Citrus family

***Thamnosma africana*** ENGLER [VdE 5.4.h]

Nama *ǂkhanab*

Common name flea bush (E)

As the generic name implies; *thamnos* (Gk.) meaning shrub and *osme* (Gk.) fragrance, this woody, 1 m high herb is strongly aromatic. The plant is hairless but glandular and has compound leaves with 3-5 linear-spathulate leaflets (10-25 by 1-2 mm in size). The tetramerous yellow flowers, growing in terminal inflorescences, develop into green teardrop-shaped capsules, which are black-spotted due to a covering of glands.

Drinking a decoction of the whole herb induces vomiting and is used to relieve stomach pains and nausea. This decoction is also a cough remedy. Leaves are thrown on the fire to 'induce happiness'.

The Bergdamara (Namibia) drink the same decoction to treat flu, colds and infections. At the same time the body is covered with the boiled leaves and wrapped to induce sweating. The Himba use the ground roots and flowers as a fragrant neck powder. In South Africa the plant is smoked to relieve chest pains.

**Salvadoraceae**

Mustard tree family

***Salvadora persica*** L. [VdE 23.3.a]

Nama *khōris*

Common names tooth-brush tree, salt bush (E), kerriebos (A)

The *Salvadora* bush is named after J. Salvador y Bosca (1598-1681), a Spanish pharmacist; *persica* means Persian. This evergreen shrub forms dense, bright-green clumps along riverbeds and on dune slipfaces. The leathery elliptical (2.5-5 by 1-3 cm), bright green leaves grow in opposite pairs and at right angles to each other. The small greenish-yellow flowers are present throughout the year and develop into small round, pink-reddish drupes about 6 mm in diameter, with a single seed inside. These seeds contain benzyl mustard oil. The fruits and seeds are said to be the mustard mentioned in the bible.

The fruits, which smell like cress, are edible but cause diarrhoea. The wood is sometimes used as a fuel. The leaves are browsed by livestock and the fruits can be fed to chickens.

The Ovambo rub a mixture of crushed leaves and water over the body to

treat rash. The Bergdamara drink a root decoction to relieve stomach and intestinal pains and to cure diarrhoea. The Himba give the same decoction to their cattle to treat the same complaints. In central Africa, the bark is used for gastritis and as a deworming agent, a decoction of the roots is considered a remedy for gonorrhoea.

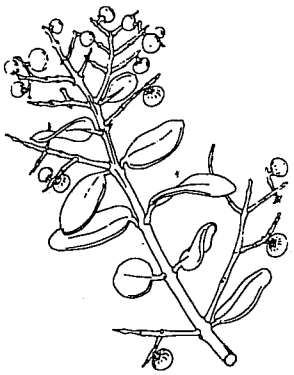

*Figure 6: Salvadora persica*

**Solanaceae**

Potato family, Nightshade family

***Lycium cinereum*** THUNB. [VdE 17.4.b]

Nama ǁ *aris*

Common Names bokdoring, kraaldoring, slangbessie (A)

The common names of *Lycium cinereum* refer to the use of this thorny shrub for the construction of thief-proof hedges around kraals and gardens. Every twig ends in a sharp thorn. The small semi-succulent spathulate leaves are clustered on shoots. White tubular flowers of 5-10 mm long grow solitary or in clusters and develop into red berries. This shrub is common in coastal depressions and vleis with salty soils, such as the delta of the Kuiseb.

All parts of the shrub (flowers, leaves, twigs and roots) can be dried and crushed. The resulting powder is used on the body as a perfume. The crushed twigs are worn under the clothes for their pleasant smell.

The ripe berries are in South Africa eaten by children.

