Medicinal ethnobotany of the Kamiesberg, Namaqualand, Northern Cape Province, South Africa

by

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ABSTRACT

Scientific relevance: Qualitative and quantitative data is presented that give a new perspective on the traditional medicinal plants of the Khoisan (Khoe-San), one of the most ancient of human cultures. The data is not only of considerable historical and cultural value, but allows for fascinating comparative studies relating to new species records, novel use records and the spatial distribution of traditional medicinal plant use knowledge within the Cape Floristic Region.

Aim of the study: A detailed documentation and quantitative analysis of medicinal plants of the Kamiesberg area (an important Khoisan and Nama cultural centre) and their medicinal traditional uses, which have hitherto remained unrecorded.

Materials and methods: During four study visits to the Kamiesberg, semi-structured and structured interviews were conducted with 23 local inhabitants of the Kamiesberg, mostly of Khoisan decent. In addition to standard methodology, a newly developed Matrix Method was used to quantity medicinal plant knowledge.

Results: The Kamiesberg is an important center of extant Nama ethnomedicinal information but the knowledge is rapidly disappearing. Of a total of 101 medicinal plants and 1375 anecdotes, 21 species were recorded for the first time as having traditional medicinal uses and at least 284 medicinal use records were new. The relative importance, popularity and uses of the plants were quantified. The 97 newly documented vernacular names include 23 Nama (Khoekhoegowab) names and an additional 55 new variations of known names. The calculated Ethnobotanical Knowledge Index (EKI) and other indices accurately quantify the level of knowledge and will allow for future comparisons, not only within the Kamiesberg area but also with other southern African communities of Khoisan decent.

Conclusion: The results showed that the Kamiesberg is an important focal point of Khoisan (Nama) traditional knowledge but that the medicinal plants have not yet been systematically recorded in the scientific literature. There are numerous new use records and new species records that are in need of scientific study. Comparative data is now available for broader comparisons of the pattern of Khoisan plants use in southern Africa and the study represents another step towards a complete synthesis of Cape Herbal Medicine.
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Chapter 1: Introduction

1.1 History of ethnobotany

Ethnobotany was historically practiced by explorers who recorded the plants used by the natives of an area on their travels. The historical documentation of these plant uses was largely based on casual observations and use-records (anecdotes) and this formed the bases of the today’s knowledge of plant uses (Cotton, 1996).

The concept and term ‘ethnobotany’ was first used in 1895 by John Harsberger (Cotton, 1996). Ethnobotany was originally defined as ‘the use of plants by aboriginal peoples’. With time this definition was redefined to include the way in which useful plants were understood within different cultures (Cotton, 1996).

The study of ethnobotany entered a phase of rapid expansion as from 1895, when Harsberger explained the concept of ethnobotany and its importance. During the late 1900’s the interest in ethnobotany increased even more as various scientific papers on ethnobotany were published. Collaborations between different role players (institutions as well as organisations) were created to encourage studies in the ethnobotanical field. There was an increase in the teaching of ethnobotany at tertiary level as well as a change in attitudes towards indigenous people (Cotton, 1996).

Scientists started to realise that indigenous cultures and associated traditional knowledge are faced with extinction because of the cultural pressures of modern life. Worldwide more attention is given to indigenous communities as part of a rescue operation to acquire and preserve cultural knowledge (Cotton, 1996; Van Wyk et al., 2008; Heinrich et al., 2009).
Various disciplines emerged from ethnobotany, including the field of ethnomedicine. According to Cotton (1996) ethnomedicine, the study of traditional medicines, can be sub-divided into three categories, namely:

(a) Medicinal anthropology,
(b) Medicinal ethnobotany, and
(c) Ethnopharmacology

Medicinal anthropology is the study of the cultural concepts of diseases and the nature of local healing systems. Medicinal anthropology includes different cultures’ perceptions and experiences of ailments, such as the role of traditional medicinal practitioners, symbolic aspects of ailments as well as social systems.

Medicinal ethnobotany studies the nature and applications of plants used within a traditional medicine system. This includes the identification of medicinal plant species used as traditional remedies and the investigation of cultural systems for classifying these medicinal plants. A medicinal ethnobotanical inventory is created as a data base for providing plant information, including herbarium voucher specimens as well as use-records obtained from interviews and literature.

Ethnopharmacology deals with the scientific evaluation of traditional medicines. This study involves the extraction, pharmacological evaluation and identification of bio-active chemical compounds present in the medicinal plant species.

1.2 Medicinal ethnobotany of the Kamiesberg

This ethnomedical study can be regarded as ‘medicinal ethnobotany’ as described by Cotton (1996). The study focuses on medicinal plants being used within the Nama (Khoisan) traditional culture in the Kamiesberg area of Namaqualand.

Namaqualand is the traditional (original) home of the Nama people (Van der Stel, 1685; Schapera, 1930; Skead, 2009). The Nama people are the largest ethnic group of Khoisan speaking people (Eliovson, 1972), comprising more than 40 000 persons
living in South Africa and the southern and central parts of Namibia. In South Africa, the Namaqualand region is situated along the west coast of South Africa and stretches from the Olifant’s River mouth northwards to the Namibian border (Figure 1).

This region is known for its extreme climatic conditions and forms part of the Succulent Karoo Biome (Mucina and Rutherford, 2006). Namaqualand is famous throughout the world for its spectacular display of flowers during spring time (August to September) and its high level of plant endemism (Van Wyk and Smith, 2001; Mucina and Rutherford, 2006; Manning, 2008).

The rich cultural heritage of the Nama people has been described by Schapera (1930). Historically the Nama people lived concentrated in the highlands of the Kamiesberg area in Namaqualand. Seasonally they migrated to other parts of Namaqualand (Webley, 2007).

As the Khoi people were nomadic herders, they very strongly depend on useful plants as a source of food, medicine, fuel and building material, as well as applications in various ceremonies (Archer, 1994). The Nama people depended on their comprehensive plant identification skills as they needed to distinguish between poisonous plants and edible food plants, as well as plant parts used medicinally and ways to administer the remedies.

It is noteworthy that the very first ethnobotanical survey in South Africa focussed on Namaqualand and that it was done by Governor Simon Van der Stel in 1685. Van der Stel had undertaken this expedition to Namaqualand in search of the Copper Mountains. Hendrik Claudius, an artist who accompanied Van der Stel on this journey, made drawings of all the plant species, which is included in the journal. Forty three plant species were recorded (Van der Stel, 1858), with 19 entries specifically referring to their uses (Table 1).
Table 1: List of useful plants as recorded by Simon van der Stel in 1685

<table>
<thead>
<tr>
<th>Scientific name (or most likely scientific identity)</th>
<th>Vernacular name (exactly as recorded)</th>
<th>Recorded use(s) (cited directly from the edition published by Human and Rousseau in 1979)</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lapeirousia sp. [L. anceps (L.f.) Ker Gawl. according to Smith (1966)] [L. jacquinii N.E.Br.?]</td>
<td>Chabi</td>
<td>“This fragrant flower sprouts from a bulb which has a sweet and delightful taste when roasted in hot ash. The aborigines use it as a daily food and call it Chabi.”</td>
<td>788</td>
</tr>
<tr>
<td>Sceletium tortuosum (L.) N.E.Br.</td>
<td>Canna</td>
<td>“This plant is found with the Namaquaas and then only on some of their mountains. It is gathered in October and is called Canna. It is held by them and surrounding tribes in as great esteem as the betel or areca with the Indians. They chew its stem as well as the roots, mostly all day, and become intoxicated by it, so that on account of this effect and its fragrance and hearty taste one can judge and expect some profit from its cultivation.”</td>
<td>790</td>
</tr>
<tr>
<td>Veltheimia capensis (L.) DC.</td>
<td>Quaroube</td>
<td>“This plant is found in the low-lying area around Meijrhofs Casteel. Its root, according to the inhabitants, has a purgative effect, which in our experience was successfully found to be true. Both the Namaquaas and the Grigriquaas call it Quaroube.”</td>
<td>794</td>
</tr>
<tr>
<td>Unidentified [Pelargonium carnosum (L.) L’Herit.?]</td>
<td>Thumma</td>
<td>“This plant, called Thumma, was found in several places among the Namaquaas. Its root and stem is of brittle substance, and when roasted over a fire, both have a rather pleasant taste. It is eaten by the aborigines all the year round.”</td>
<td>798</td>
</tr>
<tr>
<td>Lachenalia sp.</td>
<td>not recorded</td>
<td>“This is a Hyacinth species of which the root is eaten, found on the 10th September.”</td>
<td>800</td>
</tr>
<tr>
<td>Solanum sp.[the figure shows a fruit, not a root or bulb]</td>
<td>Haro</td>
<td>“This root or bulb, called haro by the aborigines has a sweet and pleasant taste and grows in sandy soil.”</td>
<td>802</td>
</tr>
<tr>
<td>Aloe dichotoma Masson</td>
<td>Chojé</td>
<td>“The branches of these trees serve the inhabitants as quivers.”</td>
<td>808</td>
</tr>
<tr>
<td>Gladiolus sp.</td>
<td>not recorded</td>
<td>“This is Aquilegia Flore Purpureo, the root of which is eaten, and which was found on the eleventh September.”</td>
<td>812</td>
</tr>
<tr>
<td>Acacia karroo Hayne</td>
<td>Choé, thorn tree</td>
<td>“This tree grows so abundantly in the country of the Namaquaas that almost all woods consist of it and is called thorn tree by us (because of the abundance of its harmful thorns) and Choé by the inhabitants. It grows fairly high and big, but crooked, and has good, hard and useful wood.”</td>
<td>812</td>
</tr>
<tr>
<td>Chamarea capensis (Thunb.) Eckl. &amp; Zeyh.</td>
<td>Gammare</td>
<td>“This root is called Gammare by the aborigines and is used much, and esteemed greatly by them. It relieves flatulence and water.”</td>
<td>820</td>
</tr>
<tr>
<td>unidentified</td>
<td>Thou</td>
<td>“This shrub is found in many places, is called Thou, and bears a kind of wild berry, rather tasty to eat, but obnoxious to the stomach, as it causes great pain in the belly, especially if one has eaten it in any quantity and then drinks water.”</td>
<td>826</td>
</tr>
<tr>
<td>Fockea comaru (E.Mey.) N.E.Br.</td>
<td>Camarebi, Camao</td>
<td>“This root is generally found in damp and sandy soil, mostly between the Oliphants and Doornbosch Rivers, and is called Camarebi by the Namaquaas and Camoa by the Grigriquaas, who esteem it greatly. They eat it to</td>
<td>826</td>
</tr>
<tr>
<td>Scientific name (or most likely scientific identity)</td>
<td>Vernacular name (exactly as recorded)</td>
<td>Recorded use(s) (cited directly from the edition published by Human and Rousseau in 1979)</td>
<td>Page number</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Cyphia sp.</strong></td>
<td>Berroé</td>
<td>“This root grows in damp and marshy places, amongst the Namaquaas, who call it Berroé and eat it daily. It has a sweet but watery taste.”</td>
<td>832</td>
</tr>
<tr>
<td><strong>Diospyros ramulosa</strong> (E.Mey. ex A.DC.) De Winter (Archer 1994)</td>
<td>Kanobe</td>
<td>“This shrub is found in the country of the Namaquaas and in stony and sandy places. It bears a very pleasant fruit, resembling the Indian kouki, not so much in appearance as in taste. It causes constipation, and whoever eats too much of it will suffer constipation and other discomforts. It is called Kanobe.”</td>
<td>834</td>
</tr>
<tr>
<td><strong>Lapeirousia anceps</strong> (L.f.) Ker Gawl. [L. fabricii (D.Delaroche) Ker Gawl.?]</td>
<td>Cabong</td>
<td>“This pleasant, fragrant flower sprouts from a bulb which tastes sweet and lovely but slightly astringent. It serves the aborigines as a common food which they call Cabong, and grows easily in good and rich soils along the Piketbergh.”</td>
<td>836</td>
</tr>
<tr>
<td>[Wurmbea spicata?]</td>
<td>not recorded</td>
<td>“This fragrant flower sprouts from a small bulb which, if roasted, was found to be sweet and lovely to taste, but if eaten in any quantity it causes constipation and obstruction of the belly. Nevertheless it serves as a regular food for the aborigines.”</td>
<td>840</td>
</tr>
<tr>
<td><strong>Albuca maxima</strong> Burm.f.</td>
<td>Gambrij</td>
<td>“This plant, 4 or 5 feet high, grows in stony places, and has its stem close to the root. It is filled with a great deal of slimy juice, is called Gambrij by the inhabitants and serves very well to slake their thirsts; they chew the stem, but mostly the root, in order to suck out the juice. It has a remarkable quality to cool and refresh the mouth, grows very luxuriantly and in several places.”</td>
<td>850</td>
</tr>
<tr>
<td><strong>Euphorbia sp.</strong></td>
<td>Thaubij</td>
<td>“This rare Esula seems to be some sort of Euphorbium and is found around mineral mountains and amongst high rocks. The inhabitants call it Thaubij and use its milk or juice to glue their arrows and quivers.”</td>
<td>852</td>
</tr>
<tr>
<td><strong>Nylandtia spinosa</strong> (L.) Dumort.</td>
<td>Cargoe</td>
<td>This shrub grows in many arid and sandy places, bears a kind of cherry, pleasant and sour in taste. It cools the healthy person, and quenches the traveller’s thirst, who finds that it comes in very handy. Called Cargoe by the inhabitants.</td>
<td>866</td>
</tr>
<tr>
<td><strong>Pelargonium spp.</strong></td>
<td>Heijntame, Aree</td>
<td>A kind of Geranium with a sweet and edible root and therefore much favoured by the inhabitants. Found in several places, and called Heijntame by the Namaquaas and Aree by the Grigriquaas.</td>
<td>868, 870</td>
</tr>
</tbody>
</table>
A few ethnobotanical use-records from Namaqualand were recorded by Harvey and Sonder (1860, 1862, 1865), most of them cited from Pappe (1850, 1857). One interesting record from Namaqualand is ascribed to Dr William Guybon Atherstone, who visited Namaqualand in 1845 to 1846. Under *Pteronia onobromoides* DC., Harvey (1965) cited the following: “The leaves are succulent and very aromatic, used by the native Namaquas and Bastards as a perfume, mixed with fat, under the name *Buchu*. It is called Sâb in the Namaqua language, and is dried and collected for sale.”

Laidler (1928) was a ‘Medical Officer of Health’, and worked in the Namaqualand region where he recorded various plants and animal products used by the inhabitants for medicinal and magical purposes. Unfortunately he usually only mentioned the vernacular names, so that the exact identity of many of the species have remained uncertain. During this study however, the most likely identities of most of the plant species could be determined, as many of them are still known by the names given in Laidler (1928). The plant names mentioned by Laidler are given in Table 2, together with their most likely identity in brackets. It is important to note that Laidler (1928) often cited from Pappe (1868) and refers to species that do not occur naturally in Namaqualand. It is therefore difficult to distinguish between his references to Khoi medicine in general and his references to Nama medicine in particular. An example is the reference to “Afrikaanse salie” or “blaauw blom” identified by him as “*Salvia africana*” (now known as *S. africana-caerulea*) and *S. paniculata* (now known as *S. chamelaeagnea*). None of these two blue sages (*bloobloomsalies*) occur in Namaqualand but is replaced there by the similar-looking *S. dentata*. Similarly, there is a confusion between *rooiwortel* (probably *Pelargonium* species) and *rooirankie* (almost certainly *Galium* species) and unfortunately we will never know exactly which Namaqualand species he was referring to. An obvious error is the identification of “blue bush” or “black-root” [*bloubos; swartwortel*], given as “*Royena pallens*” (now known as *Diospyros pallens*). This species does not occur in Namaqualand but superficially resembles *Antizoma miersiana*, with which it was confused.
### Table 2: List of all references to Namaqualand plants and their uses as recorded by Laidler (1928). For author citations see Appendix 2, where all names and synonyms are listed.

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Vernacular name(s)</th>
<th>Use(s) recorded</th>
<th>Page number in Laidler (1928)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus sp.</td>
<td>Kattendoon root [katdoringwortel], cat thorn, D/nuance</td>
<td>Tubercular disease; roots in decoction for wasting diseases</td>
<td>433, 443</td>
</tr>
<tr>
<td><em>(Pelargonium sp.?)</em></td>
<td>Rooi wortle [rooiwortel]</td>
<td>Anemias, weaknesses, fevers</td>
<td>434</td>
</tr>
<tr>
<td><em>(Galium sp.)</em></td>
<td>Rooi rainkie [rooirankie]</td>
<td>Anemias, weaknesses, fevers</td>
<td>434</td>
</tr>
<tr>
<td><em>(Eriospermum sp.)</em></td>
<td>Baboon’s ear</td>
<td>Anemias, weaknesses, fevers</td>
<td>434</td>
</tr>
<tr>
<td>Parmelia sp.</td>
<td>Dark lichen</td>
<td>Decoction as mouth-wash for teething</td>
<td>434</td>
</tr>
<tr>
<td><em>(Antizoma miersiana Harv.)</em></td>
<td>Black root</td>
<td>Emetic; purgative</td>
<td>435</td>
</tr>
<tr>
<td>unidentified</td>
<td>Fleer-boom</td>
<td>Purgative</td>
<td>435</td>
</tr>
<tr>
<td>Oncosiphon suffruticosum (L.) Källersjö</td>
<td>Stink kruit [stinkkruit]</td>
<td>Infantile convulsions; decoction for stomach pain; cold plaster for scorpion sting</td>
<td>435, 443</td>
</tr>
<tr>
<td>Aloe sp. (Aloe microstigma Salm- Dyck)</td>
<td>Aloes</td>
<td>Used for upset stomach</td>
<td>435</td>
</tr>
<tr>
<td><em>(Fockea sp.)</em></td>
<td>Kabroo [kambro]</td>
<td>Antidote for poison applied wet to wound to draw out the poison</td>
<td>439</td>
</tr>
<tr>
<td>unidentified</td>
<td>Yellow Kafir Wood</td>
<td>As poultice- antidote for poison</td>
<td>439</td>
</tr>
<tr>
<td><em>(Mesembryanthemum tortuosum L. (=Sceletium tortuosum (L.) N.E.Br.)</em></td>
<td>Kanna</td>
<td>Chewed- their spirits would rise, eyes brighten, and faces take on a jovial air, and they would dance…in excess it would robbed them of their sences and they become intoxicated.</td>
<td>440</td>
</tr>
<tr>
<td><em>(Mesembryanthemum tortuosum L.)</em></td>
<td>Kauwgoed [kougoed]</td>
<td>Toothache; pains in the stomach; strong narcotic effect; will make a child sleep; used today for sand in horses</td>
<td>440</td>
</tr>
<tr>
<td><em>(Mesembryanthemum crystallinum L.)</em></td>
<td>Slai, N/nhoo, N/nghoop</td>
<td>Taking hairs off skins</td>
<td>440</td>
</tr>
<tr>
<td><em>(Avonia ustulata (E.Mey. ex Fenzl) G.D.Rowley ?)</em> [&quot;Mesembryanthemum stellatum&quot;]</td>
<td>Karremoer [kareemoer]</td>
<td>One of the beer making roots; a deliriant and intoxicant with an earlier stimulant action</td>
<td>440</td>
</tr>
<tr>
<td>Tylecodon wallichii (Harv.) Toelken [as &quot;Cotyledon wallchii Harv.&quot;] or Lessertia annularis Burch.</td>
<td>Krampsiekbosch [krimpsiekbos]</td>
<td>Poultice on abscesses</td>
<td>440</td>
</tr>
<tr>
<td>Agathosma betulina (P.J. Bergius) Pillans [as &quot;Buchu barosma&quot;] and/or Pteronia onobromoides</td>
<td>P/nkaou, D/nhora, D/khonsa, haas buchu [haasboegoe],</td>
<td>Great virtues in curing disorders; fire and sunburns; babypowder; with fat used for earache</td>
<td>441</td>
</tr>
<tr>
<td>Scientific name</td>
<td>Vernacular name(s)</td>
<td>Use(s) recorded</td>
<td>Page number in Laidler (1928)</td>
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<td>-----------------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>DC, unidentified</td>
<td>P/kabourie</td>
<td>Powder making</td>
<td>441</td>
</tr>
<tr>
<td>(Acacia karoo Hayne)</td>
<td>Thorn tree sucker</td>
<td>Ashes to blacken the face, oil used for rheumatic troubles</td>
<td>441</td>
</tr>
<tr>
<td>unidentified</td>
<td>Xghoria, Xhoua</td>
<td>Strewn on dead bodies, and also applied to the living bodies when it has an unpleasant odour. Powder also used as a snuff to keep away the smell of the dead</td>
<td>441</td>
</tr>
<tr>
<td>Antizoma miersiana Harv. [as “Royena pallens Thunb.”]</td>
<td>bitterbosch [bitterbos], bitterwortle [bitterwortel], blue bush</td>
<td>“The blue-bush root is also known as black root, the wonderful emetic-purgative.” Decoction of powdered root used to treat stomach pain; stems are included when used to treat diarrhoea.</td>
<td>441</td>
</tr>
<tr>
<td>Asclepias crispa P.J.Bergius [given with Xysmalobium undulatum (L.) Aiton]</td>
<td>bitterwortle [bitterwortel]</td>
<td>Decoction for stomach pain</td>
<td>441</td>
</tr>
<tr>
<td>(Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth)</td>
<td>Sand bitter houd [sandbitterhoud]</td>
<td>Much used (unspecified)</td>
<td>441</td>
</tr>
<tr>
<td>Leonotis leonurus (L.) R.Br.</td>
<td>Wilde dagga [wilededagga]</td>
<td>Headache and bronchitis; ointment: eye pain; decoction of seeds: bronchitis and headache</td>
<td>441,442</td>
</tr>
<tr>
<td>Leonotis sp. [“Leonotis ovatis”]</td>
<td>Klip dagga [kliptagga]</td>
<td>Chewed for toothache; used in mixture in a decoction with Aister bosch for toothache and for venereal disease</td>
<td>441,442</td>
</tr>
<tr>
<td>Galenia africana L.</td>
<td>Kraal bosch [kraalbos], D/kooi dabee</td>
<td></td>
<td>442</td>
</tr>
<tr>
<td>(Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth)</td>
<td>Aister bosch [perhaps ysterbos?]</td>
<td>Used in a mixture in decoction with kraalbosch for toothache and for venereal disease</td>
<td>442</td>
</tr>
<tr>
<td>(Salvia dentata Aiton) (given as S. africana-caerulea L. [S. africana L.] and S. chamelaeagnea P.J.Bergius [S. paniculata L.])</td>
<td>Sages, aromatic sage, Afrikaanse salie, blaawblom [bloublomsalie]</td>
<td>Decoction of leaves used for coughs and colds; woman’s troubles</td>
<td>442</td>
</tr>
<tr>
<td>(Salvia lanceolata Lam.) [as “S. aurea L.”]</td>
<td>Geelblom [geelblomsalie], strand salie [strandsalisie], sand salie [sandsalisie]</td>
<td></td>
<td>442</td>
</tr>
<tr>
<td>Stachys rugosa Aiton</td>
<td>Slink sali [slnksalisie]</td>
<td>Dried leaves used for common colds, externally as lotion for sores</td>
<td>442</td>
</tr>
<tr>
<td>(Salvia dentata Aiton)</td>
<td>Berg salie [bergsalisie], mountain sage</td>
<td>Leaves as decoction for coughs and colds; decoction for washing sores</td>
<td>442</td>
</tr>
<tr>
<td>Ballota africana (L.) Bentham.</td>
<td>Katkruie [kattekrui], mountain sage</td>
<td>Sallies are used in combination with katkruie, plein hout and vaal bosch for fevers, such as measles</td>
<td>442</td>
</tr>
<tr>
<td>unidentified</td>
<td>Plein hout [pleinhout]</td>
<td></td>
<td>442</td>
</tr>
<tr>
<td>(Tarchonanthus camphorates L.)</td>
<td>Vaal bosch [vaalbos]</td>
<td></td>
<td>442</td>
</tr>
<tr>
<td>Scientific name</td>
<td>Vernacular name(s)</td>
<td>Use(s) recorded</td>
<td>Page number in Laidler (1928)</td>
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</tr>
<tr>
<td>Olea europaea subsp. africana (Mill.) P.S.Green</td>
<td>Wild olives, P/koem</td>
<td>Diaphoretic mixture, sweating draughts; decoction for dropsy, flatulence, pains in the stomach, lotion for sores, leaves as plaster</td>
<td>442</td>
</tr>
<tr>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>Sand olein houd [sandolienhout], D/koubi</td>
<td>Decoction of leaves used for colds and fever; typhoid</td>
<td>442</td>
</tr>
<tr>
<td>Crassula muscosa L.</td>
<td>Klein koorts bosch [klein koorsbos], little fever bush</td>
<td>Used in decoction as diaphoretic</td>
<td>442</td>
</tr>
<tr>
<td>Searsia burchellii (Sond. ex Engl.) Moffett and S. undulata (Jacq.) T.S.Yi, A.J.Mill. &amp; J.Wen</td>
<td>Taabosch [taabos], L/guara, P/guara</td>
<td>Leaves used as decoction after parturition</td>
<td>442</td>
</tr>
<tr>
<td>Viscum capense L.f.</td>
<td>Vogelent [voëlent], Aie L/kwoe</td>
<td>Emmenagogue; epilepsy; chorea; diarrhoea; used with wild celery (P/au) for amenorrhea</td>
<td>442</td>
</tr>
<tr>
<td>(Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth)?</td>
<td>L/aiser [perhaps ysterbos?]</td>
<td>Puerperal fever; purgative; only used for old women</td>
<td>442</td>
</tr>
<tr>
<td>Carpodotus edulis L.Bolus</td>
<td>Fierrank [yererank], Nautsi amma</td>
<td>Used for delayed labour, or retained afterbirth</td>
<td>442</td>
</tr>
<tr>
<td>(Ziziphus mucronata Willd.)</td>
<td>Haakiesdoorn [hakies doring], P/habi</td>
<td>Emmenagogue</td>
<td>443</td>
</tr>
<tr>
<td>Sarcocaulon sp.</td>
<td>P/ngoona</td>
<td>Abortifacient; parturient in sheep</td>
<td>443</td>
</tr>
<tr>
<td>Euphorbia restituta N.E.Br.</td>
<td>Klip melk bosch [klipmelkboes]</td>
<td>Given for tedious labours</td>
<td>443</td>
</tr>
<tr>
<td>(Pelargonium hypoleucum Turcz.? ) P. grossularioideis (L.) L'Hér. [as P. aneps ]</td>
<td>Roode rabassam, rabass, rooi worte, rooi storm [roorabas, rabas, rooiwortel, rooistorm]</td>
<td>Produce abortion or helping on a confinement; anemias; weaknesses; fevers</td>
<td>443</td>
</tr>
<tr>
<td>Pelargonium antisytsentericum (Eckl. and Zeyh.) Kostel.</td>
<td>D/kanie</td>
<td>Boiled in milk</td>
<td>443</td>
</tr>
<tr>
<td>Eriospermum capense (L.) Thunb. subsp. capense [as E. latifolium Jacq. ]</td>
<td>Baviaan’s oor [bobbejaanoor], baboon’s ear, bol</td>
<td>Cold poultice on bruises and cuts</td>
<td>443</td>
</tr>
<tr>
<td>Sutherlandia frutescens (L.) R.Br.</td>
<td>Kalkoen blom [kalkoenblom], turkey flower</td>
<td>Decoction for washing wounds; fevers, tuberculosis (consumption), chicken pox</td>
<td>443</td>
</tr>
<tr>
<td>Galium sp.</td>
<td>Rooi rainkie [voorrankie]</td>
<td>Poultice on thorns</td>
<td>443</td>
</tr>
<tr>
<td>Nymania capensis (Thunb.) Lindb.</td>
<td>Stinkbosch [stinkbos]</td>
<td>Convulsions</td>
<td>443</td>
</tr>
<tr>
<td>Boscia foetida Schinz</td>
<td>Slink bosch [stinkbos], ou meide’s bosch [oumeidebos], old woman’s bush, P/kabou</td>
<td>Emmenagogue; decoction for back pain</td>
<td>443</td>
</tr>
<tr>
<td>Eriocephalus africanus L. var. paniculatus (Cass.)</td>
<td>Rosemary</td>
<td>Pain in the stomach</td>
<td>443</td>
</tr>
<tr>
<td>Scientific name</td>
<td>Vernacular name(s)</td>
<td>Use(s) recorded</td>
<td>Page number in Laidler (1928)</td>
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</tr>
<tr>
<td>M.A.NM II., P.P.J. Herman &amp; Kolberg [as Eriocephalus umbellulatus Cass.]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oncosiphon suffruticosum</strong> (L.) Källersjö</td>
<td><strong>Stink kruit [stinkkruit]</strong></td>
<td>Stomach pain; as plaster for scorpion stings</td>
<td>443</td>
</tr>
<tr>
<td><strong>Mentha longifolia</strong> (L.) Huds.</td>
<td><strong>D/khamme, P/tkamma</strong></td>
<td>As a tea, diaphoretic</td>
<td>443</td>
</tr>
<tr>
<td>unidentified</td>
<td>Fire bush, L/naroo</td>
<td>Chewed for stomach pain</td>
<td>443</td>
</tr>
<tr>
<td><strong>(Cynodon dactylon</strong> (L.) Pers.)</td>
<td>Quickgrass, <strong>P/iarre</strong></td>
<td>Decoction for coughs</td>
<td>444</td>
</tr>
<tr>
<td><strong>Cassytha ciliolata</strong> Nees</td>
<td>Baboon rope, <strong>P/nyra sooriep</strong></td>
<td>Burned and ash sprinkled on ringworm; decoction for boils</td>
<td>444</td>
</tr>
<tr>
<td><strong>(Conyza scabrida DC. or Passerina filiformis</strong> L.?) [<strong>Cynanchum africanum</strong>, given as “C. capense”; =C. ellipticum]</td>
<td><strong>Bakker bosch? [bakkerbos]</strong></td>
<td>Administered internally for boils</td>
<td>444</td>
</tr>
<tr>
<td><strong>Passerina filiformis</strong> L.</td>
<td><strong>P/tou</strong></td>
<td>Use for baking, decoction used for shooting pains</td>
<td>444</td>
</tr>
<tr>
<td><strong>Berkheya cf. fructicosa</strong></td>
<td><strong>Suitduizel [sydissel]</strong></td>
<td>Powder as plaster for burns and boils</td>
<td>444</td>
</tr>
<tr>
<td><strong>Sarcocaulon crassicaule</strong> Rehm, <strong>S. patersonii</strong> (DC.) G.Don</td>
<td>Candle bush, <strong>D/nou D/nou</strong></td>
<td>Astringent for diarrhoea; root used as plaster</td>
<td>444</td>
</tr>
<tr>
<td><strong>Acacia karroo</strong> Hayne</td>
<td><strong>Heyra</strong></td>
<td>Not used much by man</td>
<td>444</td>
</tr>
<tr>
<td><strong>[Euryops spp. or Othonna spp.]</strong></td>
<td><strong>Scaap rapayce [skaap-rapuis]</strong>, <strong>D/ta dou</strong></td>
<td>Not used much by man</td>
<td>444</td>
</tr>
<tr>
<td><strong>Othonna daucifolia</strong> J.C. Manning and Goldblatt</td>
<td><strong>D/Goonu</strong></td>
<td>Resin boiled and bitter decoction used in fevers; stems inflammable</td>
<td>444</td>
</tr>
<tr>
<td><strong>Kedrostis</strong> sp.</td>
<td><strong>P/gameroo</strong></td>
<td>Emetic and purgative</td>
<td>444</td>
</tr>
<tr>
<td><strong>Diospyros austro-africana</strong> De Winter</td>
<td><strong>Kraaibosch [kraaibos], D/nareeree</strong></td>
<td>Purgative</td>
<td>444</td>
</tr>
<tr>
<td><strong>Chironia baccifera</strong> L.</td>
<td><strong>Wild gentian, Ambiaer bosch [ambeibos], piles bush</strong></td>
<td>Purgative; decoction for boils</td>
<td>444</td>
</tr>
<tr>
<td><strong>Erythrophysa alata</strong> (Eckl. &amp; Zeyh.) Hutch.</td>
<td><strong>White Kafir-wood</strong></td>
<td>Snuffed, decoction for flatulence</td>
<td>445</td>
</tr>
<tr>
<td><strong>Asclepias crispa</strong> P.J. Bergius</td>
<td><strong>Witte vergeit [witvergeet]</strong></td>
<td>Snuffed for headaches</td>
<td>445</td>
</tr>
<tr>
<td><strong>Haemanthus coccineus</strong> L.</td>
<td><strong>C/koos P/naboo, veldschoon blaar [veidskoenblaar], field shoes leaf</strong></td>
<td>Warmed, smeared with fat and applied to any swelling</td>
<td>445</td>
</tr>
<tr>
<td><strong>Tylecodon wallichii</strong> (Harv.) Toelken</td>
<td><strong>P/nums ghana</strong></td>
<td>Poultice</td>
<td>445</td>
</tr>
<tr>
<td><strong>Sarcocauleon</strong> spp.</td>
<td><strong>D/nou D/nou</strong></td>
<td>Used as a plaster (peppery, has the same action as a mustard plaster)</td>
<td>445</td>
</tr>
<tr>
<td>Scientific name (or most likely scientific identity); [name provided by Laidler in square brackets]</td>
<td>Vernacular name(s) (exactly as recorded) [modern or correct spelling]</td>
<td>Use(s) recorded</td>
<td>Page number in Laidler (1928)</td>
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<td>-------------------------------------------------</td>
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</tr>
<tr>
<td>Euphorbia species</td>
<td>Rubbed the milk on warts</td>
<td></td>
<td>446</td>
</tr>
<tr>
<td>(Hoodia sp.?) [Stapelia filifera]</td>
<td>Guaap [ghaap]</td>
<td>Thirst quencher</td>
<td>447</td>
</tr>
<tr>
<td>Zantedeschia aethiopica (L.) Spreng.</td>
<td>Vaarkies blaar [varkiesblaar]</td>
<td>Applied to boils that subsequently appear due to poisoning</td>
<td>447</td>
</tr>
<tr>
<td>Zygophyllum morgsana L.?</td>
<td>L/kau D/han, fleisch-bosch [vleisbos], meat bush</td>
<td>Used it as a support for meat after slaughtering to keep it off the sand</td>
<td>447</td>
</tr>
<tr>
<td>Calobota sericea (Thunb.) Boatwr. &amp; B.-E.van Wyk</td>
<td>P/abee, fluitjiesbosch [fluitjiesbos], flute bush</td>
<td>Stripped of its bark to make pipes of pan for reed dances</td>
<td>447</td>
</tr>
</tbody>
</table>
Schapera (1930) provided a comprehensive anthropological review of the San and Khoi people. Unfortunately, he only discussed the useful plants listed by Laidler (1928) without adding any original species or use records. Several plants (referred to merely as “herbs” or “roots”) are described as being important to Khoi and San people for their religious and ceremonial value and also for their practical everyday uses as medicine, food and materials for building and household items.

Ethnobotanical plant species are also referred to in the studies by Archer (1982, 1990, 1994) and by Whittaker and Archer (1985). Archer (1982) focused on the edible plants of the Kamiesberg and recorded 48 plant species which are considered as food plants. Whittaker and Archer (1985) in their study on access to health care in the Nourivier area of the Kamiesberg, listed 10 plant species which are used as traditional medicine. Archer (1990) grouped the useful plants of Namaqualand in six categories. Under ‘firewood and tindering’, 13 species were listed; under ‘edible plants’ only 14 species (although she mentioned that there are “more than eighty edible wild plants still known and used in the Kamiesberg area and surrounds”); under ‘medicinal plants’ 14 species; under ‘housing’ three species; under ‘cleaning and hygiene’ two species and under ‘dying of leather’ five species. Archer (1994) did a study on the ethnobotany of the Richtersveld in which numerous useful plant species were described. Forty medicinal plants were recorded for Namaqualand in general (listed as Table 6.1 in Archer, 1994). Unfortunately, no distinction was made between species recorded in the Kamiesberg area and those recorded in the Richtersveld (species from both areas were included in the list). A summary of all the medicinal plant species published by Whittaker and Archer (1985) and Archer (1990, 1994) are presented in Table 3.

A few useful plants are included in wild flower guides to Namaqualand (Le Roux and Schelpe, 1981; Le Roux and Wahl, 2005; Manning, 2008). Useful plants recorded in these two field guides, included plants suitable for grazing, fire wood, medicine, food, shelter, weapons and crafts. The medicinal uses of the plant species recorded in these field guides, are presented in Table 4.
Table 3: Medicinal plant species recorded in Namaqualand (mainly in the Richtersveld and the Kamiesberg area) by Whittaker and Archer (1985) [WA1985] and Archer (1990, 1994) [A1990 and A1994 respectively].

<table>
<thead>
<tr>
<th>Species</th>
<th>Part(s) used</th>
<th>Reference (with uses, if recorded)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acacia erioloba E. May</td>
<td>bark</td>
<td>A1994 (uses not provided)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td>Acacia karroo Hayne</td>
<td>root bark, stem bark</td>
<td>A1994 (used for internal ailments, as sunscreen, for the brown pigmentation which occurs after women have children, to relieve diarrhoea – especially for babies)</td>
<td></td>
</tr>
<tr>
<td>Aloe dichotoma Masson</td>
<td>roots</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td>Aloe pearsonii Schönland</td>
<td>leaves</td>
<td>A1994 (used for stomach disorders and veterinary medicine)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td>Annesorhiza altiscapa Schltr.</td>
<td>roots</td>
<td>A1994 (a beer is made which is regarded as medicinal, also used for lactating mothers as it increases milk production)</td>
<td></td>
</tr>
<tr>
<td>Antizoma miersiana Harv.</td>
<td>roots</td>
<td>A1994 (used for stomach ache)</td>
<td></td>
</tr>
<tr>
<td>Aptosimum sp.</td>
<td>leaves, stems</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td>Arctotis aspera L.</td>
<td></td>
<td>A1994 (used for colds and influenza)</td>
<td>Identification uncertain</td>
</tr>
<tr>
<td>Ballota africana (L.) Benth.</td>
<td>leaves</td>
<td>A1990 (used for influenza); A1994 (used for fevers, measles, thrush, influenza, colds and as lotion for sores on the head)</td>
<td></td>
</tr>
<tr>
<td>Boscia albitruncus (Burch.) Gilg &amp; Gilg-Ben.</td>
<td>leaves, roots</td>
<td>A1994 (used as veterinary medicine)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td>Carpobrotus edulis L.Bolus</td>
<td>leaf juice</td>
<td>A1994 (juice is dripped onto sore gums to relieve pain)</td>
<td></td>
</tr>
<tr>
<td>Cotyledon orbiculata L.</td>
<td>stem, leaf</td>
<td>A1994 (used on warts and abscesses and as gargle for sore throats)</td>
<td></td>
</tr>
<tr>
<td>Crassula elegans Schönland &amp; Baker f.</td>
<td>roots</td>
<td>A1994 (a beer is made from the roots which is used medicinally – unspecified)</td>
<td></td>
</tr>
<tr>
<td>Crassula muscosa L.</td>
<td>leaves, roots</td>
<td>A1994 (used as diaphoretic, for fever, piles, influenza and malaria)</td>
<td></td>
</tr>
<tr>
<td>Cyperus marginatus Thunb.</td>
<td>roots</td>
<td>A1994 (used for stomach ache)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td>Cyphia phyteum (L.) Willd.</td>
<td>roots</td>
<td>A1994 (uses not provided)</td>
<td>Edible plant</td>
</tr>
<tr>
<td>Species</td>
<td>Part(s) used</td>
<td>Reference (with uses, if recorded)</td>
<td>Notes</td>
</tr>
<tr>
<td>---------------------------------------------</td>
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</tr>
<tr>
<td><em>Datura stramonium</em> L.</td>
<td>leaves</td>
<td>WA1985 (infusion used for colds or influenza)</td>
<td></td>
</tr>
<tr>
<td><em>Dicoma capensis</em> Less.</td>
<td>leaves</td>
<td>A1994 (used for stomach aches, stomach ailments and coughs)</td>
<td></td>
</tr>
<tr>
<td><em>Diospyros lycioides</em> Desf.</td>
<td>roots</td>
<td>A1994 (used for stomach ache)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Dodonaea viscosa</em> Jacq. var. <em>angustifolia</em> (L.f.) Benth</td>
<td>leaves</td>
<td>WA1985 (infusion used for colds or influenza); A1990 (influenza)</td>
<td></td>
</tr>
<tr>
<td><em>Euclea pseudebenus</em> E.Mey. ex A.DC.</td>
<td>roots</td>
<td>A1994 (uses not provided)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Galenia africana</em> L.</td>
<td>leaves</td>
<td>A1990 (used for pains, aches and skin disorders)</td>
<td></td>
</tr>
<tr>
<td><em>Galium tomentosum</em> Thunb.</td>
<td>root</td>
<td>A1990 (stomach disorders); A1994 (used for stomach ache)</td>
<td></td>
</tr>
<tr>
<td><em>Gomphocarpus cancellatus</em> (Burm.f.) Bruyns (=<em>Asclepias cancellata</em> Burm.f.)</td>
<td>dried roots</td>
<td>A1990 (used as snuff for influenza); A1994 (used as snuff for influenza)</td>
<td></td>
</tr>
<tr>
<td><em>Gomphocarpus fruticosa</em> (L.) Aiton F. (=<em>Asclepias fruticosa</em> L.)</td>
<td>latex, leaf, fresh or dried roots</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td><em>Gorteria diffusa</em> Thunb.</td>
<td>flowers, leaves</td>
<td>A1994 (used for influenza)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Hermannia stricta</em></td>
<td>leaves</td>
<td>A1994 (uses not provided)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Hypertelis salsoloides</em> (Burch.) Adamson</td>
<td>leaves</td>
<td>A1994 (infusion used for influenza)</td>
<td></td>
</tr>
<tr>
<td><em>Melianthus pectinatus</em> Harv.</td>
<td>leaves</td>
<td>A1990 (pains, aches and skin disorders); A1994 (used to relieve backaches or leg pains, vapour used for influenza, colds and post-natal treatments)</td>
<td></td>
</tr>
<tr>
<td><em>Mentha longifolia</em> (L.) Huds.</td>
<td>leaves</td>
<td>WA1985 (uses not provided); A1990 (used for influenza); A1994 (used for influenza and colds)</td>
<td></td>
</tr>
<tr>
<td><em>Nicotiana glauca</em> Graham</td>
<td>leaves</td>
<td>A1990 (used for wounds); A1994 (used as poultice on burns and open wounds)</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Part(s) used</td>
<td>Reference (with uses, if recorded)</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Nymania capensis</em> (Thunb.) Lindb.</td>
<td>leaves</td>
<td>A1994 (used for influenza)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Oxalis pes-caprae</em> L.</td>
<td>leaves</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td><em>Pelargonium antidysentericum</em> (Eckl. &amp; Zeyh.) Kostel.</td>
<td>caudex</td>
<td>A1994 (original uses not provided)</td>
<td>Medicinal uses provided by Smith (1966) is quoted</td>
</tr>
<tr>
<td><em>Pteronia lucilioides</em> DC.</td>
<td>leaves</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td><em>Ricinus communis</em> L.</td>
<td>leaves, seeds</td>
<td>A1990 (used to lighten skin and as sunscreen); A1994 (used as sunscreen)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td><em>Salix mucronata</em> Thunb.</td>
<td>leaves, branches</td>
<td>A1994 (used for coughs, rheumatism, skin ailments, fever, malaria, heat exhaustion, headaches and neck stiffness. A lotion is used for scalp itches, sores, inflammations and to stimulate hair growth)</td>
<td></td>
</tr>
<tr>
<td><em>Salvia dentata</em> Aiton</td>
<td>leaves, flowers</td>
<td>A1990 (influenza); A1994 (used for influenza and colds)</td>
<td></td>
</tr>
<tr>
<td><em>Salvia lanceolata</em> Lam.</td>
<td>leaves</td>
<td>WA1985 (infusion used for colds or influenza); A1990 (used for influenza); A1994 (used for influenza and colds)</td>
<td></td>
</tr>
<tr>
<td><em>Sarcocaulon crassicaule</em> Rehm</td>
<td>branches</td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td><em>Sarcocaulon patersonii</em> (DC.) G.Don</td>
<td>stem</td>
<td>A1994 (used for stomach ailments, veterinary ailments and as an arbortificant)</td>
<td></td>
</tr>
<tr>
<td><em>Sarcostemma viminale</em> (L.) R.Br.</td>
<td>latex</td>
<td>A1994 (uses not provided)</td>
<td>Either <em>S. namaquense</em> or <em>S. framsii</em></td>
</tr>
<tr>
<td><em>Sceletium</em> sp.</td>
<td>leaves</td>
<td>A1990 (used for influenza, stomach disorders, nausea, diarrhoea, wounds, pains, aches and skin disorders)</td>
<td></td>
</tr>
<tr>
<td><em>Sceletium tortuosum</em> (L.) N.E.Br.</td>
<td>whole plant (fermented)</td>
<td>A1994 (the medicine has a narcotic effect)</td>
<td></td>
</tr>
<tr>
<td><em>Searsia burchellii</em> (Sond. ex Engl.) Moffett (=<em>Rhus burchellii</em> Sond. ex Engl.)</td>
<td>leaves</td>
<td>A1994 (used for colds)</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Part(s) used</td>
<td>Reference (with uses, if recorded)</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Searsia undulata (Jacq.) T.S.Yi, A.J.Mill. &amp; J.Wen (=Rhus undulata Jacq.)</td>
<td>leaves</td>
<td>A1990 (used for influenza)</td>
<td></td>
</tr>
<tr>
<td>Sutherlandia frutescens (L.) R.Br.</td>
<td>leaves, roots</td>
<td>WA1985 (infusion used for colds or influenza); A1990 (used for influenza, stomach disorders, wounds, pains, aches and skin disorders); A1994 (used for stomach ailments, wash for wounds, fevers, chicken pox, internal cancers, influenza, rheumatism, liver ailments, haemorrhoids, bladder and uterus complaints, diarrhoea, stomach ailments and for backache)</td>
<td></td>
</tr>
<tr>
<td>Sutherlandia microphylla Burch. ex DC.</td>
<td>not specified</td>
<td>A1990 (used for influenza, stomach disorders, wounds, pains, aches and skin disorders)</td>
<td></td>
</tr>
<tr>
<td>Tamarix usneoides E.May. ex Bunge</td>
<td>roots</td>
<td>A1994 (roots are boiled and resultant steam is used to disinfect wounds inflicted by leopards)</td>
<td>Richtersveld only?</td>
</tr>
<tr>
<td>Tapinanthus oleifolius (J.C.Wendl.) Danser</td>
<td>branches, leaves</td>
<td>A1994 (used as an infusion)</td>
<td>Richtersveld only</td>
</tr>
<tr>
<td>Tulbaghia dregeana Kunth</td>
<td>leaves, corms</td>
<td>A1994 (the corn is chewed as a cure against colds. A mixture of the pulped corn and other plants, such as leaves of Salvia dentata, is used as an infusion)</td>
<td>Identification uncertain</td>
</tr>
<tr>
<td>Viscum capense L.f.</td>
<td>leaves</td>
<td>WA1985 (infusion used for colds or influenza)</td>
<td></td>
</tr>
<tr>
<td>Ziziphus mucronata Willd.</td>
<td>stem, root bark, leaves</td>
<td>A1994 (no original uses are provided)</td>
<td>Richtersveld only.</td>
</tr>
<tr>
<td>rabas (unidentified)</td>
<td></td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td>galbos (unidentified)</td>
<td></td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
<tr>
<td>griepbos (unidentified)</td>
<td></td>
<td>A1994 (uses not provided)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Part(s) used</th>
<th>Reference (with uses, if recorded)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acacia karroo</em> Hayne</td>
<td>bark</td>
<td>[M2008] (to counter tulp-poisoning (<em>Moraea</em> species))</td>
</tr>
<tr>
<td><em>Aspalathus linearis</em> (Burm.f.) R.Dahlgren</td>
<td>leaves, stems</td>
<td>LRS1981] (brewed and drunk as tea)</td>
</tr>
<tr>
<td><em>Bulbine</em> sp.</td>
<td>leaf sap</td>
<td>[M2008] (to treat skin abrasions)</td>
</tr>
<tr>
<td><em>Dioscorea elephantipes</em> (L’Hér.) Engl.</td>
<td>stem pulp</td>
<td>[LRW2005] (pulp mixed with flour into a paste was used for blood poisoning and inflammation)</td>
</tr>
<tr>
<td><em>Dodonaea viscosa</em> Jacq. var. <em>angustifolia</em> (L.f.) Benth.</td>
<td>leaves</td>
<td>[LRW2005] (decoction used for fever, pneumonia, tuberculosis, colds and influenza)</td>
</tr>
<tr>
<td><em>Drimia elata</em> Jacq.</td>
<td>bulb, leaves</td>
<td>[LRW2005] (bulb is used as an emetic and expectorant, the leaves are said to be diuretic)</td>
</tr>
<tr>
<td><em>Elytropappus rhinocerotis</em> (L.f.) Less.</td>
<td>not specified</td>
<td>[LRW2005] (for a variety of ailments especially for flu)</td>
</tr>
<tr>
<td><em>Gomphocarpus cancellatus</em> (Burm.f.) Bruyns</td>
<td>dried root</td>
<td>[LRS1981; LRW2005] (used for stomach ailments); [M2008] (used as a snuff and as an emetic)</td>
</tr>
<tr>
<td><em>Hoodia gordonii</em> (Masson) Sweet ex Decne.</td>
<td>stem</td>
<td>[M2008] (used traditionally by the San as appetite suppressant)</td>
</tr>
<tr>
<td><em>Radiera urens</em> (L.f.) Bullock</td>
<td>roots</td>
<td>[LRS1981; LRW2005] (used as a remedy for piles)</td>
</tr>
<tr>
<td><em>Solanum burchellii</em> Dunal</td>
<td>berries</td>
<td>[LRW2005] (used to cure toothache)</td>
</tr>
<tr>
<td><em>Solanum supinum</em> Dunal</td>
<td>berries</td>
<td>[LRS1981] (reputed to cure toothache)</td>
</tr>
<tr>
<td><em>Sutherlandia frutescens</em> (L.) R.Br.</td>
<td>leaves</td>
<td>[LRS1981; LRW2005] (used for flu and stomach ailments and is reputed to cure cancer); [M2008] (used to stimulate the immune system)</td>
</tr>
<tr>
<td><em>Sutherlandia microphylla</em> Burch. ex DC.</td>
<td>leaves</td>
<td>[LRW2005] (used for flu and stomach ailments and is reputed to cure cancer)</td>
</tr>
</tbody>
</table>
Skead (2009) provided a valuable summary of all historical records of plants as recorded by early travellers. There is a separate section on Namaqualand with traveller’s entries from 1661 to 1877. These entries include numerous general references to plants. However, very few plant uses for humans were recorded as most of the descriptions dealt with the occurrence of plants in the landscape and their value as pasture for animals. In Table 5, a summary of all ethnobotanically relevant plant species recorded in Skead (2009) are given.

**Table 5:** List of useful plants recorded by travellers in Namaqualand between 1661 and 1877, as summarised in Skead (2009).

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Vernacular name (as recorded)</th>
<th>Use record</th>
<th>Original source</th>
<th>Page no. In Skead (2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Cyphia digitata</em> (Thunb.) Willd.</td>
<td>Karup</td>
<td>Eaten by the Hottentots</td>
<td>Thunberg, 1794</td>
<td>59</td>
</tr>
<tr>
<td><em>Glia prolifera</em> (Burm.f.) B.L.Burtt (as “Peucedanum gummiferum (L.) Wijnands”)</td>
<td>Moerwortel</td>
<td>Root which with honey the Hottentots make, by fermentation, an intoxicating liquor</td>
<td>Thunberg, 1794</td>
<td>59</td>
</tr>
<tr>
<td><em>Fockea comaru</em> (E.Mey.) N.E.Br.</td>
<td>Karnerup</td>
<td>Hottentot’s watermelon</td>
<td>Thunberg, 1794</td>
<td>59</td>
</tr>
<tr>
<td><em>Aloe dichotoma</em> Masson</td>
<td>Aloe, kookerboom, quiver tree</td>
<td>Used by the Hottentots as a quiver for their arrows</td>
<td>Thunberg, 1794</td>
<td>59, 61</td>
</tr>
<tr>
<td><em>Acokantera oppositifolia</em> (Lam.) Cod.</td>
<td>Poison tree</td>
<td>Bushmen mix snake venom with the juice of a poison tree</td>
<td>Thunberg, 1794</td>
<td>59</td>
</tr>
<tr>
<td><em>Boophone haemanthoides</em> F.M.Leight.</td>
<td>Gifbolles</td>
<td>Hottentots use the roots for poisoning their arrows</td>
<td>Thunberg, 1794</td>
<td>59</td>
</tr>
<tr>
<td><em>Acacia</em> species</td>
<td>Thorn-trees</td>
<td>Gum which is eaten by the Hottentots</td>
<td>Gordon, 1779</td>
<td>60</td>
</tr>
<tr>
<td><em>Hydnora africana</em> Thunb.</td>
<td>Kaniep</td>
<td>Eaten by the Hottentots</td>
<td>Gordon, 1779</td>
<td>60</td>
</tr>
<tr>
<td><em>Agathosma</em> species</td>
<td>Buchu</td>
<td>Used on Hottentot wedding</td>
<td>Gordon, 1779</td>
<td>60</td>
</tr>
<tr>
<td><em>Boophone disticha</em> (L.f.) Herb.</td>
<td></td>
<td>Furnishes Bosjesmans with poison for their arrows</td>
<td>Barrow, 1798</td>
<td>61</td>
</tr>
<tr>
<td><em>Diospyros lycioides</em> Desf.</td>
<td>Ebony</td>
<td>Bark well adapted for tanning</td>
<td>Alexander, 1836</td>
<td>63</td>
</tr>
<tr>
<td><em>Searsia undulata</em> (Jacq.) T.S.Yi, A.J.Mill. &amp; J.Wen</td>
<td>Where his party was given plenty of rozyntjes (edible fruit)</td>
<td>Backhouse, 1840</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>
Despite all these publications, the recorded information on useful plants of the Khoisan remained incomplete Liengme (1983), Archer (1990, 1994), Cowling and Pierce (1999) and Van Wyk (2002, 2008).

After the exploratory phase of this study, the following hypotheses were formulated for further investigation and evaluation:

a) The recorded information on the ethnobotany of Namaqualand and especially the recorded medicinal ethnobotany of the Kamiesberg is incomplete.

b) The medicinal ethnobotany of the Kamiesberg is in danger of being lost to future generations and there is an urgent need to accurately record the traditional medicinal plant knowledge.

c) Medicinal plants are still commonly used in the Kamiesberg.

d) If the Kamiesberg area is compared to a similar rural area in South Africa, with similar cultural background, the same trends in traditional medicinal plant knowledge will be observed.

The specific aims of this study were:

a) To obtain a general overview of the ethnobotany of Namaqualand.

b) To systematically and accurately record the medicinal plants used in the Kamiesberg area.

b) To obtain and quantify the medicinal ethnobotanical knowledge of the people of the Kamiesberg.

b) To determine the relative importance of the various medicinal plant species used in the Kamiesberg area.

d) To compare the medicinal ethnobotanical knowledge obtained in this study with the results obtained in another ethnobotanical study done in the Agter-Hantam area (De Beer and Van Wyk, 2011).
Chapter 2: Study area

Namaqualand is situated in the Northern Cape Province of South Africa (Figure 1). Various towns in Namaqualand were visited during the exploration phase of this study in February 2010. Specific focus was given to the towns in the mountainous Kamiesberg region of Namaqualand, namely: Kamieskroon, Leliefontein, Nourivier and Paulshoek. A general overview on the vegetation of Namaqualand, the history of the people of Namaqualand and the towns and participants in the Kamiesberg will be given here.

2.1 Namaqualand

Namaqualand is world famous for its spectacular flower fields in spring time, occurring from the beginning of August to the end of September. Despite the arid conditions, Namaqualand is also characterised by its diverse and unique plant life, with about 3500 plant species of which 22 per cent are endemic (Le Roux and Van Rooyen, 2006).

Cowling and Pierce (1999) stated that Namaqualand is “a desert of unrivalled plant wealth”. Namaqualand lies in the north western part of South Africa, stretching from the Olifants River Mouth to the Orange River in the north. With a total length of approximately 400 km and width of 100 km, Namaqualand covers almost 55000 square km.

Various small towns are situated within the boundaries of this unique, biodiverse region. Adjacent to the eastern side of Namaqualand is the Bushmenland, while the Hantam Karoo is situated at the south eastern border.

In early travel records 'Namaqualand' was defined as the area in which the Nama people lived (Van der Stel, 1685; Skead, 2009). This area was not strictly defined by borders and was quite different to what is considered today as Namaqualand. The
Nama tribes formed part of the KhoiKhoi, (Nama orthography: Khoekhoe, or variations: Kwena, Khoe-na or Hottentot people) (Boonzaier et al., 1996).

Figure 1: Map of Namaqualand (Succulent Karoo Knowledge Centre).
2.2 General overview of the vegetation of Namaqualand

The vegetation composition and dominance of plant species in Namaqualand are greatly influenced by environmental factors such as climate, geology and altitude (Mucina and Rutherford, 2006). The vegetation is characterised by a sparse cover of shrubs and succulents, as well as a dominance of annuals and geophytes in winter and spring. Trees and grasses are rare.

Namaqualand is known for its extreme climatic conditions, ranging from very hot and dry in summer to cold and wet during winter. The cold Benguela Current in the Atlantic Ocean has the greatest influence in this region and is responsible for the semi-arid and arid conditions as well as the winter rainfall (from April to the end of September) (Odendaal et al., 2007). The extreme environmental conditions shaped the survival strategies of these plants species, influencing their growth forms and geographical occurrence. Two distinct patterns of plant adaption to these extreme environmental conditions are found in Namaqualand, namely: drought avoidance and drought tolerance. Drought avoidance is commonly found among the annual species, while drought tolerance is found in succulent plants and perennials (Le Roux and Wahl, 2005; Le Roux and Van Rooyen, 2006).

Namaqualand is one of the six distinct geographical regions within the Succulent Karoo Biome, being the fourth largest biome in South Africa (Figure 2). This biome can be considered as the semi-desert with the highest diversity of succulent plants in the world. Patches of the Fynbos biome also occur in Namaqualand (Le Roux and Van Rooyen, 2006).
Namaqualand can be divided into four distinct regions (Figure 1):

- Richtersveld
- Namaqualand Hardeveld / Klipkoppe
- Namaqualand Sandveld / Kusvlakte, and
- Knersvlakte

Abovementioned regions have different climatic conditions, geology and altitude parameters, resulting in a unique plant species composition in each of these regions.

### 2.2.1 The Richtersveld

The Richtersveld is situated in the northern part of Namaqualand. It is a mountainous area with a very low annual rainfall. The coastal part has a mean annual precipitation (MAP) of about 50 mm and inland a MAP of approximately 300 mm (Mucina and Rutherford, 2006). The Richtersveld is bounded between the Orange River in the north, and the Atlantic Ocean in the west. Towns in the Richtersveld include Port Nolloth, Steinkopf, Lekkersing, Eksteenfontein, Khubus, Sanddrif and Vioolsdrift (Williamson, 2000).
This area is also known for its mineral wealth and rich geology (Odendaal et al., 2007). Prominent geological formations are both of volcanic and sedimentary origin. Williamson (2000) discussed the geological time scale for the formation of the geology of the Richtersveld in detail. Windblown sand covers large parts of the soil, which also directly influence the vegetation of this area (Williamson, 2000).

The vegetation occurring in this barren area of South Africa is relatively sparse or absent. Low vegetation is prominent in the Richtersveld with an average height of 50 cm (Le Roux and Van Rooyen, 2006). The region is well known for the large diversity of succulent plants and the high levels of endemism. There are at least 363 endemic plant species occurring in the Richtersveld only. For this reason it is also considered as an important Centre of Endemism (Van Wyk and Smith, 2001). The Richtersveld was identified as the first entirely arid biodiversity hotspot on earth (Mucina and Rutherford, 2006).

Nineteen different vegetation types have been identified in the Richtersveld. Within each of these vegetation units, there are dominant and important plant species (Mucina and Rutherford, 2006).

Archer (1994) completed an ethnobotanical study within this specific vegetation region of Namaqualand. According to Cowling and Pierce (1999), some 70 plant species in the Richtersveld are used as food, 40 for medicine and 54 for other purposes. This data was probably taken from Archer (1994).

### 2.2.2 Namaqualand Hardeveld / Klipkoppe

The Namaqualand Klipkoppe / Hardeveld can be regarded as the South-western escarpment of South Africa, with an average width of 50 km. It stretches from Steinkopf in the north to Bitterfontein in the south. This region separates the Namaqualand sandveld region and the Bushmanland plateau. The most distinct area in this region is the Kamiesberg mountain range, representing the highest altitude as well as the wettest and coldest part of Namaqualand (Adamson, 1938; Van Wyk and Smith, 2001).
The Namaqualand Hardeveld is characterized by massive granite domes and sandy plains (Le Roux and Van Rooyen, 2006).

The high-lying parts of the Namaqualand Hardeveld region receive a relatively high rainfall with a MAP of up to 400 mm and the plains an average of 100 – 200 mm per year. Dew and frost can also occur during winter. The average temperature during summer (January) mostly exceeds 30°C and the average temperature during winter (June) lowers to about an average of 5°C. In the higher regions of the Kamiesberg, sub-zero temperatures in winter are common (Le Roux and Van Rooyen, 2006).

The average vegetation of the Hardeveld varies between 0.5 and 1 m (Cowling and Pierce, 1999). Six different vegetation types (also part of the Succulent Karoo biome) occur in the Namaqualand Hardeveld region, namely: Namaqualand Klipkoppe Shrubland, Namaqualand Scale Shrubland, Namaqualand Blomveld, Namaqualand Heuweltjieveld, Platbakkies Succulent Shrubland and Kamiesberg Mountains Shrubland (Mucina and Rutherford, 2006).

Two vegetation units of the Fynbos biome, the Kamiesberg Granite Fynbos and the Namaqualand Granite Renosterveld also occur within the Namaqualand Hardeveld region. Each of these vegetation types are characterized by a unique vegetation composition (Mucina and Rutherford, 2006).