***Nicotiana glauca*** R. GRAHAM [VdE 18.4.k]

Nama -

Common names blue-green nicotiana (E), wilde tabak (A)

*Figure 7: Nicotiana glauca*

This genus is named after J. Nicot de Villemain (1530-1600), the Frenchman who introduced tobacco seeds to France in 1560. This wild tobacco shrub is a native of Argentina and was introduced in Namibia as an ornamental plant via missionaries. It is now growing in almost all riverbeds of the Namib. Its oblong, up to 10 cm long, leaves are bluish-green, and are the origin of its specific Latin name *glauca* (sea-green, blue-green). Beautiful yellow tubular flowers of 3-4.5 cm long grow in terminal panicles. The fruit is a 2-valved capsule with many minuscule pin-head sized seeds. Both the plant and seeds are highly poisonous.

Warmed leaves are put in shoes in cases of painful, tired feet. They are also put on the throat to relieve pain or on the head to relieve headache. A boiled leaf, put onto sores and pimples, draws out pus. If children have mumps, a warm leaf is put on the swollen cheek and this is covered with

a compress in order to reduce the swelling. The branches are used for the construction of houses, kraals and fences. It is a very strong construction material.

A leaf extract can be used as an insecticide against aphids.

**Tamaricaceae**

Tamarisk family

***Tamarix usneoides*** E. MEYER ex BUNGE [VdE 21.4.b]

Nama *daweb*

Common name tamarisk (E)

This salt-resistant tree grows along all riverbeds of the Namib and in dune depressions. Its name is derived from its occurence along the Tamaris river in Spain. The shallow spreading roots give rise to buds, resulting in new plants that grow alongside the parent tree. The name *usneoides* is derived from *Usnéa*, beard moss, since the drooping branches with small, scale-like leaves remind one of beard mosses. The leaves change colour during the day. In the morning they are green, but by midday they appear greyish due to covering of salt crystals which limits the tree's transpiration. Small unisexual, pinkish-white flowers grow on separate trees.

A decoction of the roots is drunk to cure indigestion and diarrhoea and to relieve stomach pains.

## 3.3 Unidentified Plants

Due to the absence of rains and significant floods in the area during the study period, some plants (mostly annuals) could not be found in the field or were unidentifiable. Only the Nama name and the local uses of these plants are known. The scientific name could also not be found in literature when starting from the Nama name. These plants are listed in alphabetic order. The order used for the clicks is |, ||, !, ǂ respectively.

*aib*

The root of this plant is put into milk to curdle it and improve its flavour.

*aueb, auib*

This large tree has oval opposite leaves. A decoction of the ground root or wood is drunk to relieve stomach pains. The root is put into home-brewed beer as a flavouring. The ground root is used as a perfume.

This tree might be *Spirostachys africana* (EISEB ET AL, 1991).

*|girehaib*

The plant's root, mixed with tea, and boiled gives a decoction which is fed to donkeys suffering from constipation. The root is chewed by people or the decoction is drunk to relieve stomach pains and treat constipation.

*|hus*

This 2 m high tree has small, rhombic leaves and a flakey yellowish-green bark, which is red on young twigs. The wood is used for carving and making furniture.

*|otsamab*

The root, when boiled in water or milk gives a decoction that is drunk for the relief of stomach, intestinal, menstruation and post-natal pains. Chewing the roots can also relieve these pains. The boiled leaf is put onto wounds to stop bleeding and hasten healing. The roasted and ground root or the whole plant (mixed with fat or vaseline) is rubbed into wounds and burns. The roasted and ground leaves are applied to the skin to treat various skin disorders. Throwing the leaves into the fire keeps wild animals away. This same practice is also used to attract lost goats.

Some Topnaar showed a plant, identified as *Withania somnifera*, and said this was *|otsamab*, but others disagreed with this.

*!khaǁawib*

The whole plant is roasted and ground. The powder so obtained is applied to wounds to hasten healing or is used as a perfume.

*!ub*

The powder obtained from between the stem and the bark of this tree is mixed with fat and was in the past used as a cosmetic.

This tree could be *Acacia erioloba* (Du Pisani, 1983).

*ǂuhaib*

A decoction of the roots of this creeper is drunk, or the roots are chewed to relieve stomach pains and treat intestinal problems. The plant is also used as a perfume.