2.2.3 Namaqualand Sandveld / Kusvlakte

The Kusvlakte of Namaqualand is the coastal area along the Atlantic Ocean from the Orange River in the north to Doringbaai, south of the Olifants Rivier. This area is only about 30 km wide and is generally a flat plain with sandy soil (Le Roux and Wahl, 2005). The soil of the coastal area consists of deep, grey, calcareous sand, adjacent to the coast, followed by an interrupted zone of yellow sands. The inland part of the Kusvlakte area consists of deep, red, sandy (in some places calcareous) soil (Mucina and Rutherford, 2006).
The average annual rainfall in this region increases from north to south. Fog is also an important additional source of moisture for the plant species in this region (Le Roux and Van Rooyen, 2006).

At the coast the average height of the vegetation is very low (30 cm) but becomes higher towards the interior (Le Roux and Van Rooyen, 2006). The vegetation typically comprises succulent and low shrubs, as well as succulent and geophytic herbs. There are 13 different vegetation units in this region (Mucina and Rutherford, 2006).

2.2.4 The Knersvlakte

The Knersvlakte is the southernmost part of Namaqualand and is situated between Nuwerus and Vanrhynsdorp, the coastal plain and the Bokkeveld Mountains. The name is probably derived from the crunching sound (*kners*) of wagon wheels crossing the gravel coated plains (*vlakte*) (Cowling and Pierce 1999). Another theory is that the name is derived from *Knegsvlakte* (*"servant’s plain"*).

The area covers approximately 4 500 square km and consists of sandy plains and quartzite deposits (Le Roux and Van Rooyen, 2006). The landscape is characterized by very low, rolling hills and *heuweltjies* (round barren circles caused by termites). The soil consists of a surface layer of gravel and stones protecting the underlying clayey soils (Mucina and Rutherford, 2006).

The climate is characterized by a very low average rainfall per year (100 to 200 mm), more or less restricted to the winter months. The average temperature in winter and summer ranges between 5°C to 10°C and 30°C to 35°C respectively (Mucina and Rutherford, 2006).

The average vegetation is very low (10 to 50 cm), for the area is home to a great variety of dwarf succulents. There are six vegetation units in the Knersvlakte region of Namaqualand (Mucina and Rutherford, 2006). About 140 plant species are
endemic to the Knersvlakte, most of which occurs within the Knersvlakte Quartz Vygieveld vegetation unit (Anon, 2006).

2.3 Vegetation of the Kamiesberg

As mentioned previously, the Kamiesberg forms part of the Namaqualand Hardeveld vegetation region. Adamson (1938) published the only significant account of the vegetation of the central parts of the Kamiesberg. From a vegetation point of view the Kamiesberg is a truly unique area in South Africa because of the co-occurrence of the Succulent Karoo biome and Fynbos biome in this mountainous habitat. The combination of these two biomes contributes to a fascinating, unique species composition and a high level of endemism.

There are approximately 201 endemic plant species of which 79 occur in the central mountainous area (Knobel and Bredenkamp, 2006). This area is also referred to as the Kamiesberg Centre of endemism (KBC) (Van Wyk and Smith, 2001; Mucina and Rutherford, 2006). The KBC is one of the earth’s 25 floristic hotspots (Van Wyk and Smith, 2001). There are two vegetation units in the KBC within which most of the endemic species occur (Adamson, 1938; Cowling and Pierce, 1999; Van Wyk and Smith, 2001; Mucina and Rutherford, 2006). These vegetation units are

- Mountain Fynbos, also known as Fynbos Granite or Kamiesberg Fynbos, and
- Mountain Renosterveld, also known as Fynbos Renosterveld / Renosterveld / Namaqualand Renosterveld.

These two vegetation units are interlinked at some places, creating a complex mixture of plant species (Van Wyk and Smith, 2001). The boundaries between the two vegetation types are determined by climate, geology and soils. Adamson (1938) identified three vegetation types of the Kamiesberg, corresponding to the topographic variation in this region. Various names exist for these vegetation types (Adamson 1938; Cowling and Pierce, 1999; Mucina and Rutherford, 2006), namely:
2.3.1 Mountain Fynbos

On the upper plateau and slopes of the Kamiesberg, where the rainfall exceeds 400 mm, Mountain Fynbos vegetation is dominant. This includes the plateau and slopes of the Sneeukop (1 589 m), Kamiesberg (1 527 m), Johannes se berg (1 550 m), Sittenberg (1 555 m), Eselkop (1 664 m) and Rooiberg (1 705 m). There are also some lower altitudes where this vegetation unit may be dominant, although the limit is about 1 450 m. At lower altitudes Mountain Fynbos occurs as isolated pockets or outliers (Adamson 1938; Van Wyk and Smith, 2001).

Dominant features of the landscape are round-topped mountains and broad-shouldered ridges dominated by granite domes and slabs. The geology consists of granites and gneisses of the Mokolian Kamieskroon Gneiss and Staalhoek Complex (Mucina and Rutherford, 2006). The soil composition and depth (shallow on the peaks and deeper in the intervening parts) determine the vegetation composition (Van Wyk and Smith, 2001).

The vegetation of the Mountain Fynbos is characterized by small to medium-sized shrubs (1 to 1.5 m high). On the upper plateau restioids, ericoid and proteoid elements are dominant, in combination with typical renosterveld shrubs. Nine species of restioids, seven Erica species and one species of the allied genus Scyphogyne, as well as two proteoid shrubs, both endemic to the Kamiesberg Fynbos, occur in this vegetation type (Cowling and Pierce, 1999).

Other Fynbos genera present in the Mountain Fynbos include Agathosma, Diosma, Aspalathus, Cliffortia, Gnidia, Murraya, Passerina, Phylica and Struthiola. The Mountain Fynbos is rich in bulbous plant species, but succulents are relatively rare; those that do occur include species of Delosperma, Euphorbia and Aloe (Cowling and Pierce, 1999).
The vegetation on the slopes is very similar to that of the upper plateau. The aspect of the slopes and their altitude are the main factors determining the species composition. South-facing slopes tend to be moister and can therefore support more luxuriant vegetation with larger shrubs. Large shrubs and small trees may also occur at the base of steep rocks and cliffs (Adamson 1938).

2.3.2 Renosterveld

The Renosterveld vegetation unit occurs east of Kamieskroon and north east of Garies at medium to high altitudes of the Kamiesberg area, along the edge of the escarpment. It also occurs on the high peaks of the Richtersveld Mountains and along the edge of the western escarpment near Springbok. In the Kamiesberg, this area also includes a central area around Leliefontein and the most easterly extension is in the vicinity of Paulshoek (Adamson, 1938; Mucina and Rutherford, 2006). The Renosterveld occurring in Namaqualand is a northern outlier of the renosterveld of the Fynbos biome. The landscape is marked by plateaus, low mountains and broken veld of granite landscapes (Adamson, 1938). Renosterveld vegetation occurs in the deeper soils of the plateau (at lower altitudes) where rainfall exceeds about 300 mm (Adamson, 1938; Cowling and Pierce, 1999).

The vegetation is characterized by dense, evergreen shrubs, many of them members of the Asteraceae. Cowling and Pierce (1999) list the dominant species in this vegetation unit as follows: *Elytropappus rhinocerotis (renosterbos)*, *Eriocephalus africanus* (wild rosemary), *Stoebe plumosa* (slangbos), *Euryops multifidus* (rapuis), *Montinia caryophyllacea* (peperbos), *Didelta spinosa* (perdebos), *Dodonaea viscosa* var. *angustifolia* (t’noubie), *Nylandtia spinosa* (skilpadbessie) and *Pteronia* species. Thicket patches are taller than in the Upland Succulent Karoo, with trees such as *Ozoroa dispar* (Namaqua resin tree) and *Olea europaea* subsp. *africana* (wild olive). The undergrowth is generally sparse and consists of various small bushes and annual plants (Adamson, 1938).
2.3.3 Upland Succulent Karoo

The Upland Succulent Karoo veld type occurs throughout the Hardeveld and also in the higher-lying parts of the Richtersveld. In the Hardeveld region the Renosterveld merge into the Upland Succulent Karoo vegetation type, near the base of the escarpment. The soil in these areas is much deeper, and the vegetation is rich in leaf succulents (mainly Mesembryanthemaceae and Crassulaceae) (Adamson, 1938).

The Upland Succulent Karoo vegetation type are dominant in areas with a rainfall of 100 to 300 mm and the topography where this vegetation type occur, vary greatly. The topography is marked by massive granite rock domes, smaller koppies and boulder-strewn slopes (Cowling and Pierce, 1999).

Succulent plant species is dominant in this vegetation type. Characteristic trees of the Upland Succulent Karoo are Aloe dicotoma, Ozoroa dispar, Olea europaea subsp. africana, Searcia undulata and Ficus ilicina (Cowling and Pierce, 1999). Thickets occur at the base of the granite domes where moisture is more abundant. Small succulents are found at lower altitudes while taller succulents occur at higher altitudes of this vegetation type (Adamson, 1938).

It is mainly this vegetation type within the Hardeveld region which attracts tourist from all over the world to experience the spectacular mass display of flowers in spring (Van Wyk and Smith, 2001).

2.4 History of the people of Namaqualand

2.4.1 Geographical origin of the Nama people

Various literature sources suggest that the Khoikhoi and the San people once belonged to the same cultural group, as they share the same ancient southern African genetic heritage. In terms of language, race and culture, especially religion, there are also various similarities (Schapera, 1930; Boonzaier et al., 1996).
About 2000 years ago the Khoikhoi people are believed to have started moving south, from central parts of southern Africa (some sources suggest northern Botswana, others the Zambezi valley and others even further north) (Schapera, 1930). This event most likely occurred as a result of the ‘pastoral revolution’ which influenced social and economic systems, as a result of individual acquirement of livestock. The Khoikhoi acquired fat-tailed sheep which they owned individually. This resulted in conflict between the San (hunter-gatherers) and the Khoikhoi (pastoralists) due to limited natural resources (water, grazing and food) and the occupation of the hunting territories. The ownership of livestock (cattle and fat-tailed sheep) also led to the development of a social hierarchy in which the status of a person was measured by wealth in livestock. The territorial requirements of the Khoikhoi increased so that they started to move south, and a three-way split of the Khoikhoi followed not long after that. The three distinct groups that formed were the Einiqua (who followed the course of the Orange River to the west), the Korana (which remained in the area between the Vaal and the Orange River) and the Namaqua (Nama) (which moved south west, towards the Cape Peninsula) (Schapera, 1930).

When the Namaqua reached the arid parts in the south west, they split into two groups, possibly in search of pasture. The one group, the ‘Great Namaqua’, lived north of the Orange River in the southern parts of what is today called Namibia (also known as Greater Namaland) (Shapera, 1930; Eliovson, 1972; Webley, 2007). The other group ‘The Little Namaqua’ moved south, and as they reached the southern parts of South Africa they split yet again into relatively large groups, with different clans and different leaders (Schapera, 1930). Each of these groups also had tribal areas, in which the group had the right to use the resources. The Little Namaqua retained their identity as a group and lived south of the Orange River and north of the Olifants River, in the area known as Namaqualand.

As a consequence of their nomadic lifestyle, the Khoikhoi traditionally lived in characteristic rounded houses known as bee-hive huts [(matjieshuiše (Afrikaans), omi (Nama)], build from reed mats (most probably from Scirpus inanis, S. dioecus and S. nodosus), and poles made from hakiesdoring (Ziziphus mucronata) or witkaree (Searsia pendulina) (Van der Merwe, 1945; Archer, 1994; Van Wyk and
Gericke, 2000). The *matjieshuis* is suited to the extreme climatic conditions of the western part of South Africa, as the inside is cool and airy in summer (the reeds shrink in dry weather, leaving small gaps between them) but warmer and dry during wet weather in winter (the reeds swell and close up) (Schapera, 1930; Archer, 1994; Cowling and Pierce, 1999). There are only a few places in Namaqualand where *matjieshuis* can still be seen. The art of building such houses is recorded in various literature sources (Schapera, 1930; Van der Merwe, 1945; Archer, 1994; Van Wyk and Gericke, 2000; Odendaal *et al.*, 2007). One of the participants in the Kamiesberg, Anna ‘Wiet’ Brand (who lives in Nourivier) also explained the building of a *matjieshuis*. She build her own *matjieshuis* (Appendix 1B no. 21 and 22), and at the age of 84, still prefers to live in it.

The San people (Bushmen) also moved southwards, probably earlier than the Khoi people, as they are seen as the first inhabitants of South Africa (Schapera, 1930) and settled themselves in the central parts of South Africa.

Although the Khoi and the San people share certain resemblances, such as language and appearance, there are also striking differences such as religion, medicinal practices and social interaction (Currell, 1913; Schapera, 1930; Eliovson, 1972). Conflict between these two cultural groups arose from time to time as they lived side by side in South Africa.

**2.4.2 Khoikhoi and Europeans**

The first interaction between the early seafarers and the indigenous people of South Africa, was with the Khoikhoi people. Bartolomeu Dias recorded this interaction with the Khoikhoi at what is today called Mossel Bay in February 1488 (Reader’s Digest, 1992; Boonzaier *et al.*, 1996).

The Khoikhoi interacted and traded with Europeans since the sixteenth and seventeenth century. The Dutch gave different names to these two distinct cultural groups, calling the Khoikhoi ‘Hottentots’ and the San people ‘*Bosjesmans* / *Boesmans*’ (Bushmen) (Boonzaier *et al.*, 1996). The name Hottentot, by which they were known, assumed to derive from the german word *Hüttentüt*, which means
‘stammerer’ or ‘stutterer’, due to the peculiar click sound they made when talking (Schapera, 1930). There are other theories for the origin of the word ‘Hottentot’ as given in Boonzaier et al. (1996), but Schapera’s (1930) explanation is the best known and most authentic explanation.

In the seventeenth century the Khoikhoi people occupied most of the western and southern part, along the coast of South Africa. There were four main divisions of Khoikhoi in South Africa at the time of European settlement, known as the Cape Hottentot, the Eastern Hottentots, the Korana and the Naman (Schapera, 1930). Each of these main divisions consisted of smaller tribes. It is estimated, on the basis of early records, that the total number of Cape Hottentots from all the different tribes were, at the time the Dutch settled at the Cape (after 1652), about 45 000 to 50 000 persons (Schapera, 1930).

The Khoi people in the Cape Colony, by the middle of the 17 century, were quite used to the coming and going of European and British ships and sailors, and traded with them regularly. Some of them were even able to act as negotiators and had some understanding of the foreign languages (Reader’s Digest, 1992).

2.4.3 Khoikhoi and Dutch settlement

When the first Dutch settlers arrived at the Cape of Good Hope in 1652, they build relations with the Peninsular Khoikhoi (also known as the Goringhaiqua or Goringhaikona and the Kora or Gorachouqua) living in the Cape. The Peninsular Khoi traded their livestock with the early colonists (Reader’s Digest, 1992).

Early travelers explored the country for its minerals, shipping ports and natural resources. It was also with the help of the Grigiqua or the Chariguriqua(s), which were found near Table Bay up to the Olifants River (Schapera, 1930) that these journeys was done. Most travelers started their inland journeys in a northerly direction. Accurate travel records are available to give an idea of the localities and environments visited, and recorded for the first time the geography of South Africa, the tribes and indigenous people encountered and the fauna and flora observed.
Namaqualand was defined in the early travel records as the area in which the Nama people lived (Van der Stel, 1685; Skead, 2009). This definition is quite borderless and quite different to what is today defined as Namaqualand.

The first recorded contact with the “Nimiqua Hottentots” was by Corporal Pieter Cruythoff and surgeon Pieter Meerhof near Clanwilliam in 1660 (Williamson, 2000).

In a dairy entry of 1662 by Jan Van Riebeeck [as cited in Skead (2009)], the following account indicated the border between the Chariguriqua group and the Namaqua group: “13 February: But between a certain river named the Oliphants River which run into an inland sea (i.e. the mouth) and the place were the Namaquas are at present camped there was a stretch of country so barren and salty that it was impossible to traverse. The captain of the Chariguriquas and some of his men rapidly crossed this stretch and come upon the Namaquas. After our men had waited 10 or 12 days they brought the news that the Namaquas had said that there was absolutely no chance of meeting them this season.” The “barren and salty stretch of country” almost certainly refers to the Knersvlakte, which appears to have been a natural boundary between the Chariguriqua and the Namaqua. It should be kept in mind that the Namaqua were nomadic pastoralists and that they probably moved southwards from time to time (as evidenced by the contact between them and the Cruythoff/Meerhof expedition near Clanwilliam).

The journal of the Dutch Governor Simon van der Stel (1685), who went searching for the Copper mountains in Namaqualand, gives an indication of the geography, natural resources, fauna and flora of Namaqualand. The first entry in his journal if translated stated: “Journal kept during the journey undertaken to Amaqualand under the leadership of the honourable Simon van der Stel, Commander of the Cape of Good Hope...” In this journal Van der Stel also recorded that the Nama people did not have a firm place of residence and that they moved according to the time of the year. The migration took place between the “mountains and the valleys shore, depending on where they find the best grazing” (Van der Stel, 1685).

Travelers in the seventeen century, when exploring northwards in Namaqualand, referred to the Kamiesberg as “a beacon of water and pasture”, in their exploration
work (Barrow, 1801 as cited in Skead, 2009). Historically it is known that the Nama people, with vast herds of cattle and sheep, were largely concentrated in the high regions of the Kamiesberg (Whittaker and Archer, 1985; Skead, 2009). Webley (2007) suggested that, based on substantial historical information and agrological data, there was a seasonal migration cycle in Namaqualand. The Nama people and their livestock moved between the mountainous region of the Kamiesberg, where they stayed in the summer months (November to March) at permanent water holes, and the plains (Sandveld), where they stayed in the winter (April to October). It is known that the Nama people were largely concentrated in the Kamiesberg.

2.4.4 The Khoikhoi in the eighteenth century

During the 1700’s, various events shaped the future of the Khoikhoi people. Their livestock was greatly reduced due to trade with the European settlers, drought and diseases (Webley, 2007). The sexual contact between some European male settlers as well as male slaves and Khoikhoi woman, changed the racial composition. A further important event was the smallpox epidemic of 1713, which dramatically reduced the population size of the Koi people in the Cape. The following gives an account of what happened during the smallpox epidemic to the Khoikhoi: “When the first Khoikhoi began to die late in April, it soon becomes evident that they had far less resistance to the disease than the settlers and the slaves. With no medical lore to resist what was to them a totally foreign illness, scores of Khoikhoi simply died where they fell ill. Francois Valentyn, a Dutch official, recorded that: ‘The Hottentots died in their hundreds. They lay everywhere on the roads. Cursing at the Dutchmen, who they said had bewitched them; they fled inland, with their kraals, huts, and cattle in hopes there to be freed from the malign disease. “Those who flee got killed in many instances by the inland tribes” (Reader’s Digest, 1992). The surviving Khoikhoi people, who fled inland, assembled with other tribes but they already had a great deal of European influence in their lives.

About the middle of the eighteen century, the Grigriqua or Ghariguriqua tribe moved north, after receiving a considerable infiltration of European blood. They established themselves in the Kamiesberg Mountains, under the leadership of Adam Kok (Boonzaier et al., 1996).
In the 1750’s the first *trekboere*, European pastoralists, started entering Namaqualand. This event also put pressure on the Nama who lived inland. The *trekboere*’s lifestyle at that stage was very similar to the Khoikhoi lifestyle, as they preferred to live in *matjieshuise* and also migrated with their animals in search of grazing and water. The *trekboere*, who were remote from the influences of the European traditions, used the traditional knowledge of plant use of the local (Nama) people for their basic needs (Boonzaier *et al.*, 1996). Conflict may have arisen between the *trekboere* and the Namaqua. Some of the Nama people started moving northwards, beyond the Orange River (into Namibia), some worked for the *trekboere* but many still preferred the nomadic lifestyle, moving with their livestock (Boonzaier *et al.*, 1996).

Further instability of the Nama people was created due to conflict between the remnant Khoi people (of which the Nama formed part) and the San people, as recorded by travelers such as Captain Hendrik Hop in 1761 (Odendaal *et al.*, 2007; Skead, 2009). He passed through Little Namaqualand on his way to explore further north and stated that the Little Namaqua would altogether disappear within a few years. Robert Jacob Gordon, commander of the Dutch garrison at the Cape, visited the Kamiesberg in 1779. He found that the kraal of the chief consisted of only nine huts, while the entire Namaqua population comprised, according to him, of only approximately 400 people (Odendaal *et al.*, 2007).

### 2.4.5 The Khoikhoi in the nineteenth century

The 1800’s were known for political instability, especially in the Cape Colony, due to new proclamations of rules and laws. During this political instability some of the Nama people appealed to the church to establish mission stations in their midst, which was a desperate bid to retain a small portion of their land and some independence (Webley, 2007).

Although mission stations were established, the church was the only attraction of the village, as no other facilities were developed yet. The Nama people still had to continue their nomadic lifestyle to escape seasonal drought conditions (which in this
area can last up to six or more months of the year) (Boonzaier et al., 1996; Shapera, 1930; Skead, 2009). An account of this nomadic lifestyle is found in a record of Thompson in 1823 (as cited in Skead, 2009), who visited the Pella Mission: “About 400 people lived there…but the severe droughts and consequent failure of pasturage force them occasionally to disperse themselves in divisions over the country wherever a spring of water exists with grass in the vicinity for their flocks. It was on this account that Pella, though well supplied with water, was at that time entirely deserted. Such an unsettled and roving life is undoubtedly very adverse to the progress of civilization, but the nature of the country is such that people like the Namaquas must be nomadic… As soon as rain falls the pastures at Pella will instantly spring up and the scattered divisions of the people will again re-assemble.”

These nomadic movements may have delayed the process of ‘civilization’, but on the other hand resulted in the people holding on to their traditional lifestyle and the preservation of their ethnobotanical knowledge. To survive under extreme conditions the people had to rely on oral sharing of detailed knowledge about the habitat, including the location of water holes, pasture, food sources as well as medicine.

In 1828 an important law was announced, stating that the ‘Hottentots’ and other free persons of colour, had the right to own land, which up to that stage was not possible. It still took some years before this law was implemented (Boonzaier et al., 1996).

2.4.6 The Khoikhoi in the twentieth century

In 1909 the “Mission Stations and Communal Reserves Act”, had an impact on the missionary stations (Boonzaier et al., 1996), known at the time as ‘reserves’ or ‘coloured rural areas’. Five reserves were established in Namaqualand, namely the Richtersveld, Steinkopf, Kommagas, Concordia and Leliefontein (Archer, 1990, 1994; Boonzaier et al., 1996; Odendaal et al., 2007; Webley, 2007). In these reserves, semi-nomadic movements on communal land still exist but they have become permanent villages with basic facilities such as schools and community centers. Until the late 1950’s, it was still possible for farmers to move to their stock posts but it gradually became more difficult for farmers and their families to live far from the villages.
The cultural, social and genetic composition of the Little Namaqua people, who first inhabited the Kamiesberg area thus changed dramatically during historical times. According to Boonzaier et al. (1996) the reason for changes in their social and cultural system included:

a) Religious beliefs: many of the people became Christians and therefore lost their traditional belief system and concepts of religion. It is noteworthy, however, that superstitions are still encountered today. Examples witnessed during doing field work in the Kamiesberg include plants used for paljas (magic), paying a bush when taking a part of it (by burying a coin below it) and a firm belief in the mythical water snake (waterslang).

b) Introduction of schools: this had an impact on the language and as result the Nama language is rapidly disappearing in South Africa. Traditional knowledge is not so often transferred to the young people. According to Archer (1982, 1990, 1994), Metelerkamp and Sealy (1983), Boonzaier et al. (1996) and Van Wyk (2008) it is especially the indigenous knowledge of traditional plant uses which is rapidly disappearing. Due to better qualifications, young people tend to move to other towns for better work opportunities and as a result, they are no longer dependent on the natural resources of their place of birth.

In 1963, the government of South Africa introduced the concept of breaking up parts of the reserves into economic units, which local farmers can then hire. There where several valid objections against this division of communal land and in the late 1980’s, members of the Leliefontein community took the objections to the courts. As a result, the government withdrew the scheme (Boonzaier et al., 1996).

2.5 Nama identity

Today it is debatable if “pure” Namas are to be found in the villages in Namaqualand. Boonzaier et al., (1996) suggested that by the 1950’s it was accepted ‘that there were hardly any pure Hottentots left in Namaqualand’. Archer (1982) who
researched the edible plants of the Kamiesberg in the Leliefontein area, mentioned that remnants of the Little Namaqua still lived there. Eliovson (1972) noted that some of the Nama people live in the Richtersveld and others near Springbok but that they are not any longer purely Nama and that the Nama race is disappearing, just as the Bushmen people.

But nevertheless, whether pure Nama people exist or not, one must acknowledge that the dominant characteristics of their heritage had remained, especially in the communities visited during this study. The ethnobotanical knowledge of the people of the Kamiesberg and other parts of Namaqualand were not acquired from the Europeans that settled amongst them, but rather the Europeans acquired traditional knowledge from the local people (Eliovson, 1972). There was some transfer of knowledge from the Europeans, including the use and cultivation of exotic plants such as Ruta graveolens (wynruit) and Artemisia absinthium (groenamara) but the overall medicinal plant use knowledge can still be described as part of the Khoisan medicinal ethnobotanical knowledge system. The persistence of cultural superstitions, beliefs and medicinal treatments and the diversity of recorded medicinal plants as encountered during this study is a confirmation that the Khoisan medicinal ethnobotanical system is still used and that it is still relevant.

The various names which have been used in the past to describe the same ethnic/cultural group are very confusing. These include Khoikhoi, Little Namaqua, Hottentots and Namas. What is the correct term to use when referring to these people?

Since the 20th century and still today some political issues have arose around the use of the words ‘Hottentot’ (and ‘Bushmen’). Some people view and use these words as offensive terms, indicating inferiority (Boonzaier et al., 1996; Williamson, 2000). But it is necessary to emphasize that this generalization is not the norm; one cannot therefore state that authors who used the term ‘Hottentot’ or ‘Bushmen’ in historical literature dealing with ethnobotany, used it with a negative connotation or with derogatory motives. In historical literature authors used ‘Hottentot’ and ‘Bushmen’ as acceptable terms to refer to these two cultural groups and to record their plant knowledge. When citing the literature in this study, the terms ‘Hottentots’
or ‘Bushmen’ are quoted verbatim as a historically correct cultural identification and as a potentially important distinction between the *material medica* and medicinal practices of the two groups. The use of the words ‘Hottentot’ and ‘Bushman’ as used in the historical literature (Appendix 2) can also have a positive outcome in identifying where the traditional knowledge originates from, especially in a time where the ethical issues of indigenous knowledge are debated on.

Most recent authors prefer the term ‘Khoikhoi’ but this includes the wider cultural group to which the Nama people (= *Namaqua*) belong. This study focused specifically on the descendents of the Nama group of the Khoikhoi that inhabits the Kamiesberg area.

### 2.6 Language of the Khoikhoi

The Nama language is part of the Khoesaan or Khoisan languages which includes the languages of the San and that of the Khoi (Lewis, 2009; Güldeman and Elderkin, in press). The Khoi and the San languages are similar (both include click sounds) and in certain characters indicate similarity with the Hemitic languages of North and North-East Africa (Güldeman and Elderkin, in press). Nowadays Khoe is considered a language family of its own and not directly related to the two San language families (Tuu and Kx’a). The Khoe language group is divided into the Khoekhoe languages and the Kalahari languages. The former includes Nama (Khoekhoegowab), Xiri (Griqua), !Ora (Koranna or Gorachouqua; extinct), Eini (extinct) and Cape Khoekhoe (extinct) (Fauvelle-Aymer, 2005). The Kalahari languages include about 10 different languages or dialect clusters (Lewis, 2009; Güldeman and Elderkin, in press). Nama is more correctly referred to as Khoekhoegowab (Haacke and Eiseb, 2002).

Of the four (Schapera, 1930) or five (Güldeman and Elderkin, in press; Fauvelle-Aymer, 2005) Khoe/Hottentot languages, Nama is the most widely spoken and best known. Several grammatical studies and dictionaries are available (Schapera, 1930; Lewis, 2009). The first linguistic study of Nama took place in the late 1800’s. The Khoesaan languages have a very complex sound pattern, which are rich in consonants, includes clicks and also several vowels. Schapera (1930) discussed
each of the different elements of the language in detail. Much work on the studies of
the click sounds has been done. These clicks are classified by the different positions
they are formed in the mouth. The symbols / represents the dental click, ‡ represents
the alveolar click, ! the palata-alveolar or cerebral click and // the lateral click.

Literature references such as Le Roux and Wahl (2005) indicate the klick sounds in
Nama by a t’ without specifying the particular type of click sound. This spelling was
also used when recording Nama vernacular plant names during fieldwork in
Namaqualand.

Lichtenstein, a physician and naturalist who lived in Cape Town from 1803 to 1806,
mentioned that Duch (or perhaps early forms of Afrikaans?) was the language of the
Khoikhoi who lived in the vicinity of Cape Town. Only the Khoikhoi who lived in rural
areas still spoke their language. It is interesting to note that some Nama words were
incorporated into the Afrikaans language. Examples include gogga (insect), geitjie
(gecko), kerie (walking stick), aitsa (well-done) and place names such as
Kamies(berg), Garies, Gamoep and Gariep (Eliovson, 1972; Boonzaier et al., 1996).

Today unfortunately very few people in South Africa (Namaqualand) can still speak
Nama but some of the older people in Namaqualand sometimes use a few Nama
words as part of everyday conversations.

2.7 Towns and participants in the Kamiesberg

The Kamiesberg mountain range lies to the east of Kamieskroon and extends
southwards for a distance of about 60 km (Figure 3). Towns visited in the
Kamiesberg are Kamieskroon, Leliefontein, Nourivier and Paulshoek (Figure 3).
The name Kamies is of Nama origin and there are different proposed meanings for the name. Some of these variations are summarized by Van Wyk and Smith (2001). The proposed meanings for the Nama word include reference to a lion (chami, xami), to gather (t’kimmie), place of grassland (/kamis), to bundle (t’kimmie, /hami), water (/gamì), or two (kam) referring to the twin peaks of the mountain (Van Wyk and Smith, 2001). According to Lita Cole (2010, pers. comm.) an inhabitant of the area, there is only one correct derivation, namely from the Nama word “t’iemies” meaning “to bundle”. This bundling refers to the topography of the mountains in the mountain range.

A brief overview on the four towns and the participants in these towns that were visited during this study is given below. Photos of the four towns are provided in Appendix 1, B.
2.7.1 Kamieskroon

Lita Cole (2010, pers. comm.) gave some historical facts about Kamieskroon. “The town Kamieskroon was established in 1924, as the church at Kamieskroon was inaugurated on 27 July 1924. The town moved from Bowesdorp, where the original church was built in 1864, to its present location. There was no space for further development at Bowesdorp. The farm on which the town of Kamieskroon is situated was once known as Koets; it also may have a meaning, but I don’t know. This farm was the property of Ouma Tollie. Her children were referred to as the Oese (a nickname), but their surname was Van Wyk.”

The mountains are the t’imies mountains and the kroon (crown) refers to the town that were established. Some people think the crown is the rock formation that can be seen from Kamieskroon, but the Nama name for that rock formation is t’ar-t’nou; t’ar meaning “difficult” or “steep” and “t’nou” meaning a mountain or pass.

The three participants that were interviewed in Kamieskroon were Lita Cole, Marietjie Goedeman and Magdalena Josephs (Appendix 1, A).

Lita Cole grew up on a farm called Arkoep just outside Kamieskroon, where she was interviewed. She went to boarding school in the town, the buildings of which today serve as a research station (the Kamieskroon Succulent Karoo Centre). Lita is a qualified tour guide for Namaqualand and has a passion for Namaqualand and the diverse flora, which she studies and knows very well. Logistically, Lita Cole helped with the organization of visits to different participants, as she knows the people and they have a trust relationship with her. She also accompanied the researchers to the participants in the other towns and continuously records newly gathered information on the plants and their uses (for Lita, life is a continuous learning process).

The other two participants of Kamieskroon were Marietjie Goedeman and Magdalena Joseph. They form part of a tourist attraction initiative known as the ‘Kookskerm tannies’ which consists of three members. These two participants are sisters and grew up at Tweeriviere, near Kamieskroon.
2.7.2 Leliefontein

Leliefontein is the oldest village in Kamiesberg. It is said that the Khoikhoi Chief Haimaap (also known by the colonists as Jantje Wildschut) invited the Wesleyan Methodist Missionary Society on behalf of a remnant group of Little Namaqua to send someone to Leliefontein (Boonzaier et al., 1996). Reverent Barnabas Shaw was send as missionary to Leliefontein. On 16 October 1816 a meeting was held between Barnabas Shaw and the Little Namaquas, under leadership of Jantje Wildschut. The mission station was established on a loan farm given to the Namaquas by Lord Cathcart and the church building was completed in 1855 (Whittaker and Archer, 1985; Boonzaier et al., 1996). The Leliefontein reserve, as it was called, occupied 192 791 ha and according to Boonzaier et al. (1996) had an estimated population of 5 500 people.

Leliefontein is the town with the highest altitude in the Kamiesberg (1519 m above sea level) and sub-zero temperatures with snow (or kapok, as the local inhabitants call it) is not uncommon in winter (Appendix 1B, no. 12, 15). The Leliefontein area has a diverse vegetation due to the high altitude, the various sloes and aspects and the relatively high rainfall.

Anna ‘Boom’ Stewe (maiden name Links), who lives in Leliefontein is recognized as one of the most knowledgeable persons in the Kamiesberg with regard to medicinal plants. She actively participated in all four phases of this study. A total of five inhabitants of Leliefontein were interviewed.

2.7.3 Nourivier

Nourivier village is part of the so-called Leliefontein reserve area of the Kamiesberg. The estimated population size, according to Whittaker and Archer (1985), is 315 people. The results of the study done by Whittaker and Archer (1985) indicated that health care is generally good and that people in this area still rely on traditional remedies for the treatment of ailments.
In Nourivier some elements of the traditional Nama culture can still be observed, such as the typical Nama *matjieshuis*. Anna Brand, one of the participants in Nourivier, made her own *matjieshuis* and still lives in it. It was noteworthy that her son (Jakobus Brand) and grandson (Morné Brand) also participated in the study. Anna Brand encouraged both her son and grandson to obtain plant use knowledge.

In Nourivier, quiver tree houses (made from the wood of *Aloe dichotoma*) and *kookskerms* (cooking shelters made from a circle of stacked bushes) were also observed (Appendix 1B, no. 28, 30).

### 2.7.4 Paulshoek

Paulshoek is situated on the edge of the Kamiesberg mountains, with the Bushmanland towards the east. There are approximately 600 residents from 120 households. According to Leraume Claasen, the project manager from the development centre in Paulshoek, the village was named after a man by the name of Paul Josephs, who lived there on a permanent basis. People referred to his stand as “Paul se hoek” (literally translated “Paul’s corner”). Later (in the late 1950’s) nomadic people from different localities in the surroundings moved to this place, so that they could be close to a doctor and so that a municipality could be established.

Many of the people in this village are unemployed and have no income. Most of the participants interviewed were from this town. Two of the Kamiesberg’s legendary *bossiedoktors*, Gert Dirkse and Jakobus Corjeus, were interviewed during this study. Gert Dirkse, in particular, shared a tremendous treasure of traditional knowledge on the medicinal plants of the Kamiesberg. It was with sadness and a sense of great loss to hear about Jakobus Corjeus’s death in October 2010 and Gert Dirkse’s death in November 2010. This news and events served as a reminder of the urgency to study traditional knowledge, not only in the Kamiesberg but also in other rural areas of South Africa where ethnobotany is not yet systematically recorded. It is fortunate that these local experts enthusiastically shared their traditional ethnobotanical knowledge and thus made an important contribution towards preserving the traditional medicinal knowledge of the Kamiesberg for future generations.
It was also in this town where the participants referred to four of their legendary *bossiedokters*. Willem (Barend) Engelbrecht (01-01-1915 to 02-03-1985) was one of the most important *bossiedokters* of the Kamiesberg who lived in Paulshoek. Other *bossiedoktors* in Paulshoek were Piet (Perda) Cloete (who specialized in children’s diseases), Joseph Nero and Willem (Jakkals) Cloete.

Some literature sources also refer to the famous *bossiedokters* of the Kamiesberg area. Laidler (1928) referred to ‘Barend’ as an expert in medicinal and magical plants but it is unclear if there is any direct relation between this Barend and Willem (Barend or Bêrend) Engelbrecht. Archer (1994) stated that: “The most renowned healer, Willem Berend, was said to command an esoteric knowledge of herbs and the nature of good and evil.” It is clear that especially this legendary *bossiedokter* was much respected in the community and had tremendous medicinal plant knowledge. It is noteworthy that one of the most frequently used vernacular names for *Sutherlandia frutescens* along the west coast of South Africa is *jantjiebêrend*. It is possible that there is some connection between this name and the legendary *bossiedokters* of the Kamiesberg but the details seem to have been lost.
Chapter 3: Methodology

The methodology followed includes data collection by means of field work as well as a detailed literature study of the medicinal uses of the recorded plant species, as included in the inventory (Appendix 2). Various quantification methods have been applied to evaluate the collected data, using several published indices. A comparison between the Kamiesberg and the Agter-Hantam data (De Beer and Van Wyk, 2011) has also been done.

3.1 Data collection

Data collection strictly adhered to all of the ethical principles, which were based on the concept of traditional resource rights, as outlined in the latest version (2008) of the International Society of Ethnobiology (2006). The aim of the study, the method of data collection, the long term benefits of the study and the feedback strategy (participatory approach) have all been explained to the participants. An appropriate honorarium was paid to compensate the participants for the time that they spent on interviews. An educated prior informed consent has been established with all participants, including permission to use all photographs, digital recordings, personal details and ethnobotanical information for scientific theses and publications.

This study was formally approved by the Science Faculty Ethics Committee of the University of Johannesburg. During the last 30 years, several scientific studies have been conducted in Namaqualand and in the Kamiesberg (especially by scientists from the University of Cape Town) so that the inhabitants of these areas were already familiar with scientific research methodologies and typical research objectives. Information about the participants who contributed to this study is given in Appendix 1, including portraits of the participants, their dates of birth, their geographical origin, source(s) of traditional knowledge, as well as the part of this study to which they contributed. Interviews with the participants were conducted in the Afrikaans language. The original use-records were recorded verbatim (in Afrikaans) to accurately capture the subtle, often humorous nuances and
expressions used by the local people. These were later loosely translated into English. Both versions are included in Appendix 2.

### 3.2 Field work

Field work was done in four phases. The first phase was conducted during February 2010 and the last phase during May 2011.

#### 3.2.1 Phase 1 - Exploration

During the exploratory phase (February 2010), a broad survey was conducted in nine towns in Namaqualand (Vanrhynsdorp, Nuwerus, Garies, Kamieskroon, Leliefontein, Nourivier, Paulshoek, Soebatsfontein, Springbok and Steinkopf) in order to identify persons with traditional ethnobotanical knowledge. The Richtersveld was excluded from this study because Archer (1994) already recorded the ethnobotany of this area. Eighteen persons (refer to Appendix 1) were informally interviewed on the general ethnobotany of Namaqualand. Most of them were specifically recommended by the local communities because of their knowledge of plant uses. As such, the selection of participants was not based on race, gender or age.

Some useful data on Namaqualand ethnobotany was obtained during this phase (Nortje and Van Wyk, unpublished data). The most knowledgeable persons were identified and a preliminary list of useful plants of Namaqualand was compiled, categorizing the plants according to medicinal (M), food (F) and craft (C) uses (Table 6, section 4.1.1). The use categories in Table 6 were located to either being recorded in Namaqualand [N] (excluding the Kamiesberg records) or in the Kamiesberg region [K]. The field work during this first phase indicated that the Kamiesberg area is arguably the most important focal point of Nama ethnobotany in South Africa. The traditional medicinal uses of plants in this area have remained practically unrecorded. The edible plants of the Kamiesberg, however, were studied in considerable detail by Archer (1982). It became clear that a wealth of unpublished information on medicinal plants and their uses was available in the Kamiesberg.
3.2.2 Phase 2 - Structured interviews

The structured interview phase (June 2010) was focused on the medicinal plants of the Kamiesberg. Four towns in the Kamiesberg were visited and structured interviews were conducted with eight main participants from Kamieskroon, Leliefontein, Paulshoek and Nourivier. The aim of this phase was to record as many local medicinal plant species as possible, together with their traditional medicinal uses and vernacular names in the Afrikaans and/or Nama languages. A selection of 83 photo images, showing the complete plant and details of the leaves, flowers or fruits were used to facilitate the interviews. The selection of species was guided by experience from previous studies and the results of phase 1, as well as a careful consideration of literature data (e.g. Laidler, 1928; Archer, 1994). The images did not only represent medicinal plant species, but also a wider collection of ethnobotanically relevant plants. Some non-medicinal uses were recorded (Nortje and Van Wyk, unpublished notes). Facilitation of interviews through images proved to be a very useful tool, stimulating the interest of the participants and resulting in lively conversations. The presentation of plant photo images ensured that a large number of plant species and their medicinal uses were discussed and described in a relatively short time. As most of the participants were elderly people, this method of data collection had a great advantage as it was not necessary to visit specific locations or walk long distances to study the plants in the field. The images of the plants and their flowers made it possible to do field work and to have interviews at any time of the year and not only in the flowering season. The data was recorded verbatim by writing all information in a note book. For some interviews, a dictaphone was used for accurate recordings and for capturing the correct pronunciation of some of the vernacular names (especially Nama names). However, during this phase some plant species still remained unidentified. The reason for this was that the participants used unfamiliar vernacular names and their descriptions of the plants were not always sufficient for accurate identification. The participants were encouraged to locate the unidentified plant species and/or to collect a small part of it to ensure scientific accuracy.

The participants were informed about a third phase of the study that was planned for the spring season when most of the plants species are in flower. The second phase
and anticipated third phase resulted in a greater bond of trust and friendship with the participants. They realized the continuity of the study as well as the benefit of sharing their information for structured recordings for future generations, before it is lost forever.

3.2.3 Phase 3 - Confirmation

The confirmation phase (September 2010) consisted of field work in the Kamiesberg (mostly in the Leliefontein area with the very knowledgeable Anna ‘Boom’ Stewe), to identify and/or verify some of the plant species recorded during the structured interview phase. Appendix 1 B, No 14 is a portrait of Anna ‘Boom’ Stewe in the field, identifying some of the plant species. The choice of time for this phase was spring – undoubtedly the best season to do field work in this seasonally dry region. However, the rainfall was very low in 2010, resulting in an extremely dry spring season with very few plants emerging and almost no flowers. Photographs of all available medicinal plants were taken and some herbarium voucher specimens were collected, especially of previously unrecorded species and species with doubtful identities. The identity of species were determined (or confirmed) at the National Herbarium in Pretoria (PRE). Dr John Manning (Compton Herbarium) and Mr Nick Helme (associated with the Compton Herbarium) helped with the identification of Othonna species.

A preliminary checklist of 85 medicinal plant species of the Kamiesberg was compiled. The preliminary checklist forms part of the final checklist of 101 medicinal plant species as presented in Table 7. Plants with magical and veterinary applications have also been included as medicinal plants.

Table 7 is a list of all the medicinal plants, their vernacular names and a summary of their recorded medicinal uses. Authorities for species names as given in Table 7 are not repeated in the text from here on. Data from the checklist were evaluated against recorded literature on the medicinal uses for each of the species (Appendix 2). From this evaluation new medicinal plant species, new vernacular names and new
variations of existing vernacular names (in Afrikaans and Nama) were identified and new medicinal uses were highlighted.

The number of use-records per medicinal plant species were also calculated, and expressed as a rank, from the highest number of use-records per species to the lowest. Note that several species may have the same rank if they had the same number of use-records.

From the preliminary medicinal plant species list, a list of ailments – as treated in the Kamiesberg - was compiled (Table 8). The ailments were grouped into ailment categories based on the treatment as mentioned by the participants (therefore different ailment categories may seem inconsistent or illogical, such as the separation of stomach ailments, stomach ache and stomach cramps). An attempt was made in Table 8 to indicate the importance of the individual species used for that ailment category.

The concept of the “Species Therapeutic Index” (STI) is hereby introduced, and is calculated as the number of use-records of a given species for a particular ailment divided by the total number of use-records for that ailment (a value between 0 and 1). A high STI value for a species in an ailment category indicate that several use-records for that plant species were recorded and that it is therefore considered to be an important remedy for treating that specific ailment. For example, the STI value for Agathosama betulina for influenza is calculated as:

\[
\text{STI}_{\text{Agathosama betulina}} = \frac{1 \text{ (use-record)}}{108 \text{ (total number of use-records for influenza)}} = 0.01
\]

3.2.4 Phase 4 - Quantification and feedback

The quantification and feedback phase took place during May 2011. Quantification of the level of medicinal knowledge for persons in the communities and quantifying the extent to which medicinal plants species are known by inhabitants of the Kamiesberg was done by applying the Matrix Method (De Beer and Van Wyk, 2011). A total of 16
persons from Leliefontein, Paulshoek, Nourivier and Kamieskroon participated in the quantification process (Appendix 1 A).

The preliminary medicinal plant species checklist (consisting of 85 plant species) and compiled during the previous phase was included in a questionnaire. A file with 85 “images” (i.e. herbarium specimens enriched with photos) accompanied the questionnaire (Figure 4).

Figure 4: The image file, with photographs and herbarium voucher specimens, as it was used for identification purposes in the application of the Matrix Method during Phase 4 of the Kamiesberg study.

The participants were asked to study each of the 85 plant “images” one by one and then answer three questions for each of them, namely:

Does the participant recognize the plant? (score of 1 or 0);
Does the participant have a name for the plant? (score of 2 or 0); and
Does the participant known of a medicinal use for the plant? (score of 3 or 0)

Each answer was scored as indicated above, resulting in a maximum possible score of 6 per plant species. The different score values (1, 2 or 3) is an attempt to accurately record the level of knowledge of the participant. For example, children often learn to recognize a plant without necessarily having a name for it (they may say, for example, that they recognize it as the tree that grows along the river). This is
the first step in acquiring ethnobotanical knowledge. The next step is to link a name or names to the plant that they already know so that they are able to communicate about it (hence the score of 2). The third and most sophisticated and important step is to gain knowledge about the uses of the plant (hence the score of 3). This scoring system takes into account all levels of knowledge about the plant and not only the uses.

Three additional non-plant products also formed part of the Matrix Method, namely hyraceum (*dassiepis*), midget droppings (*klipsweet*) and rock salt (*bomeester*). Previous phases revealed that these products are used mostly in combination with plant materials and that they play an important role in the traditional healing system in the Kamiesberg. For this reason, non-plant products used as medicine in the Kamiesberg have also been addressed, briefly evaluated and discussed in Chapter 4.

**3.2.4.1 Ethnobotanical Knowledge Index (EKI)**

Quantifying the extent to which medicinal plants species are known to inhabitants of the Kamiesberg have been calculated by the Ethnobotanical Knowledge Index EKI(m) for medicinal plants only. It is the first time ever that the EKI(m) is used [In the study by De Beer and Van Wyk (2011), the EKI values were calculated for all useful plants, while this study included medicinal plants only. The EKI(m) is calculated by determining the total score of the individual participant for all of the 85 plant species and dividing this number by the maximum possible score for the 85 plant species. For example, the EKI(m) is 1.00 when the participant knew all the plants, including names and uses for all of them [EKI(m) = 510 (the maximum possible total) ÷ (85 x 6) = 1] or it may be 0.9 if most of the plants and their uses were known [EKI(m) = 460 (total score obtained) ÷ (85 x 6) = 0.90].

This index is therefore expressed as a number between 0 and 1. The closer a participant’s score to 1 the more knowledge he/ she has on the medicinal plants of the area. To determine which age group possesses the most medicinal knowledge
the EKI(m) values for three age groups [elderly (55+), adults (25 – 54) and children or young people (<25)] were determined.

3.2.4.2 Species Popularity Index (SPI)

The Matrix Method also allows researchers to quantify the extent to which each medicinal plant species is known in the local community. This value is calculated using the Species Popularity Index or SPI (De Beer and Van Wyk, 2011). The SPI is calculated by taking the total score of all participants for each plant species and dividing it by the maximum possible score for that plant species. For example, the SPI for a given plant species is 1.00 when all 16 participants knew the plant and its name(s) and use(s) \[SPI = 96 \text{ (maximum possible score)} ÷ (16 \times 6) = 1.00\] or 0.50 when a total score of 48 was obtained for the species \[SPI = 48 \text{ (total score obtained)} ÷ (16 \times 6) = 0.50\].

3.2.4.3 Additional plant species

After the questionnaire has been completed, each of the participants was asked if they had knowledge about any medicinal plants that were not included in the questionnaire and image file. As a result, 16 additional medicinal plant species and their uses were recorded, bringing the total number of medicinal plant species recorded in the Kamiesberg to 101 (Table 7). It is important to note that these 16 additional plant species were not included in the quantification process using the Matrix Method. Four of the 16 species remain unidentified because they were mere verbal records without accurate descriptions, sight records and/or plant specimens.

3.2.4.4 Feedback

During the last phase feedback was given to the participants by means of a preliminary poster (as agreed upon during the previous phase). The poster will be printed in Afrikaans and English and will be donated for display in the local schools, community centers as well as in the Succulent Karoo Information Centre in Kamieskroon. It is hoped that these posters will be a useful educational aid for local
learners and that the information thereby given may inspire at least some of them to work towards preserving the Nama plant culture.

Some of the participants requested that portraits be made of a few of the prominent traditional healers (bossiedokters) of the Kamiesberg that are now deceased, in order to remember them and to honour their legacy. Enlarged and framed photographs were presented to the community centre in Paulshoek (Appendix 1 B, No. 39 and No. 40).

3.3 Quantitative comparisons

3.3.1 Importance of the medicinal plants

The data for the use-reports (Table 7), quantification by means of the EKI(m) and SPI (Table 9), and the illness categories (Table 8) were assessed using other quantification methods as described in the literature. In Table 7, calculations of the Cultural Importance Index (CII) and the Relative Frequency of Citation (RFC), both of Tardio and Pardo-De-Santayana (2008), as well as the Index of Agreement on Remedies (IAR) of Trotter and Logan (1986) for all the plant species have been included.

The CII and RFC values for the species have been compared with the SPI values (Table 9) and the number of use-records (Table 7). All of these quantification methods (CII, RFC, SPI and number of use-records) have the aim of determining the importance/ popularity of a medicinal plant species to the community. In addition, the IAR value was calculated to determine an overall value on the agreement of the participants for the use of a plant species for an ailment, and not for comparing it with the other statistical measures.

In this study the CII determines the medicinal importance of a species to the culture. This index takes into account the diversity of the medicinal uses for the species and the agreement of the uses between the informants (Tardio and Pardo-De-Santayana, 2008; Mutheeswaran et al., 2011).
The CII is calculated by the number of participants mentioning a specific ailment category dividing by the total number of participants in the study (structured interviews were held with a total of 23 participants in the Kamiesberg data, including the 16 persons that participated in the Matrix Method). For example, the CII value for *Acorus calamus* is calculated as:

\[
\text{CII}_{Acorus\ calamus} = \frac{1}{23} \text{ (stomach ailments)} + \frac{1}{23} \text{ (stomach ache)} + \frac{2}{23} \text{ (flatulence)}
\]

\[
= 0.04 + 0.04 + 0.09
\]

\[
= 0.17
\]

The Relative Frequency of Citation (RFC) is a more simple quantification method than the CII, as it does not consider the different ailment categories. The values vary between 0 and 1, where a score of 1 is obtained when all the participants mentioned a use for the plant species. A score close to 0 would indicate that only a few participants referred to a use for that plant species.

The RFC is calculated by dividing the number of participants mentioning a use-record for a plant species with the total number of participants in the survey (23). For example, the RFC value for *Acorus calamus* is calculated as:

\[
\text{RFC}_{Acorus\ calamus} = \frac{3}{23}
\]

\[
= 0.13
\]

The Index of Agreement on Remedies (IAR) was calculated to determine the importance of each plant species by taking into account the total number of use-records for the species as well as the number of ailment categories for which the species are used (Mutheeswaran *et al*., 2011). This is an additional statistical value where the index value ranges from 0 to 1 with only one decimal. A value of 0 can be obtained when the number of use-records is equal to the number of ailment categories or when only one use-record has been mentioned for a plant species. A value of 1 can be obtained when two use-records are given for the same ailment category.
The IAR is calculated by subtracting the total number of ailment categories from the total number of use-records and dividing this by the total number of use-records minus 1. For example, the IAR value of *Acorus calamus* is calculated as:

\[
\text{IAR}_{Acorus\ calamus} = \frac{[4\ \text{(use-records)} - 3\ \text{ailment\ categories}]}{[4-1]}
\]

\[
= \frac{[4 - 3]}{3} = 0.33
\]

### 3.3.2 Ailment categories

Comparisons of previously mentioned statistics in the ailment categories with other quantification methods such as the consensus factor (\(F_{ic}\)) of Trotter and Logan (1986) and the Fidelity Level (FL) of Friedman *et al.* (1986) have been performed and are included in Table 8. These other quantification methods and how the various indices are calculated, have been evaluated and reviewed by Heinrich *et al.* (2009) and Mutheeswaran *et al.* (2011).

The consensus factor (\(F_{ic}\)) determines the consistency of the participants mentioning a treatment for a specific ailment. The index values range between 0 and 1. A score of 1 is obtained when all participants mention a use-record for a specific plant species for treating the same ailment.

The \(F_{ic}\) is calculated by subtracting the total number of species for the specific ailment from the total number of use-records and by dividing this value by the total number of use-records minus 1. For example, the \(F_{ic}\) value for influenza is calculated as:

\[
F_{ic\ influenza} = \frac{[108 - 28]}{108 - 1}
\]

\[
= \frac{80}{107} 
\]

The Fidelity Level (FL) is a measure of the importance of each individual species in an ailment category. The Fidelity Level is calculated by dividing the total number of
use-records for treating an ailment with a particular plant species, by the total number of participants mentioning the medicinal use of that plant species (and multiplying it by 100 to give a percentage). For example, the FL value for *Agathosma betulina* for treatment of influenza is calculated as:

\[
\text{FL } \textit{Agathosma betulina} = \left( \frac{1}{2} \right) \times 100 = 50\%
\]

### 3.3.3 Kamiesberg versus the Agter-Hantam

A comparison between the medicinal plant data obtained from the application of the Matrix Method in the Kamiesberg and in the Agter-Hantam by De Beer and Van Wyk (2011) has been performed. A recalculation of the data presented by De Beer and Van Wyk (2011) was necessary to exclude non-medicinal uses and to evaluate the EKI(m) of the participants as well as the SPI values of the medicinal plants. As a result, the knowledge of medicinal uses of plant species and their importance in the rural communities of two totally different areas in South Africa can now be directly compared for the first time.

### 3.4 Literature study

The data obtained from the field work in the Kamiesberg has been compared with relevant literature. The literature gave a deep insight of the medicinal uses previously recorded for the medicinal plant species in the Kamiesberg. All relevant literature references available (as from 1685 to 2011) on the medicinal properties of the medicinal plant species in the Kamiesberg, are listed in chronological order by the year of publication. (Appendix 2).

### 3.5 The Inventory

The inventory (Appendix 2) is a database, consisting of all available medicinal data for each plant species as recorded in the Kamiesberg. All relevant literature is also included in the inventory. The inventory will serve in the facilitation of data analysis, such as quantification of newly recorded medicinal plant species, newly recorded...
medicinal use-records and newly recorded vernacular plant names. The following information for each of the medicinal plant species has been included in the inventory:

3.5.1 Taxonomic data

Taxonomic data consist of the scientific and family name of the plant as well as synonyms of the scientific name (Germishuizen et al., 2006). This also includes a very short description of the plant and its distribution as obtained from Germishuizen et al. (2006). The synonyms are especially important when dealing with historical literature, ensuring that all possible recorded medicinal plant information is included.

3.5.2 Vernacular names

A comprehensive list of vernacular names for each plant species has been compiled and has extensively been used during this ethnobotanical study. The vernacular name of the plant is often very descriptive with reference to the plant itself, its structure or the use(s) thereof. Only Afrikaans and Nama vernacular names are used by the people in the Kamiesberg region. The same or similar vernacular names are often used for different plant species. Although these names are important, one cannot rely on such names in literature for identification purposes of plant species. For this study, the literature on vernacular names included Watt and Breyer-Brandwijk (1962), Smith (1966), Powrie (2004) and Le Roux and Wahl (2005).

The vernacular names obtained from the literature have been recorded verbatim and chronological by date of publication and with reference to the page number if applicable. All relevant languages of vernacular names used in literature have also been included in the inventory. The Afrikaans [A], Nama [N] and English [E] names (mainly used) can be identified by italics [A], bold [N] and normal [E] text respectively. Where other languages are included the name of that language appears in brackets behind the vernacular name.
3.5.3 Herbarium voucher specimens

Herbarium voucher specimens are samples of dried and pressed plant material collected in the research area. They are used for identification purposes and for providing a permanent record of the identity of the plant and its associated use-records. Most of the specimens were collected by the participants themselves and collections were made with the permission of the landowners. These voucher specimens, together with photographic material of the relevant plant species, have also been used during the quantification phase. The specimens have been deposited in the herbarium of the University of Johannesburg (JRAU) and are coded as follows in Tables, Appendices and Figures: [NV] = Nortje and Van Wyk; [NVD] = Nortje, Van Wyk and De Beer; [PNV] = photographic vouchers. The relevant codes for the herbarium specimen are provided in Appendix 2. Photographs of the voucher specimens are included in Appendix 3 and are given as figure numbers behind the code, i.e. *Agathosma betulina* [PNV50], (Appendix 3 - Figure 1).

3.5.4 Recorded medicinal uses

The recorded medicinal uses of plant species were obtained from two main sources, namely the original new data recorded in the Kamiesberg and the literature. Verbatim use-records of plants with medicinal use(s) in the Kamiesberg as recorded during this study have been translated from Afrikaans to English. The translated phrases are placed in square brackets [ ], directly behind the original Afrikaans text. The literature references are listed in chronological order by the year of publication. The author, year of publication and page number, where applicable, is provided.
Chapter 4: Results and discussions

4.1 Ethnobotanical overview of Namaqualand

The exploratory phase (February 2010) revealed that the remaining traditional ethnobotanical knowledge in Namaqualand is becoming scarce and is mainly found amongst the elderly people in the towns visited. When asked for a local expert on plant uses, in some towns no one could identify such a person. This observation confirms the concern, as mentioned in various literature sources, that ethnobotanical knowledge (especially about medicinal plants) is rapidly disappearing (Archer, 1982, 1994; De Beer and Van Wyk, 2011; Liengme, 1983; Metelerkamp and Sealy, 1983; Van Wyk et al., 2008). The urgent need to record indigenous plant knowledge and especially the medicinal knowledge, was emphasized by the recent deaths of two Kamiesberg participants (both bossiedokters), one of them being the very knowledgeable Mr Gert Dirkse.

The most obvious reason for the decrease in traditional ethnobotanical knowledge is the change in lifestyle during the last decades. The elderly people still depended on the use of plants for survival (as some of them were shepherds and lived from the veld). These days however, plants are no longer of primary importance for building of shelters, fires, other crafts, food resources as well as the local health care needs. Throughout the study it became clear that the traditional ethnobotanical use-knowledge is based on an oral traditional system. Some of the elderly participants were totally illiterate, but proved to be most knowledgable (such as Gert Dirkse and Anna ‘Wiet’ Brand). The use-knowledge is influenced by external factors such as media and literature and the tradition of teaching children plant uses during excursions is in many instances no longer being done.

Various literature references record plant uses in Namaqualand. Thus far the ethnobotanical surveys of Archer (1982 and 1994) are the only attempts at presenting a systematic documentation of the ethnobotany of Namaqualand. Archer (1982) performed a study on the edible plants of the Kamiesberg and recorded 36
edible plants, while Archer (1994) performed a study on the ethnobotany of the Richtersveld.

A list of ethnobotanically relevant species as mentioned by the participants during the exploration phase has been constructed (Table 6). Verbatim use-records of useful plant species of Namaqualand as provided by the participants during this phase is not included in this study (Nortje and Van Wyk, unpublished data). A complete ethnobotanical species list can only be compiled once a detailed systematic ethnobotanical study in Namaqualand has been completed.

The plant species are listed according to the following categories: medicinal use (M), food plants (F) and crafts (C). Furthermore it is indicated whether a plant species category has been mentioned by participants in Namaqualand [N] (excluding the records obtained in the Kamiesberg region) or in the Kamiesberg region [K]. Eleven of the 18 participants represented the Kamiesberg area (Appendix 1).

During the exploratory phase, 95 ethnobotanical plant species were recorded and have been listed in Table 6. This number is quite high taking into account the limited time spent to collect all the data from the participants without structured interviews. Forty seven plant species are listed for medicinal use, 39 as edible plants (food use) while 23 are listed for craft uses.

Twenty five of the 47 medicinal plants have been recorded as use-records from Namaqualand [N] and 39 of the 47 have been recorded from the Kamiesberg. Seventeen of the 47 medicinal plant species have been recorded as use-records from both Namaqualand and the Kamiesberg, namely: Agathosma betulina, Artemisia afra, Ballota africana, Dicoma capensis, Dodonaea viscosa var. angustifolia, Euphorbia mauritanica, Galenia africana, Melianthus pectinatus, Nicotiana glauca, Olea europaea subsp. africana, Oncosiphon suffruticosum, Ruta graveolens, Salvia dentata, Sceletium tortuosum, Senecio cinerascens, Sutherlandia frutescens and Tylecodon wallichii.

Thirty of the 39 food plants have been recorded as use-records from Namaqualand and 15 of the 39 have been recorded as use-records from the Kamiesberg. Six of the
39 edible plant species have been recorded from both Namaqualand and the Kamiesberg, namely: *Aloe dichotoma*, *Carpobrotus edulis*, *Grielum humifusum*, *Hyobanche sanguinea*, *Quaquua mammillaris* and *Searsia burchellii*.

Twenty-three plant species have been recorded for crafts uses, of which 13 species have been recorded from Namaqualand and 13 from the Kamiesberg area. Only three plant species have been recorded as correspondingly used for crafts in the two areas, namely: *Aloe dichotoma*, *Cyperus* sp. and *Dodonaea viscosa* var. *angustifolia*.

Certain plant species can be used in more than one category, i.e. medicinal and edible; medicinal and crafts; edible and crafts or medicinal, edible and crafts.

Six plant species are used for medicinal and edible purposes: *Acacia karroo*, *Agathosma betulina*, *Eriocephalus* spp., *Gazania* sp., *Mentha longifolia* and *Searsia burchellii*. Six plant species are used for medicinal and craft purposes: *Acacia karroo*, *Diospyros austro-africana*, *Dodonaea viscosa* var. *angustifolia*, *Eriocephalus* spp., *Euphorbia mauritanica* and *Searsia burchellii*. Five plant species are used for edible and craft purposes: *Acacia karroo*, *Albuca canadensis*, *Eriocephalus* spp., *Ficus cordata* and *Searsia burchellii*. Three plant species are used for all (medicinal, food and crafts) categories: *Acacia karroo*, *Eriocephalus* spp. and *Searsia burchellii*.

During the study it was found that certain plant species are used only in the Kamiesberg while other are used in Namaqualand. The reason for this can be the difference in geometrical distribution of the plant species and/or a lack of structured interviews with participants in the whole of Namaqualand.

The exploratory phase revealed that the Kamiesberg is arguably the most important centre of traditional Nama ethnobotanical knowledge in Namaqualand. From the data collected in the exploratory phase it was found that the medicinal plant species of the Kamiesberg area was in the most urgent need of being further studied and explored.
Table 6: Ethnobotanically relevant plant species recorded during the exploration phase in Namaqualand (February 2010).

Ethnobotanical data is categorised as medicinal (M), food plants (F) and crafts (C). Species use-records indicated are as provided by participants in Namaqualand [N] (excluding the Kamiesberg) or by participants in the Kamiesberg area [K].

<table>
<thead>
<tr>
<th>Plant species</th>
<th>Use category</th>
<th>Plant species</th>
<th>Use category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acacia karroo Hayne</td>
<td>M [N], F [K], C [K]</td>
<td>Carissa bispinosa (L.) Desf. ex Brenan</td>
<td>F [N]</td>
</tr>
<tr>
<td>Agathosma betulina (P.J. Bergius) Pillans</td>
<td>M [N],[K], F [K]</td>
<td>Carpobrotus edulis L.Bolus</td>
<td>F [N],[K]</td>
</tr>
<tr>
<td>Albuca canadensis (L.) F.M.Leight.</td>
<td>C [N]</td>
<td>Carpobrotus quadrifidus L.Bolus</td>
<td>F [N]</td>
</tr>
<tr>
<td>Aloe dichotoma Masson</td>
<td>F [N],[K], C [N],[K]</td>
<td>Cassytha ciliolata Nees</td>
<td>M [N]</td>
</tr>
<tr>
<td>Aloe ferox Mill.</td>
<td>M [N]</td>
<td>Cheiridopsis denticulata (Haw.) N.E.Br.</td>
<td>F [N],[K]</td>
</tr>
<tr>
<td>Aloe variegata L.</td>
<td>M [N]</td>
<td>Chironia baccifera L.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Antizoma miersiana Harv.</td>
<td>M [K]</td>
<td>Codon royenii L.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Arctotheca calendula (L.) Levyns</td>
<td>F [N]</td>
<td>Conicosia elongata (Haw.) N.E.Br.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Arctopus echinatus L.</td>
<td>M [N]</td>
<td>Cyphilla orbiculata L.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Artemisia abisinthium L.</td>
<td>M [K]</td>
<td>Cynorhiza typica Eckl. &amp; Zeyh.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Asclepias crispa P.J.Bergius</td>
<td>M [K]</td>
<td>Cyphia sylvatica Eckl.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Babiana curviscapa G.J.Lewis</td>
<td>F [K]</td>
<td>Cyphia sp.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Ballota africana (L.) Benth.</td>
<td>M [N],[K]</td>
<td>Cyphia volubilis (Burm.f.) Willd.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Boophane disticha (L.f) Herb.</td>
<td>C [N]</td>
<td>Diospyros austro-africana De Winter</td>
<td>M [K]; C [N]</td>
</tr>
<tr>
<td>Plant species</td>
<td>Use category</td>
<td>Plant species</td>
<td>Use category</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------</td>
<td>---------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Dittrichia graveolens (L.) Greuter</td>
<td>M [K]</td>
<td>Hydnora africana Thunb.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>M [N],[K]; C [N],[K]</td>
<td>Hyobanche sanguine L.</td>
<td>F [N],[K]</td>
</tr>
<tr>
<td>Elytropappus rhinocerotis (L.f.) Less.</td>
<td>M [K];</td>
<td>Lobostemon fruticosus (L.) H.Buek</td>
<td>M [K]</td>
</tr>
<tr>
<td>Erodium moschatum (L.) L’Hér.</td>
<td>C [N]</td>
<td>Mesembryanthemum guerichianum Pax</td>
<td>C [N]</td>
</tr>
<tr>
<td>Euphorbia mauritanica L.</td>
<td>M [N],[K]; C [N]</td>
<td>Microloma sp.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Ficus ilicinana (Sond.) Miq.</td>
<td>F [N]</td>
<td>Nicotiana glauca Graham</td>
<td>M [N],[K]</td>
</tr>
<tr>
<td>Galenia africana L.</td>
<td>M [N],[K]</td>
<td>Oncosphon suffrutosum (L.) Kållersjö</td>
<td>M [N],[K]</td>
</tr>
<tr>
<td>Galium tomentosum Thunb</td>
<td>M [K]</td>
<td>Oxalis pes- caprae L.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Gethyllis sp</td>
<td>F [N]</td>
<td>Parmelia sp.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Gomphocarpus cancellatus (Burm.f.) Bruyns</td>
<td>C [N]</td>
<td>Pelargonium grossularioides (L.) L’Hér.</td>
<td>M [N]</td>
</tr>
<tr>
<td>Helichrysum odoratissimum (L.) Sweet</td>
<td>M [N]</td>
<td>Pelargonium sp.</td>
<td>C [K]</td>
</tr>
<tr>
<td>Helichrysum rutilus (L.) D.Don</td>
<td>M [K]</td>
<td>Portulaca oleracea L.</td>
<td>F [K]</td>
</tr>
<tr>
<td>Plant species</td>
<td>Use category</td>
<td>Plant species</td>
<td>Use category</td>
</tr>
<tr>
<td>-------------------------------------</td>
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<td>-------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Quaqua mammillaris (L.) Bruyns</td>
<td>F [N],[K]</td>
<td>Senecio scapiflorus (L'Hér.) C.A.Sm.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Quaqua incarnata (L.f.) Bruyns</td>
<td>F [N]</td>
<td>Septulina glauca (Thunb.) Tiegh.</td>
<td>C [K]</td>
</tr>
<tr>
<td>Rumex sp.</td>
<td>F [N]</td>
<td>Solanum guineense L.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Ruta graveolens L.</td>
<td>M [N],[K]</td>
<td>Solanum tomentosum L.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Salvia dentata Aiton</td>
<td>M [N],[K]</td>
<td>Stapelia similis N.E.Br.</td>
<td>F [N]</td>
</tr>
<tr>
<td>Salvia verbenaca L.</td>
<td>M [K]</td>
<td>Stoebe plumose (L.) Thunb.</td>
<td>M [K]</td>
</tr>
<tr>
<td>Sarcocaulon crassicaule Rehm</td>
<td>C [N]</td>
<td>Tamarix usneoides E.May. ex Bunge</td>
<td>C [K]</td>
</tr>
<tr>
<td>Sceletium tortuosum (L.) N.E.Br.</td>
<td>M [N],[K]</td>
<td>Trachyandra falcata (L.f.) Kunth</td>
<td>F [N]</td>
</tr>
<tr>
<td>Searsia burchellii (Sond. ex Engl.) Moffett</td>
<td>M [K], F [N],[K]; C [K]</td>
<td>Tylecodon wallichii (Harv.) Toelken</td>
<td>M [N],[K]</td>
</tr>
<tr>
<td>Senecio cinerascens Aiton</td>
<td>M [N],[K]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2 Medicinal plants species of the Kamiesberg

Medicinal plants and their use-records for the Kamiesberg have been recorded verbatim during all the field work phases. A total of 101 medicinal plant species have been recorded in the Kamiesberg area during this study (Table 7). Four (4) of the 101 plant species have not been identified as yet. The 97 identified species belong to 41 different families. Most of the 97 plant species, namely 22 belong to the Asteraceae, while 25 plant species are the sole representatives of their respective families.

The total of 101 medicinal plant species is considered here to be a very high number when compared to the numbers recorded in previous ethnobotanical studies in South Africa (De Beer and Van Wyk, 2011; Van Wyk et al., 2008). In the study of De Beer and Van Wyk (2011), a total of 64 useful plant species (55 being medicinally employed) have been recorded. If the number of medicinal plant species recorded in the Kamiesberg is compared to the number of medicinal plant species in ethnobotanical studies world-wide, it is also very high (Cotton, 1996): For the Bardi people in Australia, 150 useful plant species were recorded, with 26 being used medicinally. For the Seri in Mexico, 384 useful plant species were recorded, with 90 being used medicinally. For the Pokomo in Kenya, 97 useful plant species were recorded, with 21 medicinally used. The Waimiri Atroari people in Brazil has a higher number of medicinal plant species compared to the Kamiesberg area, with 134 medicinal plant species of the 319 useful plant species.

During phases 2 and 3, 85 of the 101 medicinal plant species have been identified. During the last phase (quantitative phase) 16 additional species were mentioned including four as yet unidentified species. The additional species were Acorus calamus, Artemisia vulgaris, Bupleurum mundii, Dittrichia graveolens, Eucalyptus sideroxylon, Felicia sp., Malva parvifolia, Radyera urens, Salvia lanceolata, Salvia verbenaca, Searsia burchellii and Teedia lucida, as well as the unidentified species: rivierkweek, vrouebos, bitterkamroë / bitterpatat and stink-kamaroetjie.
From the medicinal plant species as listed in Table 7, a total of 1375 medicinal use-records (including human, veterinary and magical applications) were recorded. Species are listed alphabetically by their scientific names and author citation, followed by the local vernacular name(s) in Afrikaans and/or Nama as well as all the medicinal uses as mentioned by the participants (exactly as they were recorded but directly translated into English). New vernacular names (common names never recorded in literature before) are identified by a superscript ‘a’ or variations of known vernacular names by superscript ‘b’. Newly recorded Nama names are underlined and new use-records are given in bold text.

Twenty one species are recorded for the first time as having traditional medicinal uses and are indicated in bold text in Table 7, namely: Aloe microstigma subsp. microstigma, Anginon difforme, Arctotis laevis, Bulbine praemorsa, Cheilanthes induta, Conicosia elongata, Diosma acmaeophylla, Euryops lateriflora, Galium capense subsp. namaquense, Helichrysum rutilans, Hermbstaedia glauca, Limeum africanum, Lobostemon paniculatus, Notobubon pearsonii, Othonna daucifolia, Othonna sp. B, Pelargonium hypoleucum, Pteronia cinerea, Rumex cordatus, Senecio scapiflorus and Solanum guineense.

As indicated in Table 7, 14 species do not occur naturally in the Kamiesberg. These plant species are known for being part of a larger healing system, the Cape Dutch medicine (also referred to as Cape Herbal Medicine) (Van Wyk, 2008). Of the 14 species, eight are known to be exotic (non-indigenous, indicated in Table 7 with a single asterisk), namely: Acorus calamus, Artemisia absinthium, Artemisia vulgaris, Datura stramonium, Dittrichia graveolens, Eucalyptus sideroxylon, Nicotiana glauca and Ricinus communis.

Six of the 14 species are indigenous to South Africa but do not occur naturally in Namaqualand (indicated in Table 7 with a double asterisk), namely: Agathosma betulina, Aloe ferox, Artemisia afra, Aspalathus linearis, Bulbine frutescens and Leonotis leonurus. Products from these plants are either locally available at shops (Agathosma betulina, Aloe ferox, Aspalathus linearis) or the plants are cultivated in private gardens (Artemisia afra, Bulbine frutescens and Leonotis leonurus).
A total of 152 vernacular names have been recorded for the first time. Ninety seven are recorded as totally new names (indicated by superscript ‘a’) while 55 are variations of previously recorded (known) vernacular names (indicated by superscript ‘b’). These new records include 23 new Nama (Khoekhoegowab) names, namely: t`noem t’nôrro, t’nôrro, hosabi(e)s, kunie(bos), t’adou, t’ouda, t’gnoubee, t’nou, t’kau, t’gybie, t’gibbie, t’ghybie, t’warra, t’gai(bos), t’naaitand, kynie, t’ienie, org, t’ôrro(a), t’ôrrô(boegoe), t’goenabos, t’ârra and t’knou.

A total of 284 of the medicinal use-records appear to be new (not previously recorded in the scientific literature for the respective species) and are indicated in bold text in Table 7.

The number of use-records for each species is also indicated together with a rank based on the total number of use-records per species. The most important medicinal plants in the Kamiesberg according to the highest ranks are: *Asclepias crispa* (use-records 51, rank 1), *Sutherlandia frutescens* (50, 2), *Dicoma capensis* (48, 3), *Dodonaea viscosa* var. *angustifolia* (48, 3), *Sceletium tortuosum* (47, 4), *Ballota africana* (46, 5), *Carpobrotus edulis* (43, 6), *Artemisia absinthium* (38, 7), *Parmelia spp.* (38, 7), *Ricinus communis* (33, 8), *Salvia dentata* (32, 9), *Mentha longifolia* (31, 10) and *Senecio cinerascens* (31, 10).

The total number of use-records given by the participants, and the number of participants commenting on the medicinal uses, for each of the plant species are indicated in in Tabel 2. The total number of use-records per species can serve as an indication of the relative cultural importance of a species and can provide the opportunity to compare different studies (Heinrich *et al.*, 2009). Heinrich *et al.* (2009) refer to this method of determining the cultural importance of a species as the “law of large numbers”. Indicating that the more sampling (extraction of single-point data is made) – in this case: the greater the reference of a medicinal plant to a specific medicinal use – the more significant and accurate the data can be interpreted in the total of use-records and medicinal plants.
Some other quantitative data is also included in Table 7, such as the Cultural Importance Index (CII), Relative Frequency of Citation (RFC) as well as the plant species Index of Agreement on Remedies (IAR). The CII and RFC are also used to determine the cultural importance of the medicinal species.

A comparison between the CII, RFC, the number of use-records (as indicated in Table 7) and Species Popularity Index (SPI) as calculated by the Matrix Method (Table 9) is discussed in section 4.5 and indicated in Table 8.

The IAR values (Table 7) were calculated to determine an overall value of agreement for a plant species to treat certain ailments. This value does not indicate the importance of a plant species in a community and was therefore not compared with the other statistical measures. If only one participant refer to the plant species as medicinally used; or if all the participants mentioned a different medicinal use for the species, an IAR of 0 were obtained (21 species had an IAR value of 0). For those plant species where two participants were in agreement on the medicinal uses, an IAR score of one were obtained, as in the case of Aloe variegata, Bulbine praemorsa, Gunnera perpensa and Othonna sp. B.

Plant species which had high IAR values (>0.6) and a high number of participants (>14) mentioning medicinal use are: Dodonaea viscosa var. angustifolia (participants 23, IAR = 0.8); Galenia africana (participants 17, IAR = 0.8); Salvia dentata (participants 15, IAR = 0.8); Sceletium tortuosum (participants 19, IAR = 0.7); Sutherlandia frutescens (participants 21, IAR = 0.7); Ricinus communis (participants 17, IAR = 0.7); Diospyros austro-africana (participants 17, IAR = 0.7); Asclepias crispa (participants 18, IAR = 0.7) and Dicoma capensis (participants 16, IAR = 0.7).

Although it was not the purpose of this measure to determine the importance of the plant species in the community, the number of participants mentioning a use-record for the plant species listed above, can be considered as an indication that they are very important medicinal plants in the community (compared to the most important plant species as listed in Table 11, section 4.5). The high agreement values, measured by the IAR, for these plant species will also result in high STI values in the individual ailment categories (Table 8, section 4.3).
Table 7: Medicinal plant species and their uses as recorded in the Kamiesberg area, Namaqualand

Column 1: Plant species number
Column 2: Newly recorded medicinal plants and newly recorded uses are given in bold text; newly recorded vernacular names are indicated by superscript a while new variations of known vernacular names are indicated by superscript b; voucher specimens (all in JRAU) are listed as follow: [NV] = Nortje and Van Wyk; [NVD] = Nortje, Van Wyk and De Beer; [PNV] = photographic vouchers; newly recorded Nama (Khoekhoegowab) names are given in underlined text. The Cultural Importance Index (CII) and the Relative Frequency of Citation (RFC) are given as the second last and last statistic values [in square brackets]; * exotic species; ** indigenous species not occurring in Kamiesberg.
Column 3: The total number of participants mentioning a medicinal use for the plant species; total number of use-records; rank of the species. The Index of Agreement on Remedies (IAR) is shown as the last statistic value [in square brackets].

<table>
<thead>
<tr>
<th>No.</th>
<th>Species name; family name; vernacular name(s); voucher specimens.</th>
<th>Medicinal use(s) recorded in the Kamiesberg. Abbreviations (JB, LC, etc.) refer to the key participants as listed in Appendix 1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Acorus calamus</em> L.; <em>Acoraceae; kalmoes</em> [NV105]; [CII=0.17]; [RFC=0.13]</td>
<td>(AB): the root is used for stomach ache; (JB): can be chewed for flatulence; (JL): used for stomach ailments and flatulence. [3,4,32]; [IAR=0.3]</td>
</tr>
<tr>
<td>2</td>
<td><strong>Agathosma betulina</strong> (P.J. Bergius) Pillans; <em>Rutaceae; boegoe, winkelboegoe</em> b [PNV50]; [CII=0.17]; [RFC=0.09]</td>
<td>(AST): decoction used for colds, fever and influenza; (LC): used for stomach ailments. [2,4,32]; [IAR=0.0]</td>
</tr>
<tr>
<td>3</td>
<td><em>Aloe dichotoma</em> Masson; <em>Asphodelaceae; kokerboom</em> [PNV51]; [CII=0.35]; [RFC=0.09]</td>
<td>(AB, JB): root decoction used for pain; (AST): a root decoction is used medicinally (unspecified); (GD): root decoction (one that grows in a southerly direction) used as remedy for infertile woman; (GK): root decoction used for stomach ache; (JL): leaf juice used to remove moles; (JW): root decoction used for infertile woman (one that grows in a northern direction); (SC): leaf juice used to wean infants. [8,8,28]; [IAR=0.3]</td>
</tr>
<tr>
<td>4</td>
<td><strong>Aloe ferox</strong> Mill.; <em>Asphodelaceae; bitteraalwyn, aloe, winkelaalwyn</em> b [PNV52]; [CII=0.91]; [RFC=0.48]</td>
<td>(AB): used for diabetes, stomach ailments and constipation; (AST, AW, LC): used as purgative; (AST): used for wounds and sores with Cayenne pepper; (CC): used for retained placenta after labour; (EK): used for diabetes; (GB): decoction used as veterinary medicine for ticks and waterpens; (JB): used as veterinary medicine and for diabetes; (JW): used for diabetes and constipation; (PD): used for stomach ailments and and as veterinary medicine for chickens with ‘geilsiek’ (from eating too much mealies); (SC): used as veterinary medicine for chickens and used as blood purifier for humans. [11,18,18]; [IAR=0.6]</td>
</tr>
<tr>
<td>5</td>
<td><em>Aloe microstigma</em> Salm - Dyck subsp. <em>microstigma</em>; <em>Asphodelaceae; bitteraalwyn</em>, <em>aalwyn, veldaalwyn</em> b, <em>kamiesbergaalwyn, bergaalwyn</em> b [PNV53]; [CII=1.09]; [RFC=0.65]</td>
<td>(AB): leaf juice used for diabetes, as wash for skin problems (acne); (AST): used for chickens and dogs with lice, used for wounds, sores, as purgative and for ringworm on the scalp; (AW): leaf juice used to wean infants; (EK): leaf juice used for diabetes; (GD): leaf juice used to wean infants and to treat red and blue ticks in livestock; (GK): leaf juice used for ticks in donkey’s ears, applied to chafes from carts on donkeys; (JB): leaf juice used for acne; (JW): leaf juice are used for animals for ticks and internal parasites; also used for humans for diabetes and</td>
</tr>
<tr>
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<td>6</td>
<td><em>Aloe variegata</em> L.; Asphodelaceae; kanniedood, bontaalwyn, sandaalwyn⁸, wildeaalwyn⁹ [PNV54]; [CII=0.9]; [RFC=0.09]</td>
<td>stomach ailments; (JW): leaves added to the animal’s drink water to treat intestinal worms; (LC): used medicinally (unspecified); (MG, MJ): leaf used as a poultice on wounds; (PD): used for donkeys with ticks; (PR): used for animals with ticks; (SC): used as veterinary medicine for ‘blood kidneys’ and used as appetite stimulant for animals. [15,26,13]; [IAR=0.6]</td>
</tr>
<tr>
<td>7</td>
<td><em>Anginon difforme</em> (L.) B.L.Burtt; Apiacea; t’noem t’nôrro⁸, eetlusbos⁸, pennebos⁸; wildeanys⁹, t’nôrro⁹ [NVD6], [NV19]; [CII=0.70]; [RFC= 0.22]</td>
<td>(AB, AST, JB): leaf infusion used as appetite stimulant [(AST): as appetite stimulant mixed with olienhoutblare, store in a glass container]; (AB): a decoction is used for dizziness; (AST): used for backache and in combination with org for tuberculosis; (GD): leaf decoction, in combination with asafoetida, witvergeet (<em>Asclepias crispa</em>), klipsweet and bomeester; used for flatulence and as magicmedicine (paljas) – to expel evil by promoting dreaming; (JB): leaves used to treat insomnia, used for flatulence; (JvW): used for flatulence, earache, with castor oil, and as appetite stimulant. [5,13,23]; [IAR=0.4]</td>
</tr>
<tr>
<td>8</td>
<td><em>Antizoma miersiana</em> Harv.; Menispermaceae; bloubos⁸, swartstorm (root), rambos⁸ [NVD4]; [CII=0.78]; [RFC=0.43]</td>
<td>(AB): root decoction used for sick donkeys; (AST, CC, GD, JB, JL): root as veterinary medicine for sick dogs (skurwesiek and brandsekte), [(AST) as infusion and wash]; (CC): used for kremspiekte in livestock; (GD): roots and leaves used as decoction to treat alcoholism (“om mense van die drank af te kry”) and for diarrhoea; (JJ, PD): root decoction used as laxative for constipation; (JvW): leaf and twig decoction used for pains, such as backache and knee pain; (JW): root is called swartstorm, a root decoction used for flatulence (winde in die maag) and stomach ache; (PD): root decoction used for stomach ailments. [10,19,17]; [IAR=0.6]</td>
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<td>9</td>
<td><em>Arctotis laevis</em> Thunb.; Asteraceae; kankerbossie⁶ [NVD3]; [CII=0.26]; [RFC=0.17]</td>
<td>(AB, JB): leaf decoction used for stomach ache and stomach cancers (swelling); (GB): used for various ailments (unspecified); (SC): leaf compress for pains. [4,6,30]; [IAR=0.4]</td>
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<td>10</td>
<td><em>Artemisia absinthium</em> L.; Asteraceae; groenamara [PNV56]; [CII=1.83]; [RFC=0.70]</td>
<td>(AB): leaf infusion used for digestion problems; (AB, CC, JvW, MG, MJ, PR, SC): leaf infusion used for stomach ache; (AB, JC): used medicinally (unspecified); (AST, AW, MG, MJ): used for stomach ailments; (AST): leaf infusion with jantjibeërend for diabetes, (AST, GB, JL, JvW): used for influenza as a mixture; (AW, EK, MK, MG, MJ): leaf infusion used for diarrhoea; (CC): syrup used for coughs, (EK): used for pains and for high blood pressure and diabetes with alsbos and jantjibeërend; (GB, MG, MJ): infusion used for nausea; (GD): for general malaise and flatulence with other plants; (JB): leaf juice used for general malaise; (JvW): Used for heartburn; (MG, MJ): pain and backache; (PD): used for colds; (SC): used for pains. [16,38,7]; [IAR=0.6]</td>
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<td>11</td>
<td><strong>Artemisia afra</strong> Jacq. ex Willd.; Asteraceae; wildeals, als, alsbos(^b) [PNV57]; [CII=1.17]; [RFC=0.48]</td>
<td>(AST, AW): syrup from the leaves used for colds, fever, influenza; (AST): used as compress with cooking oil- pain (inflammation); (AST, MG, MJ): used for stomach ache; (AST): leaves as syrup used for chronic coughs; (EK): as compress with vinegar with vinegar for infants with high fever, used with greenamara and jantjiebêrend for high blood pressure and diabetes; (GB): medicine ( unspecified); (GD): leaf infusion used for colds, influenza, “godly illnesses” (?)(“goddelike siekte or ongesonde siekte”); (JB): for influenza; (JL): used for diabetes and influenza; (LC): used for pains; (MG, MJ): backache, initial influenza symptoms; (SW): used for influenza and chest problems. [11,28,11]; [IAR=0.6]</td>
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<td>12</td>
<td><em>Artemisia vulgaris</em> L.; Asteraceae wonderkroon(^a) [NV106]; [CII=0.13]; [RFC=0.04]</td>
<td>(AW): used for stomach ache and fever and for infant flatulence. [1,3,33]; [IAR=0.0]</td>
</tr>
<tr>
<td>13</td>
<td>Asclepias crispa P.J.Bergius; Apocynaceae; witvergeet(^a), witstorm(^a), witvergif(^b) [NV39]; [CII=2.13]; [RFC=0.78]</td>
<td>(AB, AST, JC, JW, JvW): magic medicine; the root is chewed and spat out to make other people (or yourself) to forget (hence witverget, which means “white forget”); (AB): used for nausea, bile over excretion, stomach ache and cancer, snuff also medicinal ( unspecified), used with jantjiebêrend and bitterkamerênô (see unidentified species) for diabetes; (AST): decoction used for stomach ailments, stomach cramps and menstrual cramps, the root used with a clove as snuff for headaches, also used as snuff to think clearly, the root chewed and placed in a tooth for toothache; (AW): root decoction used for flatulence and stomach ache; (EK): root chewed for diarrhoea and sniffed for headache; (GB): root used for stomach ache and stomach cramps, dry piece used for pains; (GD): the root is used for magic, during September to December; (GD, JC): root decoction used for flatulence [(GD): with klipsweet]; (GD): powdered roots as snuff for headache; (GJ, JC; JJ, PD): used for stomach ailments; (JK): decoction or chewed for stomach ache; (JB): root used for excessive bile and stomach ailments; (JC, JW): root, mixed with rooistorm (Galium tomentosum), used as magic medicine to bring loved ones back, stomach ache and as snuff for headache, (JL): magic medicine (paljas), in business for good favour; (JvW): root snuffed for headache, root decoction used for constipation, root chewed for stomach ache; (PD): root sniffed for headache (dizziness); (PR): used as magic medicine and stomach ache; (SC): root sniffed for headache; (SW): decoction used for chest ailments. [18,51,1]; [IAR=0.7]</td>
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<tr>
<td>14</td>
<td><strong>Aspalathus linearis</strong> (Burm.f.) R.Dahlgren; Fabaceae; rooibos(tee) [PNV58]; [CII=0.44]; [RFC=0.39]</td>
<td>(AST): used with honey for an infant with chest troubles; with jantjiebêrend used as weak infusion for high blood pressure; (AW): used for heartburn, without milk; (EK): with sugar for heartburn; (GB, JL, JW): appetite stimulant for infants; (GD): appetite stimulant; (JvW): used as appetite stimulant for elderly persons (LC): used for constipation. [9,10,26]; [IAR=0.6]</td>
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<tr>
<td>15</td>
<td>Ballota africana (L.) Benth.; Lamiaceae; kattekruit, oulap(^a) [PNV59]; [CII=2]; [RFC=0.87]</td>
<td>(AB): as compress on sick children’s feet, to get rid of the pains, as compress on head, for headache; (AB, AST, GD, JC, JW, SW): warm leaves used as compress on painful legs; (AST): roots, boiled with honey and lemon used as cough syrup, the leaves applied to breasts of lactating mothers, cause the milk to dry up, to wean infants, a leaf</td>
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<td><strong>Bulbine frutescens</strong> (L.) Willd.; Asphodelaceae; geneesbos(sie)** [PNV60]; [CII=1.17]; [RFC=0.52]</td>
<td>decoction used as wash for wounds, infusion used for influenza, ground leaves with milk or water used for earache; (AW): compress on breasts of lactating mothers, for mastitis (inflammation in the breasts) and to stimulate milk flow; (EK): leaf compress on breast of lactating mother to increase the milk, as ointment on sores and as poultice on boils; (CC, GB): as compress on cheek for toothache, as ointment on pains; (GD): warm leaves as compress for backache; (GK): used to wean an infant; (JB): leaf decoction with ballerja used for stomach ailments; (JC, JW): leaves used as infusion for stomach ache, lukewarm leaves placed in shoes for chilblained feet (wintervoete); (JL): leaf juice used for sores; (JL): leaf juice applied to inflamed moles; (JvW): used as poultice on boils and acne; (LC): fleshy part of the leaf applied to burn wounds; (MG, MJ): leaf juice used for sores, mouth ulcers and painful limbs. [12,27,11]; [IAR=0.6]</td>
</tr>
<tr>
<td>16</td>
<td><strong>Bulbine praemorsa</strong> (Jacq.) Spreng. Asphodelaceae; slangkop®, katstert® [NV35]; [CII=0.09]; [RFC=0.09]</td>
<td>(AB): used for pains, as wash for sores; (AST): fleshy part of leaf and leaf juice used for wounds, burn wounds, pains, swellings and insect bites; (AW): leaf juice used on sores; (CC): used for mouth ulcers; (EK): used on sprained ankles, sores, burn wounds, blisters and abrasions; (GD): leaves applied to burn wounds and boils; (JB): leaf juice used for sores; (JL): leaf juice applied to inflamed moles; (JvW): used as poultice on boils and acne; (LC): fleshy part of the leaf applied to burn wounds; (MG, MJ): leaf juice applied to sores, mouth ulcers and painful limbs. [12,27,11]; [IAR=0.0]</td>
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<tr>
<td>17</td>
<td><strong>Bupleurum mundii</strong> Cham &amp; Schltdl.; Apiaceae; leeuhout® [NV107]; [CII=0.17]; [RFC=0.09]</td>
<td>(AST): used for insect bites, such as bee stings; (AW): leaf juice used for mosquito bites. [2,2,34]; [IAR=0.7]</td>
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<td>18</td>
<td><strong>Carpobrotus edulis</strong> (L.) L.Bolus; Aizoaceae; hotnotsvye, vyerek, t’nôbovye, vye [PNV61]; [CII=1.78]; [RFC=0.65]</td>
<td>(AB): leaf juice used for infants with mouth sores and oral thrush, sometimes with honey and wonderkroon (a Lennon Dutch medicine); (AST): leaf juice for mouth sores (ulcers), oral thrush, wounds, warts, cracked feet and for a sore throat; (AW): used for mouth sores, with water used as purgative; (EK): leaf juice used for infants with mouth sores, used for heartburn, diabetes, a sore throat, and for infants with teething problems; (GD): leaves applied to sunburn, leaves and fruit juice used for stomach ulcers, mouth ulcers and oral thrush; (GK): used for mouth sores for infants; (JL): leaf juice used for infants with oral thrush; (JW): leaf juice used for infants with oral thrush, infants with teething problems, the stems chewed for stomach ailments and figs used as appetite</td>
</tr>
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<td>20</td>
<td>Cassytha ciliolata Nees; Lauraceae; bôjaantou, bobbejaantou, jakkalsgare [PVN62]; [CII=0.78]; [RFC=0.57]</td>
<td>(AB): decoction used for <strong>pains</strong>; (AK): used as medicine (unspecified); (AST): used as wash for <strong>ringworm</strong> and with <strong>1<code>knoo** for woman after labour for strength (**woman</code>s medicine</strong>); (GB): infusion used for <strong>flatulence</strong> and snuff for <strong>headache</strong>; (GJ, JJ, PD): medicinally, (unspecified); (GC): used for ringworm on the scalp and stimulate hair growth; (JB): stimulate hair growth and used for flatulence; (JL): decoction with other plants is used to <strong>expel a retained placenta</strong> after labour and as <strong>internal purifier</strong>; (JvW): helps with <strong>growth of babies</strong>; (SC): infusion used for <strong>stomach ache and fever</strong>; (PD): used for <strong>stomach ailments</strong>. [13,19,17]; [IAR=0.4]</td>
</tr>
<tr>
<td>21</td>
<td>Chelianthes induta Kuntze.; Sinopteridaceae; varing, safarie [NV32]; [CII=0.09]; [RFC=0.09]</td>
<td>(AST): infusion used for <strong>nervous conditions</strong> (<strong>gebruik vir die senuwees</strong>); (GC): used for <strong>children`s ailments</strong>. [2,2,34]; [IAR=0.0]</td>
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<tr>
<td>22</td>
<td>Chironia baccifera L.; Gentianaceae; aambei(e)bos(sie), bitterbos [NVD9]; [CII=1.26]; [RFC=0.87]</td>
<td>(AB, EK, GB, JK, JvW, JL, SC): used for haemorrhoids, as decoction, infusion and wash; (AST): used for <strong>diabetes</strong>, haemorrhoids, <strong>backache</strong>, <strong>rheumatism</strong>, <strong>arthritis</strong> and <strong>woman ailments</strong>; (AW): infusion used for backache and decoction used for haemorrhoids; (CC): used for stomach ache; (GD): dry leaves with <strong>baarbos</strong> (<strong>Limium africanum</strong>), <strong>duiwelsdrek</strong> (a Lennon Dutch medicine), <strong>klipsweet</strong> and <strong>bomeester</strong> used for bleeding haemorrhoids; (LC): leaf infusion as wash for bleeding haemorrhoids; (GJ, JJ, PD): medicinally (unspecified); (JC): leaves used for <strong>children’s ailments</strong> and stomach ailments; (MJ): used for haemorrhoids and <strong>menstrual pains</strong>; (PR): used medicinally as decoction (unspecified); (SC): used as <strong>veterinary medicine</strong>. [20,28,11]; [IAR=0.6]</td>
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<tr>
<td>23</td>
<td>Chrysocoma ciliata L.; Asteraceae; sahandjie, vuurhoutjiebos, m`tjiebos, kra-krakie, teebos(sie), knoppiesopslag [NV24]; [CII=0.26]; [RFC=0.17]</td>
<td>(AST): infusion used for <strong>flatulence</strong>, general malaise, <strong>heartburn</strong>; (JB): used for <strong>diarrhoea</strong>; (JvW): used for stomach ache; (SC): decoction used for stomach ailments. [4,6,30]; [IAR=0.0]</td>
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<td>24</td>
<td>Conicosia elongata (Haw.) N.E. Br.; Aizoaceae; varkieknol, varkieskanol [PVN64]; [CII=0.22]; [RFC=0.17]</td>
<td>(AST, SC): beer brewed and used medicinally for relaxation; (EK): leaf juice applied to <strong>white spots in neck</strong>; (JB): root used for <strong>stomach ailments</strong> and <strong>oral thrush</strong>. [4,5,31]; [IAR=0.3]</td>
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<tr>
<td>25</td>
<td>Conyza scabrida DC.; Asteraceae; vleiwilger, fonteinbos, medisynebos, slangbos, meidebos, waterbos [NV25]; [CII=0.30]; [RFC=0.13]</td>
<td>(AST): decoction used for <strong>backache</strong>, <strong>diabetes and woman<code>s ailments** with vrouebos (unknown species), **1</code>ôro</strong> (<strong>Anginon difforme</strong>) and aambeibos (<strong>Chironia baccifera</strong>); (AW): used as wash for burning feet; (GD): used for &quot;godly illnesses&quot; (?) (<strong>&quot;goddelike siekte or ongesonde siekte&quot;</strong>, fevers and for <strong>internal impurities</strong>. [3,7,29]; [IAR=0.0]</td>
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<td>26</td>
<td><em>Cotyledon orbiculata</em> L.; Crassulaceae; pépébos, skapiebos⁹, karretjiebos⁹, rooi-randjie⁹ [PNV65]; [CII=0.44]; [RFC=0.30]</td>
<td>(AST): leaves used for wounds, mouth sores (ulcers); (GB): open leaf can be placed on callus, to remove it; (GD): leaves used as compress on burn wounds, mouth ulcers and cracked lips; (JL): leaf used as poultice on thorns; (LC): fleshy part of leaf placed on an open plantar wart (soolvrat); (SC): used as poultice on callus; (PD): leaf skin is placed on mouth ulcers. [7,10,26]; [IAR=0.4]</td>
</tr>
<tr>
<td>27</td>
<td><em>Crassula muscosa</em> L.; Crassulaceae; akkedispoet², akkedisstert, akkedis(sie)(bos), hoenderpoet³, vleggiesbos³ [NVD10]; [CII=0.65]; [RFC=0.39]</td>
<td>(AB): infusion of the leaves and twigs used for stomach ailments and <em>woman’s ailments</em>, used for infants with diarrhoea; (AST): decoction of the plant used for stomach complaints, diarrhoea and for digestion problems; (EK): used for children with diarrhoea; (GD): used as a wash for <em>sores on the scalp</em>; (JC, JW): a decoction of the plant used for constipation, stomach ache; (JvW): used for stomach ache; (PD): used for infant ailments (unspecified); (SC): used for stomach ache. [9,15,21]; [IAR=0.5]</td>
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<td>28</td>
<td><em>Datura stramonium</em> L.; Solanaceae; stinkblaar, olieblaar³, groen dissel³ [PNV67]; [CII=0.26]; [RFC=0.17]</td>
<td>(AST): leaves applied as compress on wounds, pain (inflammation), ground seeds used for boils and for lumps in the neck; (GD): leaves as compress and burned seeds as ointment on burn wounds; (AB, MJ): warm leaves used as compress on pains (inflammation). [4,7,29]; [IAR=0.5]</td>
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<tr>
<td>29</td>
<td><em>Dianthus micropetalus</em> Ser.; Caryophyllaceae; grashtout, bokhoutjie³, angelier, wilde angelier, gras-angelier³ [PNV68]; [CII=0.17]; [RFC=0.13]</td>
<td>(AST): used as magic, the dry root used as snuff and an infusion are used for stomach ailments; (GD): root used as snuff to treat stomach ailments, (JvW): cause nausea and used for stomach ailments. [3,5,31]; [IAR=0.8]</td>
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<tr>
<td>30</td>
<td><em>Dicoma capensis</em> Less.; Asteraceae; hosabie(s)⁴, hosable⁴, koorsbos(sie), hotnattooogoed⁴, wilde karmedik, hen-met-kuikens⁴, karmadik, vrouensbos⁴, kuniebos⁴, baarbos⁴, sandsale⁴ [PNV69]; [CII=2.04]; [RFC=0.17]</td>
<td>(AB): leaf decoction with <em>jantjiebêrend</em> used for colds, fever, influenza, used for stomach ache; (AST): leaf infusion with other plants used for influenza, rheumatism, fever, kidney problems and backache; (AW): used for fever, colds and influenza; (CC): infusion used for stomach ache and fever; (EK): used for fever and influenza; (GB): Infusion used for fever (GD): used for <em>woman’s ailments</em>, kidney ailments and bladder problems; (GK): decoction or infusion is used for woman’s ailments, to <em>expel a retained placenta</em>; (JB): with <em>jantjiebêrend</em> for fever, influenza, flatulence and <em>diabetes</em>; (JC, JW): used for stomach pains, constipation, fevers, kidney ailments, as diuretic; (JL): used as a mixture for fever and influenza; (JvW): used for <em>asthma, tuberculosis</em>, cancer, influenza and fever; (LC): leaf infusion used for colds and influenza; (PD): medicinally (unspecified); (SC): used for colds, fever and influenza. [16,48,3]; [IAR=0.7]</td>
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<tr>
<td>31</td>
<td><em>Diospyros austro-africana</em> De Winter var. austro-africana; Ebenaceae; kraaibos, kraaibossiebos⁷ [PNV71]; [CII=0.97]; [RFC=0.74]</td>
<td>(AB, AST, AW, EW, GB, GD, GK, JB, JC, JL, JW, JW, ML): used for constipation (as purgative); (AST): leaf infusion used treating <em>over excretion of bile</em>; (JB): used for flatulence; (MG, MJ): leaf infusion used for the kidneys problems, as diuretic; (PD): leaf decoction with <em>t’noubie</em> is used for colds; (SC): a leaf infusion is used for stomach ache and diarrhoea. [17,20,16]; [IAR=0.7]</td>
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<tr>
<td>32</td>
<td><em>Diosma acmaeophylla</em> Eckl. &amp; Zeyh.; Rutaceae; boegoe⁶, <em>t’dou³</em>, valsboegoe, <em>t’ouda⁶</em> [NV40]; [CII=0.13]; [RFC=0.09]</td>
<td>(AST): leaves used as syrup with <em>wildales</em> for influenza, used for a bad cough; (JvW): used with mother’s milk for infants with flatulence. [2,3,33]; [IAR=0.0]</td>
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<td>33</td>
<td><em>Dittrichia graveolens</em> (L.) Greuter; Asteraceae; <em>kakiebos</em> [NV108]; [CII=0.09]; [RFC=0.04]</td>
<td>(AST): leaf and twig infusion are used for diabetes and high blood pressure. [1,2,34]; [IAR=0.0]</td>
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<td>34</td>
<td><em>Dodonaea viscosa</em> Jacq. var, <em>angustifolia</em> (L.f.) Benth.; Sapindaceae; <em>t<code>noubee*, *t</code>noubie</em>, <em>t`gnoubee</em>, <em>ysterhout</em>, <em>basterolienhout</em> [PNV72]; [CII=2.09]; [RFC=1.00]</td>
<td>(AB): used for influenza, leaf decoction with <em>bergsalie/bêrsalie</em> and goat dung used for measles, <em>chicken-pox</em> and fever; (AST, JC, JW): leaves chewed or infused for colds and influenza; (AW): decoction with <em>jantjiebêrend, kattekruid</em> and <em>vieroulap</em> are used for insomnia, influenza and colds; (CC): decoction used for fever and influenza; (EK): used as syrup for colds, cure is ascribed to diaphoretic action; (GD): leaf decoction with goat dung and <em>jantjiebêrend, as remedy for measles</em>; (GB, PR, SW): leaf decoction or infusion used for influenza and fever, cure is ascribed to diaphoretic action; (JL): used for fever with goat dung; (JL): used for colds and influenza; (LC): leaf decoction used for colds, influenza and measles (for measles mixed with goat dung); (JW): leaf decoction with two aspirins used for influenza, cure is ascribed to diaphoretic action; (MG, MJ): leaf infusion used for influenza, a syrup with sugar and ginger used for mucus on the lungs, infusion of green leaves used for colds, chest problems and fever; (PD): important medicine (unspecified); (SC): infusion used for the treatment of influenza;  [23,48,3]; [IAR=0.5]</td>
</tr>
<tr>
<td>35</td>
<td><em>Elytropappus rhinocerotis</em> (L.f.) Less.; Asteraceae; <em>renosterbos, t<code>nou*, *t</code>kau</em>, <em>anosterbos</em>, <em>wyfie arnosterbos</em>, <em>bergrenoster</em>, <em>vaalrenoster</em>, <em>mannetjie t`nou</em> [PNV73]; [CII=0.96]; [RFC=0.65]</td>
<td>(AST): decoction used for flatulence, for painful legs and as wash for burning feet; (AW): used for influenza and fresh leaves in shoes; used for chilblained feet; (EK): used as compress for back ache; (GD): infusion used for flatulence (&quot;vuil winde&quot;); (GJ, JJ, PD): leaves mixed with <em>jantjiebêrend for diabetes</em>; (JK): used as wash for rheumatism (JL): used in shoes for sweaty feet with a bad odour; (JW): used for burning feet and as glandular remedy for elderly; (JW): leaf decoction as a wash for a painful, swollen feet (allow feet to air dry); (LC): used as wash for sores on scalp; (MJ, MG): leaves placed in shoes for burning (painful) and sweaty feet; (PR): medicine (unspecified). [15,22,15]; [IAR=0.8]</td>
</tr>
<tr>
<td>36</td>
<td><em>Eriocephalus punctatus</em> DC.; Asteraceae; <em>wilderoosmaryn, t<code>gibbie*ª *kapokbos, t</code>gybie</em>ª [NVD13], [NV26]; [CII=0.22]; [RFC=0.13]</td>
<td>(AST): leaf infusion with <em>kraalbos</em> used as wash for ringworm on scalp; (JB): used for chest ailments; (JW): used for back problems and excessive bile excretion and a wash with <em>hotnotskooigoed</em> is used for ringworm on the scalp [3,5,31]; [IAR=0.3]</td>
</tr>
<tr>
<td>37</td>
<td><em>Eriocephalus species</em>; Asteraceae; <em>wilderoosmaryn, roosmaryn, pokbos, veldroosmaryn</em>, <em>t<code>gibbiebos*, *t</code>ghybie</em>ª; [CII=0.61]; [RFC=0.30]</td>
<td>(AB): leaf decoction with <em>kraalbos</em> used as wash for ringworm on scalp; (AST): decoction and wash used for sores on children’s scalp and ringworm; (JL): used to treat ringworm on scalp; (JW): used for back problems and excessive bile excretion and a wash with <em>hotnotskooigoed</em> is used for ringworm on the scalp (LC): infusion used for colds, influenza, fever, as wash for sores on scalp, and dandruff. [7,14,22]; [IAR=0.6]</td>
</tr>
<tr>
<td>No.</td>
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<td>38</td>
<td><em>Eucalyptus sideroxylon</em> A.Cunn.; Myrtaceae; bloekom [NV109]; [CII=0.22]; [RFC=0.17]</td>
<td>(AST): used for colds; (AW): infusion for influenza; (CC): decoction with bloekom leaves and jantjiebêrend for influenza, used with faalbos for coughs and fever; (JL): leaf infusion used for backache. [4, 6, 30]; [IAR=0.2]</td>
</tr>
<tr>
<td>39</td>
<td>Euphorbia mauritanica L.; Euphorbiaceae; melkbos, gifmelkbos, bittermelkbos [PNV74]; [CII=0.48]; [RFC=0.30]</td>
<td>(AB, AST, EK, GK, JvW, MG, MJ): latex used to remove warts; (AST): latex applied to spots of darkskin pigmentation; (AST, EK, GK): latex used to remove moles. [7, 11, 25]; [IAR=0.8]</td>
</tr>
<tr>
<td>40</td>
<td>Euryops lateriflorus (L.f.) DC.; Asteraceae; t`warra&quot;a, rapuis&quot;bos&quot;, blourapuis&quot;, vaalrepuis&quot;, stinkrapuis&quot; [NV110]; [CII=0.26]; [RFC=0.13]</td>
<td>(AB, JB): the resin used as poultice on sores and boils; (GK): The resin is used for toothache and a resin decoction for stomach ache. [3, 4, 32]; [IAR=0.3]</td>
</tr>
<tr>
<td>41</td>
<td>Felicia sp.; Asteraceae; teebossie, vaalbossie&quot; [photo in Le Roux and Wahl, 2005]; [PNV107]; [CII=0.17]; [RFC=0.13]</td>
<td>(AST): infusion used for blood in the stool; (MG, MJ): used for stomach ache, back problems. [3, 5, 31]; [IAR=0.8]</td>
</tr>
<tr>
<td>42</td>
<td>Galenia africana L.; Aizoaceae; kraalbos [PNV75]; [CII=1.09]; [RFC=0.74]</td>
<td>(AB, AST, AW, CC, EK, GD, JJ, JL, JvW, JW, LC, MG, MJ, SC, PD): infusion of leaves and twigs used as wash for sores on the scalp (ringworm); (AST): leaf decoction with kapokbos (Eriocephalus sp.) as wash for treatment of dry scalp (dandruff), wounds, infusion is used as blood purifier; (AW, EK): twig/leaf placed in tooth for toothache; (GB): used as wash for ringworm and sores and as wash in the end of measles; (JvW): dry leaves used as ointment for burn wounds. [17, 25, 14]; [IAR=0.8]</td>
</tr>
<tr>
<td>43</td>
<td>Galium capense Thunb. subsp. namaquense (Eckl. &amp; Zeyh.) Puff; Rubiaceae; rooistorm&quot;, rooibus&quot;, t`gaibos&quot; [NV29]; [CII=0.22]; [RFC=0.17]</td>
<td>(AB): root decoction used for nausea; (AST): used as snuff with witvergeet, bokhoutjie and twak, root juice can be swallowed for stomach ailments; (EK): root decoction used for stomach ailments and used as snuff for headache; (JvW): root used with kalmoes, cloves and asafoetida as snuff for headache. [4, 5, 31]; [IAR=0.5]</td>
</tr>
<tr>
<td>44</td>
<td>Galium tormentosum Thunb.; Rubiaceae; t`naaitand&quot;, rooistorm, jantjiegoub&quot;, rooihoutjie, doodlief&quot; [NV21]; [CII=0.70]; [RFC=0.52]</td>
<td>(AB): used for woman’s ailments, urinary tract infections; (AST): used as snuff with witvergeet, bokhoutjie and twak, root juice can be swallowed for stomach ailments; (GB): used as medicine (unspecified); (GD): the root, mixed with the roots of kriekiebos, cloves and tobacco (boertwak), is powdered and used as a snuff for headache; (JvW): root used with kalmoes, cloves and asafoetida as snuff for headache; (MG, MJ): root decoction used for stomach ache, used for haemorrhoids; (PD): used as snuff for stomach ache (SC): used as medicine (unspecified). [12, 17, 19]; [IAR=0.6]</td>
</tr>
<tr>
<td>45</td>
<td>Gethyllis sp.; Amaryllidaceae; koek(oe)makranka, slaapblommetjie(s)&quot;</td>
<td>(LC): fruit tincture (brandy) used for stomach ailments. [1, 1, 35]; [IAR=0.0]</td>
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<td>46</td>
<td><em>Gomphocarpus cancellatus</em> (Burm.f.) Bruyns; Apocynaceae; bergontelbos, kliptontelbos&lt;sup&gt;5&lt;/sup&gt;, tontelbos, mannetjie tontelbos&lt;sup&gt;5&lt;/sup&gt;, regop tontelbos&lt;sup&gt;5&lt;/sup&gt; [PNV77]; [CII=0.26]; [RFC=0.17]</td>
<td>(AB, JB): leaf decoction used as wash for <strong>sores on the scalp</strong>, and as ointment on pains; (AST): root decoction used for stomach ailments; (JC): root decoction used for dogs with a <strong>mouth ailment</strong> (&quot;beentong&quot;) [4,6,30]; [IAR=0.4]</td>
</tr>
<tr>
<td>47</td>
<td><em>Gomphocarpus fruticosus</em> (L.) Aiton f.; Apocynaceae; gewone tontelbos&lt;sup&gt;6&lt;/sup&gt;, tontelbos [NV11]; [CII=0.30]; [RFC=0.30]</td>
<td>(AST): root used as snuff for headache; (AW): dry leaves used as snuff for headache; (EK): used for children with <strong>convulsions</strong>, used with water tortoise blood; (GD): used as veterinary medicine for dogs, for stomach ailments (&quot;vuil in die maag&quot;) and body pains; (JL): root decoction used for dogs with a <strong>mouth ailment</strong> (&quot;beentong&quot;), used with <em>bloubos</em> and <em>kra-kraakie</em> (JvW): used as snuff for headache; (SC): root decoction used for as veterinary medicine for sick dogs and chickens. [7,9,27]; [IAR=0.5]</td>
</tr>
<tr>
<td>48</td>
<td><em>Gunnera perpensa</em> L.; Gunneraceae; wildepampoen [NV31]; [CII=0.09]; [RFC=0.09]</td>
<td>(AST, JvW): dried plant in alcohol used to treat <strong>alcoholism</strong> (&quot;om hulle van die drank af te kry&quot;), causes nausea. [2,2,34]; [IAR=1.0]</td>
</tr>
<tr>
<td>49</td>
<td><em>Helichrysum rutilans</em> (L.) D.Don; Asteraceae; kooigoedbos [NV43]; [CII=0.26]; [RFC=0.13]</td>
<td>(AB): decoction used for <strong>woman’s ailments</strong>; (AST): infusion used for <strong>kidney ailments, backache and bladder problems</strong>, used as a diuretic (JvW): used as infusion for a <strong>retained placenta</strong> and for woman’s ailments (to bind uterus). [3,5,31]; [IAR=0.0]</td>
</tr>
<tr>
<td>50</td>
<td><em>Helichrysum odoratissimum</em> (L.) Sweet; Asteraceae; kooigoed, hotnokskooigoed, slangbos&lt;sup&gt;9&lt;/sup&gt; [PNV78]; [CII=0.70]; [RFC=0.30]</td>
<td>(AB): used for influenza; (AST): an infusion used for kidney ailments, backache; (GD): used as a decoction for <strong>impurities in the bloodor the body</strong>, &quot;godly sickness&quot; (magic?), leaves bruised and used as poultice for burn wounds, plant also burnt for ancestral spirits (magic); (GB): used as poultice on pains, as infusion for influenza and stomach ailments; (JC): use for the treatment of fever; (JW): used as infusion for a <strong>retained placenta</strong>, woman’s ailments (to bind uterus); (MJ): infusion of dry leaves used for woman’s ailments, <strong>menstrual pains</strong> and to expel the placenta after labour (&quot;skoonmaak na pyne van geboorte&quot;). [7,16,20]; [IAR=0.2]</td>
</tr>
<tr>
<td>51</td>
<td><em>Hermbstaedtia glauca</em> (J.C.Wendl.) Rchb. ex Steud.; Amaranthaceae; bokhoutjie [photo in Le Roux and Wahl, 2005]; [CII=0.35]; [RFC=0.13]</td>
<td>(JC, JW): used for <strong>stomach ache, fever</strong>; (JvW): used with <em>grashoutjie</em> for <strong>stomach ailments</strong> and <strong>nausea</strong>; (LC): <strong>fever, backache</strong>. [3,8,28]; [IAR=0.4]</td>
</tr>
<tr>
<td>52</td>
<td><em>Hoodia gordonii</em> (Masson) Sweet ex Decne.; Apocynaceae; ghobba, ghôba, hoodia [PNV79]; [CII=0.13]; [RFC=0.13]</td>
<td>(GD): edible stem used as appetite stimulant; (JvW): used for <strong>stomach ulcers</strong>; (SC): used for stomach ache. [3,33,3]; [IAR=0.0]</td>
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<tr>
<td>53</td>
<td><em>Hydnora africana</em> Thunb.; Hydnoraceae; jakkelskos, kanni(e), kynie, jakkalsblom, t’ienie, kanniebos [PNV80]; [CII=0.17]; [RFC=0.09]</td>
<td>(AST): used for medicine (unspecified); (GD): dried fruit pericarp (skil) is ground and used as an infusion for body pains, stomach ailments and stomach cramps. [2,4,32]; [IAR=0.0]</td>
</tr>
<tr>
<td>54</td>
<td><strong>Leonotis leonurus</strong> (L.) R.Br.; Lamiaceae; wildedagga [PNV81]; [CII=0.26]; [RFC=0.17]</td>
<td>(AST): leaf infusion used for the treatment of high blood pressure, influenza and diabetes; (EK): used as remedy for poison (scorpion stings and snake bites); (MG, MJ): this plant was not originally used by the Nama people, but now it is used as medicine (unspecified). [4,6,30]; [IAR=0.2]</td>
</tr>
<tr>
<td>55</td>
<td><em>Limeum africana</em> L.; Molluginaceae; baarbosa [PNV82]; [CII=0.22]; [RFC=0.09]</td>
<td>(GD): decoction of the plant mixed with t’norroboegoe and slangbos (<em>Stoebe plumosa</em>) used for infants with convulsions, for epilepsy and blood impurities; (JvW): used for woman’s ailments, for a retained placenta. [2,5,31]; [IAR=0.0]</td>
</tr>
<tr>
<td>56</td>
<td><em>Lobostemon paniculatus</em> (Thunb.) H.Buek; Boraginaceae; brandbos*, agtdaegeneesbos, agdaegenis [NVD11], [NV41]; [CII=0.52]; [RFC=0.30]</td>
<td>(AST): powdered leaves used on wounds and leaves as compress on burn wounds to aid healing; (AW): used as compress on burn wounds; (GD): leaves used with other plants (unspecified) for the treatment of flatulence and stomach ailments; (JC, JW): as compress on wounds and sores – heals within eight days; (JvW): used for burn wounds; (MG, MJ): leaves as ointment for sores. [7,12,24]; [IAR=0.6]</td>
</tr>
<tr>
<td>57</td>
<td><em>Malva parvifolia</em> L.; Malvaceae; kiesieblaar, [NV116]; [CII=0.04]; [RFC=0.04]</td>
<td>(AW): powdered leaves with Vaseline® used as ointment on sores. [1,1,35]; [IAR=0.0]</td>
</tr>
<tr>
<td>58</td>
<td><em>Melianthus pectinatus</em> Harv.; Melianthaceae; kriekie-roer-my-nie(t); kriekiebos; lidjiesbos, kruidjie-roer-my-nie [PNV83]; [CII=1.17]; [RFC=0.74]</td>
<td>(AB): lukewarm decoction of green leaves used as wash for painful legs; (AST): leaf ointment, wash or compress used for painful legs and feet, fractured legs, wounds, sores and abrasions, root decoction used for urinary tract infections; (AW): used as was for painful legs; (CC): used as compress (unspecified); (EK, JB): used as was and compress for painful and cramping legs; (GD): root used as snuff with rooistorm, cloves and tobacco (boertwak) for headache; (GJ, JJ, PD): leaves as compress and wash for painful feet; (GK): used for rheumatism and warm wash for painful legs; (JB): as compress on pains and a leaf infusion is used for influenza; (JC): used as compress on wounds (inflammation); (JL): leaves used as compress on pains; (JvW): a decoction as mixture is used as blood purifier and for AIDS; (MJ, MG): roots used as snuff (&quot;only in one nostril&quot;, probably because of its toxic potential?) for headache; (PD): used as warm compress on pains. [17,26,13]; [IAR=0.6]</td>
</tr>
</tbody>
</table>
| 59  | *Mentha longifolia* (L.) Huds.; Lamiaceae; ballerja [PNV84]; [CII=1.35]; [RFC=0.74] | (AB): infusion for woman’s ailments; (AB, AST, SC): leaf infusion used for influenza; (AST, SC): infusion used for fever; (AW): ointment used for painful legs; (EK): used for influenza and flatulence, with ysterbos (*Dodonaea viscosa var. angustifolia*); (GB): used as infusion for influenza and fever, leaves as compress on pains and sores; (GD): leaf decoction used for diabetes, decoction with root, t’gôrro (*Pteronia camphorata*) leaves and rooistorm (*Galium mumentosum*) root used for sexually transmitted diseases ("onsedelike siekte"); (GJ, JJ, PD): leaves as compress on pains (e.g. knees), for burning feet; (JB): decoction with jantjieberend and t’noubie leaves used for influenza and stomach ailments, cure is ascribed to diaphoretic action; (JL): syrup used for fever and a decoction for
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<td>60</td>
<td><em>Mentha spicata</em> L.; Lamiaceae; kruistement [PNV85]; [CII=0.30]; [RFC=0.26]</td>
<td>(AST): infusion used for pains (inflammation) and menstrual pains, a sit bath is used for haemorrhoids; (JC, JW): an infusion with volént is used for the thyroid gland (skildklier); (JW): Infusion used for influenza; (PD, SC): medicine (unspecified). [6,8,28]; [IAR=0.3]</td>
</tr>
<tr>
<td>61</td>
<td><em>Nicotiana glauca</em> Graham; Solanaceae; jantwaks, twaksboom(^b); twaksblaar(^b), wilde twak, kersboom(^a) [PNV86]; [CII=0.83]; [RFC=0.61]</td>
<td>(AB, AST, GB, JB, SC): warmed leaves used as compress on pains; (EK): used for epilepsy and as compress on wounds; (GK): used as wash for painful legs; (JC, JW): compress on pains and headache; (JL): leaves used as plug or as wash for earache, dry leaves as ointment on sores; (JvW): placed as poultice on whitlow fingers and on the head for headache (MB): used as compress on pains; (MJ, MG): leaves as poultice on pains. [14,19,17]; [IAR=0.7]</td>
</tr>
<tr>
<td>62</td>
<td><em>Notobubon pearsonii</em> (Adamson) Magee; Apiaceae; orgbos(^a), org(^b) [PNV44]; [CII=0.13]; [RFC=0.09]</td>
<td>(AST): leaf decoction with jantjiebêrend and t'nôrraboegoe (Pteronia camphorata) (about 125 ml - &quot;n halwe kelkie&quot;) is used three times a day for the treatment of (and as recovery tonic for) tuberculosis, used for asthma; (EK): leaf decoction used for mucus on the lungs (pneumonia). [2,4,32]; [IAR=0.3]</td>
</tr>
<tr>
<td>63</td>
<td><em>Olea europaea</em> subsp. africana (Mill.) P.S. Green; Oleaceae; olienhout, olienhoutboom [PNV87]; [CII=0.83]; [RFC=0.52]</td>
<td>(AB): leaf infusion used for chest ailments, coughs, leaf decoction for heart ailments; (AST): leaf infusion used for backache and flatulence and as syrup for coughs and influenza with tääbos, t’oubie, wynruit and bergsalie; (AW): used as wash and ointment for sores on scalp; (GD): leaves dried and boiled with other plants for stomach ailments (bark is also used); (GJ, JJ, PD): leaves as an ointment on wounds; (JB): bark decoction used for stomach ailments; (JvW): a bark decoction is used for diabetes; (GK): a leaf infusion used for nausea and dizziness (LC): leaf infusion used for coughs and severe bronchitis, (SC): the bark is used for medicine (unspecified). [12,19,17]; [IAR=0.3]</td>
</tr>
<tr>
<td>64</td>
<td><em>Oncosiphon suffruticosum</em> (L.) Källersjö; Asteraceae; stinkkruid, stinkknoppies(^b) [PNV88]; [CII=1.09]; [RFC=0.78]</td>
<td>(AB, JB): leaves used for infant flatulence; (AST): root used for chest problems, used for mothers to stop lactating, to wean infants; (AW): used for infant convulsions; (EK): leaves used externally for infant convulsions; (GD): leaf decoction used for infants with flatulence (‘winde’) and for children’s ailments; (GJ, JJ, PD): flowers and leaves chewed for heartburn; (GK): used for kidney ailments; (JvW): syrup from leaves and sugar used for influenza and cough; (JW): dry leaves used in shoes for sweaty feet with a bad odour; (MG, MJ): juice of young leaves mixed with mother’s milk used for infants with colic and convulsions (“skree stuipe”) and flatulence (winde); (SC): used in a mixture for colds; (PD): leaf juice swallowed for nausea. [18,27,12]; [IAR=0.5]</td>
</tr>
<tr>
<td>65</td>
<td><em>Othonna daucifolia</em> J.C.Manning &amp;</td>
<td>(AB): resin as poultice on sores and as blister-plaster for thorns; (AST): decoction of the resin is used for stomach</td>
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<tr>
<td>66</td>
<td><strong>Othonna</strong> sp. B [=<em>O.arbuscula</em> (Thunb.) Sch.Bip.?] Asteraceae; <em>repuisbos</em> a, <em>bokrepuis</em> a [NV113]; [CII=0.09]; [RFC=0.09]</td>
<td>(AB, JB): the resin used as poultice on sores and boils. [2,2,34]; [IAR=1.0]</td>
</tr>
<tr>
<td>67</td>
<td><em>Parmelia</em> species; Parmeliaceae; <em>klipblom</em>, <em>heuningnessie</em> a [PNV89]; [CII=1.61]; [RFC=0.70]</td>
<td>(AB, JB): infusion used for back problems; (AB): used for a retained placenta with <em>faaibus</em> and <em>klipsweet</em>; (AST): infusion used for infertile women, mixed with <em>vrouebos</em> (see unidentified species), during menstruation, also used for haemorrhoids with <em>olienhoutboom</em> leaves, used as a wash for sores on the scalp, used for a retained placenta; (AW): compress on sores; (EK): wash used for ringworm, infusion as blood purifier and pain; (GB): used for infants with mouth sores and infusion used for influenza; (GD): syrup made from the infusion used for influenza, colds, back problems and as a diuretic (kidneys ailments); (GJ): as poultice on wounds and as syrup for chest ailments; (JC, JW): syrup used for chest ailments, backaches; decoction of dry leaves used for mouth sores and oral thrush and as a wash for teething problems in babies; (JL): used for mouth sores and backache; (JvW): used for stomach ailments and stomach ache; (MG, MJ): ointment used for children with sores on scalp; (SC): infusion used for various ailments (unspecified). (PD): used as infusion and ointment for haemorrhoids. [16,38,7]; [IAR=0.5]</td>
</tr>
<tr>
<td>68</td>
<td><em>Pelargonium antidysentericum</em> (Eckl. &amp; Zeyh.) Kostel.; Geraniaceae; <em>popbos</em> a [PNV90]; [CII=0.17]; [RFC=0.13]</td>
<td>(AST): woman`s ailments dry root infusion used to start menstruation; (GD): root decoction used for stomach and chest ailments; (LC): used diarrhoea. [3,4,32]; [IAR=0.0]</td>
</tr>
<tr>
<td>69</td>
<td><em>Pelargonium hypoleucum</em> Turcz.; Geraniaceae; <em>rooirabas</em> a [NV33]; [CII=0.22]; [RFC=0.09]</td>
<td>(AST): root decoction is used for diarrhoea; (JvW): root decoction used for stomach ailments, backache, urinary tract infections and menstrual pains. [2,5,31]; [IAR=0.0]</td>
</tr>
<tr>
<td>70</td>
<td><em>Pteronia camphorata</em> (L.) L.; Asteraceae; <em>wakkerbos</em> a, <em>koorsbos</em> a, t’(j)örro(boegoe), t’örro(a) a, t’görroboegoe b [NV36]; [CII=0.57]; [0.30]</td>
<td>(AST): powdered leaves used medicinally as snuff (mixed with other herbs), leaves and twigs infused in milk or water used to alleviate toothache, dry powdered leaves applied on cotton wool to relief of earache (dit het <code>n pyndodende effek</code> – “it has an analgesic effect”), used for flatulence, leaf infusion is used with <em>org</em> (<em>Notobubon pearsonii</em>) and <em>jantjiebêrend</em> to treat tuberculosis (about 125 ml – “<code>n halwe kelkie”) of this mixture used three times a day is considered as the best medicine and tonic for convalescent tuberculosis patients; (EK): used for powdered leaves mixed with mother</code>s milk used for earache for infants; (GB): infusion used for rheumatism; (GD): powdered roots used for infants with febrile convulsions, powdered leaves used for convulsions and epilepsy in adults, as blood purifier, leaf decoction mixed with <em>baarbos</em> (* Limeum africanum*) and <em>slangbos</em> (<em>Stoebe plumosa</em>) for general malaise (&quot;siek voel&quot;); (GK,JB): used for earache; (JvW): powdered leaf used as infusion for flatulence. [7,16, 20]; [IAR=0.4]</td>
</tr>
<tr>
<td>No.</td>
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<td>71</td>
<td><em>Pteronia cinerea</em> L.f.; Asteraceae; <em>boegoe</em>, <em>silwerboegoe</em> [NV42]; [CII=0.13]; [RFC=0.09]</td>
<td>(AST): leaf infusion used for <strong>low back pain, diabetes</strong>; (EK): used medicinally with other shrubs (unspecified). [2,3,33]; [IAR=0.0]</td>
</tr>
<tr>
<td>72</td>
<td><em>Quaqua mammillaris</em> (L.) Bruyns; Apocynaceae; <em>bokhoring, auroena</em> b [PNV91]; [CII=0.09]; [RFC=0.13]</td>
<td>(AW): used for <strong>cancer</strong>; (GD, JvW): used as an <strong>appetite stimulant</strong>. [3,3,33]; [IAR=0.5]</td>
</tr>
<tr>
<td>73</td>
<td><em>Radyera urens</em> (L.f.) Bullock; Malvaceae; <em>wildepampoen</em> [photo in Le Roux and Wahl, 2005]; [CII=0.26]; [RFC=0.09]</td>
<td>(AB, JB): leaves as compress on <strong>pains, wounds and burn wounds</strong>. [2,6,30]; [IAR=0.6]</td>
</tr>
<tr>
<td>74</td>
<td><em>Ricinus communis</em> L.; Euphorbiaceae; <em>olieboom, kasterolie</em> [PNV92]; [CII=1.39]; [RFC=0.70]</td>
<td>(AB): used for constipation (as purgative) for infants; (AST): an ointment of roasted seeds used as compress on wounds, burns and boils, leaves as compress on pains; (AW): oil from ground seeds used as ointment and leaves as compress on pains; (CC): leaves compress on the cheek for toothache and on swellings and pains; (EK): leaves as compress on pains, rheumatism and the burn, ground seeds used on mouth ulcers; (GB): leaves used as compress on wounds, ointment of seeds used on sores and mouth ulcers; (GD): leaves as compress on wounds; (JB): used as compress on pains; (GG): the oil of the seed is used as skin cream for softening the skin; (JC): lukewarm leaves used as a compress for pains (headache and knee pains), an ointment of roasted seeds used for cracked, sore lips and mouth ulcers; (JB): used as compress on pains and as poultice on sores; (JW): ground seeds as poultice on thorns and boils, leaf compress for headache, used as compress for pains (inflammation); (LC): compress on pains; (MG, MJ): leaves as compress for inflamed limbs, (painful knees), oil used as purgative for children; (PD): warm leaf used as compress and seeds as ointment on pains. [16,33,8]; [IAR=0.7]</td>
</tr>
<tr>
<td>75</td>
<td><em>Rumex cordatus</em> Desf.; Polygonaceae; <em>tongblaar</em> b [PNV93]; [CII=0.30]; [RFC=0.17]</td>
<td>(AST): warm leaves used as compress on pains, <strong>inflamed joints</strong> (e.g. a stiff neck); (AW): leaves as compress on sores and pains; (EK): leaves used as compress on sores, acne and on pains; (GK): leaves used as poultice for facial pains. [4,7,29]; [IAR=0.7]</td>
</tr>
<tr>
<td>76</td>
<td><em>Ruta graveolens</em> L.; Rutaceae; <em>wynruit, wynruik</em> b [PNV94]; [CII=1.22]; [RFC=0.65]</td>
<td>(AB): leaf infusion used for <strong>woman’s ailments</strong> and menstruation pains; (AST): leaf infusion used for colds and influenza; (AW): leaf infusion with <em>als</em> (<em>Artemisia afra</em>) for colds and influenza; (EK): used as infusion with <em>jantjiebêrend</em> for woman’s ailments and urinary tract infections; (GD): used for unspecified ailments (one of the most important medicines); (GG): leaf infusion used for nausea; (JB, JL): used for diabetes and influenza; (JC, JW): used for fever; (JW): decoction for influenza and fever with <em>als</em> and <em>groenamara</em>; (LC): leaf infusion used for intestinal parasites; (MG, MJ): leaves used for kidney ailments, diuretic and as compress for low back pain and other pains; (PD, SC): used medicinally (unspecified); (PR): used for influenza. [15,28,11]; [IAR=0.6]</td>
</tr>
</tbody>
</table>
| 77  | *Salix mucronata* Thunb.; Salicaceae; *wilgerboom, wilger, willer* [PNV95]; | (AB, AST, GD, JB, JL): leaf infusions used for backache; (AST): leaf compress for headache and on stiff neck; (CC): root decoction as veterinary medicine for **sick dogs**; (JB): leaves chewed for headache, the sap is swallowed }
<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>78</td>
<td><em>Salvia dentata</em> Aiton; Lamiaceae; <em>bloublomsalie, bergsalie, bêrsaile</em>, <em>salie, sandsalie</em> [PNV96]; [CII=1.39]; [RFC=0.65]</td>
<td>(AB, AST, GB, MG, MJ): leaves mixed with goat dung used for measles (AB, add <em>t’ noubee</em> leaves to decoction); (AB, AST, GB, JB, JL): plant infusion used for influenza; (AB, EK, JB, JL, SC): used for colds; (AB, GB, JB): used for fever; (AB, JB): used as wash for sores on children’s scalp; (CC): decoction with <em>bloekom</em> (<em>Eucalyptus</em> sp.) leaves and <em>jantjiebêrend</em> for influenza; (GD, JC): leaves used for colds and influenza (confirmed by JW, which added): it can be mixed with <em>taaibos</em> (<em>Searsia undulata</em>) and aspirine; (JL): used for pains; (JvW): syrup used for influenza, diabetes and children’s ailments; (PD): used medicinally (unspecified). [9,12,24]; [IAR=0.6]</td>
</tr>
<tr>
<td>79</td>
<td><em>Salvia lanceolata</em> Lam.; Lamiaceae; <em>bruinsalie</em> [photo in Le Roux and Wahl, 2005]; [CII=0.04]; [RFC=0.04]</td>
<td>(AST): used for influenza [1,1,35]; [IAR=0.0]</td>
</tr>
<tr>
<td>80</td>
<td><em>Salvia verbenaca</em> L.; Lamiaceae; <em>sandsalie</em> [NV114]; [CII=0.04]; [RFC=0.04]</td>
<td>(AST): used for influenza. [1,1,35]; [IAR=0.0]</td>
</tr>
<tr>
<td>81</td>
<td><em>Sarcocaulon</em> species; Geraniaceae; <em>boesmanskers, t’(n)oenadoring, t’goenabo</em> [PNV105]; [CII=0.30]; [RFC=0.26]</td>
<td>(AB, CC, JW, LC, SC): decoction used to expel retained placenta of animals (CC): used for haemorrhoids; (SC): used for stomach ache. [6,7,29]; [IAR=0.7]</td>
</tr>
<tr>
<td>82</td>
<td><em>Sceletium tortuosum</em> (L.) N.E.Br.; Mesembryanthemaceae; <em>kougoed, springbok-slaai</em>, <em>springbok-kougoed</em>, <em>geelvoorskoof</em> [PNV97]; [CII=1.91]; [RFC=0.83]</td>
<td>(AB): leaves used for flatulence in infants (<em>winde</em>) and stomach ailments; (AST): psychological conditions (“<em>dit gaan na die kop toe</em>”) and chewed for stomach ailments; dried leaves are mixed with the dry root of <em>witvergeet</em> and dipped into water or milk and a few drops are given to infants with colic and for infants with stomach ailment; (AW): used as infusion for constipation as well as a sedative; (CC): used for stomach ache (<em>EK</em>): used for flatulence; (GB): used for nausea, stomach cramps, flatulence; (GD): used as medicine for infants - a few drops in milk are given for flatulence and to treat insomnia; (JK): used for stomach ailments and for psychoactive conditions; (JB): children’s ailments, chewing the leaves cause psychoactive conditions; (JC): leaves used for infants with flatulence, stomach ache; (JC, JW): used for infants to make them sleep; (JL): used for infants with flatulence, is a sedative which cause babies to sleep, used for adults for stomach ailments, a syrup is made for fevers; (JvW): used for flatulence, stomach ailments, and cause babies to sleep; (LC): leaves added to a few drops of milk is used for infant colic and stomach cramps, leaves used for stomach ailments and cramps and as sedative for hyperactive dogs; (MJ, MG): leaves are chewed and used for stomach ache, headache and for babies with colic, only a few drops will cause them to sleep; (PD, SC): used medicinally for infants; (SW): used for infant flatulence. [19,47,4]; [IAR=0.7]</td>
</tr>
</tbody>
</table>
| 83  | *Schinus molle* L.; Anacardiaceae; | (AST): leaves as compress on painful legs; (AW): leaves as compress on pains; (EK): leaves as compress on ...
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<tr>
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<tbody>
<tr>
<td>84</td>
<td><strong>peperboom</strong> [PNV98]; [CII=0.78]; [RFC=0.48]</td>
<td>backache; (GB): used as poultice; (GD): leaves as compress on wounds and sores; (GK): general malaise and fever, pains, leaves as compress on back pain, cause perspiration; (JB): warm compress on cheek for <strong>toothache</strong> and on other pains; (JL, JW): leaves as compress and ointment on painful knees; (MG, MJ): leaves as compress for headache and fever. [11,18,18]; [IAR=0.5]</td>
</tr>
<tr>
<td>85</td>
<td><strong>Searsia burchellii</strong> (Sond. ex Engl.) Moffett; Anacardiaceae; taabos, t’ârra, gharrabos [NV115]; [CII=0.52]; [RFC=0.35]</td>
<td>(AST): used for influenza; (AW): leaf infusion used for colds; (CC): used for coughs and fever; (EK): used for influenza and stomach ailments; (GK): twig chewed and swallow juice for stomach ache; (JvW): chewed for influenza and for coughs; (PR): used for stomach cramps; (SC): used medicinally (unspecified). [8,11,25]; [IAR=0.3]</td>
</tr>
<tr>
<td>86</td>
<td><strong>Senecio cinerascens</strong> Aiton; Asteraceae; vieroulap, oulap, handjiesbos [PNV99]; [CII=1.26]; [RFC=0.74]</td>
<td>(AB): leaf infusion for <strong>influenza</strong>, bruised leaves as compress on <strong>wounds and sores</strong>; (AST): leaves as compress on wounds and leaf infusions used for influenza and with jantjiebêrend for the treatment of <strong>high bloodpressure</strong>; (AW): used for influenza and <strong>pains</strong>; (EK): used as compress for <strong>headache</strong>, as infusion for flatulence, pains and fever; (GB): used as poultice on <strong>burn wounds</strong> and used as infusion for <strong>constipation</strong>; (GD): pouanded leaves used as decoction for treatment of <strong>colds</strong> and influenza; (GJ, JJ, PD): leaf compress for pains; (GK): used as compress on pains; (JL): used as compress on sores; (JW): leaf infusion (or compress) used topically for pains; (JvW): used as poultice on burn wounds, sores and chilblained hands, as infusion in a mixture for colds; (LC): leaf infusion used for stomach ailments and stomach cramps; (SC): used as poultice for pains. [17,31,10]; [IAR=0.6]</td>
</tr>
<tr>
<td>87</td>
<td><strong>Senecio scapiflorus</strong> (L’Hér.) C.A.Sm.; Asteraceae; kapokbos [NV23]; [CII=0.30]; [RFC=0.22]</td>
<td>(AST): leaf infusion used as wash for sores and ringworm; (AW): used for children’s ailments, such as measles; (EK): used for ringworm on the scalp; (GK): leaves used as wash for ringworm on the scalp, cause hair loss; (JvW): used for flatulence in infants. [5,7,29]; [IAR=0.3]</td>
</tr>
<tr>
<td>88</td>
<td><strong>Stoebe plumosa</strong> (L.) Thunb.; Asteraceae; hotnotswortel, vleirenosterbos, kooigoed, vaal-t’knoù, berg-t’(k)nou [NV34]; [CII=0.35]; [RFC=0.30]</td>
<td>(AB): used as decoction for pain; (AST): leaf infusion used for treatment of backache and kidney problems; (GK): used as ointment to massage woman after labour for relief of pain (woman’s ailments); (JL): used for pains; (JW): used for kidney ailments; (MG, MJ): infusion of bruised leaves used for children’s ailments. [7,8,28]; [IAR=0.4]</td>
</tr>
<tr>
<td>89</td>
<td><strong>Silene burchellii</strong> Otth; Caryophyllaceae [NV28]; [CII=0.04]; [RFC=0.04]</td>
<td>(AST): the plant is used in the same way as witvergeet, as snuff. [1,1,35]; [IAR=0]</td>
</tr>
<tr>
<td>90</td>
<td><strong>Solanum guineense</strong> L.; Solanaceae; koobsasterblaar, kooisg, nasgal, tandypnbossie, bitterappeltjie [NVD17]; [CII=0.04]; [RFC=0.04]</td>
<td>(LC): ointment of the leaves used for sores [her grandmother called it “ouma se groen salf” (“grandma’s green ointment”)]. [1,1,35]; [IAR=0]</td>
</tr>
<tr>
<td>90</td>
<td><strong>Solanum tomentosum</strong> L.; Solanaceae; landpynbosse, bitterappeltjie, nasgal,</td>
<td>(AST): the fruit is used for toothache; (JW): root used as snuff and medicinally used for haemorrhoids; (MG, MJ): ointment used for acne. [4,5,31]; [IAR=0.3]</td>
</tr>
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<tr>
<td>91</td>
<td><strong>bessiebos</strong>&lt;sup&gt;a&lt;/sup&gt;, <strong>bitterbessie</strong>&lt;sup&gt;b&lt;/sup&gt;[NV46]; [CII=0.22]; [RFC=0.17]</td>
<td>(AB, JL): used for <strong>influenza</strong>; (AST): leaf decoction used for <strong>fevers</strong>, <strong>colds</strong> and influenza; (JB, EK): infusion used for fever; (JvW): used as decoction with t`noubie for fever. [6,8,28]; [IAR=0.7]</td>
</tr>
<tr>
<td>92</td>
<td><strong>Stachys rugosa</strong> Aiton; Lamiaceae; <strong>koorsbos</strong>, <strong>bergsalie</strong>&lt;sup&gt;a&lt;/sup&gt;, <strong>stinkkoorsbos</strong>, <strong>stinkbos</strong>&lt;sup&gt;b&lt;/sup&gt; [NV27], [NV49]; [CII=0.35]; [RFC=0.26]</td>
<td>(AB): leaf infusions used for influenza, diabetes and cancer; (AST): leaves and twigs used as an infusion to treat diabetes, as remedy for cancer and for influenza and wounds, used with <strong>org</strong>, <strong>t<code>norraboegoe** for tuberculosis; (AW): used for fever; (CC): used for fever and for coughs; (EK): used for cancer and diabetes; (GB): used for influenza; (GD): decoction used for various ailments such as colds, influenza and flatulence in children; (GJ, JJ, PD): leaf wash used for painful feet; leaf infusion with **taaiboom** (*Searsia* sp.) and **t</code>noubee</strong> leaves used for influenza; (GK): used for diabetes; (JB): leaf infusion used for diabetes, cancer and stomach ailments; (JC): leaf infusion used for diabetes; (JL): used for diabetes and influenza; (JW): decoction with hosabis used for the treatment of <strong>asthma</strong>, tuberculosis, fever and influenza; (JW): leaf infusion used with other herbs for the treatment of colds, fever and influenza; (LC): remedy for colds, influenza and diabetes; (MG, MJ): leaf infusion can be applied around a wound, aid healing, and used for treatment of influenza; (SC): used for influenza, colds and stomach ache; (PD): decoction used for pains and stomach ailments; (PR): used medicinally (unspecified). [21,50,2]; [IAR=0.7]</td>
</tr>
<tr>
<td>93</td>
<td><strong>Teedia lucida</strong> (Sol.) Rudolphi; Scrophulariaceae; <strong>klipdruwe</strong>&lt;sup&gt;a&lt;/sup&gt;[photo in Le Roux and Wahl, 2005]; [PNV106]; [CII=0.09]; [RFC=0.04]</td>
<td>(AST): infusion for woman`s ailments, <strong>retained placenta</strong> and inflammation. [1,3,33]; [IAR=0.5]</td>
</tr>
<tr>
<td>94</td>
<td><strong>Tulbaghia alliacea</strong> L.f.; Alliaceae; <strong>wildeknoffel</strong>, <strong>knoffel</strong> [NVD8]; [CII=0.65]; [RFC=0.39]</td>
<td>(AB): leaf infusion used for fever and influenza (it was used in the influenza epidemic of 1918); (AB, JB): used as snuff for headache; (AST): used for children with <strong>flatulence</strong> (added to <strong>kougoed</strong>), used for <strong>earache</strong> and stomach cramps; (AW): a milk infusion used for influenza; (EK): used for flatulence; (GD): used for flatulence; (JC, JW): used to treat stomach ailments and an infusion with <strong>vrouebos</strong> (see unidentified species) for <strong>woman`s ailments</strong>; (SC): used medicinally (unspecified). [9,15,21]; [IAR=0.4]</td>
</tr>
<tr>
<td>95</td>
<td><strong>Tylecodon wallichii</strong> (Harv.) Toelken; Crassulaceae; <strong>krimpsiek</strong>, <strong>t`nomsganna</strong>, <strong>kremsiek</strong>, <strong>krimsiekkandelaar</strong> [PNV102]; [CII=0.57]; [RFC=0.43]</td>
<td>(AB, JB, MJ, MG): warm leaves used as poultice and blister-plaster for a <strong>broken-off thorn</strong>; (AST): leaves used as compress on <strong>wounds</strong> andboils(<strong>bloedvinte</strong>); (EK): pounded stem used as compress on whitlow finger; (GJ, JJ, PD): used as compress on whitlow (<strong>fy</strong> finger); (JB): leaves are pounded and applied to sores; (JW): stem is used as a poultice and ointment on thorns and boils. [10,13,23]; [IAR=0.8]</td>
</tr>
<tr>
<td>96</td>
<td><strong>Urtica urens</strong> L.; Urticaceae; brandmerneuker&lt;sup&gt;a&lt;/sup&gt;, brandneuker, brandnetel,</td>
<td>(AST): leaves used as snuff to stop a bleeding nose; (AW): smoke dry leaves to stop a bleeding nose, roots can be used as decoction (unspecified); (EK): infusion to <strong>increase stamina</strong>, as tonic; (LC): leaf infusion used as tea and for</td>
</tr>
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<td>97</td>
<td><em>Viscum capense</em> L.f.; Viscaceae; <em>groen voëlent</em>, <em>voëlent</em>, <em>taaibos voëlent</em> [NVD7], [PNV104]; [CII=1.13]; [RFC=0.83]</td>
<td>(AB): used for a retained placenta; (AB, GJ, JJ, PD): stem infusion used as a remedy for diabetes; (AST): decoction used as was for haemorrhoids, as <em>appetite stimulant</em>, for <em>earache</em> and backache; (AW): infusion used for colds; (CC): <em>veterinary medicine</em>, for <em>waterpens</em>. (EK): used for a retained placenta, used as infusion as appetite stimulant; (GB): veterinary medicine, used for sick lambs; (GD): stem (fermented and dried) used as infusion for the treatment of stomach ailments and flatulence; (GJ, JJ, PD): stem infusion used to <em>expel the placenta in livestock</em>; (JC, JW): an infusion with <em>kruistement</em> (<em>Mentha spicata</em>) is used for the <em>thyroid gland</em> (<em>skildklier</em>); (JL): stem infusion with <em>jantjiebêrend</em> used for diabetes; (JvW): used as an infusion for influenza, cause perspiration; (LC): stop diarrhoea; (MB): used medicinally (unspecified); (PR): used medicinally (unspecified); (SC): infusion used for stomach ache; (SW): infusion used for influenza. [19,28,11]; [IAR=0.5]</td>
</tr>
</tbody>
</table>

**Unidentified species:**

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<td>98</td>
<td><em>vrouebos</em> (<em>Pelargonium</em> sp.?); <em>t`gou</em> (<em>Elytropappus</em> sp.? – a shrub with sticky leaves and small pink flowers)</td>
<td>(AST): leaf decoction with <em>klipblom</em> (<em>Parmelia</em> sp.) is used for infertile woman during menstruation; (GD): leaf decoction used for internal pains and an infusion of the flowers used for bladder and kidney ailments (<em>“an important herb”</em>); (JvW): used for a retained placenta. [5,31]</td>
</tr>
<tr>
<td>99</td>
<td><em>bitterkamroë</em>, <em>bitterpatat</em> (<em>Kedrostis</em> sp.?</td>
<td>(AST): infused up to three times (for bitterness), used for diabetes; (EK): used as infusion for diabetes; (GD): decoction usedfor stomach ailments, constipation and flatulence (<em>vuil winde</em>); (JL): peel used for stomach ailments and body pains (<em>JvW</em>): infusion in milk used as blood purifier. [7,29]</td>
</tr>
<tr>
<td>100</td>
<td><em>stinkkamaroetjie</em>, <em>stinkkambroë</em> (<em>Kedrotis foetidissima</em> (Jacq.) Cogn.?) (<em>Cucurbitaceae</em>)</td>
<td>(GD): used for stomach ailments and body pains; (JC, JW): used as snuff and infusion for stomach complaints. [6,30]</td>
</tr>
<tr>
<td>101</td>
<td><em>rivierkweek</em></td>
<td>(JvW): used for woman’s ailments. [1,35]</td>
</tr>
</tbody>
</table>
4.3 Ailments treated with medicinal plants in the Kamiesberg

The medicinal conditions which are treated with the different plant species were also evaluated. By listing the ailments treated (refer to Table 8), an indication of the ailments which are most commonly treated as well as the plant species mostly used for that specific ailment is given. The medicinal plants of the Kamiesberg are still widely used for self-terminating and chronic ailments (minor illnesses). People with more serious medical conditions (major illnesses) are referred to the local clinics or hospitals. Medicinal plants may be used as supportive treatment for serious ailments such as tuberculosis, cancer and diabetes, often after the patient has returned from the clinic or hospital. This classification of major and minor illnesses has also been mentioned by Laidler (1928).

Some of the major illnesses mentioned such as diabetes, tuberculosis, cancer and AIDS, were traditionally unknown to the Nama culture. Diabetes is nowadays recognised in the communities by the diagnosis of the ailment (*suikersiekte* in Afrikaans) and prescription of medicine by the doctors and local clinics as well as the symptoms recognised in the communities. The participants will therefore refer to *suiker* or *suikersiekte* as being the ailment treated with the specific medicinal plant. There is a lack of scientific knowledge transferred to the local people about the disease. The result is that the traditional healers (in this case the *bossiedoctors*) prescribe a treatment for the ailment as they interpret it. In the case of diabetes (*suikersiekte* = sugar ailment) they may perceive it as too much sugar in the blood. Most participants therefore refer to a bitter-tasting medicinal plant for treating diabetes, as they assume the sugar problem (sweet) can be outbalanced by a bitter-tasting plant.

Various plant parts are used in the preparation of the remedies, including bark, leaves, roots and fruits. Leaves are most often used in preparations, especially because the Nama culture is known for the preparations of remedies as infusions. The medicinal plants are mostly prepared as infusions (teas), rarely as decoctions. Other dosage forms include poultices, ointments, snuffs, liniments (washes), tinctures and syrups. Scarification and cupping are also part of the Nama people’s culture for treatment of ailments (Laidler, 1928). Some of the participants mentioned
this type of treatment for an ailment (LC., AB., and GD. 2010, pers. comm.). However no details have been provided if medicinal plants were used in combination with these medical procedures.

In many instances the plants are used in combination with one another. A typical example is *Dodonaea viscosa* var. *angustifolia*, which is mostly used in combination with *Salvia dentata* and *Sutherlandia frutescens*. Some of the medicinal plants may also be used in combination with animal products and/or rock salts.

Ninety different ailments are listed in Table 8, arranged by the total number of use-records for that condition and its corresponding rank (from 1 to 32). The most common indications are: influenza (use-records 180, rank 1); pain, inflammation and arthritis (101, 2); stomach ache (62, 3); stomach ailments (60, 4); fever (59, 5); sores and other skin conditions (57, 6); ringworm and various conditions of the hair and scalp (48, 7); colds (47, 8); flatulence (47, 8); diabetes (42, 9); headache (40, 9) and backache (38, 10). Fourteen ailment categories are ranked 32, where only one species and one use-record are provided.

Apart from plants used medicinally for the treatment of human ailments, it is clear that plants are still known for their magical properties (listed as psychological conditions) (use-records 15, rank 22). Cotton (1996) stated that: “An important aspect of many traditional healing systems is that they are characterised by the coexistence of several diverse and often competing healing traditions within a single community. In western terms, these various systems are broadly divided into two categories: shamanism and herbalism. Shamanism deals with diseases which are regarded as spiritual in origin, while herbalism involves the treatment of ailments which are regarded as ‘natural’”.

Animals also play an important role in the community as 29 use-records for veterinary treatments have been mentioned. In the various towns visited during this study, dogs, goats and donkeys were commonly observed. Williamson (2000) also reported on the importance of livestock and especially dogs to the Nama people. He reported that the common feature of the nomadic camps of Nama people is the presence of dogs. The dogs are held in great esteem and are treated with great
affection. The children are also very fond of their pets and most of them do not want to be photographed without their pets.

An alternative method of listing the ailments would be according to the consensus factor ($F_{ic}$) (Troter and Logan, 1986; Mutheeswaran et al., 2011). When this method is followed, the ailments treated are listed from the highest (1) to the lowest (0) values.

Plant species recommended for warts removal, mastitis and diphtheria all have a value of 1, indicating a complete consensus between the participants on the use of a specific plant species for treating the ailments (only one plant species mentioned for treating the ailment and all participants in agreement). The species are *Euphorbia mauritanica* (7 use-records), *Ballota africana* (3 use-records) and *Carpobrotus edulis* (2 use-records).

Twenty eight ailments had no consensus, with a $F_{ic}$ value of 0 (one use-record and one species or equal number of use-records and species used to treat that ailment). These ailments include asthma, chicken pox, indigestion, high blood pressure, stomach ulcers and sunburn.

The results indicate that there is no similarity between the ailments ranked highest due to the number of use-records, the number of species and the $F_{ic}$ values for that specific ailment. The $F_{ic}$ value is determined by a combination of the number of use-records and the number of species used for that ailment. The values expressed by the $F_{ic}$ can be explained as follows: the higher the number of use-records and the fewer the species used, the higher the $F_{ic}$ value. An average $F_{ic}$ value is obtained when the use-records are double the amount of the species used to treat that ailment.

The most popular species for each of the ailments has been indicated in Table 8 in bold text and are based on the number of use-records mentioned. The concept of the Species Therapeutic Index (STI) is introduced for the first time ever and is calculated as the total number of use-records of a given plant species for a particular
ailment divided by the total number of use-records for that ailment (a value between 0 and 1).

It appears that there are numerous plant species that can be used to treat the same ailment, most probably as a result of their local availability. More than 10 plant species are used for most of the frequently mentioned indications.

Within the Kamiesberg area, *Dodonaea viscosa var. angustifolia* is the most popular medicinal plant species to be used as a medicine for influenza, with STI-values of 0.18 (with 19 use-records from a total of 108 use-records for influenza). *Melianthus pectinatus* is the most popular plant species used for the topical treatment of pain, with a STI-value of 0.14 (14 out of 101 use-records).

These low STI-values are typical for most of ailments and supporting the stated lack of specificity.

However, some plants are mainly used for particular indications (those with STI-values of 0.50 or more). Examples are: *Asclepias crispa* (psychological conditions – magic, STI = 0.67), *Ballota africana* (chilblained hands and feet, STI = 0.6), *Bulbine praemorsa* (insect bites, STI = 0.67), *Carpobrotus edulis* (oral thrush, STI = 0.70), *Chironia baccifera* (haemorrhoids, STI = 0.58), *Dodonaea viscosa var. angustifolia* (pneumonia, STI = 0.67), *Euphorbia mauritanica* (mole removal, STI = 0.75), *Gunnera perpensa* (alcholism, STI = 0.67), *Oncosiphon suffruticosum* (convulsions, STI = 0.5), *Salvia dentata* (measles, STI = 0.50), *Sceletium tortuosum* (insomnia, STI = 0.75; colic, STI = 0.67) and *Tylecodon wallichii* (for blister-plasters, STI = 0.56).

Medical conditions treated with only two species (STI = 0.50) are: teething problems (*Carpobrotus edulis* or *Parmelia* species), thyroid gland (*Mentha spicata* or *Viscum capense*), cracked lips (*Cotyledon orbiculata* or *Ricinus communis*), swollen glands (*Elytropappus rhinocerotis* or *Datura stramonium*), indigestion (*Artemisia absinthium* or *Crassula muscosa*), skin pigmentation (*Conicosia elongata* or *Euphorbia mauritanica*), as snuff (*Silene burchellii* or *Solanum tomentosum*), stomach ulcers (*Carpobrotus edulis* or *Hoodia gordonii*) and as tonic (*Pteronia camphorata* or *Urtica urens*).
Medical conditions treated with only one species (STI = 1) has been recorded for the following conditions: mastitis (*Ballota africana*), bleeding nose (*Urtica urens*), diphtheria (*Carpobrotus edulis*), AIDS (*Melianthus pectinatus*), appetite supressant (*Carpobrotus edulis*), chicken pox (*Dodonaea viscosa var. angustifolia*), fractured legs (*Melianthus pectinatus*), gout (*Urtica urens*), heart problems (*Olea europaea subsp. africana*), intestinal parasites (*Ruta graveolens*), poisoning (*Leonotis leonurus*), prostate problems (*Bupleurum mundii*), psychoactive (*Sceletium tortuosum*), sexually transmitted disease (*Mentha longifolia*), sore throat (*Carpobrotus edulis*), sprained ankle (*Bulbine frutescens*) and sunburn (*Carpobrotus edulis*).

The STI values have been compared to the Fidelity Level (FL), which also provides an indication of the uniqueness of a plant species to treat a particular ailment. In most of the ailment categories, high FL values agree with high STI indexes in an ailment category. Within some ailment categories, both the STI and FL values for a plant species are the highest compared to other species in that ailment category.

Ailment categories where the STI and FL are both the highest for a plant species are as follows: constipation (*Diospyros austro-africana*), haemorrhoids and bleeding haemorrhoids (*Chironia baccifera*), mouth ulcers (*Carpobrotus edulis*), psychological conditions/magic medicine (*Asclepias crispa*), measles (*Salvia dentata*), oral thrush (*Carpobrotus edulis*), earache (*Pteronia camphorata*), thorns removal (*Tylecodon wallichii*), insomnia (*Sceletium tortuosum*), colic (*Sceletium tortuosum*), chilblained hands and feet (*Ballota africana*), dizziness (*Anginon difforme*), general malaise (*Artemisia absinthium*), sweaty feet (*Elytropappus rhinocerotis*), mole removal (*Euphorbia mauritanica*), alcoholism (*Gunnera perpensa*), infertility in women (*Aloe dichotoma*) and insect bites (*Bulbine praemorsa*).

More than one species in an ailment category can have an FL of 100, indicating that the plant species are equally important in the community for treating that specific ailment. Most of these plant species show a low number of use-records and only a few participants mentioning the medicinal uses for the plant. Some examples are: influenza (*Salvia lanceolata* and *Salvia verbenaca*), topical treatment of pains
(Radyera urens and Rumex cordatus), various sores (Malva parvifolia, Othonna sp. B and Solanum guineense) and wounds (Aloe variegata and Radyera urens).

The theoretical Fidelity Level ranges between 0 and 100. In some cases (when ailments are combined to form an ailment category) as in the ailment category of “ringworm, dry scalp, sores on scalp, hair loss, dandruff, stimulation of hair growth” more use-records can be found than participants (one participant could mention more than one use). In such cases, the actual FL for certain species, such as Eriocephalus (eight use-records for the ailment category dry scalp, sores on scalp, hair loss, dandruff, stimulation of hair growth ringworm, and only seven participants), may exceed 100 (in this case 114). For Galenia africana, 19 use-records have been recorded by only 17 participants, resulting in a FL value of 112.

As mentioned before, the total number of use-records for each ailment (Table 8) differs remarkably from the \( F_{ic} \) values. However, it is interesting and worthwhile to note that those plant species with the highest Species Therapeutic Index (STI) values (as shown in bold text) in most cases have Fidelity Levels indices (if FL is divided by 100) that are generally in agreement with the \( F_{ic} \) values for that particular ailment.

In the following cases, the \( F_{ic} \), FL values and STI values are similar: Topical use for pains (\( F_{ic} = 0.82 \)) with Melianthus pectinatus (most use-records, highest STI value for species in that ailment category) and the FL = 0.82; backache (\( F_{ic} = 0.38 \)) with Parmelia species (FL = 0.38); veterinary (\( F_{ic} = 0.68 \)) with Aloe microstigma subsp. microstigma (FL = 0.67) and thorn removal (\( F_{ic} = 0.50 \)) with Tylecodon wallichii (FL = 0.50).
Table 8: Summary of medical conditions treated with plants in the Kamiesberg and the plant species that are used

**Column 1. Medical condition.** Ailments are ranked in sequence according to the number of use-records (e.g. influenza is first, with 108). For comparison, two other quantification methods were used. For each of the medical conditions, the consensus factor (F ic) is given as the last statistic value [in square brackets]. The description in this column is as follows: name of ailment [total number of plant species, total number of use-records, rank of the ailment]; [concensus factor (F ic)].

**Column 2. Plant species:** Description in column is as follows: Name of plant species (number of use-records) [STI], [FL]. An evaluation of the importance of the plant species for each of the ailments is expressed as the number of use-records for that species (given in round brackets), followed by the “Species Therapeutic Index” or STI [in square brackets]. The STI for each particular ailment is calculated as the number of use-records for the species for that ailment divided by the total number of use-records for that ailment. For comparison, two other quantification methods were used. For each of the medical conditions, the Fidelity Level (FL) for each species is shown as the last statistic value [in square brackets].

Note: The most frequently used species according to the STI values are shown in bold text.

<table>
<thead>
<tr>
<th>Medical condition</th>
<th>Plant species</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza [28,108,1]; [0.75]</strong></td>
<td><em>Agathosma betulina</em> (1) [0.01],[50]; <em>Artemisia absinthium</em> (4) [0.04],[25]; <em>Artemisia afra</em> (7) [0.06],[64]; <em>Ballota africana</em> (1) [0.01],[5]; <em>Dicoma capensis</em> (9) [0.08],[56]; <em>Diosma acmaeophylla</em> (1) [0.01],[50]; <em>Dodonaea viscosa var. angustifolia</em> (19) [0.18],[83]; <em>Elytropappus rhinocerotis</em> (1) [0.01],[7]; <em>Eriocephalus species</em> (2) [0.02],[29]; <em>Eucalyptus sideroxylon</em> (1) [0.01],[25]; <em>Helichrysum odoratissimum</em> (2) [0.02],[29]; <em>Leonotis leonurus</em> (1) [0.01],[25]; <em>Melianthus pectinatus</em> (1) [0.01],[6]; <em>Mentha longifolia</em> (7) [0.06],[41]; <em>Mentha spicata</em> (1) [0.01],[17]; <em>Olea europaea</em> subsp. <em>africana</em> (1) [0.01],[8]; <em>Onosiphon suffruticosum</em> (1) [0.01],[6]; <em>Parmelia species</em> (2) [0.02],[13]; <em>Ruta graveolens</em> (6) [0.06],[40]; <em>Salvia dentata</em> (10) [0.09],[67]; <em>Salvia lanceolata</em> (1) [0.01],[100]; <em>Salvia verbenaca</em> (1) [0.01],[100]; <em>Searsia burchelli</em> (3) [0.03],[38]; <em>Senecio cinerascens</em> (4) [0.04],[24]; <em>Stachys rugosa</em> (3) [0.03],[50]; <em>Sutherlandia frutescens</em> (14) [0.13],[67]; <em>Tubulbaghia alliacea</em> (2) [0.02],[22]; <em>Viscum capense</em> (2) [0.02],[11]</td>
</tr>
<tr>
<td><strong>Pain, inflammation, arthritis (topical use – as ointment, poultice, compress or wash) [19,101,2]; [0.82]</strong></td>
<td><em>Arctotis laevis</em> (1) [0.01],[25]; <em>Artemisia afra</em> (2) [0.02],[18]; <em>Ballota africana</em> (13) [0.13],[65]; <em>Bulbine frutescens</em> (5) [0.05],[42]; <em>Datura stramonium</em> (3) [0.03],[43]; <em>Elytropappus rhinocerotis</em> (3) [0.03],[20]; <em>Gomphocarpus cancellatus</em> (2) [0.02],[50]; <em>Helichrysum odoratissimum</em> (1) [1]; <em>Melianthus pectinatus</em> (14) [0.14],[82]; <em>Mentha longifolia</em> (5) [0.05],[29]; <em>Nicotiana glauca</em> (11) [0.12],[79]; <em>Onosiphon suffruticosum</em> (1) [0.01],[6]; <em>Radyera urens</em> (2) [0.02],[100]; <em>Ricinus communis</em> (13) [0.13],[81]; <em>Rumex cordatus</em> (4) [0.04],[100]; <em>Ruta graveolens</em> (2) [0.02],[13]; <em>Salix mucronata</em> (3) [0.03],[33]; <em>Schnius molle</em> (6) [0.06],[55]; <em>Senecio cinerascens</em> (10) [0.1],[59]</td>
</tr>
<tr>
<td><strong>Stomach ailments (unspecified) [36,61,3]; [0.41]</strong></td>
<td><em>Acorus calamus</em> (1) [0.02],[33]; <em>Agathosma betulina</em> (1) [0.02],[50]; <em>Aloe ferox</em> (4) [0.07],[36]; <em>Aloe microstigma</em> subsp. <em>microstigma</em> (1) [0.02],[7]; <em>Antizoma miersiana</em> (1) [0.02],[10]; <em>Artemisia absinthium</em> (4) [0.07],[25]; <em>Asclepias crispa</em> (6) [0.1],[33]; <em>Ballota africana</em> (1) [0.02],[5]; <em>Carpobrotus edulis</em> (1) [0.02],[7]; <em>Cassytha ciliolata</em> (1) [0.02],[8]; <em>Chironia baccifera</em> (1) [0.02],[5]; <em>Chrysocoma ciliata</em> (1) [0.02],[25]; <em>Conicosa elongata</em> (1) [0.02],[25]; <em>Crassula muscosa</em> (2) [0.03],[22]; <em>Dianthus micropetalus</em> (3) [0.05],[60]; <em>Galium capense</em> subsp. <em>namaquense</em> (2) [0.03],[50]; <em>Galium tomentosum</em> (2) [0.03],[17]; <em>Glycyrrhiza sp.</em> (1) [0.02],[100]; <em>Gomphocarpus cancellatus</em> (1)</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
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<tr>
<td>-------------------</td>
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<tr>
<td>of hair growth</td>
<td>Gomphocarpus fruticosus (1) [0.02],[14]; Helichrysum odoratissimum (1) [0.02],[14]; Hermbstaedtia glauca (1) [0.02],[33]; Hydnora africana (1) [0.02],[50]; Lobostemon paniculatus (1) [0.02],[14]; Mentha longifolia (1) [0.02],[6]; Olea europaea subsp. africana (2) [0.03],[17]; Othonna daucifolia (1) [0.02],[33]; Parmelia species (1) [0.02],[6]; Pelargonium antidyesthesericum (1) [0.02],[33]; Pelargonium hypoleucum (1) [0.02],[50]; Sceletium tortuosum (7) [0.11],[37]; Searsia burchellii (1) [0.02],[13]; Senecio cinerascens (1) [0.02],[6]; Sutherlandia frutescens (2) [0.03],[10]; Tulbaghia alliacea (2) [0.03],[22]; Viscum capense (1) [0.02],[5]</td>
</tr>
<tr>
<td>Stomach ache [27,60,4]; [0.41]</td>
<td>Acorus calamus (1) [0.02],[33]; Aloe dichotoma (1) [0.02],[13]; Antizoma miersiana (2) [0.03],[2]; Arctotis laevis (2) [0.03],[5]; Artemisia absinthium (7) [0.11],[44]; Artemisia afra (3) [0.05],[27]; Artemisia vulgaris (1) [0.02],[100]; Asclepias crispa (8) [0.13],[44]; Ballota africana (2) [0.03],[10]; Bupleurum mundii (1) [0.02],[50]; Cassytha ciliolata (1) [0.02],[8]; Chironia baccifera (1) [0.02],[5]; Chrysosoma ciliata (1) [0.02],[25]; Crassula muscosa (4) [0.06],[44]; Dicoma capensis (4) [0.06],[25]; Diospyros austro-africana (1) [0.02],[6]; Euryops lateriflorus (2) [3]; Felicia sp. sp. (2) [0.03],[67]; Galium tomentosum (3) [0.05],[25]; Hermbstaedtia glauca (2) [0.03],[67]; Hoodia gordonii (1) [0.02],[33]; Parmelia species (2) [0.03],[13]; Sarcocaulon sp. (1) [0.02],[17]; Searsia burchellii (1) [0.02],[13]; Sceletium tortuosum (4) [0.06],[21]; Sutherlandia frutescens (1) [0.02],[5]; Viscum capense (1) [0.02],[5]</td>
</tr>
<tr>
<td>Fever [22,59,5]; [0.64]</td>
<td>Agathosma betulina (1) [0.02],[50]; Artemisia afra (3) [0.05],[27]; Artemisia vulgaris (1) [0.02],[2]; Ballota africana (1) [0.02],[5]; Carpodroutus edulis (1) [0.02],[7]; Cassytha ciliolata (1) [0.02],[8]; Conyza scabrida (1) [0.02],[33]; Dicoma capensis (12) [0.2],[75]; Dianoea vicsa var. angustifolia (6) [0.1],[26]; Erioccephalus species (1) [0.02],[14]; Euproyops lateriflorus (2) [4]; Galenia africana (1) [0.02],[6]; Lobostemon paniculatus (4) [0.07],[57]; Malva perivifolia (1) [0.02],[100]; Melianthuspectinatus (2) [0.04],[12]; Mentha longifolia (1) [0.02],[6]; Nicotiana glauca (2) [0.04],[14]; Othonna daucifolia (2) [0.04],[67]; Othonna sp. B (2) [0.02],[100]; Parmelia species (1) [0.02],[6]; Ricinus communis (4) [0.07],[25]; Rumexcordatus (2) [0.04],[50]; Schinus molle (1) [0.02],[9]; Senecio cinerascens (2) [0.04],[12]; Senecio scaphifolius (1) [0.02],[20]; Solarum guineense (1) [0.02],[100]; Tylecodon wallii (7) [0.12],[7]</td>
</tr>
<tr>
<td>Sores, abrasions, blisters, boils, warts, open callus, inflammed moles, cracked feet, open plantar wart (soolvrat), whitlow fingers [23,57,6]; [0.61]</td>
<td>Aloe foerox (1) [0.02],[9]; Aloe microstigma subsp. microstigma (1) [0.02],[7]; Ballota africana (2) [0.04],[10]; Bulbine frutescens (11) [0.19],[92]; Carpodroutus edulis (3) [0.05],[20]; Cotyledon orbiculata (3) [0.05],[43]; Euproyops lateriflorus (2) [4]; Galenia africana (1) [0.02],[6]; Lobostemon paniculatus (4) [0.07],[57]; Malva perivifolia (1) [0.02],[100]; Melianthuspectinatus (2) [0.04],[12]; Mentha longifolia (1) [0.02],[6]; Nicotiana glauca (2) [0.04],[14]; Othonna daucifolia (2) [0.04],[67]; Othonna sp. B (2) [0.02],[100]; Parmelia species (1) [0.02],[6]; Ricinus communis (4) [0.07],[25]; Rumexcordatus (2) [0.04],[50]; Schinus molle (1) [0.02],[9]; Senecio cinerascens (2) [0.04],[12]; Senecio scaphifolius (1) [0.02],[20]; Solarum guineense (1) [0.02],[100]; Tylecodon wallii (7) [0.12],[7]</td>
</tr>
<tr>
<td>Ringworm (also dry scalp, sores on scalp, hair loss, dandruff, stimulation of hair growth) [12,48,7]; [0.77]</td>
<td>Aloe microstigma subsp. microstigma (1) [0.02],[7]; Cassytha ciliolata (3) [0.06],[23]; Crassula muscosa (1) [0.02],[11]; Elytropappus rhinocerotis (1) [0.02],[7]; Erioccephalus punctatus (2) [0.04],[67]; Erioccephalus species (2) [0.05],[114]; Galenia africana (19) [0.4],[112]; Gomphocarpus cancellatus (2) [0.04],[50]; Olea europaeasubsp. africana (1) [0.02],[8]; Parmelia species (4) [0.09],[25]; Salvia dentata (2) [0.04],[13]; Senecio scaphifolius (3) [0.06],[60]</td>
</tr>
<tr>
<td>Colds [18,47,8]; [0.63]</td>
<td>Agathosma betulina (1) [0.02],[50]; Artemisia absinthium (4) [0.09],[25]; Artemisia afra (3) [0.06],[27]; Diocemcapensis (4) [0.09],[25]; Diospyros austro-africana (1) [0.02],[6]; Diodonaea vicsa var. angustifolia (9) [0.19],[39]; Erioccephalus species (1) [0.02],[14]; Erylops lateriflorus (1) [0.02],[25]; Mentha longifolia (2) [0.04],[12]; Oncosiphon suffruticosum (1) [0.02],[6]; Parmelia species (1) [0.02],[6]; Ruta graveolens (2) [0.04],[13]; Salvia dentata (8) [0.17],[53]; Searsia burchellii (1) [0.02],[13]; Senecio cinerascens (2) [0.04],[12]; Stachys rugosa (1) [0.02],[17]; Sutherlandia frutescens (4) [0.09],[19]; Viscum capense (1) [0.02],[5]</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
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<tr>
<td>Flatulence (infants and adults) [24,47,8]; [0.50]</td>
<td>Acorus calamus (2) [0.04],[67]; Anginon difforme (3) [0.06],[60]; Antizoma miersiana (1) [0.02],[10]; Artemisia absinthium (1) [0.02],[6]; Artemisia vulgaris (1) [2]; Asclepias crispa (3) [0.06],[17]; Bupleurum mundii (1) [0.02],[50]; Cassytha ciliolata (2) [0.04],[15]; Chrysocoma ciliata (1) [0.02],[25]; Dictoma capensis (1) [0.02],[6]; Diospyros asturo-africana (1) [0.02],[6]; Diosma acmaeaphylla (1) [0.02],[50]; Elytropappus rhinocerotis (3) [0.06],[20]; Lobostemon paniculatus (1) [0.02],[14]; Mentha longifolia (1) [0.02],[6]; Olea europaea subsp. africana (1) [0.02],[8]; Oncopsiron suffruticosum (6) [0.13],[33]; Pteronia camphorata (1) [0.02],[14]; Scelitiumtortuosum (8) [0.17],[42]; Senecio cinerascens (1) [0.02],[6]; Senecio scapiflorus (1) [0.02],[20]; Sutherlandia frutescens (1) [0.02],[5]; Tulbaghia alliacea (3) [0.02],[33]; Viscum capense (1) [0.02],[5]</td>
</tr>
<tr>
<td>Unspecified [26,40,9]; [0.36]</td>
<td>Aloe dichotoma (1) [0.02],[13]; Aloe microstigma subsp. microstigma (1) [0.02],[7]; Arctotis laevis (1) [0.02],[25]; Artemisia absinthium (2) [0.05],[13]; Artemisia afr (1) [0.02],[9]; Asclepias crispa (1) [0.02],[6]; Antizoma miersiana (1) [0.02],[10]; Carpobrotus edulis (1) [0.02],[7]; Cassytha ciliolata (4) [0.1],[31]; Chironia baccifera (4) [0.1],[20]; Dictoma capensis (1) [0.02],[6]; Dodonaea viscosa var. angustifolia (1) [0.02],[4]; Elytropappus rhinocerotis (1) [0.02],[7]; Galium tomentosum (2) [0.05],[17]; Hydnora africana (1) [0.02],[50]; Leonotis leonurus (2) [0.05],[50]; Melianthus pectinatus (2) [0.05],[12]; Mentha spicata (1) [0.02],[17]; Olea europaea subsp. africana (1) [0.02],[8]; Parmelia species (1) [0.02],[6]; Pteronia cinerea (1) [0.02],[50]; Ruta graveolens (3) [0.07],[20]; Searsia burchellii (1) [0.02],[13]; Sutherlandia frutescens (1) [0.02],[5]; Tulbaghia alliacea (1) [0.02],[11]; Utica urens (3) [0.07],[75]</td>
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<tr>
<td>Diabetes [19,40,9]; [0.54]</td>
<td>Aloe ferox (4) [0.1],[36]; Aloe microstigma subsp. microstigma (3) [0.08],[20]; Artemisia absinthium (2) [0.05],[13]; Artemisia afr (2) [0.05],[18]; Asclepias crispa (1) [0.03],[6]; Carpobrotus edulis (1) [0.03],[7]; Chironia baccifera (1) [0.03],[5]; Conyza scabriflora (1) [0.03],[33]; Dictoma capensis (1) [0.03],[6]; Ditrichia graveolens (1) [0.03],[100]; Elytropappus rhinocerotis (3) [0.08],[20]; Leonotis leonurus (1) [0.03],[25]; Mentha longifolia (1) [0.03],[6]; Olea europaea subsp. africana (1) [0.03],[8]; Pteronia cinerea (1) [0.03],[50]; Ruta graveolens (2) [0.05],[13]; Salvia dentata (1) [0.03],[7]; Sutherlandia frutescens (8) [0.2],[38]; Viscum capense (5) [0.13],[26]</td>
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<tr>
<td>Headache [15,40,9]; [0.64]</td>
<td>Asclepias crispa (6) [0.2],[44]; Ballota africana (6) [0.15],[30]; Cassytha ciliolata (1) [0.03],[8]; Dodonaea viscosa var. angustifolia (1) [0.03],[4]; Galium capense subsp. namaquensis (2) [0.05],[50]; Galium tomentosum (2) [0.05],[17]; Gomphocarpus fruticosus (3) [0.08],[43]; Melianthus pectinatus (3) [0.08],[18]; Nicotiana glauca (3) [0.08],[21]; Rincinus communis (2) [0.05],[13]; Salix mucronata (2) [0.05],[22]; Sceletium tortuosum (2) [0.05],[11]; Schinus molle (2) [0.05],[18]; Senecio cinerascens (1) [0.03],[6]; Tulbaghia alliacea (2) [0.05],[22]</td>
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<tr>
<td>Backache [24,38,10]; [0.38]</td>
<td>Anginon difforme (1) [0.03],[20]; Artemisia absinthium (1) [0.03],[8]; Artemisia afr (2) [0.02],[18]; Ballota africana (1) [0.03],[5]; Chironia baccifera (2) [0.08],[10]; Conyza scabriflora (1) [0.03],[33]; Dictoma capensis (1) [0.03],[6]; Elytropappus rhinocerotis (1) [0.03],[7]; Eriocophalus punctatus (1) [0.03],[33]; Eriocophalus species (1) [0.03],[14]; Eucalyptus sideroxylon (1) [0.03],[25]; Felicia sp. (2) [0.08],[67]; Helichrysum rutulans (1) [0.03],[33]; Helichrysum odoratissimum (1) [0.03],[14]; Herbstaedtia glauca (1) [0.03],[33]; Olea europaea subsp. africana (1) [0.03],[8]; Parmelia species (6) [0.16],[38]; Pelargonium hypoleucum (1) [0.03],[50]; Pteronia cinerea (1) [0.03],[50]; Ruta graveolens (2) [0.08],[13]; Salix mucronata (5) [0.13],[56]; Schinus molle (2) [0.08],[18]; Stoebe plumosa (1) [0.03],[14]; Viscum capense (1) [0.03],[5]</td>
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<tr>
<td>Constipation [12,36,11]; [0.69]</td>
<td>Aloe ferox (5) [0.14],[45]; Aloe microstigma subsp. microstigma (1) [0.03],[7]; Antizoma miersiana (3) [0.08],[3]; Asclepias crispa (1) [0.03],[6]; Aspalathus linearis (1) [0.03],[11]; Carpobrotus edulis (3) [0.08],[20]; Crassula muscosa (2) [0.06],[22]; Dictoma capensis (2) [0.06],[13]; Diospyros asturo-africana (13) [0.36],[76]; Rincinus communis (3) [0.08],[19]; Sceletium tortuosum (1) [0.03],[5]; Senecio cinerascens (1) [0.03],[6]</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
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<tr>
<td>--------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Wounds [20,32,12]; [0.39]</td>
<td>Aloe ferox (1) [0.03],[9]; Aloe microstigma subsp. microstigma (3) [0.09],[20]; Aloe variegata (2) [0.06],[100]; Ballota africana (1) [0.03],[5]; Bulbine frutescens (1) [0.03],[8]; Carpobrotus edulis (1) [0.03],[7]; Cotyledon orbiculata (1) [0.03],[14]; Datura stramonium (1) [0.03],[14]; Galenia africana (1) [0.03],[6]; Lobostemon paniculatus (3) [0.09],[43]; Melianthus pectinatus (1) [0.03],[6]; Nicotiana glauca (1) [0.03],[7]; Olea europaea subsp. africana (3) [0.09],[25]; Parmelia species (1) [0.03],[6]; Radyera urenis (2) [0.06],[100]; Ricinus communis (2) [0.06],[13]; Schinus molle (1) [0.03],[9]; Senecio cinerascens (2) [0.06],[12]; Sutherlandia frutescens (3) [0.09],[14]; Tylecodon wallichii (1) [0.03],[10]</td>
</tr>
<tr>
<td>Veterinary [10,29,13]; [0.68]</td>
<td>Aloe ferox (4) [0.14],[36]; Aloe microstigma subsp. microstigma (10) [0.34],[67]; Antizoma miersiana (7) [0.24],[70]; Chironia baccifera (1) [0.03],[5]; Gomphocarpus cancellatus (1) [0.03],[25]; Gomphocarpus fruticosus (1) [0.03],[14]; Salix mucronata (1) [0.03],[11]; Salvia dentata (1) [0.03],[7]; Sceletium tortuosum (1) [0.03],[5]; Viscum capense (2) [0.07],[11]</td>
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<tr>
<td>Haemorrhoids and bleeding haemorrhoids [9,24,14]; [0.65]</td>
<td>Carpobrotus edulis (1) [0.04],[7]; Chironia baccifera (14) [0.58],[70]; Galiumtomentosum (2) [0.08],[17]; Mentha spicata (1) [0.04],[17]; Parmelia species (1) [0.04],[6]; Salix mucronata (1) [0.04],[11]; Sarcocaulon sp. (1) [0.04],[17]; Solanum tomentosum (1) [0.04],[25]; Viscum capense (1) [0.04],[5]</td>
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<tr>
<td>Pain, inflammation, arthritis, rheumatism, body pains (oral use) [15,24,14]; [0.39]</td>
<td>Aloe dichotoma (2) [0.08],[25]; Antizoma miersiana (1) [0.04],[10]; Artemisia absinthium (4) [0.08],[25]; Asclepias crispa (1) [0.04],[6]; Cassytha ciliolata (1) [0.04],[8]; Chironia baccifera (2) [0.08],[10]; Dictoma capensis (1) [0.04],[6]; Gomphocarpus fruticosus (1) [0.04],[14]; Hydrana africana (1) [0.04],[50]; Mentha spicata (1) [0.04],[17]; Parmelia species (1) [0.04],[6]; Pteronia camphorata (1) [0.04],[14]; Salvia dentata (1) [0.04],[7]; Stoebe plumosa (2) [0.08],[29]; Sutherlandia frutescens (4) [0.17],[19]</td>
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<tr>
<td>Mouth ulcers (sores) [5,23,15]; [0.82]</td>
<td>Bulbine frutescens (3) [0.13],[25]; Carpobrotus edulis (10) [0.43],[67]. Cotyledon orbiculata (3) [0.13],[43]; Parmelia species (4) [0.17],[25]; Ricinus communis (3) [0.13],[19]</td>
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<tr>
<td>Women ailments [15,21,16]; [0.30]</td>
<td>Cassytha ciliolata (1) [0.05],[8]; Chironia baccifera (1) [0.05],[5]; Conyza scabrida (1) [0.05],[33]; Crassula muscosa (1) [0.05],[11]; Dictoma capensis (2) [0.1],[13]; Galium tomentosum (2) [0.1],[17]; Helichrysum rutilans (2) [0.1],[67]; Helichrysum odoratissimum (2) [0.1],[29]; Limetum africanum (1) [0.05],[50]; Mentha longifolia (1) [0.05],[6]; Pelargonium antisyntetericum (1) [0.05],[33]; Ruta graveolens (2) [0.1],[13]; Stoebe plumosa (1) [0.05],[14]; Teedia lucida (1) [0.05],[1]; Tulbaghia alliacea (2) [0.1],[22]</td>
</tr>
<tr>
<td>Placenta (retained – animals and humans) [10,20,17]; [0.53]</td>
<td>Aloe ferox (1) [0.05],[9]; Cassytha ciliolata (1) [0.05],[8]; Dictoma capensis (1) [0.05],[6]; Helichrysum rutilans (1) [0.05],[33]; Helichrysum odoratissimum (2) [0.1],[29]; Limetum africanum (1) [0.05],[50]; Parmelia species (2) [0.1],[13]; Sarcocaulon sp. (5) [0.25],[83]; Teedia lucida (1) [0.05],[100]; Viscum capense (5) [0.25],[26]</td>
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<td>Pediatric [11,17,18]; [0.38]</td>
<td>Ballota africana (2) [0.12],[10]; Cassytha ciliolata (1) [0.06],[8]; Cheilanthes induta (1) [0.06],[50]; Chironia baccifera (1) [0.06],[5]; Crassula muscosa (1) [0.06],[11]; Mentha longifolia (2) [0.12],[12]; Oncosiphon suffruticosus (1) [0.06],[6]; Salvia dentata (1) [0.06],[7]; Sceletium tortuosum (4) [0.24],[21]; Senecio scabiflorus (1) [0.06],[2]; Stoebe plumosa (2) [0.12],[29]</td>
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<tr>
<td>Burn wounds [9,16,19]; [0.47]</td>
<td>Bulbine frutescens (4) [0.25],[33]; Cotyledon orbiculata (1) [0.06],[14]; Datura stramonium (1) [0.06],[14]; Galenia africana (1) [0.06],[6]; Helichrysum odoratissimum (1) [0.06],[14]; Lobostemon paniculatus (3) [0.19],[43]; Radyera urenis (2) [0.13],[100]; Ricinus communis (1) [0.06],[6]; Senecio cinerascens (2) [0.13],[12]</td>
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<tr>
<td>Psychological conditions (magic medicine – “paljas”) [5,15,20]; [0.71]</td>
<td>Anginon difforme (1) [0.07],[20]; Asclepias crispa (10) [0.67],[56]; Dianthus micropetalus (1) [0.07],[20]; Galium tomentosum (2) [0.13],[17]; Helichrysum odoratissimum (1) [0.07],[14]</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
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<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>Coughs and bronchitis [9,14,21];</td>
<td>Artemisia absinthium (1) [0.07],[6]; Artemisia afra (1) [0.07],[9]; Ballota</td>
</tr>
<tr>
<td>[0.38]</td>
<td>africana (2) [0.14],[10]; Diosma acmaeophylla (1) [0.07],[50]; Eucalyptus</td>
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<td>sideroxylon (1) [0.07],[25]; Olea europea subsp. africana (4) [0.29],[33];</td>
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<td>Oncosiphon suffruticosum (1) [0.07],[6]; Sutherlandia frutescens (1) [0.07],[5]</td>
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<tr>
<td>Diarrhoea [9,14,21]; [0.38]</td>
<td>Antizoma miersiana (1) [0.07],[10]; Artemisia absinthium (4) [0.29],[25];</td>
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<td></td>
<td>Asclepias crispa (1) [0.07],[6]; Crassula muscosa (3) [0.21],[33]; Chrysocoma</td>
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<td>ciliata (1) [0.07],[25]; Diospyros austro-africana (1) [0.07],[6]; Pelargonium</td>
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<td></td>
<td>antisynderemic (1) [0.07],[33]; Pelargonium hypoleucum (1) [0.07],[50]; Viscum</td>
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<td>capense (1) [0.07],[5]</td>
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<tr>
<td>Kidney ailments (diuretic) [8,14,21];</td>
<td>Dicoma capensis (4) [0.29],[25]; Diospyros austro-africana (2) [0.14],[12];</td>
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<td>[0.46]</td>
<td>Helichrysum rutilans (1) [0.07],[33]; Helichrysum odoratissimum (1) [0.07],[14];</td>
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<td>Oncosiphon suffruticosum (1) [0.07],[6]; Parmelia species(1) [0.07],[6]; Ruta</td>
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<td>graveolens (2) [0.14],[13]; Stoebe plumosa (2) [0.14],[29]</td>
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<tr>
<td>Appetite stimulant (infants and</td>
<td>Anginon difforme (4) [0.31],[80]; Aspalathus linearis (5) [0.38],[56];</td>
</tr>
<tr>
<td>elderly) [5,13,22]; [0.67]</td>
<td>Hoodia gordonii (1) [0.08],[33]; Quaqua mammillaris (1) [0.08],[33]; Viscum</td>
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<td>capense (2) [0.15],[11]</td>
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<td>Chest ailments [10,13,22]; [0.25]</td>
<td>Artemisia afra (1) [0.08],[9]; Asclepias crispa (1) [0.08],[6]; Aspalathus</td>
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<td>linearis (1) [0.08],[11]; Ballota africana (1) [0.08],[5]; Dodonaea viscosa</td>
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<td>var. angustifolia (2) [0.15],[9]; Eriochephalus punctulatus (1) [0.08],[33];</td>
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<td>Olea europea subsp. africana (1) [0.08],[8]; Oncosiphon suffruticosum (1)</td>
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<td>[0.08],[6]; Parmelia species (3) [0.23],[19]; Pelargonium antisynderemic (1)</td>
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<td>[0.08],[33]</td>
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<tr>
<td>Measles [4,10,23]; [0.67]</td>
<td>Dodonaea viscosa var. angustifolia (3) [0.3],[13]; Galenia africana (1) [0.1],[6];</td>
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<td>Salvia dentata (5) [0.5],[33]; Senecio scapiflorus (1) [0.1],[2]</td>
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<tr>
<td>Nausea [8,10,23]; [0.22]</td>
<td>Artemisia absinthium (3) [0.3],[19]; Asclepias crispa (1) [0.1],[6]; Bupleurum</td>
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<td>mundii (1) [0.1],[50]; Galium capense subsp. namaquense (1) [0.1],[25];</td>
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<td>Hembstaeadia glauca (1) [0.1],[33]; Olea europea subsp. africana (1) [0.1],[8];</td>
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<td>Oncosiphon suffruticosum (1) [0.08],[6]; Ruta graveolens (1) [0.1],[7]</td>
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<td>Oral thrush [3,10,23]; [0.78]</td>
<td>Carpobrotus edulis (7) [0.7],[47]; Conicosa elongata (1) [0.1],[25];</td>
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<td>Parmelia species (2) [0.2],[13]</td>
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<td>Toothache [8,10,23]; [0.22]</td>
<td>Asclepias crispa (1) [0.1],[6]; Ballota africana (2) [0.2],[10]; Euryops</td>
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<td>lateriflorus (2) [0.2],[67]; Galenia africana (1) [0.1],[6]; Pteronia</td>
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<td>camphorata (1) [0.1],[14]; Ricinus communis (1) [0.1],[6]; Schinus molle</td>
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<td>(1) [0.1],[9]; Solanum tomentosum (1) [0.1],[25]</td>
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<td>Burning feet (compress) [4,9,24];</td>
<td>Balotta africana (1) [0.11],[5]; Conyza scabrida (1) [0.11],[33]; Elytropappus</td>
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<td>[0.63]</td>
<td>rhinocerotis (4) [0.44],[27]; Mentha longifolia (3) [0.33],[18]</td>
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<td>Cancer [5,9,24]; [0.50]</td>
<td>Arctotis laevis (2) [0.22],[50]; Asclepias crispa (1) [0.11],[6]; Quaqua</td>
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<td>mammillaris (1) [0.11],[33]; Sutherlandia frutescens (4) [0.44],[19]</td>
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<td>Earache [6,9,24]; [0.38]</td>
<td>Anginon difforme (1) [0.11],[20]; Ballota africana (1) [0.11],[5]; Nicotiana</td>
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<td>glauca (1) [0.11],[7]; Pteronia camphorata (4) [0.44],[57]; Tulbaghia</td>
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<td>alliacea (1) [0.11],[11]; Viscum capense (1) [0.11],[5]</td>
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<tr>
<td>Impurities (internal) (purifier</td>
<td>Aloe ferox (1) [0.11],[9]; Cassytha ciliolata (1) [0.11],[8]; Conyza</td>
</tr>
<tr>
<td>blood) [9,9,24]; [0]</td>
<td>scabrida (1) [0.11],[33]; Galenia africana (1) [0.11],[6]; Helichrysum</td>
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<td>odoratissimum (1) [0.11],[14]; Limeum africanum (1) [0.11],[50]; Melianthus</td>
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<td>pectinatus (1) [0.11],[6]; Parmelia species (1) [0.11],[6]; Pteronia</td>
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<td>camphorata (1) [0.11],[14]</td>
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<td>Heartburn [5,9,24]; [0.50]</td>
<td>Artemisia absinthium (1) [0.11],[6]; Aspalathus linearis (2) [0.22],[22];</td>
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<td>Carpobrotus edulis (1) [0.11],[7]; Chrysocoma ciliata (1) [0.11],[25];</td>
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<td>Oncosiphon suffruticosum (4) [0.44],[22]</td>
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<tr>
<td>Thorns (used as blister-plaster)</td>
<td>Cotyledon orbiculata (1) [0.11],[14]; Othonna daucifolia (1) [0.11],[33];</td>
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<td>Ricinus communis (1) [0.11],[6]; Schinus molle (1) [0.11],[9];</td>
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<tr>
<td>Medical condition</td>
<td>Plant species</td>
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<tr>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
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<tr>
<td>[5,9,24]; [0.50]</td>
<td><strong>Tylecodon wallichii</strong> (5) [0.56],[50]</td>
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<tr>
<td>Convulsions (infants) [5,8,25]; [0.43]</td>
<td><em>Ballota africana</em> (1) [0.13],[5]; <em>Gomphocarpus fruticosus</em> (1) [0.13],[14];</td>
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<td><em>Limeum africanum</em> (1) [0.13],[50]; <strong>Oncosiphon suffruticosum</strong> (4) [0.5],[22];</td>
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<td><em>Pteronia camphorata</em> (1) [0.13],[14]</td>
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<tr>
<td>Insomnia [3,8,25]; [0.71]</td>
<td><strong>Anginon difforme</strong> (1) [0.13],[20]; <em>Dodonaea viscosa var. angustifolia</em> (1) [0.13],[4]; <strong>Sceletium tortuosum</strong> (6) [0.75],[32]</td>
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<tr>
<td>Stomach cramps [6,8,25]; [0.29]</td>
<td><em>Asclepias crispa</em> (2) [0.25],[11]; <em>Hydnora africana</em> (1) [0.13],[50]; <em>Sceletium tortuosum</em> (2) [0.25],[11]; <em>Searsia burchellii</em> (1) [0.13],[13]; <em>Senecio cinerascens</em> (1) [0.13],[6]; <em>Tulbaghia alliacea</em> (1) [0.13],[11]</td>
</tr>
<tr>
<td>Acne, skin ailments [5,7,26]; [0.33]</td>
<td><em>Aloe microstigma</em> subsp. <em>microstigma</em> (2) [0.29],[13]; <em>Bulbine frutescens</em> (1) [0.14],[8]; <em>Ricinus communis</em> (1) [0.14],[6]; <em>Rumexcordatus</em> (1) [0.14],[25]; <em>Sceletium tortuosum</em> (2) [0.29],[50]</td>
</tr>
<tr>
<td>Warts (removal) [1,7,26]; [1.00]</td>
<td><strong>Euphorbia maurnatiana</strong> (7) [100]</td>
</tr>
<tr>
<td>Bladder problems (urinary tract infections) [6,6,27]; [0]</td>
<td><em>Dicoma capensis</em> (1) [0.17],[6]; <em>Galium tomentosum</em> (1) [0.17],[8]; <em>Helichrysum rufulans</em> (1) [0.17],[33]; <em>Melianthus pectinatus</em> (1) [0.17],[6]; <em>Pelargonium hypoleucum</em> (1) [0.17],[25]; <em>Ruta graveolens</em> (1) [0.17],[7]</td>
</tr>
<tr>
<td>Colic [2,6,27]; [0.80]</td>
<td><strong>Oncosiphon suffruticosum</strong> (2) [0.33],[11]; <strong>Sceletium tortuosum</strong> (4) [0.67],[21]</td>
</tr>
<tr>
<td>High blood pressure [6,6,27]; [0]</td>
<td><strong>Artemisia absinthium</strong> (1) [0.17],[6]; <em>Artemisia afra</em> (1) [0.17],[9]; <em>Aspalathus linearis</em> (1) [0.17],[11]; <em>Dittrichia graveolens</em> (1) [17]; <em>Leontis leonurus</em> (1) [0.17],[25]; <em>Senecio cinerascens</em> (1) [0.17],[6]</td>
</tr>
<tr>
<td>Menstrual pains (cramps) [6,6,27]; [0]</td>
<td><em>Asclepias crispa</em> (1) [0.17],[6]; <em>Chironia baccifera</em> (1) [0.17],[5]; <em>Helichrysum odoratissimum</em> (1) [0.17],[14]; <em>Mentha spicata</em> (1) [0.17],[17]; <em>Pelargonium hypoleucum</em> (1) [0.17],[50]; <em>Ruta graveolens</em> (1) [0.17],[7]</td>
</tr>
<tr>
<td>Tuberculosis [5,6,27]; [0.20]</td>
<td><strong>Anginon difforme</strong> (1) [0.17],[20]; <em>Dicoma capensis</em> (1) [0.17],[6]; <em>Notobubon pearsonii</em> (1) [0.17],[50]; <em>Pteronia camphorata</em> (1) [0.17],[14]; <em>Sutherlandia frutescens</em> (2) [0.33],[10]</td>
</tr>
<tr>
<td>Weaning of infants [4,6,27]; [0.40]</td>
<td><em>Aloe dichotoma</em> (1) [0.17],[13]; <em>Aloe microstigma</em> subsp. <em>microstigma</em> (2) [0.33],[13]; <em>Ballota africana</em> (2) [0.33],[10]; <strong>Oncosiphon suffruticosum</strong> (1) [0.17],[6]</td>
</tr>
<tr>
<td>Bile (excessive) [4,5,28]; [0.25]</td>
<td><strong>Asclepias crispa</strong> (2) [0.4],[11]; <em>Diospyros asturo-africana</em> (1) [0.2],[6]; <em>Eriocephalus punctulatus</em> (1) [0.2],[33]; <em>Eriocephalus species</em> (1) [0.2],[14]</td>
</tr>
<tr>
<td>Chilblained hands and feet [3,5,28]; [0.50]</td>
<td><strong>Ballota africana</strong> (3) [0.6],[15]; <em>Elytropappus rhinocerotis</em> (1) [0.2],[7]; <em>Senecio cinerascens</em> (1) [0.2],[6]</td>
</tr>
<tr>
<td>Dizziness [2,5,28]; [0.75]</td>
<td><strong>Anginon difforme</strong> (4) [0.8],[80]; <em>Olea europaea</em> subsp. <em>africana</em> (1) [0.2],[8]</td>
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<tr>
<td>General malaise [4,5,28]; [0.25]</td>
<td><strong>Artemisia absinthium</strong> (2) [0.4],[13]; <em>Chrysosoma ciliata</em> (1) [0.2],[25]; <em>Pteronia camphorata</em> (1) [0.2],[14]; <em>Schinus molle</em> (1) [0.2],[9]</td>
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<tr>
<td>Nervous conditions (aids relaxation) [4,5,28]; [0.25]</td>
<td><em>Cheilanthes induta</em> (1) [0.2],[50]; <strong>Conicosia elongata</strong> (2) [0.4],[50]; <em>Mentha longifolia</em> (1) [0.2],[6]; <em>Sceletium tortuosum</em> (1) [0.2],[5]</td>
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<tr>
<td>Sweaty feet [2,5,28]; [0.75]</td>
<td><strong>Elytropappus rhinocerotis</strong> (3) [0.6],[20]; <strong>Oncosiphon suffruticosum</strong> (2) [0.4],[11]</td>
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<tr>
<td>Mole removal [2,4,29]; [0.67]</td>
<td><em>Aloe dichotoma</em> (1) [0.25],[13]; <strong>Euphorbia maurnatiana</strong> (3) [0.75],[43]</td>
</tr>
<tr>
<td>Teething (babies) [2,4,29]; [0.67]</td>
<td><em>Carobrotus edulis</em> (2) [0.5],[13]; <em>Parmelia species</em> (2) [0.5],[13]</td>
</tr>
<tr>
<td>Thyroid gland [2,4,29]; [0.67]</td>
<td><em>Mentha spicata</em> (2) [0.5],[33]; <em>Viscum capense</em> (2) [0.5],[11]</td>
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<td>Alcoholism [2,3,30]; [0.50]</td>
<td><strong>Antizoma miersiana</strong> (1) [0.33],[10]; <strong>Gunnera perpensa</strong> (2) [0.67],[100]</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
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<tr>
<td>Asthma [3,3,30]; [0]</td>
<td><em>Dicoma capensis</em> (1) [0.33],[6]; <em>Notobubon pearsonii</em> (1) [0.33],[50]; <em>Sutherlandia frutescens</em> (1) [0.33],[5]</td>
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<tr>
<td>Epilepsy [3,3,30]; [0]</td>
<td><em>Lineum africanum</em> (1) [0.33],[50]; <em>Nicotiana glauca</em> (1) [0.33],[7]; <em>Pteronia camphorata</em> (1) [0.33],[14]</td>
</tr>
<tr>
<td>“Godly illness” (unknown condition; “goddelike siekte” or “ongesonde siekte”) [2,3,30]; [0.50]</td>
<td><em>Artemisia afra</em> (1) [0.33],[9]; <em>Conyza scabrida</em> (1) [0.33],[33]; <em>Helichrysum odoratissimum</em> (1) [0.33],[14]</td>
</tr>
<tr>
<td>Infertility in women [2,3,30]; [0.50]</td>
<td><em>Aloe dichotoma</em> (2) [0.67],[25]; <em>Parmelia species</em> (1) [0.33],[6]</td>
</tr>
<tr>
<td>Insect bites (including bee stings) [2,3,30]; [0.50]</td>
<td><em>Bulbine frutescens</em> (1) [0.33],[8]; <em>Bulbine praemorsa</em> (2) [0.67],[100]</td>
</tr>
<tr>
<td>Mastitis (breast tissue inflammation) and stimulation of milk flow (lactation) [1.3,30]; [1.00]</td>
<td><em>Ballota africana</em> (3) [1],[15]</td>
</tr>
<tr>
<td>Mucus on lungs (pneumonia) [2,3,30]; [0.50]</td>
<td><em>Dodonaea viscosa var. angustifolia</em> (2) [0.67],[9]; <em>Notobubon pearsonii</em> (1) [0.33],[50]</td>
</tr>
<tr>
<td>Bleeding (nose) [1,2,31]; [0]</td>
<td><em>Urtica urens</em> (2) [1],[50]</td>
</tr>
<tr>
<td>Cracked lips [2,2,31]; [0]</td>
<td><em>Cotyledon orbiculata</em> (1) [0.5],[14]; <em>Ricinus communis</em> (1) [0.5],[6]</td>
</tr>
<tr>
<td>Diphtheria [1,2,31]; [1]</td>
<td><em>Carpobrotus edulis</em> (2) [1],[13]</td>
</tr>
<tr>
<td>Glands swollen [2,2,31]; [0]</td>
<td><em>Elytropappus rhinocerotis</em> (1) [0.5],[7]; <em>Datura stramonium</em> (1) [0.5],[14]</td>
</tr>
<tr>
<td>Indigestion [2,2,31]; [0]</td>
<td><em>Artemisia absinthium</em> (1) [0.5],[6]; <em>Crassula muscosa</em> (1) [0.5],[11]</td>
</tr>
<tr>
<td>Skin pigmentation [2,2,31]; [0]</td>
<td><em>Conicosia elongata</em> (1) [0.5],[25]; <em>Euphorbia mauritanica</em> (1) [0.5],[14]</td>
</tr>
<tr>
<td>Snuff [2,2,31]; [0]</td>
<td><em>Silene burchellii</em> (1) [0.5],[100]; <em>Solanum tomentosum</em> (1) [0.5],[25]</td>
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<tr>
<td>Stomach ulcers [2,2,31]; [0]</td>
<td><em>Carpobrotus edulis</em> (1) [0.5],[7]; <em>Hoodia gordonii</em> (1) [0.5],[33]</td>
</tr>
<tr>
<td>Tonic [2,2,31]; [0]</td>
<td><em>Pteronia camphorata</em> (1) [0.5],[14]; <em>Urtica urens</em> (1) [0.5],[25]</td>
</tr>
<tr>
<td>AIDS [1,1,32]; [0]</td>
<td><em>Meliandus pectinatus</em> (1) [1],[6]</td>
</tr>
<tr>
<td>Appetite suppressant [1,1,32]; [0]</td>
<td><em>Carpobrotus edulis</em> (1) [1],[7]</td>
</tr>
<tr>
<td>Chicken pox [1,1,32]; [0]</td>
<td><em>Dodonaea viscosa var. angustifolia</em> (4) [1],[17]</td>
</tr>
<tr>
<td>Fractured legs [1,1,32]; [0]</td>
<td><em>Meliandus pectinatus</em> (1) [1],[6]</td>
</tr>
<tr>
<td>Gout [1,1,32]; [0]</td>
<td><em>Urtica urens</em> (1) [1],[25]</td>
</tr>
<tr>
<td>Heart problems [1,1,32]; [0]</td>
<td><em>Olea europaea subsp. africana</em> (1) [1],[8]</td>
</tr>
<tr>
<td>Poisoning (snake bites, scorpion stings) [1,1,32]; [0]</td>
<td><em>Leonotis leonurus</em> (1) [1],[25]</td>
</tr>
<tr>
<td>Prostate problems [1,1,32]; [0]</td>
<td><em>Bupleurum mundii</em> (1) [1],[50]</td>
</tr>
<tr>
<td>Medical condition</td>
<td>Plant species</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Psychoactive [1,1,32]; [0]</td>
<td><em>Sceletium tortuosum</em> (3) [1],[16]</td>
</tr>
<tr>
<td>Sexually transmitted disease [1,1,32]; [0]</td>
<td><em>Mentha longifolia</em> (1) [1],[6]</td>
</tr>
<tr>
<td>Sore throat [1,1,32]; [0]</td>
<td><em>Carpobrotus edulis</em> (4) [1],[27]</td>
</tr>
<tr>
<td>Sprained ankle [1,1,32]; [0]</td>
<td><em>Bulbine frutescens</em> (1) [1],[8]</td>
</tr>
<tr>
<td>Sunburn [1,1,32]; [0]</td>
<td><em>Carpobrotus edulis</em> (1) [1],[7]</td>
</tr>
<tr>
<td>Worms (intestinal parasites) [1,1,32]; [0]</td>
<td><em>Ruta graveolens</em> (1) [1],[7]</td>
</tr>
</tbody>
</table>
4.4 Quantifying medicinal plant knowledge in the Kamiesberg

The Matrix Method as developed by De Beer and Van Wyk (2011) was applied to the Kamiesberg area, to systematically quantify (in matrix format) the medicinal ethnobotanical knowledge in the local community.

The Matrix Method was applied in this study to evaluate each participant’s individual medicinal ethnobotanical knowledge, by calculating the medicinal Ethnobotanical Knowledge Index [EKI(m)]. The plant species medicinal importance has been determined by calculating the medicinal Species Popularity Index (SPI) in the community. Note that these EKI(m) values are based on medicinal plants only, unlike the study of De Beer and Van Wyk (2011), where all useful plants (including those used for food and crafts) have been included.

Sixteen participants in the Kamiesberg participated in this quantification method (five participants from Leliefontein, three from Nourivier, seven from Paulshoek and one from Kamieskroon) of which eight were female and eight were male. The quantification method allows comparisons of data obtained from different communities and geographical areas as well as comparisons with other quantitative methods.

The Matrix Method has two main advantages. Firstly, it ensures that the data is complete and accurate. The participants were all exposed to the same “flip-file” of herbarium specimens and photos, which included all of the Kamiesberg medicinal plants recorded up to that point (phases 1 to 3). Unlike random questioning with the inevitable false negative use-records (i.e. well-known plants that were momentarily forgotten by the informant), this systematic approach ensured that complete data has been recorded. Furthermore, the “flip-file” served as an important aid and as a guide for the older participants – especially those with most knowledge and experience – but who often tend to forget important facts, due to their age. In addition, these elderly persons are often no longer mobile and are unable to walk long distances to point out the useful species. Another advantage is that the method is not limited by
season and can be performed at any time of the year, even when the plants are dormant.

Secondly, the Matrix Method accounts for all the logical steps in the sequence in which traditional knowledge is acquired. Children typically first become familiar with useful plants without necessarily knowing their names or uses. The next step will be to recognize the plants by name, followed by details of their various uses. By limiting the quantification to use-records, the total knowledge in the community may be under-estimated. A possible reason for this is that the familiarity with a particular useful plant and knowledge about the vernacular name (even in the absence of a use-record) has not been taken into account. In addition, the quantification of use-records alone leads to a loss of valuable information and restricts the possibility for further analyses (e.g. by comparing the level of knowledge amongst various age groups from different communities).

Using the Matrix Method was experienced as highly applicable for evaluating the apparent loss of traditional plant knowledge. Separated analyses of the various categories of knowledge acquiring by the participants, allow an evaluation of the total plant knowledge still available in the community, and the acquiring of medicinal ethnobotanical knowledge (Figure 5 and Table 9).

In this study it has been determined that the average index values for the 16 participants were as follows: 0.73 for plant species recognition (“do you know the plant?”); 0.61 for naming the plant (do you have a name?) and 0.39 for providing medicinal use(s) for the plant species.

The scores in the categories (recognition, naming and medicinal use) have been calculated by adding the total in each category and dividing it respectively by the total level of knowledge for each category: by 85 [1x85], by 170 [2x85] and by 255 [3x85].

For the plant recognition category, six participants had a score above 0.80, two scored between 0.70 and 0.79, seven scored between 0.60 and 0.69 and one scored lower than 0.50.
For the plant naming category, two participants scored above 0.80, two between 0.70 and 0.79, four between 0.60 and 0.69, four between 0.50 and 0.59, two between 0.40 and 0.49 and two less than 0.40.

Naming of plant species was more challenging for the participants than simply recognizing the plant species, with the highest index 0.91 and the lowest index 0.2.

For the category of providing a medicinal use for the plant species, the participant`s scores dropped drastically. Most of the participants (13 of the 16) scored less than 0.50 and only three participants (AST., EK. and JvW.) scored above 0.50. Only one participant scored above 0.80 for the plant medicinal use category. Anna Stewe (AST.) was the only participant who scored above 0.80 for each of the three categories.

The Ethnobotanical Knowledge Index (medicinal) [EKI(m)] values for the 16 participants have been calculated by taking the individual score for the three categories into account. The EKI(m) values ranged from 0.90 for the most knowledgeable participant (Anna Stewe) to 0.17 for a 10-year-old boy (Morné Brand). The overall EKI(m) average value for the 16 participants was 0.52. Two participants scored an EKI(m) value of above 0.80 (high medicinal ethnobotanical knowledge). Ten participants scored between 0.44 and 0.63 (average medicinal ethnobotanical knowledge). Four participants scored less than 0.40 (poor medicinal ethnobotanical knowledge).

The participants were grouped into age categories: Senior citizens (age 55+), Adults (age 25–54) and Children (10-25) [only one child - MB, aged 10]. The Children category was not adequately represented in the sample and should therefore be interpreted with caution. The average indices of the different knowledge categories (recognition, naming and giving of medicinal use) and the average EKI(m), for the different age groups can be compared (Figure 5).
Figure 5: The average indices of the different knowledge categories (recognition, naming and medicinal use) as well as the average EKI(m), as recorded for the different age groups in the Kamiesberg.

For the category recognition, the senior citizens and adults scored the same: 0.74 and the child obtained a score of 0.60.

For the category naming, the senior citizens scored 0.68; the adults 0.62 and the child scored 0.20.

For the category medicinal use, the senior citizens scored 0.46; the adults 0.38 and the child scored 0.04.

Senior citizens and adults had almost the same average EKI(m) values, namely 0.55 and 0.52 respectively. If more participants participated in this study, the ethnobotanical knowledge of the age groups could have been further specified.

The Species Popularity Index (SPI) was used to quantify the medicinal importance of each of the plant species. The SPI is calculated by the overall knowledge of each of the 16 participants for [recognition (1), naming (2) and medicinal use (3)] of each plant species, and the maximum possible score of 96 for all of the participants.
The 14 most well-known medicinal plant species of the Kamiesberg (as determined by their SPI values) are *Ballota africana* (SPI value 0.97, rank 1), *Dodonaea viscosa* var. *angustifolia* (0.95, 2), *Sutherlandia frutescens* (0.92, 3), *Sceletium tortuosum* (0.91, 4), *Carpobrotus edulis* (0.88, 5), *Asclepias crispa* (0.85, 6), *Chironia baccifera* (0.85, 6), *Ruta graveolens* (0.85, 6), *Galenia africana* (0.84, 7), *Viscum capense* (0.83, 8), *Diospyros austro-africana* (0.82, 9), *Melianthus pectinatus* (0.82, 9), *Cassytha ciliolata* (0.81, 10) and *Oncosiphon suffruticosum* (0.81, 10).
Table 9: A matrix of 85 medicinal plant species of the Kamiesberg and the scores obtained by 16 participants

This includes scores reflecting the knowledge of 16 participants with respect to the categories: recognition of the plant, its name and its medicinal use(s) as well as the SPI and EKI(m) values.

Participants: AB = Anna ("Wiet") Brand; AST = Anna ("Boom") Stewe; AW = Anna Jacoba ("Kotie") van Wyk; CC = Cerill Corjeus; EK = Elizabeth ("Elsie/ Alla") Kardinal; GB = Gertruida Wilhelmina ("Truida") Brand; GK = Gertruida ("Trooi") Klaase; J = Jakobus ("Kosie/ Overall") Brand; JL = Johanna ("Mariana") Lot; JvW = Jan ("Brood") van der Westhuizen; LC = Lita Cole; MB = Morné Brand; PD = Pieter ("Blink") Dirkse; PR = Pieter Rooi; SC = Sors Cloete; SW= Samuel ("Samie") van der Westhuizen.

Explanation of the four digits in each cell:
Digit 1: Does the participant recognise the plant? – score: 1 or 0
Digit 2: Can the participant give a name for the plant? – score: 2 or 0
Digit 3: Can the participant provide a medicinal use for the plant? – score: 3 or 0
Digit 4: total score (out of 6)

SPI (Species Popularity Index) = total species score (digit 4), divided by the maximum possible score for the species (16x6 = 96); e.g. plant species 1 Agathosma betulina: SPI = 15 ÷ 96 = 0.16.

Knowledge indices (recognition, naming and medicinal use)
Index for recognition: participant’s total score for recognition (digit 1) divided by the maximum possible score for recognition for all 85 listed species (85x1 = 85).
Index for naming: participant’s total score for naming (digit 2) divided by the maximum possible score for naming for all 85 listed species (85x2 = 170).
Index for naming: participant’s total score for giving a medicinal use (digit 3) divided by the maximum possible score for giving a medicinal use for all 85 listed species (85x3 = 255).

EKI(m) Ethnobotanical Knowledge Index (medicinal) = participant’s total score (digit 4) divided by the maximum possible score for all 85 listed species, e.g. EKI(m) [AB] = 302 (total score obtained) ÷ (85 x 6) = 0.59
<table>
<thead>
<tr>
<th>No</th>
<th>Plant species</th>
<th>Participants</th>
<th>Senior citizens (age 55+)</th>
<th>Adults (age 25–54 )</th>
<th>Child</th>
<th>SPI</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>AB</td>
<td>SW</td>
<td>AW</td>
<td>PD</td>
<td>GK</td>
</tr>
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<td>Agathosma betulina (P.J. Bergius) Pillans</td>
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<td>1203</td>
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<td>Aloe microstigma Salm - Dyck subsp. microstigma</td>
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<td>1203</td>
<td>1236</td>
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<td>Anginon difforme (L.) B.L.Burtt</td>
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<td>Artemisia afra Jacq. ex Willd.</td>
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<td>1236</td>
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<td>1203</td>
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118
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<td><strong>Adults (age 25–54)</strong></td>
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<td><em>Helichrysum rutilans</em> (L.) D.Don</td>
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<td><em>Hydnora africana</em> Thunb.</td>
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<td><em>Nicotiana glauca</em> Graham</td>
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4.5 Comparing the importance of medicinal plants of the Kamiesberg by means of different analytical methods

The SPI as calculated in the Matrix Method (Table 9) can be compared to other statistical methods evaluating the importance of a species in a community, such as the number of use-records, the CII and the RFC (Table 7). The different quantification methods can also be compared individually to each other, although each of the methods considers different parameters for calculation (Table 10).

Table 10: Parameters taken in consideration for the different methods used for determining the importance of the medicinal plant species

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<tr>
<td>Number of medicinal use-records</td>
<td>Total per ailment category</td>
<td>Total per species</td>
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<td>Ailment categories (Table 8)</td>
<td>Total number plant species per ailment category</td>
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Table 6 represents the first 24 plants species for each of the methods being used (CII, RFC, SPI, number of use-records), which are compared with each other according to the highest values obtained. The ranks of the species are not taken into consideration, as some of the methods have various plant species in the same rank.

Two species, *Sutherlandia frutescens* and *Dodonaea viscosa* var. *angustifolia* are under the top five medicinal species in all four of these analytical methods.

Twenty one of the 24 plant species are represented in all of the results, indicating an 87.5% similarity between the various analytical methods. Only six species are not represented in all of the methods, namely: *Aloe ferox, Artemisia afra, Bulbine frutescens, Cassytha ciliolata, Diospyros asto-africana* and *Nicotiana glauca*. 
When comparing the different methods individually, both the RFC and SPI methods have 24 similar species, indicating a 100% similarity.

When comparing the CII method with the RFC and SPI methods, the CII presents three additional species (not occurring in the other two methods), namely: *Aloe ferox*, *Artemisia afra* and *Bulbine frutescens*.

A comparison of the CII method and the ‘number of use-records’ shows only one difference in each method, namely *Aloe ferox* in the CII method and *Diospyros austro-africana* in the ‘number of use-records’ method.

When comparing the RFC and SPI to the ‘number of use-records’, a similarity of 91.6% has been obtained.

These results indicate a very high agreement between the different analytical methods used to determine the most important medicinal species in the Kamiesberg. Without any doubt, the similarity of the results generated by the four different methods used, all show that the following 21 species may be considered to be the most important medicinal plants of the Kamiesberg:

Table 11: The 24 most important medicinal plant species in the Kamiesberg, as identified by different analytical methods

The methods are CII (Cultural Importance Index), RFC (Relative Frequency of Citation), SPI (Species Popularity Index) as well as the “number of use-records”.

<table>
<thead>
<tr>
<th>Analytical methods used</th>
<th>CII</th>
<th>RFC</th>
<th>SPI</th>
<th>number of use-records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>value</td>
<td>Species</td>
<td>value</td>
<td>Species</td>
</tr>
<tr>
<td>1 Sutherlandia frutescens (L.) R.Br.</td>
<td>2.17</td>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>1.00</td>
<td>Ballota africana (L.) Benth.</td>
</tr>
<tr>
<td>2 Asclepias crispa P.J.Bergius</td>
<td>2.13</td>
<td>Sutherlandia frutescens (L.) R.Br.</td>
<td>0.91</td>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
</tr>
<tr>
<td>3 Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>2.09</td>
<td>Ballota africana (L.) Benth.</td>
<td>0.87</td>
<td>Sutherlandia frutescens (L.) R.Br.</td>
</tr>
<tr>
<td>4 Dicoma capensis Less.</td>
<td>2.04</td>
<td>Chironia baccifera L.</td>
<td>0.87</td>
<td>Sceletium tortuosum (L.) N.E.Br.</td>
</tr>
<tr>
<td>5 Ballota africana (L.) Benth.</td>
<td>2.00</td>
<td>Sceletium tortuosum (L.) N.E.Br.</td>
<td>0.83</td>
<td>Carpobrotus edulis L.Bolus</td>
</tr>
<tr>
<td>6 Sceletium tortuosum (L.) N.E.Br.</td>
<td>1.91</td>
<td>Viscum capense L.f.</td>
<td>0.83</td>
<td>Asclepias crispa P.J.Bergius</td>
</tr>
<tr>
<td>7 Artemisia absinthium L.</td>
<td>1.83</td>
<td>Asclepias crispa P.J.Bergius</td>
<td>0.78</td>
<td>Chironia baccifera L.</td>
</tr>
<tr>
<td>8 Carpobrotus edulis L.Bolus</td>
<td>1.78</td>
<td>Oncosiphon suffruticosum (L.) Källersjö</td>
<td>0.78</td>
<td>Ruta graveolens L.</td>
</tr>
<tr>
<td>9 Parmelia species</td>
<td>1.61</td>
<td>Diospyros austro-africana De Winter</td>
<td>0.74</td>
<td>Galenia africana L.</td>
</tr>
<tr>
<td>10 Ricinus communis L.</td>
<td>1.39</td>
<td>Galenia africana L.</td>
<td>0.74</td>
<td>Viscum capense L.f.</td>
</tr>
<tr>
<td>11 Salvia dentata Aiton</td>
<td>1.39</td>
<td>Melianthus pectinatus Harv.</td>
<td>0.74</td>
<td>Diospyros austro-africana De Winter</td>
</tr>
<tr>
<td>12 Mentha longifolia (L.) Huds.</td>
<td>1.35</td>
<td>Mentha longifolia (L.) Huds.</td>
<td>0.74</td>
<td>Melianthus pectinatus Harv.</td>
</tr>
<tr>
<td>13 Chironia baccifera L.</td>
<td>1.26</td>
<td>Senecio cinerascens Aiton</td>
<td>0.74</td>
<td>Cassytha ciliolata Nees</td>
</tr>
<tr>
<td>14 Senecio cinerascens Aiton</td>
<td>1.26</td>
<td>Artemisia absinthium L.</td>
<td>0.70</td>
<td>Oncosiphon suffruticosum (L.) Källersjö</td>
</tr>
<tr>
<td>#</td>
<td>Species</td>
<td>CII</td>
<td>Species</td>
<td>RFC</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------</td>
<td>------</td>
<td>--------------------------</td>
<td>------</td>
</tr>
<tr>
<td>15</td>
<td><em>Ruta graveolens</em> L.</td>
<td>1.22</td>
<td><em>Dicoma capensis</em> Less.</td>
<td>0.70</td>
</tr>
<tr>
<td>16</td>
<td><em>Artemisia afra</em> Jacq. ex Wild.</td>
<td>1.17</td>
<td><em>Parmelia</em> species</td>
<td>0.70</td>
</tr>
<tr>
<td>17</td>
<td><em>Bulbine frutescens</em> (L.) Wild.</td>
<td>1.17</td>
<td><em>Ricinus communis</em> L.</td>
<td>0.70</td>
</tr>
<tr>
<td>18</td>
<td><em>Melianthus pectinatus</em> Harv.</td>
<td>1.17</td>
<td><em>Aloe microstigma</em> Salm-Dyck subsp. <em>microstigma</em></td>
<td>0.65</td>
</tr>
<tr>
<td>19</td>
<td><em>Viscum capense</em> L.f.</td>
<td>1.13</td>
<td><em>Carpobrotus edulis</em> L.Bolus</td>
<td>0.65</td>
</tr>
<tr>
<td>20</td>
<td><em>Aloe microstigma</em> Salm-Dyck subsp. <em>microstigma</em></td>
<td>1.09</td>
<td><em>Elytropappus rhinocerotis</em> (L.f.) Less.</td>
<td>0.65</td>
</tr>
<tr>
<td>21</td>
<td><em>Galenia africana</em> L.</td>
<td>1.09</td>
<td><em>Ruta graveolens</em> L.</td>
<td>0.65</td>
</tr>
<tr>
<td>22</td>
<td><em>Oncosiphon suffruticosum</em> (L.) Källersjö</td>
<td>1.09</td>
<td><em>Salvia dentata</em> Aiton</td>
<td>0.65</td>
</tr>
<tr>
<td>23</td>
<td><em>Elytropappus rhinocerotis</em> (L.f.) Less.</td>
<td>0.96</td>
<td><em>Nicotiana glauca</em> Graham</td>
<td>0.61</td>
</tr>
<tr>
<td>24</td>
<td><em>Aloe ferox</em> Mill.</td>
<td>0.91</td>
<td><em>Cassytha ciliolata</em> Nees</td>
<td>0.57</td>
</tr>
</tbody>
</table>
4.6 Comparing medicinal ethnobotanical data from the Kamiesberg and the Agter-Hantam

The Kamiesberg and Agter-Hantam are both rural areas with relative isolated communities. Figure 6 shows the location of the Agter-Hantam in South Africa. Both the ethnobotanical studies were performed in order to preserve ethnobotanical knowledge for future generations. The Matrix Method was used to determine the quantitative knowledge of the community as well as identifying the most important medicinal ethnobotanical (Kamiesberg) / ethnobotanical (Agter-Hantam) plants species in the areas. In both studies, 16 participants took part in the Matrix Method.

*Figure 6:* Map indicating the location of the Agter-Hantam in the Northern Cape Province of South Africa (De Beer and Van Wyk, 2011).

The plant communities and plant species diversity are unique in the two localities but several plants occur in both. Eighty five medicinal plant species were included in the Matrix Method for the Kamiesberg and 64 useful plant species in the Matrix Method of the Agter-Hantam. The study performed in the Agter-Hantam included plants with medicinal, edible and craft uses, while the Kamiesberg study specifically focused on the medicinal plants.
A realistic comparison between the Matrix Method quantifications of the two study areas (Kamiesberg and the Agter-Hantam) required a re-calculation of the EKI and SPI values for the Agter-Hantam to exclude all except the medicinal plants. From this newly constructed matrix of medicinal plants for the Agter-Hantam, a comparison between the category index values (recognition, plant naming and medicinal use), the EKI(m), the knowledge in the different age groups, as well as the SPI values could be made. From the 64 ethnobotanical relevant species recorded in the Agter-Hantam, 55 have medicinal uses.

The average category index values (Agter-Hantam) were 0.73 for recognition, 0.63 for naming the plant species and 0.33 for giving a medicinal use. This was found to be very similar to the Kamiesberg data, namely 0.73, 0.61 and 0.39 respectively.

Anna Stewe`s results from the Kamiesberg (above 0.80 for all three categories: recognition = 0.96; naming = 0.91 and giving medicinal use(s) = 0.87) can be compared to that of Jan Baadjies, the most knowledgeable participant in the Agter-Hantam, who also scored above 0.80 for all three categories (recognition = 0.98; naming = 0.96 and giving medicinal use(s) = 0.87). Both these participants also obtained the highest EKI(m) values.

As the highest category scores can be compared, so can the lowest scores. In the Kamiesberg, Morné Brand, who is a boy aged 10, scored for recognition = 0.60, for naming = 0.20 and for giving medicinal use(s) = 0.04. Gert Swart, the youngest participant in the Agter-Hantam, obtained the lowest scores for the knowledge categories; he scored for recognition = 0.38, for naming = 0.33 and for giving medicinal use(s) = 0.04. The scores of these youngest participants in the Kamiesberg and Agter-Hantam were therefore very similar.

It is interesting to note that participants with the highest and lowest knowledge category scores for the Kamiesberg and Agter-Hantam obtained exactly the same scores for giving medicinal use(s).
The average index values for the different knowledge categories and the average EKI(m) for the age groups in the Kamiesberg and the Agter-Hantam can also be compared to each other (Table 12).

**Table 12:** The average indices for the categories recognition [R], plant naming [N] and medicinal use [M] of different age groups in the Kamiesberg and Agter-Hantam

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Kamiesberg</th>
<th></th>
<th>Agter-Hantam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>N</td>
<td>M</td>
<td>EKI(m)</td>
</tr>
<tr>
<td>Senior citizens (age 55+)</td>
<td>0.74</td>
<td>0.64</td>
<td>0.43</td>
<td>0.55</td>
</tr>
<tr>
<td>Adults (age 25–54) [K]</td>
<td>0.74</td>
<td>0.62</td>
<td>0.38</td>
<td>0.52</td>
</tr>
<tr>
<td>Adults (age 30-54) [A-H]</td>
<td>0.60</td>
<td>0.20</td>
<td>0.04</td>
<td>0.17</td>
</tr>
<tr>
<td>Children (10-25)</td>
<td>0.60</td>
<td>0.20</td>
<td>0.04</td>
<td>0.17</td>
</tr>
</tbody>
</table>

The values in Table 12 indicate that the participants of all the age groups in the Kamiesberg had lower scores considering the recognition and plant naming categories when compared to participants from the Agter-Hantam. A possible explanation is that not only medicinal plants were included in these two categories for the Agter-Hantam. If the ethnobotanical knowledge of the medicinal use(s) [M] for the different age groups in these two areas is compared, both the senior and adult participants of the Kamiesberg obtained higher scores, than those of the Agter-Hantam. This may indicate that more people in the Kamiesberg have knowledge on the medicinal uses of plant species, more medicinal plants are still being used on an everyday basis, and that the Kamiesberg is more diverse in terms of medicinal plant species.

The EKI(m) values of the two study areas were found to be very similar: with the average EKI(m) for the Kamiesberg being 0.52 and for the Agter-Hantam 0.50. The highest was 0.90 and the lowest 0.17 in the Kamiesberg and 0.92 and 0.19 in the Agter-Hantam respectively. The senior citizens of the Kamiesberg scored 0.55, and the senior citizens of the Agter-Hantam scored 0.54. For the adult age groups the scores were 0.52 and 0.58 for the Kamiesberg and Agter-Hantam respectively. For the children age group the scores were 0.17 for the Kamiesberg and 0.26 for the Agter-Hantam.
The species considered medicinally the most important for these two areas (the Kamiesberg and the Agter-Hantam) can be compared by their SPI values (Table 13).

**Table 13:** The 12 most important medicinal plants species in the Kamiesberg and Agter-Hantam areas according to their SPI values

<table>
<thead>
<tr>
<th>Medicinal Plants in the Kamiesberg</th>
<th>SPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant species</td>
<td></td>
</tr>
<tr>
<td>Ballota africana (L.) Benth.</td>
<td>0.97</td>
</tr>
<tr>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>0.95</td>
</tr>
<tr>
<td>Sutherlandia frutescens (L.) R.Br.</td>
<td>0.92</td>
</tr>
<tr>
<td>Sceletium tortuosum (L.) N.E.Br.</td>
<td>0.91</td>
</tr>
<tr>
<td>Carpobrotus edulis L.Bolus</td>
<td>0.88</td>
</tr>
<tr>
<td>Asclepias crispa P.J.Bergius</td>
<td>0.85</td>
</tr>
<tr>
<td>Chironia baccifera L.</td>
<td>0.85</td>
</tr>
<tr>
<td>Ruta graveolens L.</td>
<td>0.85</td>
</tr>
<tr>
<td>Galenia africana L.</td>
<td>0.84</td>
</tr>
<tr>
<td>Viscum capense L.f.</td>
<td>0.83</td>
</tr>
<tr>
<td>Diospyros austro- africana De Winter</td>
<td>0.82</td>
</tr>
<tr>
<td>Meliantus pectinatus Harv.</td>
<td>0.82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medicinal Plants in the Agter-Hantam</th>
<th>SPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant species</td>
<td></td>
</tr>
<tr>
<td>Hoodia gordonii (Masson) Sweet ex Decne.</td>
<td>0.94</td>
</tr>
<tr>
<td>Punica granatum L.</td>
<td>0.90</td>
</tr>
<tr>
<td>Sutherlandia frutescens (L.) R.Br.</td>
<td>0.82</td>
</tr>
<tr>
<td>Aloe microstigma Salm-Dyck</td>
<td>0.81</td>
</tr>
<tr>
<td>Pelargonium ramosissimum (Cav.) Willd.</td>
<td>0.77</td>
</tr>
<tr>
<td>Galenia africana L.</td>
<td>0.76</td>
</tr>
<tr>
<td>Pentzia incana (Thunb.) Kuntze</td>
<td>0.76</td>
</tr>
<tr>
<td>Aloe variegata L.</td>
<td>0.75</td>
</tr>
<tr>
<td>Oncosiphon suffruticosum (L.) Källersjö</td>
<td>0.74</td>
</tr>
<tr>
<td>Ricinus communis L.</td>
<td>0.74</td>
</tr>
<tr>
<td>Dodonaea viscosa Jacq. var. angustifolia (L.f.) Benth</td>
<td>0.70</td>
</tr>
<tr>
<td>Parmelia sp.</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Three plant species *Sutherlandia frutescens* (ranked third in both areas), *Dodonaea viscosa* var. *angustifolia* and *Galenia africana* are under the 12 most important medicinal species for both study areas.

The difference in the SPI values (indicating the importance of the medicinal plant species) can be explained by differences in the geographical distribution of the species, their availability and perhaps also to the traditional medicinal knowledge of the plant species in the different areas.

*Hoodia gordonii* which is ranked first in the Agter-Hantam with a SPI value of 0.94 has a much lower SPI value of 0.33 in the Kamiesberg. On the other hand *Ballota africana* has a SPI value of 0.97 in the Kamiesberg and a SPI value of 0.46 in the Agter-Hantam area. Although *Ballota africana* is a very important medicinal plant in the Kamiesberg area and in the larger Cape Dutch medicine (Van Wyk, 2008), it has a relative low SPI value in the Agter-Hantam. It is assumed that species with a high SPI value in one area and low SPI value in another area, such as *Ballota africana* (in
the Kamiesberg) can be replaced with another highly ranked species (in the Agter-Hantam) for treating the same specific ailment(s).

### 4.7 Non-plant products used medicinally in the Kamiesberg

Cotton (1996) stated that minerals, animals and fungi are also included in ethnomedicinal remedies but that a much larger diversity of plant-based medicines are used. The ethnomedicinal system of the Kamiesberg also includes animals and their products, rocks (minerals) and fungi, although the medicinal system is largely plant-based, with 101 recorded medicinal plant species.

Very limited published information is deals with the fascinating topic of non-plant products as part of a community's traditional medicinal system in South Africa. For the healing system of the Khoikhoi, literature that refers to non-plant products includes Kling (1923), Laidler (1928) and Schapera (1930).

Various uses of the medicinal non-plant products were recorded during the different phases of this study. Some of these uses have never been recorded in literature before. Medicinal non-plant products used in the Kamiesberg area can be categorised as animal products, minerals and fungi. According to most participants, the addition of non-plant products to a remedy consisting of medicinal plants will strengthen the efficacy of the treatment.

#### 4.7.1 Animal products

Animal products are the most popular non-plant medicinal products used in the Nama culture and are far more frequently used than minerals and fungi. Various animal products were observed during an interview with Gert Dirkse, the legendary *bossiedokter* near Paulshoek. Various animal skins, hooves and bones were found in his practice (Appendix 1 B, No 37). He mentioned some animal products being used in combination with medicinal plant species.

A total of seven animal products (*dassiepis*, *klipsweet*, goat or chicken dung, water tortoise blood, the anal gland of *t`aib* or aardwolf (*Proteles cristatus*), sheep fat and
porcupine (*Hystrix australasia*) stomach were mentioned during the different phases of the study.

### 4.7.1.1 Hyraceum (Dassiepis)

*Hyraceum* or *hydracei* is the dried, solidified and often fossilized excretion (faeces and urine) of rock rabbits (*dassies*) *Hyrax capensis* (Appendix 4, Figure 98). It is a black, rock-like substance occurring in layers on the cliffs where the rock rabbits live. This product is an ancient remedy of the Nama (Khoikhoi) people (Van Wyk *et al.*, 2008). The early European colonists also used it for medicinal purposes, after learning about it from the Khoikhoi people. *Hyraceum* is still sold on the Parade (the traditional open air market) in Cape Town (Van Wyk and Gericke, 2000). Mr Buys Wiese from Vanrhynsdorp mentioned that he can still remember the days when *dassiepis* was sold in shiny tins (*blink blikkies*) in pharmacies.

The use of *hyraceum* was first recorded by Pappe (1947). The Nama name of this product was recorded by Laidler (1928) and Schapera (1930) as /am uru, /gauς (l = lateral click and l = dental click) and laua /arub. Laidler (1928) first recorded the well-known Afrikaans vernacular name *dassiepis*. This name has been mentioned and was confirmed by 20 of the participants (AB., AST., AW., BW., CC., EK., GB., GD., GJ., GK., JB., JJ., JL., JvW., LC., PD., PR., SC., SW., WD., 2010, 2011 pers. comm.). Smith (1966) recorded the names *haasboegoe*, *klipboegoe* and *hyraceum*. In literature there seems to be a confusion between the product *dassiepis* and *klipsweet*, as both these terms are used for what is assumed to be *dassiepis* (Van Wyk and Gericke, 2000; Olsen *et al.*, 2008; Van Wyk *et al.*, 2008).

Various uses for *hyraceum* were recorded from literature as well as field work during the different phases of this study.

In 1860, a doctor A. Brown (cited by Kling, 1923) wrote: “In hysterical, nervous, spasmodic affections, it is daily prescribed by myself; combined with tincture Valeriana. A long standing case of hypochondria and hysterical nervousness baffled me and other practitioners with regard to the rapid cure. A case of amenorrhoea and chlorosis, the patients laying up for 11 and 18 months, expectorating blood and pus,
hectic fever, cold and clammy at night, no appetite, a hopeless case, completely
cured in one month... As anti-spasmodic remedy in hysteria invaluable … I can
speak highly of its efficacy in this class of cases. As an emmenagogue in
amenorrhoea and chlorosis, its effects have been beyond all conception.”

Kling (1923) also referred to the use of the *hyraceum* as a decoction or tincture for
asthma, hysteria, St. Vitus’s-dance, amenorrhoea (blood shortage), chlorosis,
epilepsy, convulsions, nervousness and kidney and bladder problems.

Laidler (1928) visited a poison doctor (Jacob Klaas) whose father was a full-blooded
Nama and also a poison doctor and who lived in the “the north of Namaqualand”
(exact locality uncertain). This poison doctor applied dried venom of snakes as
antivenom and *hyraceum* as poultice on snake bites. Other medicinal use-records for
*hyraceum* include: “as a decoction for dry confinements, during parturition, for
woman’s ailments, for irregular menstruation, a large dosage is considered a perfect
arbortifacient; as infusion it is used for different types of poisoning, a stiff neck and
stomach ache. Powdered *hyraceum* is rubbed into scarified snake bites and scorpion
stings (Laidler, 1928; Schapera, 1930; Archer, 1994; Olsen *et al*., 2008). As infusions
and/or tinctures, *hyraceum* is used as an emmenagogue and arbortifacient, and has
also been used for hysteria, epilepsy and as anti-spasmodic (Van Wyk and Gericke,
2000).

Olsen *et al.* (2008) reports on the use to treat scorpion and snake bites and that a
decoction is used as an antidote against poisons and as a cure for back and
abdominal aches. Olsen *et al.* (2008) also mentioned that: “the Afrikaner settlers in
Gamkaskloof, a remote valley in the Swartberge, which was accessible only by foot
until 1963, used an infusion of *hyraceum* as treatment for various ailments, including
colic, hysteria, epilepsy and St. Vitus’s dance (now known as Parkinson’s disease)”. An
infusion can also be used for infants with flatulence, as post-natal medicine (for a
retained placenta) and for children with chest ailments (Van Wyk *et al*., 2008).

*Hyraceum* is not only used as medicine but also as perfume in the fragrance industry,
(2008) mentioned that it is exported to France and used as a fixative in the perfume industry.

Sixteen participants provided medicinal uses for hyraceum during the different phases of this study (February 2010 to May 2011). Five new medicinal uses (not recorded in literature before) were recorded for hyraceum. The new use-records are indicated in bold text below. The abbreviations of the participants names (Appendix 1) are given in alphabetically order together with the use-record(s):

(AB. 2010, pers. comm.): “Used with medicinal plants for the treatment of backache; furthermore it can be used to get rid of a retained placenta after labour, for chest and bladder problems (urinary tract infections)”. (AST. 2010, pers. comm.): “Used for heartburn and women’s ailments”. (AW. 2010, pers. comm.): “Used for kidney ailments and to get rid of a retained placenta after labour”. (BW. 2010, pers. comm.): “Used as a decoction for bladder problems and kidney ailments”. (EK. 2011, pers. comm.): “A decoction is used to initiate menstruation”. (GB. 2011, pers. comm.): “Used for stomach ailments, to get rid of a retained placenta after labour and for flatulence”. (GD. 2010, pers. comm.): “An infusion is used as a remedy for kidney and bladder problems and for woman`s ailments (moedersdeel)”. (GK. 2011, pers. comm.): “Used for stomach ache and woman`s ailments”. (JB. 2011, pers. comm.): “Used for heartburn and woman`s ailments”. (JL. 2010, pers. comm.): “Used for woman`s ailments”. (JvW. 2011, pers. comm.): “Used for woman`s ailments, to get rid of a retained placenta after labour and as an arbortificient”. (LC. 2010, pers. comm.): “Used for urinary tract infections”. (PD. 2011, pers. comm.): “Used as a decoction with goat dung for bladder problems”. (PR. 2011, pers. comm.): “Used for stomach ailments”. (SC. 2011, pers. comm.): “Used for stomach ache, chest cramps and general malaise”. (WD. 2010, pers. comm.): “Used for infants with stomach ailments” [according to WD., it is formed by a rock mouse (klipmuis) which he called t’noutjie in Nama. It is also the solidified urine of this t’noutjie which is used and he still calls the product dassiepis].

According to the participants, dassiepis is used as medicine because of the ‘very strong plants’ (poisonous plants) that the rock rabbits eat. By digesting these plants,
the poisons are removed and the excretion contains the strong and beneficial
products, which are considered excellent medicine to them.

Schapera (1930) provides a possible mythological view on the rock rabbit; stating
that in the mythology of the Cape Bushmen (/Xam), the mantis is the most prominent
mythological figure and that his wife, the rock rabbit (/huntu! katt! kitten or dassie) is
also important. This is interesting to take note of as mythological figures in the Nama
culture are supposed to possess supernatural powers. The extent to which the
mythology relates to the use and healing by rock rabbit excretion was not
determined.

Olsen et al. (2008) studied the affinity of hyraceum for the γ-aminobutyric acid
(GABA) receptor. An imbalance of the GABAergic system is linked to epilepsy.
The fact that hyraceum shows GABA-benzodiazepine receptor affinity is an
important step towards a better understanding of the pharmacological properties of
this interesting and traditionally important natural product.

4.7.1.2 Klipsweet

Klipsweet is a black residue occurring in layers of about 3–5 mm thick on the roofs of
shallow caves and represents the excretions of midgets (unknown species) (Van
Wyk and Gericke, 2000). During the study visits, the participants quite regularly
referred to klipsweet. Klipsweet was photographed and midgets were collected in the
Cederberg Mountains in June 2010. These photos were used in the Matrix Method
(Appendix 4, Figure 99).

Participants explained that there is a difference between the products dassiepis and
klipsweet. According to information from the participants (BW., GD., GJ., JJ., LC.,
PD. and WD., 2010, 2011, pers. comm.) dassiepis occurs on the floor of caves and
klipsweet on the roof of caves; dassiepis is formed by dassies and klipsweet by
midgets; dassiepis is hard and klipsweet is soft; the medicinal uses of these two
products are different.
Laidler (1928) was the first person to record the vernacular name “black klipsweet” for this product. Eighteen (18) participants (AB., AST., AW., BW., CC., GB., GD., GJ., GK., JB., JJ., JL., JvW., LC., PD., PR., SW., WD., 2010, 2011 pers. comm.) know the product as klipsweet and EK. (2011, pers. comm.) refers to it as swart bomeester. In Afrikaans the word bomeester literally means ‘superior’ or ‘the best master’, but bomeester also refers to another non-plant product, namely rock salt.

Laidler (1928) mentioned that an infusion of klipsweet is used for parturition, irregular “unhealthy” menstruation, as an abortifacient (large dosage), for backache and for children’s ailments. Van Wyk and Gericke (2000) referred to a use-record by Gert Dirks(e) (also one of the participants during this study) who mentioned that it is a general tonic and used for many conditions.

The following use-records were provided by the participants of this study. Nine new medicinal uses (never recorded in the literature before) have been identified for klipsweet. The new use-records are indicated in bold text below. The abbreviations of the participant names (Appendix 1) are given together with the use-record(s):

(AW. 2010, pers. comm.): “Used to get rid of a retained placenta after labour and for fever”. (AST. 2010, pers. comm.): “Klipsweet is formed by midgets; there are different colours of klipsweet and is found on the roof of caves. It tastes salty and bad and is used for the treatment of diabetes and heartburn. The klipsweet layer is not thick; it can be removed with an iron or with a sheep shears. During winter time the klipsweet is found to be hard while during summer time it becomes soft”. (EK. 2011, pers. comm.): “Klipsweet is food for the mythological water snake (waterslang). It is also used medicinally for heartburn”. (GB. 2010, pers. comm.): “Used for stomach ailments”. (GD. 2010, pers. comm.): “Can be used as a mixture with medicinal plants, or by itself, by placing a small piece in your mouth, used for the treatment of stomach ache and flatulence”. (JB. 2010, pers. comm.): It is a general medicine, used for insomnia (used in the early evenings), used for flatulence, children’s ailments and as appetite suppressant (slimming product). (JL. 2010, pers. comm.): “Used medicinally in mixtures with medicinal plants”. (JvW. 2010, pers. comm.): “Used as anti-venom for snake bites and scorpions stings”. (PD. 2011, pers. comm.): “Used medicinally with medicinal plants”. (PR. 2011, pers. comm.): “Used medicinally (unspecified)”. (WD. 2010, pers. comm.): “Used for the
treatment of stomach ache. As remedy for flatulence, boiling water is added to the *klipsweet*, whereafter it is stirred and the foam on the surface is used”.

### 4.7.1.3 Goat/chicken dung

Goat or chicken dung is always used in combination with medicinal plants, or *dassiepis* but never on its own (MG., MJ. and AB. 2010 pers. comm.). Detailed use-records as mentioned by the participants, where goat/chicken dung is used in combination with medicinal plants, are given verbatim in the inventory (Appendix 2).

Twelve participants commented on the use of goat/chicken dung as medicinal mixtures. Four different ailments (fever, measles, chicken pox and influenza) can be treated with the mixture of it with various medicinal plants. The following medicinal plants are used in combination with goat/chicken dung, as given by the participants (abbreviations of their names as in Appendix 1).

(AB. 2010, pers. comm.): “Goat dung is mixed with *Salvia dentata* for treating measles, chicken pox and fever. *Dodonaea viscosa* var. *angustifolia* can be added to the goat dung and *Salvia dentata* mixture for treating measles”. (AST. and GB. 2010, pers. comm.): “Goat dung is mixed with *Dodonaea viscosa* var. *angustifolia* for the treatment of influenza and measles. Goat dung is mixed with *Salvia dentata* for the treatment of children with measles”. (GD. 2010, pers. comm.): “Goat dung is mixed with *Dodonaea viscosa* var. *angustifolia* and *Sutherlandia frutescens* for treating measles”. (GB. and JB. 2010, pers. comm.): “Goat dung is mixed with *Dodonaea viscosa* var. *angustifolia* and used for fever”. (GJ., JJ. and PD. 2010, pers. comm.): “Goat dung is mixed with *Dodonaea viscosa* var. *angustifolia*, *Salvia dentata* and *Searsia undulata* and used to treat chicken pox”. (LC. 2010, pers. comm.): “Goat dung is mixed with *Dodonaea viscosa* var. *angustifolia* for treating measles”. (PD. 2010, pers. comm.): “Goat dung mixed with *hyraceum* is used for bladder problems”. (MG. and MJ. 2010, pers. comm.): “The dry white part of the chicken dung is mixed with *Ballota africana* and used for the treatment of children`s ailments”.

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4.7.1.4 Water tortoise blood

EK. (2011, pers. comm.) mentioned that a water tortoise’s blood, mixed with the roots of *Gomphocarpus fruticosus* can be used for the treatment of children with convulsions or epilepsy.

No literature reference could be found that mentions the use of water tortoise blood as part of a medicinal system in South Africa. The only water tortoise or terrapin that occurs in the Kamiesberg area (and in many other parts of the Western and Northern Cape Provinces) is the marsh terrapin (*Pelomedusa subrufa*, family Pelomedusidae). The water tortoise features prominently in San (/Xam) folklore, as recorded by Lucy Lloyd in her /Xam notesbooks (http://lloydbleekcollection.cs.uct.ac.za/stories/582/index.html) in January 1878. According to the /Xam contributor, |hanǂkass’o or Klein Jantje, who hailed from the Kenhardt area of the Northern Cape, “the !khou or water tortoise lives in water and is a rain thing (!khoa ka|| kerri-ssi \kau\)".

4.7.1.5 Anal gland of the aardwolf (*Proteles cristatus*)

Gert Dirkse (2010, pers. comm.) was asked if animal products were part of their healing system. He mentioned the anal gland or as he called it the *agterentklier, kaasklier* (Afrikaans) or *t`jie* (Nama) of the *t`aib* jackal, better known in English as the aardwolf, *Proteles cristatus*. This animal is related to hyenas, where anal glands are typical (jackals do not have anal glands). According to GD (2010, pers. comm.) the anal gland is medicinally used to treat serious flatulence in infants; a piece of this product can be placed on the tongue of the infant or on the mother’s nipple, when the infant is still breastfeeding.

In addition to the anal gland of the aardwolf (*Proteles cristatus*), Laidler (1928) refer to the dried kidney of the *D/aie* jackal and the sea bean, which is used for infantile convulsions. The identity of the sea bean was unknown to Laidler but it is probably the seeds of *Entada rheedii* Spreng. or *E. wahlbergii* Harv.that regularly wash up on beaches along the Indian Ocean; whether they can be found on the Atlantic coast of
South Africa is unclear) Archer (1994) also referred to the liver of the *D’aie* jackal or aardwolf (*Proteles cristatus*) being medicinally used for the treatment of infant ailments. Whittaker and Archer (1985) commented on a herbalist in the Nourivier area, who treated febrile convulsions with an infusion of “dried powdered jackal liver, *kalmoes* and ground wild garlic”.

### 4.7.1.6 Animal fat

Animal fat is never administered in its pure form for the treatment of ailments, but is used for making ointments by mixing it with plant materials. Some participants (including MG. and MJ.) mentioned that the ointments must be specifically made from sheep fat. Medicinal plants (often powdered aromatic leaves such as buchu) are mixed with the animal fat and rubbed into and/or onto the affected area. In cases of sprains and inflammation, the ointment can be used for massaging the affected area.

### 4.7.1.7 Porcupine stomach

The stomach of the porcupine (*Hystrix afericaeaustralis*) (known as *ystervarkmaag* in Afrikaans) is also used medicinally in the Nama culture`s healing system.

AST. (2010, pers. comm.) indicated that the content of the porcupine`s stomach is used, because porcupines eat resinous and poisonous plants, such as *rape*, *rapuise*, *t`norrieboom* (*Ozoroa dispar*) and *gifmelkbos* (*Euphorbia mauritanica*). According to her, it is during the digestion process that the beneficial and medicinally relevant chemicals are separated from the poison and therefore the stomach content will make good medicine. JJ., GJ. and PD. (2010. pers. comm) explained that the stomach of the porcupine, with its content, is dried and cut into pieces, whereafter it is used for the treatment of infant ailments. According to GD. (2010 pers. comm.) any porcupine can be used. The stomach will be dried, the content of the stomach removed and mixed with a decoction with medicinal plants for the treatment of flatulence.
Archer (1994) stated that the stomach content of a porcupine, *Hystrix australis*, is often mixed into an infusion of *Sutherlandia frutescens* and used for the treatment of stomach complaints.

### 4.7.2 Rock salts (*Bomeester*)

Almost nothing has been recorded in the scientific literature about the medicinal use of rock salts in South Africa. Several types of rock salts are known as *bomeester* in the Kamiesberg area. These products can be used on their own, but is mostly used in mixtures with plants. The Afrikaans word *bomeester* can literally be translated to “upper master”, referring to something exceptionally good. The participants also referred to different types (colours) of *bomeester*, which are used for different ailments. A participant from Leliefontein, Anna Stewe (AST.), took us to a locality where *blou bomeester* (blue rock salt) was found (Appendix 4, Figure 100). She also provided us with a sample of wit *bomeester* (white rock salt) (Appendix 4, Figure 101). Many other participants also referred to the product *bomeester* AB., AST., EK., GB., GD., GJ., JJ., LC., PD., SW., WD., 2010, pers. comm.).

The first and only mention of the name *bomeester* was by Laidler (1928). He recorded that a certain poison doctor in Namaqualand (Jacob Klaas), treated snakebites with an infusion of *bomeester*, as long as the patient was ill. He also rubbed the powder into scarifications made on the bites.

Thirteen (13) participants commented on the use and/or nature of *bomeester*. (AB. 2010, pers. comm.): “*Bomeester* is different from *klipsweet*, the taste of *bomeester* is somewhat salty. It is used as remedy for chest ailments and for flatulence. There are different colours of *bomeester*: white, red and blue. It is also used as remedy for snake bites and occurs at the foot of cliffs”. (AST. 2010, pers. comm.): “There are blue, white and yellow *bomeester*. *Bomeester* is totally different from *dassiepis* and *klipsweet*. *Bomeester* is formed when rocks break apart. It is used as remedy for poisonous bites/ stings (snake bites) and also for cramps. The taste is quite bitter. The *blou bomeester* is used for wounds. The white and yellow *bomeester* is used in mixtures with medicinal plants”. (EK. 2011, pers. comm.): “Used for various ailments, it can be used for toothache and stomach ailments. It can
be used on its own by sucking a piece of it”. (GB. 2010, pers. comm.): “Used for the treatment of stomach ailments, flatulence and headache. The different colours of *bomeester* found are: blue, white and yellow”. (GD. 2010, pers. comm.): “*Bomeester* is a rock salt which can be used as antidote against a bite/ sting of a poisonous animal. The yellowish (golden yellow) *bomeester* changes to blue if added to water and is used for the treatment of stomach ailments. The whitish *bomeester* is also used for treating stomach ailments. A brownish colour *bomeester* is also known”. (GJ., JJ. and PD. 2010, pers. comm.): “*Bomeester* tastes salty. Different colours of *bomeester* are found in different areas, namely white, black and yellow as well as one that resembles a crystal colour”. (JB. 2010, pers. comm.): “*Bomeester* tastes salty. There are different colours of *bomeesters*: yellow, black and blue. It is used as poultice”. (JL. 2010, pers. comm.): “Used for stomach ache”. (JvW. 2010, pers. comm.): “There are different types of *bomeester*, the most important one is the shiny whitish one, which is used medicinally for the treatment of pains and flatulence. There is also a yellow *bomeester*”. (WD. 2010, pers. comm.): “There are different *bomeesters*; a black and a white-coloured one. The white one is put in lukewarm water. Sugar is added to make a syrup, which is used medicinally”.

No research has yet been done to determine the chemical composition of *bomeester* or any possible therapeutic actions of these products.

### 4.7.3 Fungi

It is known from literature that fungi are medicinally used by the Khoikhoi and San people (Pappe, 1868; Smith 1966; Archer, 1994; Scott and Hewett, 2008). Four participants reported on the medicinal use of fungi in Namaqualand.

Pappe (1868) stated that the mushroom with an oblong, club- shaped cap that grows gregariously on ant-hills as used. The spores, a “*blackish powder*” are used for curing carcinomatous ulcers.
Smith (1966) identified the fungus as *Phellorina inquinans* ‘nambossie’ and mentioned that the Khoisan in earlier days collected the ripe fungus (the dark brown spores) and made an ointment for their faces.

G.R. van Wielligh (cited in Smith, 1966) records: “By uitsondering gebruik die blanke meisies dit ook om haar gelaat suiwer blank te maak.” [By exception European girls also use the spores of the fungus to have a pure white facial complexion].

Archer (1994) discussed the uses of spores of a certain fungus as cosmetic product in the Richtersveld. This product is applied (as an ointment) to the skin to protect it against the sun and against the brown pigmentation which occurs after women have children. In historical times it was also used as cosmetic decoration.

Scott and Hewett (2008) cited Thunberg 11 (1785. p.15) who stated that powder of the whole fungus is used medicinally for cancerous ulcers. The ascribed identity for this record is *Podaxon carcinomatis* from the family Gasteromycetaceae.

Two Nama vernacular names are recorded here for the first time (see Appendix 1 for the abbreviations of participant names): (AK. 2010, pers. comm.): “t’nômsa”; (AST., MG. and MJ. 2010, pers. comm.): “t’nwasà”.

Information on the medicinal uses of fungi was contributed by four participants in Namaqualand (including the Kamiesberg) during the various phases of this study. All four participants reported the same uses as recorded in the literature cited above. (AK. 2010, pers. comm.): It is a puff-ball fungus growing on termite mounds. The dark brown powder is mixed with fat and applied to the skin, for skin conditions or as sun protection. (AST. 2010, pers. comm.): The mushroom occurs on ant-heaps. When unripe it has a green colour which turns to brown when ripe. An ointment of the powder with fat is used as cosmetics and sunscreen. (MG. and MJ. 2010, pers. comm.): The powder of a fungus, growing on termite mounds, is mixed with sheep or goat fat. An ointment is prepared and applied on the skin, as sunscreen or for cosmetic purposes.
4.7.4 Matrix Method for medicinal non-plant products

For the first time the Matrix Method has been used for non-plant material. The sixteen (16) participants that completed the matrix on the medicinal plants (Table 9) also completed the matrix for non-plant products (Table 14). Three non-plant products were included in the matrix: *dassiepis* (hyraceum), *bomeester* and *klipsweet*.

The EKI(m) for the participants (for non-plant products) have been similarly calculated as the EKI(m) for medicinal plants. This was done by dividing the participant’s total score in each category (Table 9, digit 4) by the maximum value of the category, which in this case is only 18 (3 non-plant products x 6 maximum score for a product).

The SPI (Species Popularity Index) for the products was calculated by dividing the sum of the total value for the product for the 16 participants, by the maximum value of 96 [16 (participants) x 6 (maximum value for a product/ participant)].
Table 14: Matrix for three non-plant products used medicinally in the Kamiesberg and the scores obtained by 16 participants

The scores reflect the 16 participant’s ability to recognise, name and give a medicinal use for the products. The Ethnobotanical Knowledge Index (medicinal) \[\text{EKI(m)}\] is indicated for each participant as well as the Species Popularity Index (SPI) for the three products.

The four digits indicate:

Digit 1: does the participant recognize the product – score 1 or 0;
Digit 2: does the participant have a name for the product? – score 2 or 0
Digit 3: can the participant give a medicinal use for the product? – score 3 or 0
Digit 4: total score (out of 6)

| Products   | AB  | AST | AW  | CC  | EK  | GB  | GK  | JB  | JL  | JvW | LC  | MB  | PD  | PR  | SC  | SW  | SPI  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Dassiepis  | 1236| 1236| 1236| 0000| 1236| 1236| 1236| 1236| 1236| 1236| 1236| 1236| 1236| 1236| 1236| 1203| 0.88 |
| Bomeeste   | 1236| 1236| 0000| 0000| 1236| 1236| 1203| 1236| 1236| 1236| 1236| 1001| 1236| 0000| 0000| 1236| 0.57 |
| Klipsweet  | 1236| 1236| 1236| 1203| 1236| 1236| 0000| 1236| 1236| 1236| 1203| 1236| 1236| 0000| 1203| 1236| 0.75 |
| EKI(m)     | 1.00| 1.00| 0.67| 0.17| 1.00| 1.00| 0.50| 1.00| 1.00| 1.00| 0.50| 0.39| 1.00| 0.67| 0.33| 0.50|     |
All sixteen (16) participants could recognise and give a name to at least one non-plant medicinal product. Thirteen (13) participants could also give a medicinal use for at least one of these products.

Eight (8) participants (AB, AST, EK, GB, JB, JL, JvW, PD) had an EKI(m) of 1, which indicated that they could recognise, give a name as well as a medicinal use for all three products. The lowest EKI(m) value is 0.17, where the participant could only recognise and name klipsweet, but had no knowledge of the other two products. Only one (1) participant had no knowledge of dassiepis; five (5) participants had no knowledge of bomeester and two (2) participants had no knowledge of klipsweet. From this data it is clear that the majority of participants are familiar with these products and the medicinal uses thereof.

Dassiepis is the most medicinally used non-plant product in the Kamiesberg, with a SPI value of 0.88, followed by klipsweet with a SPI value of 0.75 and bomeester with a SPI value of 0.57. A possible reason for the popularity of dassiepis is that it is more readily available than the other two products as a result of the large numbers of rock rabbits that occur in this mountainous area.

Although non-plant products may be considered beyond the scope of a study in botany and medicinal plants, these are an important and unique part of the Nama healing system. It is clear that future studies on this fascinating topic are likely to yield interesting results. It would also be of interest to compare the use of non-plant medicinal products in other areas of the Cape (and southern Africa) with the findings of this study. The use of the Matrix Method was beneficial for accurately identifying the medicinal non-plant products as the images (used during the Matrix Method) decreased the likelihood of confusion; it is time efficient, as locating the products in the field is not necessary; false negative results are avoided, because each of the participants were asked if they know the products. The use of the Matrix Method, not only for the medicinal plant species, but also for the identification and quantification of medicinal non-plant products can therefore be strongly recommended to ensure that field survey data is scientifically accurate and rigorous.
Chapter 5: Conclusions

This study revealed that the recorded ethnobotanical information for Namaqualand is incomplete, and that a broad systematic survey of all the useful plants of the region needs to be done as a matter of urgency. It is recommended that such an ethnobotanical study of Namaqualand, in order to be complete, need to collect information from each of the towns and villages in such a way that high quality comparative data becomes available for a quantitative evaluation of the pattern of extant ethnobotanical knowledge in various parts of the region.

In this study it was highlighted that the Kamiesberg in Namaqualand is an important centre of traditional Nama ethnobotany. The rich medicinal ethnobotanical knowledge of this unique area had remained practically unrecorded. This is therefore the first comprehensive and systematic documentation of the medicinal plants and other materia medica used in the Kamiesberg and will hopefully serve as a contribution to the scientific documentation of the cultural heritage of South Africa for future generations.

The death of two very knowledgeable participants (both bossiedoktors) during this study highlights the urgent need for ethnobotanical documentation. These deaths represent a tragic loss of traditional Nama medicinal knowledge, given the fragility of the oral-traditional knowledge system and the perceived lack of knowledge transfer to younger generations. It is recommended that similar ethnobotanical studies in other rural areas in southern Africa be done urgently as contributions to a more complete synthesis of Khoi-San ethnomedicine.

This study has revealed that the traditional materia medica of the Kamiesberg comprises at least 101 plant species and at least nine non-plant products (animal products and other items). Most of the species are used for treating everyday human ailments, but some also for veterinary medicine and for applications related to psychological conditions, including magic and/or superstition (paljas). The diversity of medicinal plant species known and used in this area indicates that medicinal
plants still play an important role in primary health care in the Kamiesberg. The most common indications treated with medicinal plants are influenza, stomach ache, fever, unspecified stomach ailments, colds, flatulence, diabetes, headache and backache. The inventory presented here will be a useful database and starting point for future ethnobotanical studies in Namaqualand and in other parts of the Cape.

The study has confirmed the paucity of published information on Nama medical ethnobotany. In the Kamiesberg alone, 21 newly recorded medicinal plant species, 284 new medicinal use records and 97 new vernacular names (including 23 Nama names) became scientifically known for the first time. The addition of several medicinal plant species and medicinal use-records to the scientific literature presents new opportunities for organic chemists and ethnopharmacologists to explore the scientific rationale behind unknown or poorly known medicinal plants. The addition of new Afrikaans and Nama vernacular names enriches the literature of both these cultures at a time when local perceptions on the practical relevance of traditional knowledge are declining.

The study shows that the Matrix Method may be the most practical and useful approach for capturing and quantifying ethnobotanical knowledge at community level. The method ensures that high quality comparative data is captured and will allow for fascinating studies to fully evaluate the apparent loss of traditional plant knowledge in younger age groups. This quantification method and its associated statistical indices have numerous advantages over less rigorous and less systematic methods.

The medicinal Ethnobotanical Knowledge Index \([EKI(m)]\) values obtained suggest that the average value for a rural community should be in the region of 0.50. Very knowledgeable persons (e.g. *bossiedokters*) in a community typically have values above 0.80. These average values were also observed when comparing the results of this study with the medicinal data obtained from an ethnobotanical study in a similar rural locality in the Northern Cape Province (the Agter-Hantam).

The comparative data obtained from analytical methods (SPI, CII, RFC and 'number of anecdotes') suggest that the following species are the most popular and most
commonly used traditional medicinal plants of the Kamiesberg: *Aloe ferox, Aloe microstigma* subsp. *microstigma, Artemisia afra, Artemisia absinthium, Asclepias crispa, Ballota africana, Bulbine frutescens, Carpobrotus edulis, Cassytha ciliolata, Chironia baccifera, Dicoma capensis, Diospyros austro-africana, Dodonaea viscosa var. angustifolia, Elytropappus rhinocerotis, Galenia africana, Melianthus pectinatus, Mentha longifolia, Nicotiana glauca, Oncosiphon suffruticosum, Parmelia species, Ricinus communis, Ruta graveolens, Salvia dentata, Sceletium tortuosum, Senecio cinerascens, Sutherlandia frutescens and Viscum capense.

The data also show that the Nama medicinal system (as part of the Khoisan system and broader Cape Herbal Medicine system) is dynamic and adaptive, because several non-traditional plant species that have not originally occurred in the Kamiesberg have become part of the system. These include *Artemisia afra* (a popular cultivated species indigenous to the southern and eastern parts of South Africa) and cultivated non-indigenous plants such as *Artemisia absinthium, Nicotiana glauca, Ricinus communis* and *Ruta graveolens*.

The quantitative results of this study and those of the Agter-Hantam were surprisingly similar. When taking into consideration the different age groups, similar patterns of knowledge and knowledge acquisition were observed. It was also found that several use-records and medicinal plant species are shared between the two areas. The comparison contributes to our understanding of the unique traditional knowledge system of the Khoisan people and it is hoped that similar studies will be done in future (as a matter of urgency) to provide a more complete synthesis of Cape Herbal Medicine.
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I want to end these acknowledgements by giving glory and thanks to God, with the words of Ps 104 (Bible): “Praise the Lord, my soul! O Lord my God, You are very great.”

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Appendix 1

LIST OF PARTICIPANTS

A: List of Participants .......................................................................................... 161
B: Villages in the Kamiesberg (to show cultural context) ..................................... 168
A: List of Participants

Participants in the ethno-botanical survey of Namaqualand. Nicknames ("klein name") are considered essential for identifying a person in Namaqualand and are therefore given in brackets. The names are listed alphabetically by first name and then by surname, with the abbreviations (in brackets) that were used in Appendix 2 and in the text.

<table>
<thead>
<tr>
<th>Name of participant (*deceased)</th>
<th>Date of birth</th>
<th>Geographical origin</th>
<th>Origin of medicinal plant knowledge and some personal information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andries Schreuder (AS)</td>
<td>22/10/1938</td>
<td>Nuwerus</td>
<td>Personal experience</td>
</tr>
<tr>
<td>Anna (&quot;Wiet&quot;) Brand (AB)</td>
<td>16/10/1927</td>
<td>Nourivier</td>
<td>From her grandmother, Elisabet Willems, a herbalist from Nourivier</td>
</tr>
<tr>
<td>Anna (&quot;Boom&quot;) Stewe (AST)</td>
<td>04/09/1948</td>
<td>Leliefontein</td>
<td>From Jan (&quot;Bordhoed&quot;) Beukes, a herbalist from Leliefontein who originally lived in Paulshoek</td>
</tr>
<tr>
<td>Anna Jacoba (&quot;Kotie&quot;) van Wyk (AW)</td>
<td>07/01/1928</td>
<td>Leliefontein</td>
<td>From her grandparents</td>
</tr>
<tr>
<td>Name</td>
<td>Date</td>
<td>Place</td>
<td>Experience/Background</td>
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<td>--------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Appetjie Kennedy (AK)</td>
<td>03/02/1934</td>
<td>Springbok</td>
<td>Personal experience. He is also familiar with some Nama words and names. Identification and an interview were facilitated by the field guide of Le Roux and Wahl (2005)</td>
</tr>
<tr>
<td>Buys Wiese (BW)</td>
<td>10/09/1921</td>
<td>Vanrhynsdorp</td>
<td>Own experience</td>
</tr>
<tr>
<td>Cerill Corjeus (CC)</td>
<td>29/11/1985</td>
<td>Paulshoek</td>
<td>From Jan (Dubbeljan) Josephs</td>
</tr>
<tr>
<td>Elizabeth Kardinal (EK)</td>
<td>09/09/1939</td>
<td>Leliefontein</td>
<td>From her parents</td>
</tr>
<tr>
<td>*Gert (“Joelk”) Dirkse (GD)</td>
<td>10/03/1936; deceased 07/11/2010</td>
<td>Paulshoek</td>
<td>His uncle, a legendary herbalist: Willem (“Barend”) Engelbrecht taught him about the medicinal plants, and personal experience. He was one of the last <em>bossiedoktors</em> in the Kamiesberg</td>
</tr>
<tr>
<td>Name</td>
<td>Date</td>
<td>Location</td>
<td>Details</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Gertruida Wilhelmiena (“Truida”) Brand (GB)</td>
<td>07/12/1958</td>
<td>Paulshoek</td>
<td>Personal experience, parents</td>
</tr>
<tr>
<td>Gertruida (“Trooi”) Klaase (GK)</td>
<td>01/09/1932</td>
<td>Leliefontein</td>
<td>Grandfather was a herbalist (bossiedokter)</td>
</tr>
<tr>
<td>Jan (“Dubbeljan”) Joseph (JJ)</td>
<td>30/03/1951</td>
<td>Paulshoek</td>
<td>Personal experience as bossiedokter (unfortunately suffers from poor health and was unable to participate in a formal interview planned for 2011)</td>
</tr>
<tr>
<td>Jakobus (“Kosie/Overall”) Brand (JB)</td>
<td>31/10/1960</td>
<td>Nourivier</td>
<td>From his mother (Anna Brand) and personal experience</td>
</tr>
<tr>
<td>Gert (“Gertjie”) Josephs (GJ)</td>
<td>22/08/1947</td>
<td>Paulshoek</td>
<td>Personal experience</td>
</tr>
<tr>
<td>Name</td>
<td>Date of Birth</td>
<td>Place</td>
<td>Occupation</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>--------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Jakobus (“Koos”) Joseph (JAJ)</td>
<td>03/06/1943</td>
<td>Nourivier</td>
<td>Personal experience</td>
</tr>
<tr>
<td>Johanna (“Hanna”) Willems (JW)</td>
<td>08/10/1931</td>
<td>Paulshoek</td>
<td>From her father, Willem Dirkse, and personal experience. She specifically noted that her name and birth date were wrongly recorded on her identity document as “Jahanna” and as “18/11/1931”</td>
</tr>
<tr>
<td>Johanna (“Mariana”) Lot (JL)</td>
<td>06/03/1964</td>
<td>Paulshoek</td>
<td>Personal experience</td>
</tr>
<tr>
<td>*Jakobus (“Kooitjie”) Corjeus (JC)</td>
<td>22/09/1929; deceased 06/10/2010</td>
<td>Paulshoek</td>
<td>His father-in-law: Willem (“Barend”) Engelbrecht taught him a lot about medicinal plants</td>
</tr>
<tr>
<td>Jan (“Brood”) van der Westhuizen (JvW)</td>
<td>12/06/1941</td>
<td>Garies; originally Paulshoek, but also lived in Leliefontein</td>
<td>Obtained knowledge from the other legendary bosiedoktors in Paulshoek</td>
</tr>
<tr>
<td>Name</td>
<td>Date</td>
<td>Place</td>
<td>Additional Information</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lita Cole (LC)</td>
<td>01/08/1942</td>
<td>Kamieskroon</td>
<td>Personal experience and her grandmother, 'Ouma Nooientjie Beukes', who also used plants for healing (she died of untreated influenza)</td>
</tr>
<tr>
<td>Lizzy Cloete (LCl)</td>
<td>not recorded</td>
<td>Steinkopf</td>
<td>Personal experience</td>
</tr>
<tr>
<td>Magdalena (&quot;Tarries&quot;) Joseph (MJ)</td>
<td>05/04/1938</td>
<td>Kamieskroon, originally Twee-riviere</td>
<td>Grandfather, Willem (&quot;Oupa Platneus&quot;) Willemskat</td>
</tr>
<tr>
<td>Maria (&quot;Ouma Marie&quot;) Dirkse (MD)</td>
<td>14/03/1938</td>
<td>Soebatsfontein</td>
<td>not recorded</td>
</tr>
<tr>
<td>Marina van Zyl (MZ)</td>
<td>not recorded</td>
<td>Vanrhynsdorp</td>
<td>Her maiden name was Roux. She has a special interest in the history of people with the surname Van Zyl, and has written a book on this topic</td>
</tr>
<tr>
<td>Name</td>
<td>Date</td>
<td>Location</td>
<td>Relationship and Notes</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>-------------------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Marietjie Goedeman</td>
<td>14/12/1936</td>
<td>Kamieskroon, originally Twee-riviere</td>
<td>Grandfather, Willem (“Oupa Platneus”) Willemskat</td>
</tr>
<tr>
<td>Morné Brand</td>
<td>14/09/2000</td>
<td>Nourivier</td>
<td>Grandmother and father</td>
</tr>
<tr>
<td>Pieter (“Blink”) Dirkse</td>
<td>08/06/1929</td>
<td>Paulshoek</td>
<td>Personal experience and from the community’s legendary <em>bossiedoktors</em></td>
</tr>
<tr>
<td>Pieter Rooi</td>
<td>not recorded</td>
<td>Leliefontein</td>
<td>Personal knowledge</td>
</tr>
<tr>
<td>Sors Cloete</td>
<td>02/03/1962</td>
<td>Paulshoek</td>
<td>Personal knowledge</td>
</tr>
<tr>
<td>Name (Nickname)</td>
<td>Date of Birth/Died</td>
<td>Place</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------------</td>
<td>---------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Samuel (“Samie”) van der Westhuizen (SW)</td>
<td>10-05-1931</td>
<td>Paulshoek</td>
<td>Personal experience</td>
</tr>
<tr>
<td>Willem Dirkse (WD)</td>
<td>31/12/1933</td>
<td>Soebatsfontein</td>
<td>not recorded</td>
</tr>
</tbody>
</table>

**Legedary **bossiedokters** of the Kamiesberg**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Birth/Died</th>
<th>Place</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Willem (Barend) Engelbrecht</em></td>
<td>01/01/1915; deceased 02/03/1985</td>
<td>Paulshoek</td>
<td>One of the most famous <strong>bossiedokters</strong> of the Kamiesberg</td>
</tr>
<tr>
<td><em>Joseph Nero</em></td>
<td>unknown</td>
<td>Paulshoek</td>
<td>Was a <strong>bossiedokter</strong> in Paulshoek</td>
</tr>
</tbody>
</table>

*Willem (Jakkals) Cloete – **bossiedokter** in Paulshoek (no further details available)*

*Piet (Perda) Cloete – **bossiedokter** in Paulshoek, who specialised in children’s diseases (no further details available)*
B: Villages in the Kamiesberg

Kamieskroon

1) The village of Kamieskroon, situated on the edge of the Kamiesberg mountain range; 2) The rock formation at Kamieskroon, with the Nama name t’ar-t’nou; 3) The ruins of the church at Bowesdorp; 4) The entrance to Bowesdorp; 5) The church at Kamieskroon; 6) Magdalena Joseph; 7) A traditional Nama boksak (goat skin bag); 8) Marietjie Goedeman; 9) Lita Cole.
19) The village of Nourivier; 20) Donkey carts are still used as important transport system; 21) Jakobus Brand at his mother’s *matjieshuis* (traditional Nama house); 22) Anna Brand’s *matjieshuis*; 23) Anna Brand and Lita Cole with a quilt (*lappieskombers*) that Anna made; 24) Doing the Matrix Method with Jakobus Brand; 25) Anna “Wiet” Brand; 26) Children in Nourivier; 27) A shepherd with goats in his donkey cart; 28) A traditional cooking shelter (*kookskerm*) as seen outside Nourivier; 29) A “caravan” seen outside Nourivier; 30) A small shed (*kafhuis* or *kokerboomhuis*) made from the trunks of *Aloe dichotoma* as seen outside Nourivier.
31) The village of Paulshoek; 32) The development project’s building in Paulshoek; 33) A typical house in Paulshoek; 34) Doing the Matrix Method with Samuel van der Westhuizen; 35) Conducting a structured interview with Jakobus Corjeus and Johanna Willems; 36) The consulting room of Gert Dirkse, just outside Paulshoek; 37) Interviewing Gert Dirkse; 38) Gert Dirkse showing the root of *Asclepias crispa* and explaining its use; 39) Handing over a portrait of Willem (“Barend”) Engelbrecht (01/01/1915 – 02/03/1985) to the community – he was one of the most important *bossiedokters* of the Kamiesberg; 40) Handing over a portrait of Gert Dirkse (10/03/1936 – 07/11/2010) to Leraume Claasen, the project manager of the community development centre; given to the community as symbol to honour this well-known *bossiedokter* of the Kamiesberg area; 41) Donkeys are important animals of the area. Photographs: 35 & 37 by J.J.J. de Beer; 34 & 40 by E. Kotina.
APPENDIX 2

INVENTORY OF MEDICINAL PLANTS OF THE KAMIESBERG
Content of Inventory

Only species recorded during this study are included.

Taxonomic data

Taxonomic data for each of the medicinal relevant plant species of the Kamiesberg consist of the family, the scientific name, synonyms, a short description of the plant and the distribution in southern Africa. The names of naturalised exotic species are listed with a single asterisk*, cultivated (or commercially obtained) indigenous species (that do not occur naturally in the Kamiesberg area) with a double asterisk** and cultivated exotics with a triple asterisk***.

The nomenclature and synonymies as presented in Germishuizen et al. (2006) are used. The older synonyms are now obsolete but they are all given here to help identify the species listed under outdated names in the older literature. Abbreviations of the distribution areas of the species are as follows: N (Namibia), B (Botswana), LIM (Limpopo Province), NW (North West Province), G (Gauteng Province), M (Mpumalanga Province), S (Swaziland), FS (Free State Province), KZN (KwaZulu Natal Province), L (Lesotho), NC (Northern Cape Province), WC (Western Cape Province), EC (Eastern Cape Province).

Vernacular names

A comprehensive list of vernacular names for each plant species has been compiled. The vernacular names obtained from the literature have been cited directly and listed chronological by date of publication and with reference to the page number if applicable. All relevant languages of vernacular names used in literature have also been included in the inventory. The Afrikaans [A], Nama [N] and English [E] names (mainly used) can be identified by italics [A], bold [N] and normal [E] text respectively. Where other languages are included the name of that language appears in brackets after the vernacular name.

Herbarium voucher specimens

The specimens have been deposited in the herbarium of the University of Johannesburg (JRAU) and are coded as follows in tables, appendices and figures: [NV] = Nortje and Van Wyk; [NVD] = Nortje, Van Wyk and De Beer; [PNV] = photographic vouchers. Photographs of the voucher specimens are included in Appendix 3 and are given as figure numbers behind the code, i.e. Agathosma betulina [PNV50], (Appendix 3 - Figure 1).

Recorded medicinal uses

The recorded medicinal uses of plant species were obtained from two main sources, namely the original new data recorded in the Kamiesberg and the literature. Verbatim use-records of plants with medicinal use(s) in the Kamiesberg as recorded during this study have been roughly translated from Afrikaans into English, giving only the critical information in English. The translated phrases are placed in square brackets [ ], directly behind the original
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1. *Acorus calamus* *

1. **Taxonomic data**

1.1. **Family:** Acoraceae

1.2. **Scientific name:** *Acorus calamus* L.

1.3. **Synonyms:** No

1.4. **Description:** Perennial herb, helophyte, Ht 0.6 – 1 m. Alt about 1400 m

1.5. **Distribution:** NW (naturalised exotic)

2. **Vernacular names:** (Githens, 1948) [p.66]: “sweet flag”; (Quisumbing, 1951) [p.137]: “sweet flag”; (Smith, 1966) [p.271]: “*kalmoes*”; (Watt- en Breyer-Brandwijk, 1962) [p.1350]: “sweet calomel, vegetable calomel”; (Chiej, 1984) [no.7]: “sweet sedge”; (Rood, 1994) [p.11]: “*makkalmoes*”; (Hutchings et al., 1996) [p22]: “*makkals*, sweet colmel, sweet flag, sweet sedge, [ikalamuzi, ikhalamuse, indawolucwatha(Zulu)]”; (Van Wyk et al., 2009) [p.28]: “*makkalmoes, kalmoes*, sweet-flag, [ikalamuzi (Zulu)]”; (AB. 2011 pers. comm.) “*kalmoes*”; (JB. 2011 pers. comm.) “*kalmoes*”; (JL. 2011 pers. comm.) “*kalmoes*”

3. **Herbarium specimen:** [NV105], (Appendix 3 - Figure 1)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2011 pers. comm.): “Gebruik vir maagseer, die wortel word gekook.” 
[A root decoction is used for stomach ache.]

(JB. 2011 pers. comm.): “Vreeslik goed op winde, werk die winde uit.”
[Used for flatulence.]

(JL. 2011 pers. comm.): “Gebruik vir maagaandoenings en winde.”
[Used for stomach ailments and flatulence.]

4.2. **Literature**

(Githens, 1948) [p.66]; (Quisumbing, 1951) [p.137, 138, 139]; (Watt and Breyer-Brandwijk, 1962) [p.112]; (Smith, 1966) [p.271]; (Chiej, 1984) [no.7]; (Rood, 1994) [p.11]; (Hutchings et al., 1996) [p.22]; (Van Wyk et al., 2009) [p.28]
2. *Agathosma betulina**

1. Taxonomic data

1.1. **Family:** Rutaceae

1.2. **Scientific name:** *Agathosma betulina* (P.J. Bergius) Pillans

1.3. **Synonyms:**

*Barosma betulina* Bartl. and H.L.Wendl.

*Hartogia betulina* P.J.Bergius

1.4. **Description:** Perennial. Shrub, dwarf shrub, shrub. Ht 0.6-1 m. Alt 800-2000 m.

1.5. **Distribution:** WC (indigenous species but not in the Kamiesberg; commercial products obtained from shops)


3. **Herbarium specimen:** [PNV50], (Appendix 3 - Figure 2)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Word gebruik vir griep, koors en verkoues; kry ook boegoebrandewyn.”

[Used for influenza, fever and colds; also used as tincture (boego brandy).]

(LC. 2010, pers. comm.): “Gebruik medisinaal vir maagprobleme.”

[Used for stomach ailments.]

4.2. **Literature**

(Gordon, 1779 in Skead, 2009) [p.60]; (Pappe, 1868) [p.7, 8]; (Dykman, 1908); (Laidler, 1928) [p.434, 440]; (Shapera, 1930) [p.246]; (Marloth, 1917) [p.16]; (Kling, 1923) [p.11, 16]; (Githens, 1948) [p.79]; (Watt and Breyer-Brandwijk, 1962) [p.910]; (Smith, 1966) [p.135];
(Roberts, 1983) [p.30]; (Ellis, 1989); (Roberts, 1992) [p.42]; (Rood, 1994) [p.89, 90]; (Van Wyk and Gericke, 2000) [p.139, 140, 197, 180, 216]; (Van Wyk, 2008) [p335]; (Van Wyk et al., 2009) [p.34]; (De Beer and Van Wyk, 2011); (Wileman, undated) [p.6]
3. **Aloe dichotoma**

1. **Taxonomic data**

1.1. **Family:** Asphodelaceae

1.2. **Scientific name:** *Aloe dichotoma* Masson

1.3. **Synonyms:**
- *Aloe dichotoma* Masson var. *dichotoma*
- *Aloe dichotoma* Masson var. *montana* (Schinz) A.Berger
- *Aloe montana* Schinz
- *Aloe ramosa* Haw.

1.4. **Description:** Perennial Tree succulent. Ht 3-9 m. Alt 610-915 m.

1.5. **Distribution:** N, NC

2. **Vernacular names:**
- (Van der Stel, 1685) [p.800]: "chojé"; (Marloth, 1917) [p.51]: "kokerboom";

3. **Herbarium specimen:** [PNV51], (Appendix 3 - Figure 3)

4. **Recorded medicinal uses**

4.1. Kamiesberg

(AB. 2011, pers. comm.): "Die wortel word gekook vir pyn"  
[A root decoction is used for pain.]

(AST. 2010, pers. comm.): "Anna Brand se man (Hendrik) van Nourivier het die kokerboom se wortel gekook as medisyne, hulle sê dis `n goeie medisyne."  
[Anna Brand’s husband, Hendrik, used a decoction of the quiver tree’s root as medicine (unspecified).]
(GD. 2010, pers. comm.): “Die wortel word gekook en ingegee vir vroue wat nie kan kinders kry nie; slegs die suidelike wortel word gebruik. Kook water word by hom gevoeg en net `n teelepel vol word gedrink.”
[An infusion of the southern root is used as remedy for infertile women; boiling water is added and only one teaspoon is taken.]

(GK. 2011, pers. comm.): “Die wortels word gekook vir maagpyn.”
[A root decoction is used for stomach ache.]

(JB. 2011, pers. comm.): “Word gebruik vir pyne.”
[Used for pains.]

(JL. 2011, pers. comm.): “Die lym van die blaar word op `n moesie (vleismoesie) gesit om dit af te haal.”
[The leaf juice is used to remove a mole (applied externally).]

(JvW. 2011, pers. comm.): “Die wortel word gebruik vir `n vrou wat nie kan kinders kry nie; word agt dae laat droë in papiersak, stamp hom fyn en kook dit. Die noorde wortel werk by my beter, dis die sterker wortel.”
[A dry root is used as a decoction for infertile women; the north facing root is used.]

(SC. 2011, pers. comm.): “Die sap is bitter en word gebruik om babatjies te speen.”
[The bitter leaf juice is used to wean infants.]

4.2. Literature
(Van den Eynden et al., 1992) [p.42]; (Van den Eynden and Van Dammen, 1993) [p.80]; (Archer, 1994) [p. 66]; (De Beer and Van Wyk, 2011)
4. **Aloe ferox**

1. **Taxonomic data**

1.1. **Family:** Asphodelaceae  
1.2. **Scientific name:** *Aloe ferox* Mill.  
1.3. **Synonyms:**  
- *Aloe canadabrum* A.Berger  
- *Aloe ferox* Mill. var. *galpinii* (Baker) Reynolds  
- *Aloe ferox* Mill. var. *incurva* Baker  
- *Aloe galpinii* Baker  
- *Aloe perfoliata* L. var. *epsilon* L.  
- *Aloe perfoliata* L. var. *gamma* L.  
- *Aloe perfoliata* L. var. *theta* (Mill.) Aiton  
- *Aloe perfoliata* L. var. *zeta* Willd.  
- *Aloe perfoliata* Thunb.  
- *Aloe pseudo-ferox* Salm-Dyck  
- *Aloe subferox* Spreng.  
- *Aloe supralaevis* Haw.  
- *Aloe supralaevis* Haw. var. *erythrocarpa* A.Berger  
- *Pachidendron ferox* (Mill.) Haw.  
- *Pachidendron pseudo-ferox* (Salm-Dyck) Haw.  
- *Pachidendron supralaeve* (Haw.) Haw.  

1.4. **Description:** Perennial. Tree, succulent. Ht 2-5 m. Alt 10-670 m  
1.5. **Distribution:** EC, KZN, L, WC (indigenous species but not in the Kamiesberg; commercial products - in the form of aloe lump - obtained from shops)

2. **Vernacular names:** (Smith, 1895) [p.120]: "The medicinal aloe, *um-Hlaba*"; (Marloth, 1917) [p.5]: "*aloes*"; (Phillips, 1917) [p.296]: "*[Hlaba (Sesotu)]*"; (Watt and Breyer-Brandwijk, 1962) [p.1354]: "*aalwyn, bitter aloe, kanniedood, [hlabla, lekxala-la-quthing, umhlaba (Sotho)], [umhlaba (Xhosa)], [umhlaba (Zulu)]*"; (Smith, 1966) [p.539]: "*aalwee, aalwyn, bergaalwyn, bitteraalwyn, kraalaalwyn, makaalwyn, opregteaalwyn, regteaalwyn, swellendamsaalwee, tapaalwee, tapaalwyn, goreebosch*"; (Chiej, 1984) [no.21]: "*loe*"; (Johnson and Sokutu, 1985) [p.97]: "*[iHlaba Xhosa]*"; (Palmer, 1985) [p.118]: "red aloe, bitter aloe, *bitteraalwyn, tapaalwyn*"; (Roberts, 1992) [p.10]: "*bitter aloe, bitteraalwyn, lapaalwyn, tapaalwyn, *[iHlaba (Sotho)], [umhlaba (Xhosa)], [umhlaba (Zulu)]*"; (Pooley, 1993) [p.56]: "*bitter aloe, bitteraalwyn, [iNhlaba (Zulu)], [iKhalala (Xhosa)]*"; (Dyson, 1994) [p.7,8]: "*bitter aloe, red aloe, [lekkxa-la-qothing (Sotho)], aalwyn, kanniedood, bitteraalwyn, lapaalwyn, [umhlaba (Xhosa)], [umhlaba (Zulu)]*"; (Rood, 1994) [p.64]: "*makaalwyn, tapaalwyn*"; (Hutchings et al., 1996) [p.33]: "*bitter aloe, bitteraalwyn, red aloe, tapaalwyn, [umhlaba (Zulu)]*"; (Anonymous, 1998) [p.5]: "*aalwyn, aloe*"; (Van Wyk and Gericke, 2000) [p.120]: "*cape aloes, bitter aloe, [umhlaba (Xhosa, Zulu, Sotho)], bitteraalwyn*"; (Van Wyk and Gericke, 2000) [p.197, 229]: "*bitter aloe*"; (Powrie, 2004) [p.73]: "*aalwee, aalwyn, bergaalwyn, bitteraalwyn, makaalwyn, opregteaalwyn, regtea-alwyn, swellendam-aalwee, tap-aalwyn*"; (Van Wyk and Gericke, 2000) [p.335]: "*aalwyn, bitteraalwyn*"; (Van Wyk et al., 2008) [p.697]: "*aalwyn*"; (Van Wyk et al., 2009) [p.42]: "*bitteraalwyn, kaapse aalwyn, bitter aloe, [umhlaba (Sotho, Xhosa, Zulu)]*"; (De Beer and Van Wyk, 2011): "*aalwyn*, ...

3. Herbarium specimen: [PNV52], (Appendix 3 - Figure 4)

4. Recorded medicinal uses

4.1. Kamiesberg
(AB. 2011, pers. comm.): “Gebruik vir suiker, maagprobleme, en hardlywigheid”
[Used for diabetes, stomach ailments and constipation.]

(AW. 2011, pers. comm.): “Gebruik om maag mee skoon te maak.”
[Used as purgative.]

(AST. 2010, pers. comm.): “Goeie medisyne is vir wonde saam met kainpeper, ook gebruik vir sere en maag skoonmaak.”
[Used on wounds, with cayenne pepper, also used for sores and as purgative.]

(CC. 2011, pers. comm.): “Word vir die vee gegee as hulle gelam het, om hulle skoon te maak (nageboorte af te kry).”
[Used for livestock to get rid of the afterbirth.]

(EK. 2011, pers. comm.): “Vir suiker gebruik (diabetes).”
[Used for the treatment of diabetes.]

(GB. 2011, pers. comm.): “Word gegee vir diere, dit maak hulle bloed bitter om van die bosluiise ontslae te raak, ook goed vir waterpens.”
[Used as veterinary medicine for ticks and as remedy for ‘waterpens’.]

(GD. 2010, pers. comm.): “Hy laat stink jou sweet.”
[Cause sweat to have a bad odour.]

(JB. 2011, pers. comm.): “Gebruik as medisyne vir vee en vir suiker.”
[Used as veterinary medicine and for diabetes.]

(JvW. 2011, pers. comm.): “Gebruik vie suikersiekte en hardlywigheid.”
[Used for diabetes and constipation.]

(LC. 2010, pers. comm.): “Mense het dit gebruik, vir onder andere as purgasie.”
[Used as a purgative.]

(PD. 2011, pers. comm.): “Gebruik vir maagprobleme en vir vee; word in hoenders se water in gemeng vir geilsiek (’n siekte wat hulle kry as hulle te veel mielies eet)."
[Used for stomach ailments. The leaf juice is in mixed in the drinking water of the chickens as treatment for ‘geilsiek’ (from eating too much mealies).]

(SC, 2011, pers. comm.): “Vee medisyne, gebruik ook vir hoenders. Word vir mense gebruik om die bloed mee skoon te maak.”

[Veterinary medicine, used for chickens. Also used for humans as blood purifier.]

4.2. Literature

(Pappe, 1868) [p.41]; (Smith, 1895) [p.120]; (Phillips, 1917) [p.296]; (Githens, 1948) [p.77]; (Watt and Breyer-Brandwijk, 1962) [p.1354]; (Batten and Bokelman, 1966) [p.17]; (Smith, 1966) [p.457]; (Reynolds, 1970) [p.466]; (Jacot Guillarmod, 1971) [p.411]; (Coates Palgrave, 1977) [p.80]; (Chiej, 1984) [no.21]; (Johnson and Sokutu, 1985) [p.115]; (Roberts, 1985) [p.17]; (Palmer, 1985) [p.118]; (Johnson and Hutching, 1986) [p.79]; (Ellis, 1989); (Roberts, 1992) [p.10]; (Pooley, 1993) [p.56]; (Dyson, 1994) [p.7,8]; (Rood, 1994) [p.64]; (Hutchings et al., 1996) [p33]; (Neuwinger, 1996) [p.34]; (Anonymous, 1998) [p.5]; (Van Wyk and Gericke, 2000) [p.120, 140, 197, 229]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (Van Wyk et al., 2009) [p.42]; (De Beer and Van Wyk, 2011); (Anonymous, undated) [p.7]
5. *Aloe microstigma* subsp. *microstigma*

1. Taxonomic data

1.1. **Family:** Asphodelaceae

1.2. **Scientific name:** *Aloe microstigma* Salm-Dyck subsp. *microstigma*

1.3. **Synonyms:**
- *Aloe brunnthaleri* A.Berger ex Cammerloher ex Cammerloher
- *Aloe juttae* Dinter
- *Aloe khamiesensis* Pillans

1.4. **Description:** Perennial, Shrub, succulent, Ht 0.5-2 m. Alt 75-1450 m.

1.5. **Distribution:** N, NC, WC

2. Vernacular names:

   - (Laidler, 1928) [p.434]: "aloe"
   - (Eliovson, 1972) [170]: "Kamiesberg aloe"
   - (Le Roux and Wahl, 2005) [p.54]: "kamiesberg aloe, kamiesberg aalwyn"
   - (Manning, 2008) [p.47]: "Cape speckled aloe, gespikkelde-aalwyn"

3. **Herbarium specimen:** [PNV53], (Appendix 3 - Figure 5)

4. Recorded medicinal uses

4.1. Kamiesberg

   - (AB. 2010 pers.comm.): "Die sap word gebruik vir suiker (diabetes)."
   - [Leaf juice is used for diabetes.]

   - (AB. 2010, 2011 pers.comm.): "Word gekook en gebruik as was vir vel probleme (puisies)"
   - [Used as wash for skin problems (acne).]

   - (AST. 2010, 2011, pers. comm.): "Die blare word in blokkies gesny en in die hoenders se drinkwater gegooi vir luise, ook vir honde gebruik. Word gebruik vir wonde, sere, maag skoonmaak en vir vaal kolle op die kop."
   - [The leaves are cut into pieces and placed in drinking water of chickens and dogs to treat lice. Also used for wounds, sores, as purgative and for ringworm on the scalp.]

   - (AW. 2011, pers. comm.): "Die sap word gebruik om ’n kind te speen."
   - [The leaf juice is used to wean infants.]

   - (EK. 2011, pers. comm.): "Gebruik vir suiker, vat sap."
   - [The leaf juice is used for the treatment of diabetes.]
Leaf decoction used to treat blue and red ticks in livestock and the juice is used to wean infants.

Juice of young leaf is applied to acne on the skin.

Leaf juice is used for animals for the treatment of ticks and internal parasites; also used for humans for diabetes and stomach ailments.

Leaves added to the stock’s drinking water to treat intestinal worms; not used for humans.

Used medicinally (unspecified).

Leaves used as poultice on wounds.

Leaves used for donkeys with ticks.

Used for animals with ticks.

Leaf juice is used as veterinary medicine, for bile illness and ‘blood kidney’; a good medicine that stimulates appetite in animals.

No medicinal uses have been recorded in literature for Aloe microstigma subsp. microstigma.
6. Aloe variegata

1. Taxonomic data

1.1. **Family:** Asphodelaceae

1.2. **Scientific name:** Aloe variegata L.

1.3. **Synonyms:**
   - *Aloe ausana* Dinter
   - *Aloe punctata* Haw.
   - *Aloe variegata* L. var. haworthii A.Berger

1.4. **Description:** Perennial. Herb, succulent. Ht 0.1-0.3 m. Alt 100-1750 m.

1.5. **Distribution:** EC, FS, N, NC, WC

2. Vernacular names:

3. **Herbarium specimen:** [PNV54], (Appendix 3 - Figure 6)

4. Recorded medicinal uses

4.1. Kamiesberg
   - (AB. 2010, pers. comm.): "Kan vir wonde gebruik word."
   - (GD. 2010, pers. comm.): "Vir wonde, smeer op `n papierjtie en plak dit oor die wond vas."

4.2. Literature
   - (Dykman, 1923) [p.134]; (Watt and Breyer-Brandwijk, 1962) [p.687]; (Smith, 1966) [p.277]; (Reynolds, 1970) [p.210]; (Batten, 1986) [p.18-21]; (Shearing, 1994) [p.42]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (De Beer and Van Wyk, 2011)
7. Anginon difforme

1. Taxonomic data

1.1. Family: Apiaceae
1.2. Scientific name: Anginon difforme (L.) B.L.Burtt
1.3. Synonyms:
   Bupleurum difforme L.
   Rhyticarpus difformis (L.) Briq.
1.4. Description: Perennial. Shrub. Ht 1-3 m. Alt 200-1500 m.
1.5. Distribution: EC, NC, WC

2. Vernacular names:

3. Herbarium specimen: [NVD6]; [NV19], (Appendix 3 - Figure 6)

4. Recorded medicinal uses

4.1. Kamiesberg
   (AB. 2010 pers. comm.): “Jy kook hom en drink hom as jy nie eetlus het nie. Die t’ńorrro verwys na die agterkop (waar die nek en die kop bymekaar kom). Lyk soos die denneboom naalde; kook en drink hom as jy dronk in die kop is.”
   [The leaves are boiled and the decoction is drunk as an appetite stimulant. The t’ńorrro refer to the nape of the neck; a decoction is used for dizziness.]

   [Used for backache and as appetite stimulant. As appetite stimulant it is boiled with olienboulblare (Olea europaea leaves) and stored in a glass bottle, and not a plastic bottle. For tuberculosis it is used with org (Notobubon pearsonii) leaves.]

   (GD. 2010, pers. comm.): “Medisyne, kwaal: ongesonde siek, nie godsiekte, die vuil siekte, vir toor. Hy’s ´n paljas. Help winde bo uit en laat droom die mense die goed in sy liggaam uit. Kook sy blare, so klompie van sy blare, gooi nog ´n kruie bosse by (drie soorte bosse), en gooi by: duiwelsdrek, witverget (Asclepias crispa), maal dit saam met swart klipsweet en bomeester, maal en droog, skud dit saam, om te drink.”
   [A leaf decoction, used for venereal diseases(?) not for “godly illness”, in combination with asafoetida, witverget (Asclepias crispa), klipsweet and bomeester; used for flatulence and as magic medicine (paljas) – to expel evil by promoting dreaming.]

   (JB. 2010 pers. comm.): “Jy kook hom (blare) en drink hom Sommer in die oggend, middag en aand en na so drie dae sal jy die honger begin voel. Algemene medisyne. Gebruik vir slapelose nagte, drink vroeë aand dan raak jy vaak. Gebruik vir winde.”
[Decoction used as appetite stimulant, used in the morning, noon and evenings; after three days the hunger becomes evident; it is a general medicine, which is also used for insomnia and flatulence.]

(JvW. 2011, pers. comm.): "gebruik vir winde, steek in die oor (jy maak hom fyn saam met kasterolie), word ook gebruik vir eetlus aanwakker, saam met ander bosse."

[Used for flatulence, ear ache (dry and powdered with castor oil) and as appetite stimulant.]

4.2. Literature

No medicinal uses have been recorded in literature.
8. Antizoma miersiana

1. Taxonomic data

1.1. Family: Menispermaceae
1.2. Scientific name: Antizoma miersiana Harv.
1.3. Synonyms: No
1.4. Description: Perennial. Shrub, climber. Ht 0.35 –1.5 m. Alt 275-1000 m.
1.5. Distribution: N, NC, WC


3. Herbarium specimen: [NVD4], (Appendix 3 - Figure 8)

4. Recorded medicinal uses

4.1. Kamiesberg
(AB. 2011, pers. comm.): “Die wortel word gekook en gebruik vir donkies wat siek is.” [Root decoction used for sick donkeys.]

(AST. 2010, pers. comm.): “Wortel is gekook, gee dit vir die hond in vir skurwesiek/brandziekte en was hom met ‘n aftreksel daarvan.”
[A decoction of the root is used as veterinary medicine for sick dogs (‘skurwesiekte’ and ‘brandziekte’), the dog is also washed with an infusion.]

(CC. 2011, pers. comm.): “Die wortel word gebruik vir hondesiek, en self vir vee wat krimpseik het.”
[A root decoction is used for dog illnesses and for livestock with ‘krimpseik’.]

(GD. 2010, pers. comm.): “Baie mense gebruik hom. Die wortel en die blare word gestamp en gekook, die afgekoelde mengsel word gegee om te drink om mense van die drank af te kry. Ook gebruik as maag nie lekker is nie. Vir hondesiekte word dit ook gekook, laat die hond dit drink. Vir baie kwale voor goed.”
[A root decoction is used to treat alcoholism, and stomach problems (diarrhoea) and various ailments; it is also used as veterinary medicine for sick dogs.]

(GJ., JJ., PD., pers. comm): “Gebruik vir vas maag (lakseermiddel), kook die wortels, bitter en sterk ‘n glasie vol. Derms praat ‘hey jy!’”
[A concentrated decoction of the bitter roots is used for constipation, as laxative.]
(JB. 2010, pers. comm.): “Die bloubos word gebruik vir maagpyn en die wortel word gekook as `n hond hondesiekte het.”
[A root decoction used for stomach ache and as veterinary medicine for dogs.]

(JL. 2011, pers. comm.): “Die wortel word gekook vir honde met beentong.”
[Root decoction used for veterinary disease in dogs called beentong (?).]

(JvW. 2011, pers. comm.): “Baie goed vir rugpyne, en vir knieë, vir enige pyne; kook die stokke en die blare.”
[A decoction of the leaves and twigs are used for pains, such as back ache and knee ache.]

(JW. 2010, pers. comm.): “Die wortel is swartstorm. Die plant het fyn blaartjies. Die wortel is medisyne vir winde en pyn op die maag, die wortel word afgetrek. Daar is `n ander swartstorm ook.”
[The root is called swartstorm; some other plants are also called swartstorm. The leaves are small. A root decoction is used for flatulence and stomach ache.]

(PD. 2011, pers. comm.): “Wortel word gebruik vir medisyne vir maag.”
[Root decoction is used for stomach ailments.]

4.2. Literature
(Laidler, 1928) [p.441] [wrongly identified as “Royena pallens” (=Diospyros pallens, a species that does not occur in Namaqualand]; (Archer, 1994) [p. 66]
9. *Arctotis laevis*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Arctotis laevis* Thunb.

1.3. **Synonyms:**
   - *Arctotis denudata* Thunb.
   - *Arctotis elatior* Jacq.
   - *Arctotis glabrata* Jacq.
   - *Arctotis grandiflora* Jacq.
   - *Arctotis squarrosa* Jacq.

1.4. **Description:** Perennial. Suffrutex. Ht 0.4-1.2 m. Alt 50-1140 m.

1.5. **Distribution:** NC, WC

2. **Vernacular names:** (Powrie, 2004) [p.76]: “dassieskokbreker, ouma-lek-my-gat”; (JB. 2010, pers. comm.): “kankerbos”

3. **Herbarium specimen:** [NVD3] (Appendix 3 - Figure 9)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AB. 2011, pers. comm.): “Gebruik vir maagpyn (kanker) as die maag so swel, die blare word gekook.”
   [A leaf decoction is used for stomach ache (cancer) indicated by swelling of the stomach.]

   (GB. 2011, pers. comm.): “Is `n medisynebos.”
   [Used as medicine (unspecified).]

   (JB. 2010, 2011 pers. comm.): “Is medisyne vir allerlei siektes, gebruik vir maagpyn (kanker) as die maag so swel, die blare word gekook”
   [Used for various ailments (unspecified). A leaf decoction are used for stomach ache and cancer (swelling).]

   (SC. 2011, pers. comm.): “Gebruik as `n pleister vir pyn.”
   [Used as a compress on pains.]

4.2. **Literature**
   No medicinal uses have been recorded in literature.
10. *Artemisia absinthium***

1. Taxonomic data

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Artemisia absinthium* L.

1.3. **Synonyms:** No

1.4. **Description:** erect perennial shrub of up to two meters in height, with highly aromatic, grey-green feathery leaves and small yellowish flower heads, which are born along the branch ends.

1.5. **Distribution:** not indigenous to South Africa; cultivated in gardens.

2. Vernacular names:


3. Herbarium specimen: [PNV56], (Appendix 3 - Figure 10)

4. Recorded medicinal uses

4.1. Kamiesberg

   (AB. 2010, pers. comm.): “Kan gebruik word vir pyn op die maag.”
   [Used for stomach ache.]

   [Used for stomach ailments and a leaf infusion with *jantjiebêrend* (*Sutherlandia frutescens*) is used for diabetes, also used in mixtures for influenza.]

   (AW. 2011, pers. comm.): “n Tee van die blare word gebruik vir maagkwale en diarrhee, dit stop die maag.”
   [A leaf infusion is used for stomach ailments and diarrhoea.]

   (CC. 2011, pers. comm.): “n Tee word gebruik vir maagpyn en `n stroop vir hoes.”
   [An infusion is used for stomach ache and a syrup is made for coughing.]

   (EK. 2011, pers. comm.): “Om diarrhee en pyn te stop.”
   [Used for the treatment of diarrhoea and for pain.]
(GB. 2011, pers. comm.): “`n Tee word gebruik vir naar en griep.”
[An infusion is used for nausea and influenza.]

(GD. 2010, pers. comm.): “Groenamara word gebruik vir enige siekte, winde goeters. Word gemeng met ander kruibos.”
[Used for various ailments and flatulence, it is used in combination with other plants.]

(JB. 2010, 2011 pers. comm.): “Gebruik as jy so snaaks voel, die sap word gesluk.”
[Leaf juice is swallowed for general malaise.]

(JC. 2010, pers. comm.): “Hulle sê hys `n medisyne ook.”
[Used as a medicine (unspecified).]

(JL. 2011, pers. comm.): “Gebruik vir griep, saam met ander bosse.”
[Used in combination with other medicinal plants for the treatment of influenza.]

(JvW. 2011, pers. comm.): “Gebruik vir griep, pyn op die maag en sooibrand.”
[Used for influenza, stomach ache and heartburn.]

(MJ. and MG. 2010, pers. comm.): “Groenamara word gebruik vir maagpyn (as jou maag jou onverhoeds betrap), dodelike maag, braak, pyn en as jy pap is. Neem `n paar vars blaartjies, gooi bietjie kookwater daaroor, kneus die blare met `n lepel en drink dan `n lepeltjie daarvan. Dit kan ook gebruik word vir maagmoeilikheid, pyne en rugpyn, Dit is `n bomedisyne.”
[Used for stomach ailments, stomach ache, diarrhoea, nausea, pain, backache and lack of energy; various stomach ailments, an infusion with boiling water is made, the leaves are slightly crushed and a spoonfull (15 ml) is used; it is a very good medicine.]

(PD. 2011, pers. comm.): “Gebruik vir verkoue.”
[Used for the treatment of colds.]

(PR. 2011, pers. comm.): “Gebruik vir maagpyn, kou die blare.”
[The leaves are chewed for stomach ache.]

(SC. 2011, pers. comm.): “Gebruik die blare vir maagpyne en ander pyne.”
[Leaves are used for stomach ache and other pains.]

4.2. Literature
(Dykman, 1908) [p.119]; (Marloth, 1917) [p.5]; (Githens, 1948) [p.77]; (Roberts, 1985) [p.138]; (Anonymous, 1998) [p.9]; (Van Wyk and Gericke, 2000) [p.142]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.701]
1. Taxonomic data

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Artemisia afra* Jacq. ex Willd.

1.3. **Synonyms:**
   - *Artemisia ambigua* Thunb.
   - *Artemisia maderaspantana* L.
   - *Artemisia vermiculata* L.

1.4. **Description:** Perennial. Shrub or herb. Ht 0.3-2 m. Alt 20-2440 m

1.5. **Distribution:** B, EC, FS, G, KZN, L, LI,M, M, N, NW, S, WC (not indigenous to the Kamiesberg area; cultivated in gardens).

1.6. **Vernacular names:**
   - (Pappe, 1868) [p.22]: “wormwood, alsem”;
   - (Smith, 1895) [p.95]: “wormwood”;
   - (Dykman, 1908) [p.114]: “als”; (Marloth, 1917) [p.5]: “als, wilde als, alsem”;
   - (Phillips, 1917) [p.142]: “lengana (Sesotho)”;
   - (Kling, 1923) [p.11,19]: “wilde als, als”;
   - (Watt and Breyer-Brandwijk, 1962) [p.1358]: “als, wilde als, wild wormwood, wormwood, [itasi, mtsi (Chagga)], [entili, juandimba, omatili (Lunyaneka)], [lengana (Manyika)], [lengana (Pedi)], [lengana, zengana (Southern Sotho)], [fifi (Sukuma)], [umhlonyane (Swati)], [lengana, ilongana (Tswana)], [umhlonyane (Xhosa)], [umhlonyane, mhlonyane (Zulu)]”;
   - (Smith, 1896) [p.502]: “wilde-als(ies), wilde-alsem”;
   - (Roberts, 1982) [p.226]: “wild wormwood, [lengana (Tswana)], [Umhlonyane (Xhosa)], [Mhlonyane (Zulu)]”;
   - (Palmer, 1985) [p.22, 45]: “wildeals”;
   - (Johnson and Hutching, 1986) [p.74]: “umhlonyane”;
   - (Ellis, 1989): “wilde-als”;
   - (De Beer and Van Wyk, 2011): “wildeals; wilde-als; als; alsem; african wormwood, [lengana (Sesotho, Tswana)]; [umhlonyane (Xhosa, Zulu)];”
3. **Herbarium specimen:** [PNV57], (Appendix 3 - Figure 11)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

**(AST. 2010, pers. comm.):** “Groei in die tuin, verkoues, griep, bring koors af, soos stroop. Saam met kookolie as ’n kompres. Dit werk vir maagpyn. Gebruik vir ’n knaande hoes, kook ’n stroop en voeg suiker of heuning in.”

[Cultivated in the garden, used as syrup for colds, influenza and fever, used as compress with cooking oil for pains. It is also used for stomach ache. Syrup made by boiling the leaves and adding honey or sugar is used for chronic coughs.]

**(AW. 2011, pers. comm.):** “Bring koors af, gebruik vir griep en verkoue.”

[Used for fever, colds and influenza.]

**(EK. 2011, pers. comm.):** “Gebruik vir kinders met hoë koors as kompres saam met asyn op kind se bors of op die voete. Meng met groenamara en jantjiebêrend en drink vir bloeddruk en suiker.”

[Used as compress with vinegar on the chest or feet of children with high fever; can also be used for high blood pressure and diabetes, with *groenamara* and *jantjiebêrend*.]

**(GB. 2011, pers. comm.):** “Gebruik as medisyne.”

[Used as medicine (unspecified).]

**(GD. 2010, pers. comm.):** “Staan hier in die tuin, kook (tee) hom skoon vir griep en verkoue en goddelike siekte.”

[A leaf infusion is used for influenza, colds and “godly illness” (?).]

**(JB. 2011, pers. comm.):** “Groei in die tuin, hulle sê hy word vir griep gebruik.”

[Cultivated in the gardens, said to be used for influenza]

**(JL. 2011, pers. comm.):** “Gebruik vir suikersiekte en griep.”

[Used for diabetes and influenza.]

**(JvW. 2011, pers. comm.):** “Blare word gekook saam met groenamara vir griep, pyn op maag en sooibrand.”

[Decoction of the leaves with *groenamara* used for the treatment of influenza, stomach ache and heartburn.]

**(LC. 2011, pers. comm.):** “Gebruik vir pyne.”

[Used for pains.]

**(MJ. and MG. 2010, pers. comm.):** “Vir rugpyn- aftrek, maagpyn en vir griep se begin.”

[Used for the treatment of backache, stomach ache and for the initial stages of influenza.]

**(PR. 2011, pers. comm.):** “Goeie medisyne.”

[Good medicine (unspecified).]
(SW. 2011, pers. comm.): “Gebruik vir griep en bors moeilikheid.”
[Used for influenza and chest problems.]

4.2. Literature
(Pappe, 1868) [p.22, 23]; (Smith, 1895) [p.95, 96]; (Dykman, 1908); (Phillips, 1917) [p.142];
(Kling, 1923) [p.11, 19]; (Githens, 1948) [p.78]; (Watt and Breyer-Brandwijk, 1962) [p.199, 201, 202]; (Smith, 1966) [p.104]; (Smith, 1966) [p.502]; (Jacot Guillarmod, 1971) [p.413];
(Roberts, 1982) [p.226]; (Roberts, 1983) [p.3]; (Palmer, 1985) [p.87, 95, 96, 97, 98];
(Roberts, 1985) [p.137]; (Johnson and Hutching, 1986) [p.74, 143, 144, 145]; (Johnson and Hutching, 1986); (Ellis, 1989); (Dyson, 1994) [p.9]; (Rood, 1994) [p.24]; (Shearing and Van Heerden, 1994) [p.154]; (Palmer, 1995) [p.217]; (Hutchings et al., 1996) [p.117, 263, 327];
(Anonymous, 1998) [p.17]; (Van Wyk and Gericke, 2000) [p.105, 142, 143, 216]; (Von Koenen, 2001) [p.80]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (Van Wyk et al., 2009) [p.48]; (De Beer and Van Wyk, 2011)
12. **Artemisia vulgaris***

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Artemisia vulgaris* L.

1.3. **Synonyms:** No

1.4. **Description:** Annual, occ. Perennial. Herb. Ht up to 0.7 m. Alt up to 1000 m

1.5. **Distribution:** EC (naturalised) (not indigenous to South Africa; cultivated in gardens).

2. **Vernacular names:** (Quisumbing, 1951) [p.960]: "motherwort, maidenwort, felon herb mugwort, worm wood"; (Chiej, 1984) [no.246]: "silverweed"; (Palmer, 1985) [p.137]: "mugwort, muggiewortel"; (AW. 2011, pers. comm.): "wonderkroon"

3. **Herbarium specimen:** [NV106], (Appendix 3 - Figure 12)

4. **Recorded medicinal uses**

4.1. **Kamiesberg** (AW. 2011, pers. comm.): "Gebruik vir maagpyn, koors en babatjies met winde.”

[Used for stomach ache and fever and for infant flatulence]

4.2. **Literature** (Quisuming, 1951) [p.960]; (Von Reis Altschul, 1973); (Chiej, 1984) [no.246]; (Palmer, 1985) [p.137]
13. *Asclepias crispa*

1. Taxonomic data

1.1. **Family**: Apocynaceae

1.2. **Scientific name**: *Asclepias crispa* P.J.Bergius var. *crispa*

1.3. **Synonyms**:
- *Asclepias sabulosa* Schltr.
- *Asclepias sinuosa* Burm.f.
- *Asclepias undulata* L. (1769), non L. (1753)
- *Gomphocarpus arenarius* Schltr.
- *Gomphocarpus crispus* (P.J.Bergius) R.Br.
- *Gomphocarpus hastatus* E.Mey. var. *angustifolius* Meisn.
- *Pachycarpus crispus* (P.J.Bergius) E.Mey.
- *Xysmalobium crispum* (P.J.Bergius) D.Dietr.

1.4. **Description**: Perennial. Geophytic herb. Ht 0.15-0.38 m. Alt 30-900 m.

1.5. **Distribution**: EC, NC, WC


3. **Herbarium specimen**: [NV39], (Appendix 3 - Figure 13)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, 2011, pers. comm.): “Gebruik in die toorbesigheid, kou `n stukkie van die wortel, spoeg voorentoe na die persoon, dan vergeet die persoon, soos in `n winkel. Witvergee is dieselfde as witstorm, en word ook gebruik vir maagpyn en kankers. Witvergee kan gemeng word met jantjiebêrend en bitter-kameroë vir suiker. Die wortel kan afgetrek word vir naarheid, gal en maag.”

[Used as magic medicine, a piece of the root is chewed and spit to cast a spell on a person to forget certain things. It is used for the treatment of stomach ailments and cancer and with
and *bitterkamaroë* (unidentified) for diabetes. The root is used for nausea, biliousness and stomach problems.]


[Grow in flat places. Used for stomach ailments, stomach cramps and menstruation pains. For stomach pains the root is dried and ground and used as a powder. The old people used to make a snuff and mix it with a clove for headache. Also use as snuff to think clearly (clear the head). It can be used as a remedy for toothache, the powdered root is placed in the painfull tooth. Can be used for magic.]

(AW. 2011, pers. comm.): “Rasper die wortel en kook dit in water, word gebruik vir winde en pyn op die maag.”

[The root is grated and used as a decoction for flatulence and stomach ache.]

(EK. 2011, pers. comm.): “Kou die wortel vir ontstelde maag, medisyne soos snuif vir hewige kopseer.”

[The root is chewed for an upset stomach (diarrhoea) and used as snuff for severe headache.]

(GB. 2011, pers. comm.): “Die wortel is medisyne vir maagpyne en maagkrampe, droë stukkie vir pyne.”

[The root is used for stomach ache and stomach cramps, and a dry piece is used for pains.]

(GD. 2010, pers. comm.): “Die wortel word gebruik, maal hom fyn, en sif hom, gooi hom dan in papiertjie, snuif vir pyn in kop. As maag nie reg, kou en sluk die sap, ook vir winde. Toorgoed, September-Desember. Witvergeet word ook saam met swart klipsweet vir winde bo en onder gebruik.”

[The root is ground and used as snuff for headache. Chew the root and swallow the juice for the treatment of stomach ailments and flatulence. Used as magic, September to December. With klipsweet (midget droppings) it is used for flatulence.]

(GJ., JJ., PD. 2010, pers. comm.): “Medisyne vir maagmoeilikheid, jy kou dit en sluk dit dan in.”

[The sap is swallowed to treat stomach ailments.]

(GK. 2011, pers. comm.): “Gebruik vir maagpyn, afgetrek of kou in die mond.”

[Used as a decoction or chewed for stomach ache.]

(JB. 2011, pers. comm.): “Gebruik vir gal (as die maag slegs is), eet ‘n stukkie wortel.”

[Used for bile problems (stomach ailments), eat a piece of the root.]

(JC., JW. 2010, pers. comm.): “Goed vir pyn op die maag, winde – die wortel word gebruik. Ook vir paljas gebruik: sit ‘n stukkie van die wortel in jou mond, kou dit ‘n bietjie en spoeg dit na die persoon waarvoor die paljas gemik is; die persoon gaan dan vergeet bv. as jy by die
winkel is, dan vergeet die mense, dis sonde. Die wortel as jy hom fynmaak kan gebruik word as snuif vir kopwyn. Daar is twee soorte; die een wat tussen die klippe groei, so plat en die ander lyk soos `n ontelbos, hy groei so regop."

[The root is used for stomach ache and flatulence. It is also used as magic, a piece of the root is chewed and spit towards the person targeted for spell; this person will then forget, this is handy when going to a shop and you are unable to pay; it is sinful. The root is used as snuff for headache. There are two kinds of this plant, one grows upright and the other between the rocks, more flat.]

(JC. and JW. 2010, pers. comm.): “Witvergeet en rooistorm (Galium tomentosum) word saam gebruik as `n paljas om iemand weer na jou terug te bring; soos as jou jou vrou gelos het, bring dit haar weer terug.”

[Used with rooistorm (Galium tomentosum) as magic, to bring loved ones back, such as when your wife has left you.]

(JL. 2011, pers. comm.): “Gebruik vir sake (besigheid) – paljas, om goeie guns te kry.”

[Used as magic in business – for good favour.]

(JvW. 2011, pers. comm.): “Die wortel word gesnuif vir kopwyn, drink vir hardlywigheid, kou vir maagpyn; kan jou of ander mense laat vergeet as jy hom kou en spoeg.”

[Root is snuffed for headache, a root decoction used for constipation and chewed for stomach ache; used as paljas by chewing and spitting a piece of the root, to let you or another person forget.]

(MJ. and MG. 2010, pers. comm.): “Groei nie eintlik hier nie, meer by Paulshoek, word ook nie eintlik gebruik nie.”

[Grows more in the vicinity of Paulshoek; not really used.]

(PD. 2011, pers. comm.): “Wortel snuif as kop nie lekker voel nie.”

[Root is snuffed for headache (or dizziness).]

(PR. 2011, pers. comm.): “Grawe hom, dan verdwyn hy weer onder die grond, gebruik deur toordraers, gebruik vir maagpyn.”

[The root disappears when digging it out; used for magic; used for stomach ache.]

(SC. 2011, pers. comm.): “Wortel snuif vir hoofpyn.”

[Root snuffed for headache.]

(SW. 2011, pers. comm.): “Kook en drink vir borsmoeilikheid.”

[Decoction used for chest troubles.]

4.2. Literature

(Pappe, 1868) [p.29]; (Laidler, 1928) [p.445]; (Steyn, 1934) [p.337]; (Watt and Breyer-Brandwijk, 1962) [p.119]; (Batten and Bokelman, 1966) [p.120]; (Smith, 1966) [p.110]; (Rood, 1994) [p.12]; (Van Wyk and Gericke, 2000) [p.120]; (Scott and Hewett, 2008) [p.347]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (Van Wyk et al., 2009) [p.158].
14. *Aspalathus linearis**

1. **Taxonomic data**

1.1. **Family:** Fabaceae

1.2. **Scientific name:** *Aspalathus linearis* (Burm.f.) R.Dahlgren

1.3. **Synonyms:**
- *Aspalathus cognata* C.Presl
- *Aspalathus corymbosa* E.Mey.
- *Aspalathus linearis* (Burm.f.) R.Dahlgren subsp. *pinifolia* (Marloth) R.Dahlgren
- *Aspalathus tenuifolia* DC.
- *Borbonia pinifolia* Marloth
- *Lebeckia linearis* (Burm.f.) DC.
- *Psoralea linearis* Burm.f.

1.4. **Description:** Perennial. Shrub, dwarf shrub. Ht 0.15-2.4 m. Alt 15-1220 m.

1.5. **Distribution:** WC (not indigenous to the Kamiesberg; commercial product - rooibos tea - obtained from shops).

- (JB. 2011, pers. comm.): “*rooibostee*”;
- (JW. 2010, pers. comm.): “*rooibostee*”;
- (LC. 2011, pers. comm.): “*rooibos*”;
- (PD. 2011, pers. comm.): “*rooibostee*”;
- (SW. 2011, pers. comm.): “*rooibostee*”;

3. **Herbarium specimen:** [PNV58], (Appendix 3 - Figure 14)

4. **Recorded medicinal uses**

4.1. Kamiesberg

(AST. 2011, pers. comm.): “Tee word gemaak saam met heuning vir babatjies met ‘n toe borsie en saam met jantjiebêrend word ‘n flou tee gedrink vir hoë bloeddruk.” [Used as tea with honey for an infant with chest troubles; with *jantjiebêrend* it is used as weak infusion for high blood pressure.]

(AW. 2011, pers. comm.): “Gebruik vir sooibrand, tee word gemaak sonder melk.” [Used for hearburn, infusion used without milk.]

(EK. 2011, pers. comm.): “Gebruik vir sooibrand, swart met bietjie suiker.” [Used for heartburn, used black with a bit of sugar.]
"Hou babas gesond, gee eetlus, drink met geelsuiker.”
[Keeps infants healthy, stimulates appetite, drink with yellow sugar.]

"Gee eetlus.”
[It stimulates appetite.]

"Tee, vir eetlus, babatjie wat nie baie eet nie.”
[A tea is used as appetite stimulant for infants]

"Gebruik vir oumense om eetlus te gee, drink swart.”
[The tea is used for elderly to stimulate appetite, used without milk and sugar.]

"Na `n operasie het my maag gaan staan, het rooibos gedrink om maag los te maak.”
[Used for constipation (after an operation).]

4.2. Literature
(Watt and Breyer-Brandwijk, 1962) [p.558]; (Roberts, 1983) [p.25]; (Palmer, 1985) [p.146];
(Ellis, 1989); (Dyson, 1994) [p.11]; (Rood, 1994) [p.51]; (Van Wyk and Gericke, 2000) [p.99];
(Van Wyk and Gericke, 2000) [p.100]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2009) [p.50]
15. *Ballota africana*

1. Taxonomic data

1.1. **Family:** Lamiaceae

1.2. **Scientific name:** *Ballota africana* (L.) Benth.

1.3. **Synonyms:** *Marrubium africanum* L.

1.4. **Description:** Perennial. Dwarf shrub, herb. Ht 0.3-1.2 m. Alt 3-1525 m.

1.5. **Distribution:** EC, FS, N, NC, WC


3. **Herbarium specimen:** [PNV59], (Appendix 3 - Figure 15)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “`n Kompres word van die blare gemaak, wat op seer bene of voete geplaas word, dit word dan toegedraai met lappe. Die blare word eers so bietjie warm gemaak op die vuur. Gebruik as `n kind baie siek is, sit die blare onder die voete en draai toe, dit trek pyne uit. Ook op kop gesit as kompres vir koppyn.”

[Warmed (on the fire) leaves are used as a compress to treat painful legs and feet; the leaves are then covered with bandages. Used for very sick children, place leaves as compress on feet and cover with bandages, it relieves the pains; also used on the head for headache.]
(AST. 2010, 2011, pers. comm.): “Die wortels word saam met heuning en suurlemoen gekook tot ‘n stroop as ‘n hoesmiddel. Die vars blare laat die melk tydens borsvoeding opdroog, dit word uitwendig op die bors gesit (aan die tepel gesmeer). ‘n Groot wond kan ook met kattekruid aftreksel gewas word. Gebruik vir steek in die oor, maak dit fyn en meng met melk of water. Die blare kan soos ‘n kompres op seer knieë gesit word. Tee van die blare kan ook gebruik word vir griep”

[Syrup of the roots with honey and lemon are used as cough remedy. The fresh leaves are applied to breasts of lactating mothers, cause the milk to dry up (to wean infants), a leaf decoction is used as wash for wounds. Used for earache, powdered and mixed with milk or water. The leaves can be used as compress on painful limbs (knee). Used as an infusion for influenza.]

(AW. 2011, pers. comm.): “Gebruik vir as jy babatjie het, op die borste gesit (kompres) vir melkkoors (ontsteking), laat die melk weer kom.”

[Used as compress on breasts of breast-feeding mothers, to treat mastitis, it also stimulates the milk flow and helps with the inflammation.]

(CC. 2011, pers. comm.): “’n Kompres van die blare word op die wang gesit vir tandpyn.”

[A leaf compress is placed on the cheek for toothache.]

(EK. 2011, pers. comm.): “Daar was klonte in my pram melk, pak die blare op bors om melk vloeı te bevorder. Kan ook op sere en pitsere gesmeer word as trekself.”

[A compres of the leaves is used for inflammation in the breasts of breastfeeding mothers and to increase the milk flow of a breast-feeding mother. Used as an ointment on sores and as poultice on boils.]

(GB. 2011, pers. comm.): “Pleister (kompres) op wang vir tandpyn, as salf vir pyne.”

[Used as compress on cheek for the treatment of toothache and an ointment is used for pains.]

(GD. 2010, pers. comm.): “Rugkwale (warm) en seer bene as kompres.”

[Warmed leaves are used as a compress for back problems and painful legs.]

(GK. 2010, pers. comm.): “Gebruik om borsmelk optedroog, om ‘n kind te speen.”

[Used to wean infants, by placing the leaves on the breasts.]

(JB. 2011, pers. comm.): “Kook die blare vir maagmoeilikheid, saam met balleja.”

[A leaf decoction with ballerja is used for stomach ailments.]

(JC. and JW 2010, pers. comm.): “Vir pyne in die bene word die blare warm/ lou gemaak en op gesit (kompres). Lou in die skoene gesit vir wintersvoete. Drink as medisyne die kattekruid, hy’s bitter, ’n tee van die blare vir pyne op die maag. Vir pyne kan jy hom lou maak. Op die kop gesit vir hoofpyne (tussen twee lappe).”

[Warmed leaves are used as a compress on painful legs, lukewarm leaves are placed in the shoes for chilblained feet. A leaf infusion is used for stomach ache, leaves can also be used as a compress for headache.]
(JL. 2011, pers. comm.): “Gebruik as salf en pleister op pyne.”
[Used as ointment or compress on pains.]

(JvW. 2011, pers. comm.): “Pleister vir pyne, soos die nek en die knieë, en die blare word in
die skoene gesit vir brandvoete.”
[Used as compress on pains, such as neck and knee pains; the leaves can be placed in the
shoes, for burning feet.]

(LC. 2010, 2011, pers. comm.): “Aftreksel gebruik vir winterhande en wintervoete, om in te
week. Dit word ook as bors medisyne gebruik, om slym los te maak.”
[A leaf infusion used as wash for the treatment of chilblained hands and -feet and it is also
used for chest ailments, for loosening mucus.]

(MG. and MJ. 2010, pers. comm.): “Kattekruid blare word saam met droë wit hoendermis
(omtrent twee splinte) gemeng en gebruik as kindermedisyne. Blare word ook op die kop
gesit (hoofpyne).”
[The leaves are mixed with white, dry chicken dung and used for children`s ailments. The
leaves are also put on the head for headaches.]

(MJ. 2010, pers. comm.): “Word gebruik vir babetjie stuipe, trek blare soos tee.”
[Leaf infusion used to treat convulsions in infants.]

(PD. 2011, pers. comm.): “Die blare word as warm kompres op pyne gesit.”
[Leaves used as warm compress on pains.]

(PR. 2011 pers. comm.): “Die blare word gesit op gewrigspyne en knieknoppe wat seer is.”
[The leaves are used as a compress on inflamed joints and painful knees.]

(SC. 2011, pers. comm.): “Die blare word soos `n pleister op kop gesit vir koppyn, trek ook
die koors uit.”
[Used as compress for headache and used for fever.]

(SW. 2011, pers. comm.): “Blare as lou kompres, pak op pyn bene.”
[Leaves used as a luke-warm compress on painfull legs.]

4.2. Literature
(Pappe, 1868) [p.33]; (Dykman, 1908); (Marloth, 1917) [p.47]; (Kling, 1923) [p.12]; (Laidler,
1928) [p.442]; (Githens, 1948) [p.95]; (Watt and Breyer-Brandwijk, 1962) [p.514]; (Smith,
1966) [p.285]; (Eliovson, 1972) [p.24, 35]; (Metelerkamp and Sealy, 1983) [p.8]; (Palmer,
1985) [p.134]; (Palmer, 1985) [p.134]; (Ellis, 1989); (Archer, 1990) [p.967]; (Roberts, 1992
[p.109]; (Archer, 1994) [p. 66, 69]; (Dyson, 1994) [p.13]; (Shearing and Van Heerden, 1994
[p.126]; (Rood, 1994) [p.58]; (Anonymous, 1998) [p.9]; (Van Wyk and Gericke, 2000) [p.120,
174]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (Van Wyk et al., 2009) [p.60];
(De Beer and Van Wyk, 2011); (Anonymous, undated) [p.13]; (Wileman, undated) [p.10]
16. *Bulbine frutescens**

1. Taxonomic data

1.1. **Family:** Asphodelaceae

1.2. **Scientific name:** *Bulbine frutescens* (L.) Willd.

1.3. **Synonyms:**
- *Anthericum frutescens* L.
- *Anthericum fruticosum* Salisb.
- *Anthericum incurvum* Thunb.
- *Anthericum rostratum* Jacq.
- *Bulbine caulescens* L.
- *Bulbine rostrata* Willd.
- *Bulbine triebneri* Dinter

1.4. **Description:** Perennial. Dwarf shrub, succulent. Ht 0.3-0.8 m. Alt 5-2285 m.

1.5. **Distribution:** EC, FS, G, KZN, L, N, NC, S, WC (apparently indigenous to the Kamiesberg but also cultivated in gardens).


3. **Herbarium specimen:** [PNV60], (Appendix 3 - Figure 15)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2011, pers. comm.): “Gebruik vir pyne, kook die blare en was sere met die water” [Used for pains and a leaf decoction as wash for sores.]
(AST. 2010, pers. comm.): “Word gebruik vir wonde, brandwonde, pyne, swelsels en vir jeuk.”
[Used for wounds, burn wounds, pains, swellings and itch.]

(AW. 2011, pers. comm.): “Die sap word op sere gesmeer.”
[Leaf juice applied on sores.]

(CC. 2011, pers. comm.): “Die sap word gebruik vir koorsblare”
[Leaf juice used for mouch ulcers.]

(EK. 2011, pers. comm.): “Die plant het baie gebruike, op geswikte enkels, sere, brandwonde, blase en skaafplekke.”
[Used on sprained ankles, sores, burn wounds, blisters and abrasions.]

(GD. 2010, pers. comm.): “Groei in die tuine en die veld. Die sap van die blare word gebruik vir brandwonde en pitsere, drink: tee van die blare.”
[Occur in the veld and in the garden, the leaves are used on burn wounds, boils; for treatment an infusion can be made from the leaves.]

(JB. 2011, pers. comm.): “Groei in die veld, sap gebruik vir sere.”
[Grows in the field, leaf juice are used for sores.]

(JL. 2010, pers. comm.): “Hierdie moesie van my het mos so geontsteek, toe smeer ek van die geneesbossie op dit.”
[The leaf juice can be applied to infected moles.]

(JvW. 2011, pers. comm.): “Die blare word gesny en sit dit op pitsere soos pleister, dit trek die pitseer uit, die sap kan ook op puisies en karbonkels gesit word.”
[Leaves or leaf juice used as a poultice on boils and acne.]

(MG., MJ., 2010, pers. comm.): “Die velletjie word oop gemaak om die blaar vleis op die sere te sit en op koorsblare of as kompres op bv. `n heup wat seer is..”
[Inner part of leaf placed on sores, mouth ulcers or used as a compress on painful limbs.]

4.2. Literature
(Smith, 1895); (Phillips, 1917) [p.297]; (Watt and Breyer-Brandwijk, 1962) [p.696]; (Roberts, 1992) [p.47]; (Roberts, 1992) [p.103]; (Dyson, 1994) [p.15]; (Palmer, 1995) (p.217); (Hutchings et al., 1996) [p.28]; (Anonymous, 1998) [p.7]; (Van Wyk and Gericke, 2000) [p.198, 230]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2009) [p.70]; (Manning, 2008) [p.50]
17. Bulbine praemorsa

1. Taxonomic data

1.1. **Family:** Asphodelaceae

1.2. **Scientific name:** *Bulbine praemorsa* (Jacq.) Spreng.

1.3. **Synonyms:**
- *Anthericum alooides* Thunb. non L.
- *Anthericum praemorsum* Jacq.
- *Bulbine laxiflora* Baker
- *Bulbine tetraphylla* Dinter
- *Bulbine urigneoides* Baker
- *Bulbine zeyheri* Baker

1.4. **Description:** Perennial. Herb, geophyte, succulent. Ht 0.3-0.8 m. Alt 155-650 m.

1.5. **Distribution:** M, NC, WC


3. **Herbarium specimen:** [NVD3]

4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, 2011, pers. comm.): “Gebruik vir `n insekte en vir bysteek, vir die jeuk. Smeer blaarsap op.”

[Leaf juice is applied on insect bites and bee stings, to alleviate the itching.]

(AW. 2011, pers. comm.): “Aansmeer van die blaarsap vir muskietbyte.”

[Leaf juice is used topically for mosquito bites.]

4.2. Literature

No medicinal uses have been recorded in literature.
18. *Bupleurum mundii*

1. **Taxonomic data**

1.1. **Family:** Apiaceae  
1.2. **Scientific name:** *Bupleurum mundii* Cham. & Schltdl.  
1.3. **Synonyms:** No  
1.4. **Description:** Perennial. Herb. Ht 0.3-1 m. Alt 15-3475 m.  
1.5. **Distribution:** EC, FS, G, KZN, L, M, NC, S, WC

2. **Vernacular names:** (Hutchings *et al.*, 1996) [p224]: “[ibeke (Zulu)]; (AST. 2010, 2011, pers. comm.): “leeuhout”

3. **Herbarium specimen:** Van Wyk & Vortje s.n. (JRAU)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
(AST. 2011, pers. comm.): “Die stammetjie en die blare word gebruik vir prostaatprobleme en winde.”  
[The stem and leaves are used as decoction for prostate problems and for flatulence.]

(GK. 2010, pers. comm.): “Gebruik vir maagpyn en naar.”  
[Used for stomach ache and nausea.]

4.2. **Literature**  
(Hutchings *et al.*, 1996) [p.224]
19. *Carpobrotus edulis*

1. Taxonomic data

1.1. Family: Mesembryanthemaceae

1.2. Scientific name: *Carpobrotus edulis* L.Bolus

1.3. Synonyms:

- *Abryanthemum edule* (L.) Rothm.
- *Mesembryanthemum acinaciforme* L. var. ß flavum L.
- *Mesembryanthemum edule* L.

1.4. Description: Perennial. Succulent. Ht about 0.15 m. Alt up to 1100 m

1.5. Distribution: EC, NC, WC

3. Herbarium specimen: [NVD3], (Appendix 3 - Figure 19)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Mondseer en sproei by babetjies. Soms is heuning en wonderkroon, een van die produkte in die Lennon Dutch medicine reeks, bygevoeg.”

[Leaf juice is used to treat infants with mouth sores and oral thrush, sometimes honey and wonderkroon (a Lennon Dutch medicine) were added.]

(AST. 2010, 2011, pers. comm.): “Mondsere, mond sproei, vir wonde, vratte, koorsblare en skurf voete. Dit is ook `n veildkos, van die vrug word konfyt gekook. En die sap is vir seer keel.”

[Used for mouth sores (ulcers), oral thrush, wounds, warts, cracked feet. The fruits are edible and can be used to cook jam. The juices are also used for a sore throat.]

(AW. 2011, pers. comm.): “Gebruik vir mondsere, kan geëet word, saam met water gebruik vir opelyf (purgeermiddel).”

[Used for moth sores, is edible, with water used as purgative.]

(EK. 2011, pers. comm.): “gebruik vir mondsere by kinders, sooibrand, suiker, seerkeel, tande kry.”

[The leaf juice used for infants with mouth sores, heartburn, diabetes, a sore throat, and for infants with teething problems.]

(GB. 2010, pers. comm.): “eet en maak maag los (purgeermiddel).”

[Edible and used as purgative.]

(GD. 2010, pers. comm.): “Gebruik vir velbrand, vat die blare en smeer aan. Vir maagsere word die sop gedrink; ook gebruik vir koorsblare en sproei.”

[The leave juices are applied on sunburn as well as for stomach ulcers, mouth ulcers and oral thrush.]

(GK. 2011, pers. comm.): “Die groen gedeelte word aangesmeer vir kinders met mond sere. Die droë vye is ou `nôí (so lekker)!”

[Leaf juice used for infants with mouth sores.]

(LC. 2010, 2011, pers. comm.): “Gebruik vir sproei, koorsblare en mond sere. Die vars vrugte is droog gemaak om te eet. Die vars vrugte, wat sag, ryp en geel is, se oortjies word afgehaal, lyk soos `n klein hutjie. Dan word die vye op `n dak gesit en in die wintertyd as droë vrugte te eet, al is hy droog hou hy sy purgerende eienskappe. Hy raak mos sout-suur. `n Sop kan ook daarvan gemaak word, om te drink, vir mondsere, sproei, koors en maagwerkings. Gehoor van `n
man wat die sap uitgedruk het en dan het hy dit uitwendig gebruik op aambeie. Dit kan geweldig jou klere vlek."

[Used for oral thrush, mouth ulcers and mouth sores. The fresh fruits were dried and they are edible. The outer part of the soft, ripe, yellow fruit is removed and placed on a roof to dry. This is then stored for the winter to eat as dried fruit. The dried fruit retains its purgative activity. The leaf juice can be taken for mouth sores, oral thrush fever and diarrhoea. The juice can also be applied externally on haemorrhoids. The leaf sap can stain your clothes permanently.]

(JB. 2011, pers. comm.): “Die vye breek maag los.”
[The figs (fruits) are used as purgative.]

(JL. 2011, pers. comm.): “Gebruik vir `n baba met sproei.”
[Used for infants with oral thrush.]

(JvW. 2011, pers. comm.): “Gebruik die sap vir kinders met mondsproei, en vir tande kry, die dik stingels kan gekou word vir maagprobleme, soos brand op die maag, vat die honger weg.”
[Leaf juice used for infants with oral thrush, infants with teething problems, the stems can be chewed for stomach ailments and can be used as appetite suppressant.]

(JW. 2010, pers. comm.): “Twee soorte vye; die elandsvye, by biesiesfontein, na sondagskool hom geloop pluk om te eet.”
[There are two types, (we) picked elandsvye for eating.]

(MG., MJ., 2010, pers. comm.): “Dit is `n bomeester wat gebruik word vir witseerkeel, sere en sproei. Die sap word op `n linnelappie gedrup, wat gedruk word op die sere in die mond.”
[Used for diphtheria, sores and oral thrush. The juices are dripped on a piece of linen and pressed on the mouth sores.]

(SC. 2011, pers. comm.): “Gebruik blaarsap vir klein kindertjies met mond sere.”
[Leaf juice used for infants with mouth sores.]

(PR. 2011, pers. comm.): “Eet die vye in Januarie en Februarie, dis `n medisyne ook.”
[The figs are eaten in January and February, it is also a medicine (unspecified).]

4.2. Literature
(Pappe, 1868) [p.16]; (Dykman, 1908) [p.128]; (Marloth, 1917) [p.30]; (Laidler, 1928) [p.442]; (Shapera, 1930) [p.239, 264, 412]; (Watt and Breyer-Brandwijk, 1962) [p.5, 6]; (Wright, 1963) [p.62]; (Courtenay-Latimer et al., 1967) [no.31]; (Smith, 1966) [p.251]; (Metelerkamp and Sealy, 1983) [p.8]; (Roberts, 1983) [p.12]; (Palmer, 1985) [p.86]; (Palmer, 1985) [p.96]; (Palmer, 1985) [p.98, 99, 131]; (Roberts, 1985) [p.123]; (Johnson and Hutching, 1986) [p.153]; (Johnson and Hutching, 1986) [p.153]; (Roberts, 1992) [p.190]; (Archer, 1994) [p.69, 106]; (Rood, 1994) [p.72]; (Palmer, 1995) [p.218]; (Hutchings et al., 1996) [p. 93]; (Anonymous, 1998) [p.7]; (Van Wyk and Gericke, 2000) [p.36]; (Van Wyk and Gericke, 2000) [p.122, 198]; (Scott and Hewett, 2008) [p.347]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2008) [p.697]; (Van Wyk et al., 2009) [p.78]; (De Beer and Van Wyk, 2011);
(Anonymous, undated) [p.20]
20. Cassytha ciliolata

1. Taxonomic data

1.1. Family: Lauraceae
1.2. Scientific name: Cassytha ciliolata Nees
1.3. Synonyms: No
1.4. Description: Perennial. Twining herb, parasite. Ht. variable. Alt 30-1000m.
1.5. Distribution: EC, NC, WC


3. Herbarium specimen: [PNV62], (Appendix 3 - Figure 20)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2011, pers. comm.): “Kook en drink dit vir pyne”
[A decoction is used for pains.]

(AST. 2011, pers. comm.): “Gebruik as kop vaal kolle het, help die hare groei; gebruik saam met t`kou vir `n vrou na die geboorte, om haar weer wakker te skud vir die volgende kind.”
[Used as wash for ringworm and to stimulate hair growth; use with t`kou for a woman after childbirth to prepare her for the next pregnancy.]

(AW. 2011, pers. comm.): “Gebruik as medisyne.”
[Used as medicine (unspecified).]

(GB. 2011, pers. comm.): “Gebruik as tee vir winde en as snuif vir hoofpyn.”
[Infusion used for flatulence and as snuff for headache.]

(GJ., JJ., PD. 2010, pers. comm.): “Gebruik as medisyne. Hy is oranje, `n rankop, kry nie sy oorsprong nie, groei in die t`noubeebos, het `n groen skynsel as hy klim.”
[Used medicinally (unspecified).]

(GK. 2011, pers. comm.): “Gebruik vir vaal kolle, laat hare groei.”
[Used for ringworm on the scalp, stimulates hair growth.]

(JB. 2011, pers. comm.): “As jou hare uitval, kook en was vir agt dae daarmee, dit bevorder haargroei; word ook gebruik vir winde.”
[Used as wash for eight days to stimulate hair growth; also used for flatulence.]

(JL. 2010, pers. comm.): “Oupa Halla het hom `n keer vir my ingegee, gemeng met ander goed, dit was drie goed, dan kook hy hom so en dit word gedrink dis goed vir die nageboorte. Drink die mengsel drie dae, `n beker vol, maar hys nie op sy eie nie. Maak jou van binne skoon.”
[Grandpa Halla gave me a decoction of this plant, mixed with other medicinal plants (three different plants) to expel a retained placenta after labour, I used it for three days, a cup (250 ml) a day; it cleans you from the inside.]

(JvW. 2011, pers. comm.): “Nie op eie gebruik nie, word gemeng, maak babatjies groot.”
[Used as a mixture, it helps with growth of babies.]

(SC. 2011, pers. comm.): “Word afgetrek vir maagpyn en koors.”
[An infusion is used for stomach ache and fever.]

(PD. 2011, pers. comm.): “ Dit is `n belangrike medisyne vir maag.”
[This plant is an impotant medicine for stomach ailments.]

4.2. Literature

(Laidler, 1928) [p.443]; (Shapera, 1930) [p.412]; (Githens, 1948) [p.81]; (Watt and Breyer-Brandwijk, 1962) [p.529]; (Batten and Bokelman, 1966) [p.71]
21. *Cheilanthes induta*

1. **Taxonomic data**

1.1. **Family:** Pteridaceae

1.2. **Scientific name:** *Cheilanthes induta* Kuntze.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Herb, geophytes, lithophytes. Ht 80 – 160 mm. Alt 100-1400 m

1.5. **Distribution:** NC, EC, WC


3. **Herbarium specimen:** [NVD3] (Appendix 3 - Figure 21)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Gebruik vir senuwees.”
[Used for nervous conditions]

(GK. 2011, pers. comm.): “Medisyne vir kinders.”
[Used for children`s ailments.]

4.2. **Literature**

No medicinal uses have been recorded in literature.
22. Chironia baccifera

1. Taxonomic data
1.1. **Family:** Gentianaceae
1.2. **Scientific name:** *Chironia baccifera* L.
1.3. **Synonyms:** No
1.4. **Description:** Perennial. Dwarf shrub, herb, suffrutex. Ht 0.1 – 1 m. Alt 5 -1450 m
1.5. **Distribution:** EC, KZN, NC, WC

2. Vernacular names:  

3. **Herbarium specimen:** [NVD9], (Appendix 3 - Figure 22)

4. Recorded medicinal uses
4.1. Kamiesberg

(AB. 2011, pers. comm.): “Gebruik vir aambeie, kook en drink en ook was”
[Used for haemorrhoids, as decoction and wash.]

(AST. 2010, 2011, pers. comm.): “Die bos word as medisyne vir suikersiekte gebruik. Die rooi bessie is bitter. Vir aambeie, rug, rumatiek, artrietis en vrouekwale”
[Used for diabetes, haemorrhoids, backache, rheumatism, arthritis and women ailments.]

(AW. 2011, pers. comm.): “Gebruik vir rugpyn, drink tee, kook en drink vir aambeie.”
[Infusion is taken for backache and a decoction for haemorrhoids.]

(CC. 2011, pers. comm.): “Gebruik vir maagpyne”
[Used for stomach ache.]

(EK. 2011, pers. comm.): “Drink hom vir aambeie.”
[Drink for haemorrhoids.]

(GB. 2011, pers. comm.): “Gebruik vir aambeie, kook as `n was en as `n pleister.”
[Used for haemorrhoids, as wash and poultice.]

(GD. 2010, pers. comm.): “Die blare kan droog wees. Vir bloedaambeie word die aambeibos gekook saam met baarbos en duiwelsdrek, klipsweet en die wit bomeester. Drink `n lepel vol drie maal per dag. Is ook goed vir aambeie.”
[Dry leaves in combination with baarbos (Limeum africanum), duiwelsdrek (a Lennon Dutch medicine), klipsweet and white bomeester is used for bleeding haemorrhoids. Drink one spoonful (15 ml) three times a day. The plant is also used for haemorrhoids.]

(GJ., JJ., PD. 2010, pers. comm.): “Bitterbos of aambeibos, kan gedrink word vir byna alles.”
[Can be taken orally for almost all ailments.]

(GK. 2010, pers. comm.): “Mans gebruik dit vir aambeie, as `n wasmiddel en dit word gekook om te drink.”
[Men used it for haemorrhoids, used as a wash and orally as decoction.]

(JB. 2011, pers. comm.): “Gebruik vir aambeie, kook en drink en ook was”
[Used for haemorrhoids, orally as decoction and as a wash.]

(JC. 2010, pers. comm.): “Goed vir kindersiektes, kook die blare en die kind so bietjie ingee, goed vir die maag.”
[Used for children’s ailments; boil the leaves; in small doses; good for the stomach.]

(JL. 2011, pers. comm.): “Gebruik vir aambeie – kook die blare en bessies.”
[Used as decoction (leaves and berries) for haemorrhoids.]

(JvW. 2011, pers. comm.): “Gebruik vir aambeie, kook hom net so en drink hom.”
[Used orally as decoction for haemorrhoids.]
(LC. 2010, pers. comm.): “My oupa het in die rebellie geveg en van te veel perd ry, het hy bloedaambeie gekry. Hy is toe huis toe gestuur, en daar is hy met die aambeibos gedokter, en is genees.”
[Used as medicine for blood haemorrhoids (my grandfather was cured).]

(MJ. 2010, pers. comm.): “My pa het dit gebruik, vir aambeie; word ook gebruik vir periods pyne.”
[My dad used it for haemorrhoids, it can also be used for menstrual pains.]  

(PR. 2011, pers. comm.): “Kook die plant en drink hom vir medisyne.”
[A decoction of the plant used as medicine (unspecified).]

(SC. 2011, pers. comm.): “Word afgetrek vir aambeie en dit is medisyne vir diere”
[Infusion used for haemorrhoids and used as veterinary medicine.]

4.2. Literature
(Laidler, 1928) [p.444]; (Pappe, 1868) [p.iv]; (Githens, 1948) [p.113]; (Watt and Breyer-Brandwijk, 1962) [p.447, 448]; (Batten and Bokelman, 1966) [p.117]; (Smith, 1966) [p.54]; (Smith, 1966) [p.271]; (Eliovson, 1972) [p.24]; (Palmer, 1985) [p.98]; (Palmer, 1985) [p.126]; (Ellis, 1989); (Roberts, 1992) [p.66]; (Dyson, 1994) [p.21]; (Rood, 1994) [p.54]; (Hutchings et al., 1996) [p.241]; (Anonymous, 1998) [p.5]; (Van Wyk and Gericke, 2000) [p.182, 183]; (Van Wyk, 2008) [p.335]; (Van Wyk et al., 2009) [p.88]; (Wileman, undated) [p.7]
23. *Chrysocoma ciliata*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Chrysocoma ciliata* L.

1.3. **Synonyms:**
   - Aster discoideus Sond.
   - Chrysocoma microcephala DC.
   - Chrysocoma tenuifolia P.J.Bergius

1.4. **Description:** Perennial. Shrub. Ht 0.1-0.6 m. Alt 5-3124 m.

1.5. **Distribution:** EC, FS, G, KZN, L, M, N, NC, NW, WC

2. **Vernacular names:**
   - (Marloth, 1917) [p.12]: “bitter`bossie”;
   - (Steyn, 1934) [p.393]: “bitterkaroo, beeskaroo, beesbossie, brandbossie, bitterbossie, [sehalahala (Suto)]”;
   - (Watt and Breyer-Brandwijk, 1962) [1371]: “beesbossie, beeskaroo, bitterkaroo, brandbossie, sehalahala (Southern Sotho)”;
   - (Smith, 1966) [p.611]: “beesbossie, beeskaroo, bitter(bees)bossie, bitterkaroo, brandbossie, hantambossie, karoobossie”;
   - (Kellerman et al., 1988) [p.69]: “bitterbos”;
   - (Kellerman et al., 1988b) [p.217]: “bitter bush, bitterbos, bitterkaroo”;
   - (Rood, 1994) [p.27]: “bitterbos, bitterkaroo”;
   - (Shearing and Van Heerden, 1994) [p.172]: “bitterbos”;
   - (Batten and Bokelman, 1996) [p.159]: “bitterbossie, beeskaroo, beesbossie, bitterkaroo, brandbossie”;
   - (Von Koenen, 1968) [p.93]: “beesbossie, bitterbossie, bitterkaroo”;
   - (Powrie, 2004) [p.81]: “beesbossie, beeskaroo, bitterbeesbos, bitterbeesbossie, bitterbos, bitterkaroo, bitterkarooobossie, brandbossie, hantambossie, kaalsiektebos, karoobossie, selderybossie”;
   - (Le Roux and Wahl, 2005) [p.279]: “bitterbos”;
   - (Anonymous, 2006) [p.8]: “bitterbos”;
   - (De Beer and Van Wyk, 2011): “beesbos”;
   - (Anonymous, undated) [p.8]: “bitterbos”; (AB. 2011, pers. comm.): “teebos”;
   - (AST. 2010, pers. comm.): “safhandjie, vuurhoutjiebos, métjiebos”;
   - (AW. 2011, pers. comm.): “métjiebos”; (CC. 2011, pers. comm.): “kra-krakie, teebos”;
   - (EK. 2011, pers. comm.): “métjiebos”;
   - (JvW. 2011, pers. comm.): “métjiebos”;
   - (JB. 2011, pers. comm.): “teebosse”;
   - (JL. 2011, pers. comm.): “kra-krakie”;
   - (JvW. 2011, pers. comm.): “métjiebos”;
   - (LC. 2011, pers. comm.): “knoppiesopslag”;
   - (PR. 2011, pers. comm.): “métjiebos”;
   - (SC. 2011, pers. comm.): “kra-krakie”

3. **Herbarium specimen:** [NV24], (Appendix 3 - Figure 23)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AST. 2010, pers. comm.): “Tee vir winde, ook gebruik vir ‘n siek gevoel en sooibrand.”
   [Decoction used for flatulence, unspecified ailment (general malaise?) and heartburn.]

   (JB. 2011, pers. comm.): “Stop ‘n oneindige loopmaag.”
   [Used for a persistent diarrhoea.]

   (JvW. 2011, pers. comm.): “Gebruik vir pyn op die maag.”
   [Used for stomach ache.]
(SC. 2011, pers. comm.): “n Mengsel word gebruik vir maag aandoenings.”
[Decoction (mixture) used for stomach ailments.]

4.2. Literature
(Marloth, 1917) [p.12]; (Steyn, 1934) [p.393]; (Watt and Breyer-Brandwijk, 1962) [9, 216, 217]; (Smith, 1966) [p.107]; (Kellerman et al., 1988) [p.69]; (Kellerman et al., 1988) [p.153, 215]; (Kellerman et al., 1988b) [p.217]; (Rood, 1994a) [p.27]; (Shearing and Van Heerden, 1994) [p.172]; (Batten and Bokelman, 1996) [p.159]; (Von Koenen, 2001) [p.93]; (Anonymous, 2006) [p.8]; (De Beer and Van Wyk, 2011); (Anonymous, undated) [p.8]
24. *Conicosia elongata*

1. **Taxonomic data**

1.1. **Family:** Mesembryanthemaceae  
1.2. **Scientific name:** *Conicosia elongata* (Haw.) N.E. Br  
1.3. **Synonyms:**  
   - *Conicosia coruscans* (Haw.) Schwantes  
   - *Conicosia robusta* N.E.Br.  
   - *Herrea acocksii* L.Bolus  
   - *Herrea affinis* (N.E.Br.) L.Bolus  
   - *Herrea alba* L.Bolus  
   - *Herrea albolutea* L.Bolus  
   - *Herrea blanda* L.Bolus  
   - *Herrea brevisepala* L.Bolus  
   - *Herrea elongata* (Haw.) L.Bolus  
   - *Herrea elongata* (Haw.) L.Bolus var. *elongata*  
   - *Herrea elongata* (Haw.) L.Bolus var. *minor* (Haw.) L.Bolus  
   - *Herrea excavata* L.Bolus  
   - *Herrea fusiformis* (Haw.) L.Bolus  
   - *Herrea grandis* L.Bolus  
   - *Herrea gydouwensis* L.Bolus  
   - *Herrea inaequalis* L.Bolus  
   - *Herrea klaverensis* L.Bolus  
   - *Herrea laticalyx* L.Bolus  
   - *Herrea macrocalyx* L.Bolus  
   - *Herrea nelii* Schwantes  
   - *Herrea obtusa* L.Bolus  
   - *Herrea plana* L.Bolus  
   - *Herrea porcina* L.Bolus  
   - *Herrea robusta* (N.E.Br.) L.Bolus  
   - *Herrea ronaldii* L.Bolus  
   - *Herrea roodiae* (N.E.Br.) L.Bolus  
   - *Herrea stipitata* L.Bolus

1.4. **Description:** Perennial. Succulent. Ht up to 0.3 m. Alt 200-950 m.

1.5. **Distribution:** NC, WC

3. **Herbarium specimen:** [PNV64], (Appendix 3 - Figure 24)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

*(AST. 2011, pers. comm.): “Bier word van van die gegiste knolle gemaak (die klei word gebruik vir heuningbier), wat medisinaal gebruik word vir ontspanning.”*

[Beer is brewed (heuningbier = honeybeer) used medicinally for relaxation.]

*(EK. 2011, pers. comm.): “Vaal, wit kolle op die nek (spannabrak), smeer blaarsap aan en slaap met hom.”*

[Leaf juice is applied to treat white spots in the neck (fungal infection).]

*(JB. 2010, pers. comm.): “Bierwortel of heuningbier word met die klei van die varkiesknol gemaak. Dit is ook gesond vir die maag en sproei.”*

[Beerroot or honeybeer are made from varkiesknol, it is also used for stomach complaints and oral thrush.]

*(SC. 2011, pers. comm.): “Heuning bier word van die wortel gemaak, wat medisinaal gebruik word, vir ontspanning. Die bier is gesonder as wyn.”*

[Honey beer is made from the roots, which is used medicinally for relaxation. The beer is healthier than wine.]

4.2. **Literature**

No medicinal uses have been recorded in literature.
25. *Conyza scabrida*

1. Taxonomic data

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Conyza scabrida* DC.

1.3. **Synonyms:**
- *Baccharis ivaefolia* L.
- *Conyza ivifolia* (L.) Less.
- *Conyza ivaefolia* [Marloth, 1917][p.62]
- *Pluchea scabrida* DC.

1.4. **Description:** Perennial. Shrub. Ht 0.38-1.2 m. Alt 5-1920 m.

1.5. **Distribution:** B, EC, FS, G, KZN, L, LIM, M, N, NC, NW, S, WC

2. Vernacular names:
- (Smith, 1895) [p.154]: “[i-Savu (African name)], [oonthbosje (Dutch)], oven bush, the Albany gall-sick bush”;
- (Marloth, 1917)[p.62]: “oo`nd`bos”;
- (Marloth, 1917) [p.63]: “oven’bos”;
- (Watt and Breyer-Brandwijk, 1962) [p.1376]: “Albany gall-sick bush, bakbos, bakbossie, bakkabossie, koëlbossie, oondbossie, oven bush, [ndilela (Venda)], [isavu (Xhosa)], [uhlabu, umanzimnyama (Zulu)]”;
- (Rood, 1994) [p.29]: “bakbossie, kruebos, oondbossie”; (Hutchings et al., 1996) [p.315]: “bak(besem)bossie, galsiektebossie, kouebos, oven bush, [uhlabo, umanzimnyama; (Zulu)]”;
- (De Beer and Van Wyk, 2011): “meidebos, perskebos; oondbos; oondbesembos”;
- (GK. 2011, pers. comm.): “fonteinbos”

3. Herbarium specimen: [NV25], (Appendix 3 - Figure 25)

4. Recorded medicinal uses

4.1. Kamiesberg
- (AST. 2010, pers. comm.): “Medisyne vir alles, veral vir rugprobleme, nie eintlik bitter nie; kook en drink hom. Gebruik vir suiker, vrouemedisyne [mengsel van vrouebos (onbekende spesie), t`ôrro (*Anignon difforme*) en aambeibos (*Chironia baccifera*)].”
  [Medicine for everything, especially for backache. Used for diabetes and as remedy for women`s ailments - in combination with vrouebos (unknown species), t`ôrro (*Anignon difforme*) and aambeibos (*Chironia baccifera*)-]

- (AW. 2011, pers. comm.): “Gebruik vir brand-voete, `n aftreksel word as `n wasmiddel gebruik, hou die voete in die aftreksel.”
  [Infusion used as wash for burning feet.]

- (GD. 2010, pers. comm.): “Vir goddelike siekte, koors en vuiligheid.”
  [Used as medicine for “godly illnesses”(?), fevers and for internal impurities.]
4.2. Literature
(Smith, 1895) [p.154]; (Marloth, 1917)[p.62]; (Githens, 1948) [p.84]; (Watt and Breyer-Brandwijk, 1962) [p.221]; (Rood, 1994) [p.29]; (Hutchings et al., 1996) [p.315]; (Anonymous, 1998) [p.13]; (Von Koenen, 2001) [p.101]; (Van Wyk et al., 2008) [p.698]; (Van Wyk, 2008) [p.336]; (Van Wyk et al., 2009) [p.102]; (De Beer and Van Wyk, 2011)
26. **Cotyledon orbiculata**

1. **Taxonomic data**

1.1. **Family:** Crassulaceae  
1.2. **Scientific name:** *Cotyledon orbiculata* L.  
1.3. **Synonyms:**  
- *Adromischus mucronatus* (Lam.) Lem.  
- *Cotyledon ausana* Dinter  
- *Cotyledon decussata* Sims  
- *Cotyledon decussata* Sims var. *dielsii* Schltr. ex Poelln.  
- *Cotyledon decussata* Sims var. *hinrichseniana* H.Jacobsen  
- *Cotyledon elata* Haw.  
- *Cotyledon engleri* A.Berger and Dinter  
- *Cotyledon flanaganii* Schönland and Baker f. var. *karroensis* Schönland and Baker f.  
- *Cotyledon mucronata* Lam.  
- *Cotyledon orbiculata* L. var. *ausana* (Dinter) H.Jacobsen, illegitimate name  
- *Cotyledon orbiculata* L. var. *dinteri* H.Jacobsen  
- *Cotyledon orbiculata* L. var. *elata* (Haw.) DC.  
- *Cotyledon orbiculata* L. var. *engleri* (Dinter and A.Berger) Dinter  
- *Cotyledon orbiculata* L. var. *higginsiae* H.Jacobsen  
- *Cotyledon orbiculata* L. var. *hinrichseniana* H.Jacobsen  
- *Cotyledon orbiculata* L. var. *obovata* DC.  
- *Cotyledon orbiculata* L. var. *oophylla* Dinter  
- *Cotyledon orbiculata* L. var. *ramosa* (Haw.) DC.  
- *Cotyledon orbiculata* L. var. *rotundifolia* DC.  
- *Cotyledon orbiculata* L. var. *viridis* Dinter ex Range  
- *Cotyledon ovata* Haw., non Mill.  
- *Cotyledon papillaris* Haw. non L.f.  
- *Cotyledon papillaris* L.f. var. *tricuspidata* (Haw.) DC.  
- *Cotyledon ramosissima* sensu Mill. , non Haw.  
- *Cotyledon tricuspidata* Haw.  
- *Cotyledon undulata* Haw. var. *mucronata* (Lam.) Poelln.  
- *Cotyledon undulata* sensu H.Jacobsen non Haw.  
- *Cotyledon unculata* Lam.

1.4. **Description:** Perennial. Shrub, succulent. Ht about 1 m, 1.25 -1.45 m when in flower. Alt 50-1800 m.

1.5. **Distribution:** EC, N, NC, WC

2. **Vernacular names:** (Pappe, 1868) [p.15]: “varkens ooren, pig`s ears”; (Smith, 1895) [p.128]: “[i-Pewula (African language)]” (Marloth, 1917) [p.40]: “honde` oor”; (Marloth, 1917) [p.52]: “kouterie”; (Marloth, 1917) [p.84]: “varkens oren, pigs ears”; (Phillips, 1917) [p.96]: “[seredile (Sesotho)]; (Watt and Breyer-Brandwijk, 1962) [p.1377]: “hondeoer, konterie, kouterie, oorlam`s plakkie, oukoei, pig`s ear, plaatjies, plakkie, varkoo, varkoorblare, [seredile (Sotho)], [phewula (Xhosa)], [intelezi (Zulu)]”; (Smith, 1966) [p.565]: “koolterie, kotrie, kout(e)rie, varkiesblaar, varkore (leaves), pig`s ears (leaves)”; (Courtenay-Latimer et

3. Herbarium specimen: [PNV65], (Appendix 3 - Figure 26)

4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, pers. comm.): “Vir wonde, mondsere; trek velletjie van die blaar af en sit oor die seer of oor die lip (koorsblare).”

[Used for wounds and mouth ulcers; the outer skin of leaf is removed and the leaf is then placed on the affected area.]

(GB. 2011, pers. comm.): “Sit oop blaar op eelte om die eelt te verwyder.”

[An opened leaf is placed on a callus to remove it.]

(GD. 2010, pers. comm.): “Gebruik vir brandwonde, koorsblare en seer lippe, mondsere; haal die velletjie van die blaar af en trek oor die lip.”

[Used for burns wounds, mouth ulcers and cracked lips; remove skin of leaf and apply.]

(JL. 2011, pers. comm.): “Die blaar word soos ’n trekpleister gebruik vir dorings”

[Used as a poultice (blister-plaster) to remove thorns.]
(LC. 2010, pers. comm.): “As `n soolvrat oopgebreek word kan die velletjie van die pêpêbos afgehaal word en op die vrat gesit word. Die pêpêbos se bloeisteel is gebruik as `n fluitjie, die bloeisteel is geplaas wat `n "pê" geluid gemaak het, dit is gebruik om wild aan te lok. As kinders het ons dit ook as speelgoed gebruik: `n blaar is gevat en `n besemrietjie is deurgedruk, wat gedien het as `n as; dan is twee kleiner blaartjies aan die as gesit, dan was dit `n karretjie. So is daar ook mannetjies en rydinge gebou met die ronde blaartjies gemaak, deur besemrietjies as armpies, beentjies en nek deur die blaar te steek, vir die kop is nog `n kleiner uitgesnyde blaar op die nekkie gesit.”

[The leaf flesh is placed on an open plantar. The flower stalk is also used as a flute; when blown it makes a “pê” sound, which is used to attract game. We also used the leaves to make toys such as cars, men and horses, by taking different sizes of leaves and combine it with reeds.]

(SC. 2011, pers. comm.): “Gebruik soos trekpleister op eelt.”
[Used like a blister-plaster on (a) callus.]

(PD. 2011, pers. comm.): “Vryf die blaar tot die velletjie los gaan en sit die velletjie op die koorsblaar.”
[The “skin” of the leaf is placed on mouth ulcers.]

4.2. Literature
(Pappe, 1868) [p.15, 16]; (Smith, 1895) [p.128]; (Marloth, 1917) [p.52]; (Phillips, 1917) [p.96]; (Githens, 1948) [p.113]; (Watt and Breyer-Brandwijk, 1962); (Smith, 1966) [p.312]; (Courtenay-Latimer et al., 1967) [no.34]; (Jacot Guillarmod, 1971) [p.420]; (Lucas and Pike, 1971) [p.38]; (Roberts, 1983) [p.92]; (Palmer, 1985) [p.87]; (Palmer, 1985) [p.96]; (Roberts, 1985) [p.47]; (Batten, 1986) [p.97]; (Kellerman et al., 1988) [p.134]; (Ellis, 1989); (Roberts, 1992) [p.145]; (Archer, 1994) [p. 66, 78]; (Dyson, 1994) [p.31]; (Rood, 1994) [p.40]; (Shearing and Van Heerden, 1994) [p.72]; (Palmer, 1995) [p.217, 218]; (Hutchings et al., 1996) [p.112]; (Anonymous, 1998) [p.13]; (Cowling and Pierce, 1999) [p.150]; (Van Wyk and Gericke, 2000) [p.106]; (Van Wyk and Gericke, 2000) [p.124, 162]; (Von Koenen, 2001) [p.102]; (Le Roux and Wahl, 2005) [p.159]; (Manning, 2008) [p.82]; (Van Wyk et al., 2009) [p.104]
27. **Crassula muscosa**

1. **Taxonomic data**

1.1. **Family:** Crassulaceae  
1.2. **Scientific name:** *Crassula muscosa* L.

1.3. **Synonyms:**
- *Crassula anguina* Harv.
- *Crassula imbricata* Burm.f.
- *Crassula littoralis* (Eckl. and Zeyh.) Endl. and Walp.
- *Crassula lycopodioides* Lam.
- *Crassula lycopodioides* Lam. var. *pseudolycopodioides* (Dinter) Walther ex H.Jacobsen
- *Crassula pseudolycopodioides* Dinter and Schinz
- *Lycopodium hieronymii* Herter
- *Sedum lycopodioides* (Lam.) Kuntze
- *Tetraphyle littoralis* Eckl. and Zeyh.
- *Tetraphyle lycopodioides* (Lam.) Eckl. and Zeyh.
- *Tetraphyle muscosa* (L.) Eckl. and Zeyh.

1.4. **Description:** Perennial. Herb, succulent. Ht 0.1-0.8 m. Alt 50-1800 m.

1.5. **Distribution:** EC, FS, N, NC, NW, WC


3. **Herbarium specimen:** [NVD10], (Appendix 3 - Figure 27)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
(AB. 2010, pers. comm.): "Gebruik vir maag en vrouedele. Gebruik vir babatjie met maagwerk"
[Used as a treatment for stomach ailments and for women parts. Used for infants with diarrhoea.]

(AST. 2010, pers. comm.): “Vir maag ongesteldhede, loop maag en spysvertering probleme: kook soos tee.”
[Used for stomach complaints, diarrhoea and for digestion problems, use as infusion.]

(EK. 2011, pers. comm.): “Gebruik vir loopmaag by kinders.”
[Used for children with diarrhoea.]

(GD. 2010, pers. comm.): “Gebruik as medisyne, kook vir sere op die kop, was die kop met die water.”
[used as a wash for sores on the scalp (ringworm).]

(JC. 2010, pers. comm.): “Medisyne, pyne by maag (as die maag vas is), jy kook hom.”
[Decoction used for stomach pain and constipation.]

(JvW. 2011, pers. comm.): “Gebruik vir pyn op die maag.”
[Used for stomach ache.]

(SC. 2011, pers. comm.): “Gebruik vir maagpyn.”
[Used for stomach ache.]

(PD. 2011, pers. comm.): “Gebruik vir klein kindertjies wat siek is.”
[Used for infant ailments (unspecified).]

4.2. Literature
(Laidler, 1928) [p.442]; (Githens, 1948) [p.84]; (Watt and Breyer-Brandwijk, 1962) [p. 322]; (Smith, 1966) [p.295, 306]; (Metelerkamp and Sealy, 1983) [p.7]; (Archer, 1994) [p.66]; (Anonymous, 1998) [p.11]; (Cowling and Pierce, 1999) [p.48]; (Von Koenen, 2001) [p.103]; (Anonymous, undated) [p.5]
1. **Taxonomic data**

1.1. **Family:** Solanaceae

1.2. **Scientific name:** *Datura stramonium* L

1.3. **Synonyms:** *Datura tatula* L.

1.4. **Description:** Annual. Shrub or Herb. Ht 0.34-2 m. Alt 45-2380 m.

1.5. **Distribution:** B, EC, FS, G, KZN, L, LIM, M, N, NC, NW, S, WC (naturalised exotic)

2. **Vernacular names:** (Pappe, 1868) [p.30]: "skinkblaren, thorn-apple"; (Smith, 1895) [p.123]: "[um-Hlavutwa (Africa language)], [um-Vumbangwe (Fingo)]"; (Dykman, 1908) [p.191]: "stinkblaar, stramonium"; (Marloth, 1917) [p.66]: "pietjie laporte"; (Marloth, 1917) [p.78]: "blauw stink klaar"; (Phillips, 1917) [p.211]: "[lechoe, letjoi (Sesotho)]"; (Steyn, 1934) [p.358]: "thornapple, white stramonium, mad apple, peru apple, devil’s trumpet, stinkwort, stinkweed, white stinkweed, dewtry, Jamestown weed, Jimson weed, fireweed, jamestown lily, stinkblaar, olieboom, oelieblaar, olieneut, pietjie laporte, [i Logi, i yoli (Zulu)], [lethsowe, mphufi (Suto)], [zaba-zaba (Tonga)], [um Hlavuthwa (Xosa)], [um Vumbangwe (Fingo)]"; (Dalziel, 1936) [p.429]: "green thorn-apple, Jimson (Jamestown) weed, apple of Peru, devil’s apple, devil’s trumpet Stramonium"; (Githens, 1948) [p.67]: “thorn apple”; (Webb, 1948) [p.153]: “common thorn apple, stramonium”; (Watt and Breyer-Brandwijk, 1962) [p.1383]: “apple of peru, blou stinkblaar, common stramonium, devil’s apple, devil’s trumpet, dewtry, fireweed, goat apple, jimestown lily, jamestown weed, jimson weed, mad apple, olieblaar, olieboom, olieneut, pietjie Laporte, purple jimson weed, purple stinkweed, purple stramonium, purple thornapple, steekappel, stinkblaar, stinkroot, stinkweed, stinkwort, thornapple, white stinkweed, white stramonium, [umvumbangwe (Fingo)], [leza bazaba (Lobedu)], [chohwa (Shona)], [lethsowe, lethswowi, mphufi (Sotho)], [lechoe, letjoi, mokhurana (Southern Sotho)], [zaba zaba (Tonga)], [umhlavuthwa (Xhosa)], [iloqi, iyoli (Zulu)]; (Wright, 1963) [p.150]: “devil’s apple”; (Smith, 1966) [p.602]: “bloustinkblaar, doringsappel, dotter, makolieboom, olieblaar, olieboomneut, pietjie laporte, stinkolieboom, stink(olie)blaar, stramonium, prickly apple, purple stink weed, stink thorn apple”; (Roberts, 1983) [p.137]: “thorn apple, stinkblaar, olieboom, [iloqi (Zulu)], [Lethsowi (Sotho)]”; (Chiej, 1984) [no.111]: “thornapple”; (Palmer, 1985) [p.90]: “stinkblaar, thornapple”; (Roberts, 1985) [p.154]: “thorn apple”; (Kellerman et al., 1988) [p.82]: “thorn apple, moon flower, stinkblaar, olieboom”; (Rood, 1994) [p.96]: “bloustinkblaar, doringsappel, dotter, makolieboom, pietjie laporte”; (Shearing and Van Heerden, 1994) [p.130]: “stromonium, stinkblaar, olieboom”; (Hutchings et al., 1996) [p.280]: “apple of Peru, bloustinkblaar, dotter, Jimson weed, makolieboom, pietjie laporte, prickly apple, (purple) stink weed, stinkblaarwort, stramonium, thorn apple, [i Logi, iyoli (elimhlope), iyoye, iyoyi (Zulu)]”; (Anonymous, 1998) [p.15]: “stinkblaar, thorn apple”; (Van Wyk and Gericke, 2000) [p.104]: “common thorn apple”; (Van Wyk and Gericke, 2000) [p.162]: “common thorn apple, gewone stinkblaar, malpitte, [i Logi, umhlavuthwa (Zulu)], [lethsowe (Sotho)]; [lechoe (Southern Sotho)], [zaba zaba (Tsonga)]; (Von Koenen, 2001) [p.108]: “thorn apple, pers stinkblaar, steekappel, [Gemeiner Stechapfel (German)], [otjitaue (Herero)], [eguitha (Ndonga)]; (Powrie, 2004) [p.82]: “olieboom”; (Van Wyk et al., 2008) [p.701]: “olieboom”; (Van Wyk et al., 2009) [p.114]: “stinkblaar, thornapple, lethsowe, lechoe (Sotho)], [zaba zaba (Tsonga)], [i Logi, umhlavuthwa (Xhosa)],
3. Herbarium specimen: [PNV67], (Appendix 3 - Figure 28)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “t`kom (plak/ kompres) die blare op pyne.”
[Leaves used as compress on pains.]

(AST. 2010, 2011, pers. comm.): “Die blare word gebruik vir wonde. Die saadjies word fyn
gemaal as medisyne vir bloedvinte. Die blare word ook gebruik soos kompres vir pyn. ’n Salf
van die sade word gebruik vir knoppe in die nek, om dit te laat deurbreek.”
[The leaves used as compress on wounds and on pain. The seeds are ground and used for
boils. An ointment is used for lumps in the neck, to help drainage.]

(GD. 2010, pers. comm.): “Die blare word gebruik vir brandsere. Die pitte word gebrand,
laat dit afkoel, maal fyn en meng met vet vir ’n salf, wat gebruik kan word om op brandwonde te
sit.”
[The leaves are used as compress on burn wounds. The seeds are roasted, ground and
mixed with fat to make an ointment for burn wounds.]

(MJ. 2010, pers. comm.): “Baie goed vir pyne, t`nou (bedek, dokter, pleister); die blare word
by kole warm gemaak, op die pyne vir verligting.”
[Warmed leaves are used as compress (cover = t`nou) on pains for relief.]

4.2. Literature

(Pappe, 1868) [p.30]; (Smith, 1895) [p.123]; (Dykman, 1908) [p.191]; (Marloth, 1917) [p.78];
(Phillips, 1917) [p.211]; (Steyn, 1934) [p.358]; (Dalziel, 1936) [p.429]; (Githens, 1948) [p.56,
67]; (Webb, 1948) [p.153]; (Watt and Breyer-Brandwijk, 1962) [p.811, 946, 947, 948, 951,
952, 953, 955, 956, 960, 961]; (Wright, 1963) [p.150]; (Smith, 1966) [p.336]; (Roberts, 1983)
[p.137]; (Chiej, 1984) [no.111]; (Gelfrand et al., 1985) [p.217, 218]; (Palmer, 1985) [p.90, 95,
151, 154]; (Kellerman et al., 1988) [p.82]; (Abbiw, 1990) [p.132, 192, 220]; (Rood, 1994)
[p.96]; (Shearing and Van Heerden, 1994) [p.130]; (Hutchings et al., 1996) [p.280];
[p.108]; (Van Wyk et al., 2008) [p.701]; (Van Wyk et al., 2009) [p.114]
29. *Dianthus micropetalus*

1. **Taxonomic data**

1.1. **Family:** Caryophyllaceae

1.2. **Scientific name:** *Dianthus micropetalus* Ser.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Herb. Ht 0.1-0.44m. Alt 600-2200m

1.5. **Distribution:** B, EC, FS, G, NC, NW, WC


3. **Herbarium specimen:** [PNV68], (Appendix 3 - Figure 29)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, 2011 pers. comm.): "Die droë wortel kan gesnuwe word vir paljas, gebruik dit soos `n tee vir maagprobleme." [The dry root is used as a snuff for magic; and an infusion is used for stomach ailments.]

(GD. 2010, pers. comm.): "Die wortel word gemaal en gesnuif as maag medisyne." [The ground root is used as snuff for stomach ailments.]

(JvW. 2010, 2011 pers. comm.): "Veroorsaak braking en word ook gebruik vir die maag." [Cause nausea and is used for stomach ailments.]

4.2. **Literature**

(Watt and Breyer-Brandwijk, 1962) [p.175, 898]; (Palmer, 1985) [p.145]; (Shearing and Van Heerden, 1994) [p.68]; (Van Wyk et al., 2008) [p.698]
30. Dicoma capensis

1. Taxonomic data

1.1. Family: Asteraceae

1.2. Scientific name: Dicoma capensis Less.

1.3. Synonyms: No

1.4. Description: Perennial. Herb, prostate. Lenth up to 0.6 m. Alt 155-1385 m.

1.5. Distribution: B, EC, FS, N, NC, S, WC


3. Herbarium specimen: [PNV69], (Appendix 3 - Figure 30)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010,2011, pers. comm.): “Ken hom baie goed, word saam met jantjiebêrend (Sutherlandia frutescens) gebruik vir verkoue, koors en griep; die blare word gebruik vir maagpyn.”

[I know it very well; the leaves are used, together with jantjiebêrend (Sutherlandia frutescens) for colds, influenza, fevers and also stomach ache.]

(AST. 2010, pers. comm.): “Die blare word afgetrek soos ’n tee (baie bitter), as medisyne vir griep, rumatiek, koors, niere- en rug problem; kook saam met ander goed.”

[Leaf infusion with other plants used for influenza, rheumatism, fever, kidney- and back problems.]

(AW. 2011, pers. comm.): “Gebruik vir koors, verkoue en griep.”

[Used for fever, colds and influenza.]
An infusion is used for stomach ache and fever.

Used for fever and also for influenza.

Infusion used for fever.

Used as women’s medicine, for kidney- and bladder ailments.

A decoction or infusion is used as women’s medicine, to expel a retained placenta.

Used with jantjiebêrend for fever, influenza, flatulence and diabetes.

Used in combination with other medicinal plants for the treatment of fever and influenza.

Used for the treatment of asthma, tuberculosis, cancer, influenza and fever.

A decocotion of the plant is used for colds and influenza. Mieta Josephs (wife of Jakobus Joseph) gave me as child koorsbos as an infusion for influenza.

Used for all ailments (unspecified.).

Good medicine; used for colds, fever and influenza.
4.2. Literature
31. *Diospyros austro-africana*

1. **Taxonomic data**

1.1. **Family:** Ebenaceae

1.2. **Scientific name:** *Diospyros austro-africana* De Winter var. *austro-africana*

1.3. **Synonyms:** *Royena hirsuta* L.

1.4. **Description:** Perennial. Shrub. Ht 0.6-3 m. Alt 80-1750 m.

1.5. **Distribution:** FSA, NC, SA, WC


3. **Herbarium specimen:** [PNV71], (Appendix 3 - Figure 31)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2011, pers. comm.): “Kook as purgeermiddel.”

[A decoction is used as purgative.]

(AST. 2010, pers. comm.): “Vasmaag, hardlywigheid en gal- trek soos `n tee, gebruik soos `n purgasie middel”

[Leaf infusion used for the treatment of constipation, as a purgative and for treating excessive bile.]

(AW. 2011, pers. comm.): “Gebruik vir `n openyf (purgeermiddel).”

[Used as purgative.]

(EK. 2011, pers. comm.): “Kook die blare vir hardlywigheid.”

[Leaf decoction used for constipation.]
(GB. 2011, pers. comm.): “Maagmiddel, om die maag te spoel (purgeermiddel).”
[Used as purgative.]

(GD. 2010, pers. comm.): “Medisyne, werk om maag skoon te maak.”
[Used as a purgative.]

(GB. 2011, pers. comm.): “Die bessie maak die maag los (purgeermiddel).”
[Used (the berry) as purgative.]

(JC. 2010, pers. comm.): “Vir hardlywigheid word die blare afgetrek.”
[The leaves are used as an infusion for constipation.]

(JB. 2011, pers. comm.): “Gebruik vir vasmaag en winde.”
[Used for constipation and flatulence.]

(JL. 2011, pers. comm.): “Gebruik om maag los te maak.”
[Used as purgative.]

(JvW. 2011, pers. comm.): “Blare en bessies gekook vir hardlywigheid.”
[Decoction of leaves and berries used for constipation.]

(JW. 2010, pers. comm.): “Ek het die bessies geëet toe ek kind was, dis soet. Dis `n vee tak. Jy kan hom aftrek as jy hardlywig is, dan maak hy jou warm.”
[The fruits are edible, it has a sweet taste. The branches can be used as a broom. Used as medicine for constipation.]

(LC. 2010, pers. comm.): “Dis `n vee-tak, om mee te vee. Ons het as kinders mekaar gevertel dis giftig, maar ek weet nie hoekom nie, ons het dit nie by die groot mense gehoor nie, seker maar omdat hy so bietjie bitter is.”
[Branches can be used as a broom. As children we thought it was poisonous, but I don't know why, perhaps because it is slightly bitter.]

(MG. and MJ. 2010, pers. comm.): “Goeie medisyne, vir die niere, is uriendrywend- word afgetrek soos `n tee.”
[Infusion used for kidney ailments as diuretic.]

(ML. 2010, pers. comm.): “Gebruik as purgasiemiddel.”
[Used as a purgative.]

(PD. 2011, pers. comm.): “Kook blare vir verkoue, meng met t’noubie.”
[A leaf decoction with t’noubie is used for colds.]

(SC. 2011, pers. comm.): “Gebruik vir maagpyn, stop diarrhoea, maak `n tee van die blare.”
[A leaf infusion is used for stomach ache and diarrhoea.]
4.2. Literature
(Marloth, 1917) [p.50]; (Laidler, 1928) [p.444]; (Shapera, 1930) [p.412]; (Githens, 1948) [p.102]; (Watt and Breyer-Brandwijk, 1962) [p.393]; (Smith, 1966) [p.310]; (Van Wyk et al., 2008) [p.698]
32. *Diosma acmaeophylla*

1. **Taxonomic data**

1.1. **Family:** Rutaceae

1.2. **Scientific name:** *Diosma acmaeophylla* Eckl. and Zeyh

1.3. **Synonyms:**

1.4. **Description:** Perennial. Shrub, dwarf shrub. Ht 0.5-2.5 m. Alt 120-1800 m

1.5. **Distribution:** NC, WC

2. **Vernacular names:** (Le Roux and Wahl, 2005) [p.200]: “ribbokboegoe, valsboegoe”;

   (AST. 2011, pers. comm.): “t’ouda, boegoe”;

   (CC. 2011, pers. comm.): “t’adou”;

   (JL. 2011, pers. comm.): “boegoe”;

   (LC. 2011, pers. comm.): “valsboegoe”;

   (SC. 2011, pers. comm.): “t’adou”;

   (SW. 2011, pers. comm.): “boegoebos”

3. **Herbarium specimen:** [NV40], (Appendix 3 - Figure 32)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

   (AST. 2010, pers. comm.): “Word gebruik saam met wildeals, ‘n stroop word gemaak vir
griep. Gebruik vir ‘n knaende hoes.”

   [Used with wildeals (*Artemisia afra*) as a syrup, for the treatment of influenza. Used for a
persistent cough.]

   (JvW. 2011, pers. comm.): “Word gemeng met moedersmelk vir babatjies se winde.”

   [Mixed with mother’s milk to treat flatulence in infants.]

4.2. **Literature**

No medicinal uses have been recorded in literature.
33. *Ditrichia graveolens***

1. **Taxonomic data**

   1.1. **Family:** Asteraceae
   1.2. **Scientific name:** *Ditrichia graveolens* (L.) Greuter
   1.3. **Synonyms:**
      - *Erigeron graveolens* L.
      - *Inula graveolens* (L.) Desf.
   1.4. **Description:** Perennial. Shrub. Ht 0.45-0.9 m. Alt 15-300 m.
   1.5. **Distribution:** WC (naturalised exotic)

2. **Vernacular names:** (Watt and Breyer-Brandwijk, 1962) [p.1405]: "kakiebos, khakibush, khaki weed, stink weed, stink wort"; (Kellerman et al., 1988) [p.213]: “Cape khakiweed”; (AST. 2011, pers. comm.): “kakiebos”

3. **Herbarium specimen:** [NV108], (Appendix 3 - Figure 33)

4. **Recorded medicinal uses**

   4.1. **Kamiesberg**
      (AST. 2011, pers. comm.): “Die takkies en blare word gebruik vir suiker probleme en hoë bloeddruk.”
      [Leaf and twig infusion are used for diabetes and high blood pressure.]

   4.2. **Literature**
      (Watt and Breyer-Brandwijk, 1962) [p.241]; (Kellerman et al., 1988) [p.213]
34. **Dodonaea viscosa var. angustifolia**

1. **Taxonomic data**

1.1. **Family:** Sapindaceae

1.2. **Scientific name:** *Dodonaea viscosa* Jacq. var. *angustifolia* (L.f.) Benth

1.3. **Synonyms:**
- *Dodonaea angustifolia* L.f.
- *Dodonaea viscosa* Jacq. subsp. *angustifolia* (L.f.) J.G.West
- *Dodonaea thunbergiana* Eckl. & Zeyh. (see A.E. Van Wyk et al., 2011)

1.4. **Description:** Perennial. Tree, shrub. Ht 0.8-9 m. Alt 15-1525 m

1.5. **Distribution:** B, LIM, NW, G, M, S, KZN, NC, WC, EC

2. **Vernacular names:**


3. **Herbarium specimen:** [PNV72], (Appendix 3 - Figure 34)
4. Recorded medicinal uses

4.1. Kamiesberg

(AB, 2010, pers. comm.): “t`noubie word gemeng met bergsalie/ bêrsalie (Salvia dentata) en bokmis wat gekook word en gebruik word as medisyne vir masels, pokkies, koors en vir griep.”
[Leaves used for influenza, a leaf decoction with bergsalie/bêrsalie and goat dung used to treat measles, chicken pox and fever.]

[Leaf infusion used to treat influenza and colds.]

(AW, 2011, pers. comm.): “Laat slaap jou lekker, gebruik vir griep, verkoue, kook saam met jantjiebêrend, kattekruid en vieroulap.”
[A decoction with jantjiebêrend, kattekruid and vieroulap is used for insomnia, influenza and colds.]

(CC, 2011, pers. comm.): “Kook vir koors en griep.”
[A decoction is used for fever and influenza.]

(EK, 2011, pers. comm.): “Verkoue medisyne (kook saam met suiker, dit laat jou erg sweet.”
[Mdeicine for colds; decoction with sugar; it is strongly diaphoretic.]

(GB, 2011, pers. comm.): “Die blare aftrek vir griep.”
[A leaf infusion is used for influenza.]

(GD, 2010, pers. comm.): “t`noubee is medisyne, word saam met bokmis en jantjie-bêrend (Sutherlandia frutescens) gekook vir masels.”
[Leaf decoction with goat dung and jantjiebêrend (Sutherlandia frutescens), as remedy for measles.]

(GJ., JJ., PD, 2010, pers. comm.): “Jantjiebêrend, taaiboom blare en t`noubee blare is saam gebruik vir griep. t`noubee (ysterhout), taaibos blare, bloublomsalie en bokmis kan ook saam gekook word om vir waterpokkies te gebruik.”
[Jantjiebêrend, taaibos leaves and t`noubee are mixed together and used as medicine for influenza. A leaf decoction of t`noubee leaves, taaibos leaves, bloublomsalie and goat dung is used to treat chicken-pox.]

(GK, 2011, pers. comm.): “As kompres op kop vir koppyn, afgetrek gebruik vir griep, koors kom uit, sweet.”
[Used as compress on head for headache, infusion used for influenza and drive out fever; diaphoretic.]

(JC, 2010, pers. comm.): “n Goeie medisyne, vir griep en verkoues, ek het sommer die blare geëet, trek hom ook af.”
[The leaves can be chewed or infused as a tea for influenza and colds.]

(JB, 2011, pers. comm.): “Gebruik vir koors, saam met bokmis.”
[Used for fever with goat dung.]

(JL. 2011, pers. comm.): “Gebruik vir verkoues en griep.”
[Used for colds and influenza.]

(JvW. 2011, pers. comm.): “Gebruik vir griep (blare gekook met twee disprins), laat jou sweet.”
[Leaf decoction (with two aspirins) used for influenza, cause perspiration.]

(JW. 2010, pers. comm.): “Blare vir verkoue en griep; eet die blare of trek soos ‘n tee.”
[The leaves are used for colds and influenza; the leaves can be chewed or infused as a tea.]

(LC. 2010, pers. comm.): “Die medisyne vir ons, blare vir griep en verkoue, maar eintlik vir masels; vir masels is dit gemeng met ‘n handjie bokmis (maar ma het nie dit gebruik.).”
[Leaves used for the treatment of colds, influenza and especially for measles - it is mixed with a small handful of goat dung (my mother did not use the latter).]

(MJ. and MG. 2010, pers. comm.): “t’ noubee word as medisyne gebruik vir griep, soos ‘n tee. Om slyme op die bors los te maak word die kooksel gemeng met suiker om ‘n stroop te kry. Gemmer kan ook by gesit word, om die bitter smaak minder te maak. Die groen blare word gebruik vir verkoue, bors en koors.”
[A leaf infusion used for influenza, a syrup with sugar and ginger used for mucus on the lungs (coughs), an infusion of green leaves are used for colds, chest problems and fever.]

(PD. 2011, pers. comm.): “Belangrike medisyne.”
[Important medicine (unspecific).]

(PR. 2011, pers. comm.): “Gebruik vir griep.”
[Used for influenza.]

(SC. 2011, pers. comm.): “Die blare word as tee gebruik vir griep.”
[Infusion used for the treatment of influenza.]

(SW. 2011, pers. comm.): “Die blare word gekook en gebruik vir griep.”
[A leaf decoction is used for influenza.]

4.2. Literature
(Pappe, 1868) [p.4]; (Dykman, 1908); (Marloth, 1917) [p.42]; (Kling, 1923) [p.12, 13];
(Laidler, 1928) [p.442]; (Githens, 1948) [p.53]; (Watt and Breyer-Brandwijk, 1962) [p.931];
(Smith, 1966) [p.409]; (Archer, 1990) [p.967]; (Pooley, 1993) [p.292]; (Rood, 1994) [p.94];
[p.113]; (Le Roux and Wahl, 2005) [p.210]; (Van Wyk, 2008) [p.336]; (Van Wyk et al., 2008)
[p.698]; (Van Wyk et al., 2009) [p.122]; (De Beer and Van Wyk, 2011); (Wileman, undated)
[p.12].
35. *Elytropappus rhinocerotis*  

(= *Dicerothamnus rhinocerotis* (L.f.) Koekemoer)

1. Taxonomic data

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Elytropappus rhinocerotis* (L.f.) Less.

1.3. **Synonyms:**  
- *Elytropappus cernuus* (Thunb.) Fourc.
- *Elytropappus rhinocerotis* (L.f.) Less.
- *Seriphium adpressum* DC.
- *Stoebe cernua* Thunb.
- *Stoebe cupressina* Rchb.
- *Stoebe rhinocerotis* L.f.

1.4. **Description:** Perennial. Shrub, dwarf shrub. Ht 0.4-1.6 m. Alt 200-1900 m.

1.5. **Distribution:** EC, NC, WC

2. Vernacular names:  
- (Pappe, 1868) [p.25]: “rhinosterboschjes”  
“renosterbos”; (SW. 2011, pers. comm.): “renosterbos”; (PD. 2011, pers. comm.):
“renosterbos”; (PR. 2011, pers. comm.): “t’kau, renosterbos”;

3. Herbarium specimen: [PNV73], (Appendix 3 - Figure 35)

4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, pers. comm.): “Renosterbos is gebruik om winde uit te kry, dit is ook gekook en
gebruik vir bene wat pyn en om brandvoete in te was.”
[Used for flatulence and for painful legs and as wash for burning feet.]

(AW. 2011, pers. comm.): “Gebruik vir verkoue, en wintersvoete, sit nat in skoene, haal die
jeuk uit.”
[Used for influenza, and chilblained feet; fresh leaves placed in shoes, it alleviates the itch.]

(EK. 2011, pers. comm.): “Kook vir medisyne, pleister vir seer rug (kompres).”
[Used as compress for back ache.]

(GD. 2010, pers. comm.): “Gebruik maar min, vir vuil winde.”
[Used infrequently; for flatulence.]

(GJ., JJ., PD. 2010, pers. comm.): “Meng anosterbos met jantjiebêrend (Sutherlandia
frutescens) as medisyne vir suikersiekte”
[Leaves mixed with jantjiebêrend (Sutherlandia frutescens) used for diabetes.]

(GK. 2011, pers. comm.): “Gebruik vir rumatiek as was.”
[Used as wash for rheumatism.]

(JB. 2011, pers. comm.): “Gebruik vir winde.”
[Used for flatulence.]

(JvW. 2011, pers. comm.): “Gebruik vir brandvoete en oumens kliere.”
[Used for burning feet and to treat glandular ailments in the elderly.]

(JW. 2010, pers. comm.): “(Nie rivierrenoster nie). Baai jou voete - kook water en baai jou
voete in hom; ook vir swelsels, haal voete uit en droog hulle nie af nie, laat die voete self
droog.”
[Not rivierrenoster. Leaf decoction used as a wash for painful and swollen feet; leave feet to
drip dry.]

(JL. 2011, pers. comm.): “Sit in skoene vir stink voete.”
[Used in shoes for sweaty feet with a bad odour.]

(LC. 2011, pers. comm.): “Gebruik vir kopsere, hare afspoel.”
[Used as wash for sores on scalp.]
(MJ. and MG. 2010, pers. comm.): “Word gebruik vir brandende voete en vir sweet voete; die vars blare word in die skoene gepak, wat die voete dan afkoel.”
Leaves are placed in the shoes for burning, painful and sweaty feet; it cools the feet.

(PR. 2011, pers. comm.): “Medisyne.”
Used as medicine (unspecified).

4.2. Literature
(Pappe, 1868) [p.25]; (Marloth, 1917) [p.69, 70]; (Dykman, 1908); (Kling, 1923); (Watt and Breyer-Brandwijk, 1962) [p.226]; (Smith, 1966) [p.387]; (Palmer, 1985) [p.97, 88, 146]; (Roberts, 1992) [p.159]; (Rood, 1994) [p.30]; (Shearing and Van Heerden, 1994) [p.164]; (Palmer, 1995) (p.217); (Anonymous, 1998) [p.15]; (Van Wyk and Gericke, 2000) [p.126]; (Le Roux and Wahl, 2005) [p.273]; (Van Wyk, 2008) [p.336]; (Van Wyk et al., 2008) [p.698]; (Van Wyk et al., 2009) [p.134]; (Wileman, undated) [p.5]
36. Eriocephalus punctulatus

1. Taxonomic data
1.1. Family: Asteraceae
1.2. Scientific name: Eriocephalus punctulatus DC.
1.3. Synonyms:
   - Eriocephalus punctulatus DC. var. brevifolius DC.
   - Eriocephalus punctulatus DC. var. pedicellaris (DC.) Harv.
   - Eriocephalus punctulatus DC. var. tenuifolius (DC.) Harv.
1.4. Description: Perennial. Shrub. Ht. 0.5-1.5 m. Alt 300-2000m
1.5. Distribution: NC, WC


3. Herbarium specimen: [NV26], (Appendix 3 - Figure 36)

4. Recorded medicinal uses
4.1. Kamiesberg
   (AB. 2010, pers. comm.): “Saam met kraalbos word dit gebruik vir kolle op die kop.” [Leaf infusion with kraalbos used as wash for ringworm on scalp]

   (JB. 2011, pers. comm.): “Gebruik vir borsmoeilikheid.” [Used for chest ailments.]

   (JvW. 2011, pers. comm.): “Gebruik vir rug, gal en vaal kolle op kinders se kop saam met hotnotskooigoed.” [Used with hotnotskooigoed (Helichrysum odoratissimum) for back problems, biliousness and ringworm in children.]

4.2. Literature
   (Phillips, 1917) [p.139]; (Watt and Breyer-Brandwijk, 1962) [p.228]; (Jacot Guillarmod, 1971) [p.426]; (Shearing and Van Heerden, 1994) [p.156].
37. *Eriocephalus* spp.

1. Taxonomic data

1.1. Family: Asteraceae


3. Herbarium specimen: (Appendix 3 - Figure 37)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Kook hom en was `n kind kind se kop daarmee vir omlope en kaal kolle op die kop.”
[Leaf decoction with used as wash for ringworm.]

(AST. 2011, pers. comm.): “Gebruik vir sere en vaal kolle op `n kind se kop, kook en drink a aftreksel en ook as was.”
[Used as decoction and wash for sores on children’s scalp and ringworm.]

(AW. 2011, pers. comm.): “Die olie word gebruik vir hare.”
[The oil is used as hair product.]

(JC. and JW. 2010, pers. comm.): “Gebruik as hare uitval, maak die blare droog, maal fyn en maak ‘n salf (meng met vaselien), wat jy dan aan jou hare smeer. Dit kan ook gekook word en dan jou kop daarmee was. Hy laat groei jou hare. ‘n Vrou het by my gekom wat nie hare op haar kop het nie, toe maak ek salf wat sy gebruik het toe kom wys sy my haar lang hare.”
[Can be used to treat hair loss. The leaves are used as wash, or dried and powdered and mixed with Vaseline, as ointment used to treat hair loss (it helps to let your hair to grow). I successfully treated a women with hair loss with this ointment.]

(JL. 2011, pers. comm.): “Gebruik vir vaal kolle op die kop.”
[Used for ringworm.]
(JvW. 2011, pers. comm.): “Gebruik vir rug, gal en vaal kolle op kinders se kop saam hotnotskooigoed.”
[Used with hotnotskooigoed for back problems, biliousness and ringworm in children.]

(LC. 2010, pers. comm.): “Hare van die meisies is daarmee afgespoel, sommer vir die lekker. Toe sê my pa dit is ook as medisyne vir griep en verkoues gebruik. As medisyne vir koors gebruik. Sere en skifers (soos shampoo) op die kopvel, spoel af met die roosmaryn dan maak dit gesond. Die olie van die plant kan ook in `n briedie gebruik word.”

[Girls used to rinse their hair with an extraction of the plant. My dad said it is also a medicine for colds, influenza and fever. Used as wash (like shampoo) for sores on scalp, and dandruff. The oil of this plant can also be used in a stew.]

(MJ. and MG. 2010, pers. comm.): “Braai die blommetjies en blare uit in vet of olie. Dit kan gebruik word as haar behandeling middel, om lewendige, sagte en glansende hare te kry.”
[flowers and leaves grilled in fat or oil can be used to treat hair.]

4.2. Literature
(Scott and Hewett, 2008) [p.347]
38. *Eucalyptus sideroxylon***

1. **Taxonomic data**

1.1. **Family:** Myrtaceae  
1.2. **Scientific name:** *Eucalyptus sideroxylon* A.Cunn.  
1.3. **Synonyms:** No  
1.4. **Description:** Perennial. Tree. Ht up to 10 m. Alt 1300-1500 m  
1.5. **Distribution:** FS (naturalised) (exotic species cultivated as ornamental tree).


3. **Herbarium specimen:** [NV109], (Appendix 3 - Figure 38)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
(AST. 2011, pers. comm.): “Die blare word soos `n tee gebruik vir verkoue.”  
[Leaves used as infusion for colds.]

(AW. 2011, pers. comm.): “Die blare word afgetrek vir griep.”  
[Leaf infusion used for influenza.]

(CC. 2011, pers. comm.): “Word as `n tee gebruik, saam met jantjiebêrend vir griep. Gebruik ook saam met taabios vir hoes en koors.”  
[An infusion with *jantjiebêrend* used for influenza; also used with *taabios* for coughs and fever.]

4.2. **Literature**  
No medicinal uses have been recorded in South Africa of this species (*Eucalyptus globulus* is widely used).
39. *Euphorbia mauritanica*

1. **Taxonomic data**

1.1. **Family:** Euphorbiaceae

1.2. **Scientific name:** *Euphorbia mauritanica* L. var. *namaquensis* N.E.Br.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Shrub, succulent. Ht 0.06 - 1m. Alt 40-1200m.

1.5. **Distribution:** N, NC


3. **Herbarium specimen:** [PNV74], (Appendix 3 - Figure 39)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “n Staanvuur kan van hom gemaak word en hy word ook gebruik vir skemmbou en om vratjies af te haal.”

[Used to make fire and to build cooking shelters; latex used to remove warts.]

(AST. 2010, pers. comm.): “Vratte en bruin kolle op jou hande en gebruik vir hinderlike/ontsteekte moesie.”

[Latex used to remove warts and spots of dark skin pigmentation on hands; also for troublesome/infamed moles.]

(EK. 2011, pers. comm.): “Gebruik sap op vratte en moesies, het op eie dogtertjie gebruik.”

[The latex is used for removing moles and warts; used on own daughter.]

(GK. 2011, pers. comm.): “Gebruik om moesies af te sit, en ook om vratte af te haal; vir vratte is ‘n garing toutjie om die vrat gebind, tot hy afval.”

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4.2. Literature

(Van Wyk et al., 2008) [p.698]

[Used to remove moles and warts.]

(JvW. 2011, pers. comm.): “Die melksap word gebruik om vratte af te haal.”

[Latex used to remove warts.]

(MG. and MJ. 2010, pers. comm.): “Kan blindheid veroorsaak; vratjies kan ook afgesny word en dan kan jy hom aansit, die vratjie groei nie weer nie.”

[Can cause blindness; can cut off warts and apply to prevent regrowth.]
40. *Euryops lateriflorus*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Euryops lateriflorus* (L.f.) DC.

1.3. **Synonyms:**
   - *Euryops pearsonii* E.Phillips
   - *Jacobaeastrum lateriflorum* (L.f.) Kuntze
   - *Jacobaeastrum subsessile* (Sch.Bip.) Kuntze
   - *Othonna lateriflora* L.f.

1.4. **Description:** Perennial. Shrub. Ht 0.3-2.5m. Alt 100-1917m.

1.5. **Distribution:** EC, FS, N, NC, WC


3. **Herbarium specimen:** [NV110], (Appendix 3 - Figure 40)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AB., JB. 2011, pers. comm.): “die gom word soos `n pleister op `n sweer of fyt gesit.”
   [The resin is used like a plaster on a sore or to treat whitlow.]

   (GK. 2011, pers. comm.): “gebruik om te kou vir `n seer tand, trek die harpuis af vir maagpyn.”
   [The resin is chewed to treat toothache and taken as decoction for stomach ache.]

4.2. **Literature**
   No medicinal uses have been recorded.
41. *Felicia* sp.

1. **Taxonomic data**

   1.1. **Family:** Asteraceae

2. **Vernacular names:** (AST. 2011, pers. comm.): “teebossie, vaalbossie”

3. **Herbarium specimen:** [PNV107], (Appendix 3 - Figure 41)

4. **Recorded medicinal uses**

   4.1. **Kamiesberg**
   
   (AST. 2011, pers. comm.): “die plant word afgetrek om bloederige stoelgang mee te behandel.”
   [Infusion used for blood in the stool.]

   (MG., MJ., 2011, pers. comm.): Gebruik vir maagpyne en seer rug
   [Used for stomach ache and back pain.]

   4.2. **Literature**
   
   No medicinal uses have been recorded in literature.
42. Galenia africana

1. Taxonomic data

1.1. Family: Aizoaceae

1.2. Scientific name: *Galenia africana* L.

1.3. Synonyms:
- *Galenia africana* L. var. *halimifolia* Fenzl ex Sond.
- *Galenia africana* L. var. *pentandra* Hiern
- *Galenia africana* L. var. *secundata* Adamson
- *Galenia linearis* Thunb.
- *Galenia namaensis* auct. non Schinz
- *Galenia tenuifolia* Salisb.

1.4. Description: Perennial. Shrub. Ht 0.5-1.5m.

1.5. Distribution: EC, FS, N, NC, WC


3. Herbarium specimen: [PNV75], (Appendix 3 - Figure 42)

4. Recorded medicinal uses
4.1. Kamiesberg

(AB, 2010, pers. comm.): “Kook die takkies en die blare en gebruik as was vir sere vir die kind se kop.”
[An infusion is used as wash to treat sores on a child’s scalp (ringworm).]

(AST, 2010, pers. comm.): “Kapokbos word saam met kraalbos gebruik vir omlope (wit kaal kolle op die kop), sere en droë kopvel om dit mee te was; wonde kan ook daarmee gewas word. Kan blindheid by skape veroorsaak en as die vee te veel daarvan eet kry hulle waterpens. Drink ook om bloed te suiwer.”
[A leaf decoction with *kapokbos* (*Eriocephalus* sp.) is used as wash for treatment of sores on head, ringworm, dry scalp and wounds. It can cause blindness in sheep as well as a condition called *waterpens*. An infusion is used as blood purifier.]

(AW, 2010, pers. comm.): “`n Takkie word in gat van `n tand gesit – vir tandpyn; was hare met `n aftreksel van die blare en takkies vir vaal kolle.”
[Twig placed in tooth for toothache, and used as wash for ringworm.]

(CC, 2011, pers. comm.): “`n Aftreksel van die plant word gebruik vir vaal kolle op die kop, soos `n shampoo.”
[Used as wash for ringworm.]

(EK, 2011, pers. comm.): “Gebruik as salf of was vir vaal kolle op die kop; sit blaar in die tand vir tandpyn.”
[Used as wash or ointment for ringworm; the leaf can be place in a tooth for treating toothache.]

(GB, 2011, pers. comm.): “Gebruik vir vaal kolle en sere, en as wasmiddel aan die einde van masels.”
[Used as wash for ringworm and sores and as a wash after measles.]

(GD, 2010, pers. comm.): “Word gebruik vir sere/ sere op die kop.”
[Used for wounds and sores on the scalp.]

(GJ., JJ., PD, 2010, pers. comm.): “Kraalbos word gebruik vir vaal kolle op die kop.”
[Used for ringworm.]

(JL, 2011, pers. comm.): “Gebruik vir vaal kolle op kinders se kop.”
[Used to treat ringworm on children’s scalp.]

(JvW, 2011, pers. comm.): “Kook die blare en takkies en gebruik dit as wasmiddel vir sere op kind se kop en ook droog gebruik as salf vir brandwonde.”
[Used as wash for ringworm on a children’s scalp and dry leaves used as ointment for burn wounds.]

(JW, 2010, pers. comm.): “Word gebruik vir sere op die kop: Neem die droë blare en maal dit fyn en sif dit deur `n kous, smeer vaselien op die sere en strooi die gemalde kraalbos oor.”
[Used for sores on the head. Apply Vaseline to the scalp and then sprinkle leaf powder over it (prepared from dried, powdered leaves, sieved through a sock).]
(LC. 2010, pers. comm.): “Gebruik vir kolle op die kop, kan die kop daarmee was, soos nis shampoo.”
[Used as infusion for ringworm, like shampoo.]

(MJ. and MG. 2010, pers. comm.): “Die blare word gekook vir seertjies op die kopvel, `n droë kopvel en omlope op die kopvel. Die kopvel van die kind word daarmee afgespoel.”
[An infusion of the leaves are used for the treatment of sores and ringworm on children’s scalp and a dry scalp (dandruff).]

(SC. 2011, pers. comm.): “Gebruik as was vir vaal kolle op `n kind se kop.”
[Used to treat ringworm on the scalp of a child.]

(PD. 2011, pers. comm.): “Gebruik om dou van kinders se hare te was.”
[Used as wash for ringworm on children’s scalp.]

4.2. Literature
(Kling, 1923) [p.19]; (Laidler, 1928) [p.442]; (Shapera, 1930) [p.411, 412]; (Watt and Breyer-Brandwijk, 1962) [p. 7]; (Smith, 1966) [p.310]; (Kellerman et al., 1988) [p.18]; (Archer, 1990) [p.967]; (Anonymous, 1998) [p.13]; (Cowling and Pierce, 1999) [p.48]; (Van Wyk and Gericke, 2000) [p.208]; (Von Koenen, 2001) [p.120]; (Anonymous, 2006) [p.8]; (Van Wyk, 2008) [p.336]; (Van Wyk et al., 2008) [p.698]; (De Beer and Van Wyk, 2011); (Anonymous, undated) [p.17]; (Wileman, undated) [p.12]
43. *Galium capense* subsp. *namaquense*

1. Taxonomic data

1.1. **Family:** Rubiaceae
1.2. **Scientific name:** *Galium capense* Thunb. subsp. *namaquense* (Eckl. and Zeyh.) Puff
1.3. **Synonyms:**

    *Galium capense* Thunb. var. *scabrum* Sond.
1.4. **Description:** Perennial. Herb. Ht 0.4-1m. Alt 600-1066m.
1.5. **Distribution:** NC, WC


3. **Herbarium specimen:** [NV29], (Appendix 3 - Figure 43)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Hy groei net in die Kamiesberg. Jy kook hom op en gebruik hom teen naarheid. Hy’ t sulke fyn, groen blaartjies en nie blommetjies of bessies nie. Groei onder die taaibossies. Rooistorm is mos omdat hy rooi is (die binnekant van die hout).”

[This plant occurs only in the Kamiesberg. It is boiled and used against nausea. This plant has delicate green leaves and no flowers or berries and grows under the *taaibos*. The inside of the wood is red, hence the Afrikaans vernacular name: ‘*rooi*’ (red)- ‘*storm*’.]

(AST. 2010, pers. comm.): “Is gebruik as medisyne, ons noem hom die rooistorm, die worteltjies is rooi. Snuif saam met *witvergeet*, bokhoutjie en *twak*; ‘n stukkie wortel kan gekou word en die sap gesluk word vir maagprobleme.”

[Used as medicine, the roots are red. Used as snuff with *witvergeet*, *bokhoutjie* and tobacco (*twak*), root juice can be swallowed for stomach ailments.]

(EK. 2011, pers. comm.): “Kook die wortel vir die maag, en kan gesnuif word vir koppyn.”

[Root decoction used for stomach ailments and used as snuff for headache.]

(JvW. 2011, pers. comm.): “Die wortel word saam met *kalmoes*, naeltjies en duiwelsdrek gemeng en gebruik as snuff vir hoofpyn.”

[Root used with *kalmoes*, *clove* and *asafoetida* as snuff for headache.]

4.2. **Literature**

No medicinal uses have been recorded in literature.
44. *Galium tomentosum*

1. Taxonomic data

1.1. **Family:** Rubiaceae

1.2. **Scientific name:** *Galium tomentosum* Thunb.

1.3. **Synonyms:** *Galium asperum* Thunb.

1.4. **Description:** Perennial. Herb. Ht 1-2m. Alt 5-2135m.

1.5. **Distribution:** EC, FS, FSA, KZN, N, NC, WC


3. Herbarium specimen: [NV21], (Appendix 3 - Figure 44)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2011, pers. comm.): “Gebruik vir vroumenskwale, gebruik vir pyn in die blaas.”
[Used for women’s ailments; bladder pains (urinary tract infections?).]

(AST. 2011, pers. comm.): “Dit kan gesnuif word saam met witvergeet, bokhoutjie en twak, `n stukkie wortel kan gekou word en die sap gesluk word vir maagprobleme.”
[Used as snuff with witvergeet, bokhoutjie and tobacco (twak); root juice can be swallowed for stomach ailments.]

(GB. 2010, pers. comm.): “Gebruik as medisyne.”
[Used as medicine (unspecified).]

(GD. 2010, pers. comm.): “Die rooistorm se wortel word gebruik as snuif, word gemeng met kriekiebos (Melianthus pectinatus) se wortel en naeltjie en boertwak blaar, wat gemaal word en gebruik word as snuif medisyne vir hoofpyn; die blaartjies klou.”
[The root, mixed with the roots of kriekiebos, cloves and tobacco (boertwak), is powdered and used as a snuff for headache.]
[The root is used for women medicine.]

(JC. 2010, pers. comm.): “Gebruik as medisyne vir pyn op die maag, die wortel gegrawe en afgetrek. Groei in die Kamiesberg, bo teen die berg.”
[Used as medicine for stomach pain; the root is dug up and infused. Grows in the Kamiesberg, on upper slopes.]

(JC. and JW. 2010, pers. comm.): “Gebruik as `n paljas: as jy `n meisie/vrou wil hê, dan maal jy die wortel en dra dit saam met jou, dan raak sy lief vir jou, maak dat sy aan jou sit. Hy werk self. Word gemeng met witvergeet (Asclepias crispa).”
[The powdered root is used for magic (paljas) with witvergeet to make someone love you.]

(JvW. 2011, pers. comm.): “Die wortel word saam met kalmoes, naeltjies en duiwelsdrek gemeng en gebruik as snuif vir hoofpyn.”
[Root used with kalmoes, cloves and asafoetida as snuff for headache.]

(MG. and MJ. 2010, pers. comm.): “Groei in die sandveld; die wortel word gekook vir maagpyne en vir aambeie. Die takkies haak aan jou klere (dit ‘naai vas) en word gebruik as klein ruikertjies.”
[Grows in the sandveld; root decoction used as treatment for stomach ache and haemorrhoids. Used as small shoulder bouquet, the branches stick to your clothes; the Nama word for stick is ‘naai.]

(PD. 2011, pers. comm.): “Die droë wortels word gebruik as snuif vir maagpyn.”
[Dry roots used as snuff for stomach ache.]

(SC. 2011, pers. comm.): “Deur kruiedokters gebruik.”
[Used by herbalists (unspecified).]

4.2. Literature
(Metelerkamp and Sealy, 1983) [p.7]; (Archer, 1990) [p.967]; (Archer, 1994) [p. 66];
(Shearing and Van Heerden, 1994) [p.144]; (Van Wyk et al., 2008) [p.698]; (De Beer and Van Wyk, 2011)
45. *Gethyllis* sp.

1. Taxonomic data

1.1. Family: Amaryllidaceae

2. Vernacular names: (Eliovson, 1972) [p.65]: “kukumakranka, koekemakranka”;
(Metelerkamp and Sealy, 1983) [p.8]: “koekoemakranka”; (Rood, 1994) [p.4]:
“koekemakranka, kukumakranka”; (Anonymous, 1998) [p.11]: “koekemakranka”;
(Cowling and Pierce, 1999) [p.48]: “kukumakranka”; (Van Wyk and Gericke, 2000)
[p.126]: “koekemakranka”; (Van Wyk et al., 2009) [p.152]: “koekemakranka,
kukumakranka”; (AB. 2011, pers. comm.): “slaapblommetjie, koekmakranka”; (AS. 2010,
pers. comm.): “koekmakranka, kroekie”; (AK. 2010, pers. comm.): “koekemakranka”;
(AST. 2010, pers. comm.): “koekmakranka, slaapblommetjie”; (AW. 2011, pers. comm.):
(GK. 2011, pers. comm.): “koekmakranka”; (JC. 2010, pers. comm.): “koekmakranka”;
(JB. 2011, pers. comm.): “koekmakranka”; (JL. 2011, pers. comm.): “koekoemakranka”;
“koekmakranka” (PR. 2010, pers. comm.): “koekmekranka”; (SC. 2011, pers. comm.):
“koekoemakranka”; (SW. 2011, pers. comm.): “koekmakranka”

3. Herbarium specimen: [PNV76], (Appendix 3 - Figure 45)

4. Recorded medicinal uses

4.1. Kamiesberg

(LC. 2010, pers. comm.): “Ons het dit geëet. Die saadjies het ons uitgesuig en die droë
buisie wat agterbly, het ons in ‘n kosbare boek soos die Bybel gebêre vir die ruik
(bookmerk). Op witblits was dit vir die maag ingegee (so die aktiewe bestandeel was
alkohol)."

[The fruit are edible, the seeds are sucked out and the tube that stays behind is then placed
in a precious book, such as the Bible, as a book mark, due to its lovely smell. A tincture
(brandy) used for stomach ailments.]

4.2. Literature

(Rood, 1994) [p.4]; (Anonymous, 1998) [p.11]; (Cowling and Pierce, 1999) [p.48]; (Van Wyk
and Gericke, 2000) [p.126]; (Van Wyk et al., 2009) [p.152]
46. *Gomphocarpus cancellatus*

1. **Taxonomic data**

1.1. **Family:** Asclepiadaceae  
1.2. **Scientific name:** *Gomphocarpus cancellatus* (Burm.f.) Bruyns  
1.3. **Synonyms:**  
- *Asclepias arborea* Salisb.  
- *Asclepias arborescens* L.  
- *Asclepias cancellata* Burm.f.  
- *Asclepias pubescens* L.  
- *Asclepias rotundifolia* Mill.  
- *Gomphocarpus arborescens* (L.) Aiton f.  
- *Gomphocarpus cancellatus* (Burm.f.) Nicholas & P.I.Forst.  
1.4. **Description:** Perennial. Herb or shrub. Ht 0.7 - 1.4m. Alt 20-1400m.  
1.5. **Distribution:** EC, N, NC, WC


3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 46)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
(AB. 2010, pers. comm.): “Kook blare as was vir sere op die kop en as salf vir pyne.”  
[Leaf decoction used as wash for sores on scalp and as ointment for pains.]

(AST. 2010, pers. comm.): “Die wortel word gebruik vir maagpyn.”  
[Root used for stomach pain.]

(JB. 2010, pers. comm.): “Kook blare as was vir sere op die kop en as salf vir pyne.”  
[Leaf decoction used as wash for sores on scalp and as ointment for pains.]

(JC. and JL. 2010, pers. comm.): “Tontelbos wat regop groei; wortel word gekook en gebruik vir hondesiek, as hond ˇn beentong het (lyk of die hond ˇn visgraatjie aan die onderkant van sy tong het). Kook die wortel in die pap in, want hy is bitter.”
[Root decoction are used as veterinary medicine for dogs, for an ailment called beentong (mouth ailment), it seems as if the dog has a fishbone under its tongue.]

4.2. Literature
1. **Taxonomic data**

1.1. **Family:** Asclepiadaceae

1.2. **Scientific name:** *Gomphocarpus fruticosus* (L.) Aiton f. *subsp. fruticosus*

1.3. **Synonyms:**

- *Asclepias angustifolia* Schweigg.
- *Asclepias cornuta* (Decne.) Cordem.
- *Asclepias crinita* (Bertol.) N.E.Br.
- *Asclepias fruticosa* L.
- *Asclepias salicifolia* Salisb.
- *Gomphocarpus angustifolia* (Schweigg.) Link
- *Gomphocarpus arachnoideus* E. Fourn.

1.4. **Description:** Annual or Perennial. Herb or shrub. Ht 0.8 - 1.5 m. Alt 20-1400 m.

1.5. **Distribution:** G, M, S, FS, KZN, L, NC, EC


3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 47)
4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, pers. comm.): “Die wortel word gebruik, gesnuif vir koppyn.”  
[The roots are snuffed for headache.]

(AW. 2011, pers. comm.): “Die droë blare word gebruik as `n snuif vir hoofpyn.”  
[Dry leaves used as snuff for headache.]

(EK. 2011, pers. comm.): “Die wortel word gebruik as kinders trekkings het (epilepsie), dit word saam met `n waterskilpad se bloed gebruik.”  
[The root is used for children with convulsions, used with water tortoise blood.]

(GD. 2010, pers. comm.): “Tontelbos wortel word ook vir hondesiek gebruik. Gebruik vir vuil in die maag, lyf pyn”  
[The root is used as veterinary medicine for dogs; for the treatment of stomach ailments and body pains.]

(JC. and JL. 2010, pers. comm.): “Die wortel word gekook en gebruik vir hondesiek, as hond `n beentong het (lyk of die hond `n visgraatjie aan die onderkant van sy tong het). Kook die wortel in die pap in, want hy is bitter, gebruik saam met bloubos en kra-krakie.”  
[Root decoction are used as veterinary medicine for dogs, for an ailment called beentong (mouth ailment), it seems as if the dog has a fishbone under his tongue, used with bloubos and kra-krakie.]

(JvW. 2011, pers. comm.): “Snuif `n stukkie van die wortel vir hoofpyn.”  
[Piece of root used as snuff for headache.]

(SC. 2011, pers. comm.): “Die wortel gebruik vir siek honde en hoenders.”  
[Root used for sick dogs and chickens.]

4.2. Literature

(Phillips, 1917) [p.195]; (Steyn, 1934) [p.339]; (Webb, 1948) [p.22]; (Watt and Breyer-Brandwijk, 1962) [p.119, 121]; (Jacot Guillarmod, 1971) [p.414]; (Gelfrand et al., 1985) [p.207]; (Palmer, 1985) [p.97, 155]; (Kellerman et al., 1988) [p.119]; (Roberts, 1992) [p.128]; (Burkill, 1994) [p.226]; (Hutchings et al., 1996) [p.252]
48. *Gunnera perpensa*

1. **Taxonomic data**

1.1. **Family:** Gunneraceae

1.2. **Scientific name:** *Gunnera perpensa* L.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Herb, hydrophyte. Ht 0.3-1.5 m. Alt 60-2775 m.

1.5. **Distribution:** EC, FS, G, KZN, LIM, M, NW, S, WC


3. **Herbarium specimen:** [NV31], (Appendix 3 - Figure 48)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Droog die plant, word gebruik om mense van die drank af te kry; die drank te stop. Gooi die droë plant in die drank, maak naar. Hy dra ‘n klein pampoentjie.” [dried plant steeped in the alcohol, used to treat alcoholism; it causes nausea.]

(JvW. 2010, pers. comm.): “Stukkies wortel in die drank saam met ‘n boontjie (ongespesifiseerd) gegooi, dit veroorsaak braking en diaree en word gebruik om alkolsoncisme mee te behandel.” [Pieces of root placed in alcohol causes nausea and diarrhoea; used to treat alcoholism.]

4.2. **Literature**

(Pappe, 1868) [p.36]; (Smith, 1895) [p.162, 163]; (Phillips, 1917) [p.97]; (Githens, 1948) [p.91]; (Watt and Breyer-Brandwijk, 1962) [p.499, 500]; (Jacot Guillarmod, 1971) [p.431]; (Batten and Bokelman, 1966) [p.110]; (Johnson and Hutchings, 1986) [p.152]; (Rood, 1994) [p.57]; (Hutchings et al., 1996) [p.53, 63, 220, 321]; (Anonymous, 1998) [p.17]; (Van Wyk and Gericke, 2000) [p.186]; (Van Wyk et al., 2009) [p.160]
49. *Helichrysum odoratissimum*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Helichrysum odoratissimum* (L.) Sweet

1.3. **Synonyms:**

*Helichrysum odoratissimum* (L.) Sweet var. *odoratissimum*

1.4. **Description:** Perennial. Shrub, herb. Ht 0.2-1.75 m. Alt 5-3050 m.

1.5. **Distribution:** EC, FS, KZN, L, LIM, M, S, WC

2. **Vernacular names:**

- (Dykman, 1908) [p.113]: “hottentots kooigoed”;
- (Watt and Breyer-Brandwijk, 1962) [p.1401]: “[ikovi, ikovo, kichameri (Chagga)], [jeninga, otyhanandimba (Lunyaneka)], [phefo- ya- setlolo (Southern Sotho)];
- (Smith, 1966) [p.614]: “hottentotskooigoed, hottentotkruie”;
- (Roberts, 1982) [p.76]: “everlastings, hottentotskooigoed, hotnotskooigoed, hottentotsbedding, sewjaartjies, kerriebos”;
- (Hutchings et al., 1996) [p320]: “[imphepho (Zulu)];
- (Van Wyk and Gericke, 2000) [p.166, 220]: “[imphepho (Xhosa, Zulu)], everlastings, kooigoed”;
- (Van Wyk, 2008) [p.337]: “kooigoed”;
- (Van Wyk et al., 2009) [p.168]: “kooigoed, everlastings, [imphepho (Xhosa, Zulu)];
- (AB. 2010, pers. comm.): “hotnotskooigoed, kooigoedbos”;
- (AST. 2010, pers. comm.): “hotnotskooigoed”;
- (GB. 2010, pers. comm.): “hotnotskooigoed”;
- (GD. 2010, pers. comm.): “hotnotskooigoed, slangbos”;
- (JvW. 2011, pers. comm.): “hotnotskooigoed”;
- (LC. 2011, pers. comm.): “hotnotskooigoed”

3. **Herbarium specimen:** [PNV78], (Appendix 3 - Figure 49)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

- (AB. 2010, pers. comm.): “Gebruik vir griep.”
  [Used for the treatment of influenza.]

  [An infusion used for kidney and back ailments.]

- (GB. 2010, pers. comm.): “Pleister vir pyne, gebruik vir griep en maagprobleme.”
  [Used as poultice on pains and as infusion for influenza and stomach ailments.]

- (GD. 2010, pers. comm.): “Vuiligheid in die lyf, goddelike siekte, word gekook. `n Pleister vir brandsere, stamp die blare. Word ook gebrand vir voorvader geeste.”
  [Used as a decoction for impurities in the blood or the body, “godly sickness” (magic?). Leaves bruised and used as poultice for burn wounds; plant also burnt for ancestral spirits.]
(JC. 2010, pers. comm.): “Medisyne vir koorsigheid.”
[Used for the treatment of fever.]

(JvW. 2011, pers. comm.): “Gee vir vrou na kraam, maak skoon en bind weer die baarmoeder.”
[Used as post-partum medicine, for cleaning and to “bind” the uterus.]

[Infusion of dry leaves used for women’s ailments, menstrual pains and to expel the placenta after labour.]

4.2. Literature
(Dykman, 1908) [p.113]; (Kling, 1923) [p.16]; (Watt and Breyer-Brandwijk, 1962) [p.239]; (Smith, 1966) [p.251]; (Jacot Guillarmod, 1971) [p.432]; (Roberts, 1982) [p.78]; (Johnson and Hutching, 1986) [p.84]; (Van Wyk and Gericke, 2000) [p.116, 166, 220]; (Scott and Hewett, 2008) [p.347]; (Van Wyk, 2008) [p.337]; (Van Wyk et al., 2009) [p.168]
50. *Helichrysum rutilans*

1. **Taxonomic data**

1.1. **Family:** Asteraceae  
1.2. **Scientific name:** *Helichrysum rutilans* (L.) D.Don  
1.3. **Synonyms:**  
   - *Gnaphalium rutilans* L.  
   - *Helichrysum manopappum* O.Hoffm.  
   - *Helichrysum niveum* non (L.) Less  
   - *Helichrysum parviflorum* (Lam.) DC.  
1.4. **Description:** Perennial. Dwarf shrub, herb. Ht 0.01- 0.6 m. Alt 10-1600m  
1.5. **Distribution:** FS, NC, WC, EC


3. **Herbarium specimen:** [NV43], (Appendix 3 - Figure 50)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
   (AB. 2011, pers. comm.): “Kook die plant en drink vir vroue pyne.”  
   [Decoction drunk for women`s pains.]  
   
   [An infusion used for kidney ailments, backache and bladder problems, used as a diuretic.]  
   
   (JvW. 2011, pers. comm.). “Gee soos `n tee vir `n vrou na sy gekraam het, maak skoon en bind weer die baarmoeder.”  
   [Used as infusion for post-partum medicine; for cleaning and to “bind” the uterus.]

4.2. **Literature**  
No medicinal uses have been recorded in literature.
51. *Hermbstaedtia glauca*

1. **Taxonomic data**

1.1. **Family:** Amaranthaceae

1.2. **Scientific name:** *Hermbstaedtia glauca* (J.C.Wendl.) Rchb. ex Steud.

1.3. **Synonyms:**
   - *Berzelia glauca* (J.C.Wendl.) Mart.
   - *Celosia glauca* J.C.Wendl

1.4. **Description:** Perennial. Shrub. Ht 0.4-2 m. Alt 200-1100 m.

1.5. **Distribution:** N, NC


3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 51)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   - (JC, and JW. 2010, pers. comm.): “Word gebruik vir maagpyn en koors.”
     [Used for stomach ache and fever.]
   - (JvW. 201, pers. comm.): “Word gebruik saam met grashout vir maag en braking.”
     [Used with grashout for stomach ailments and vomiting.]
   - (LC. 2010, pers. comm.): “Goeie medisyne, gebruik vir koors en rug.”
     [Good medicine, used for fever and backache.]

4.2. **Literature**

No medicinal uses have been recorded in literature.
52. *Hoodia gordonii*

1. **Taxonomic data**

1.1. **Family:** Asclepiadaceae  
1.2. **Scientific name:** *Hoodia gordonii* (Masson) Sweet ex Decne.  
1.3. **Synonyms:**  
   - *Hoodia albispina* N.E.Br.  
   - *Hoodia bainii* Dyer  
   - *Hoodia barklyi* Dyer  
   - *Hoodia burkei* N.E.Br.  
   - *Hoodia husabensis* Nel  
   - *Hoodia langii* Oberm. & Letty  
   - *Hoodia longispina* Plowes  
   - *Hoodia pillansii* N.E.Br.  
   - *Hoodia rosea* Oberm. & Letty  

1.4. **Description:** Perennial. Succulent shrub. Ht 0.5 – 1 m. Alt 250-1200 m.

1.5. **Distribution:** N, FS, NC, WC

2. **Vernacular names:** (Kling, 1923) [p.21]: “guaap”; (Laidler, 1928) [p.447]: “guaap”;  

3. **Herbarium specimen:** [PNV79], (Appendix 3 - Figure 52)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
   (GD. 2010, pers. comm.): “Dit is veldvrugte, die lote word geëet as jy nie eetlus het nie.”  
   [The edible stem is eaten when you have no appetite.]

   (JvW. 2011, pers. comm.): “Gebruik vir maagsere.”
   [Used for the treatment of stomach ulcers.]
(SC. 2011, pers. comm.): “Word gebruik vir maagpyn.”
[Used for the treatment of stomach ache.]

4.2. Literature
(Kling, 1923) [p.21]; (Laidler, 1928) [p.447]; (Rood, 1994) [p.13]; (Van Wyk and Gericke, 2000) [p.70]; (Anonymous, 2006) [p.9]; (Odendaal et al., 2007) [p.52]; (Manning, 2008) [p.84]; (Van Wyk et al., 2009) [p.174]; (Anonymous, undated) [p.9]
53. *Hydnora africana*

1. Taxonomic data

1.1. **Family:** Hydnoraceae  
1.2. **Scientific name:** *Hydnora africana* Thunb.  
1.3. **Synonyms:** No  
1.4. **Description:** Perennial. Herb, parasite. Ht 0.08-0.12 m. Alt 30-915 m.  
1.5. **Distribution:** B, EC, N, NC, WC


3. Herbarium specimen: [PNV444], (Appendix 3 - Figure 53)

4. Recorded medicinal uses

4.1. Kamiesberg  
(A.B. 2010, pers. comm.): "Die skil word afgebreek, die vleis is mealy. Dit is nie medisyne nie. Help vir die dors. Groei onder die melkbos"  
[The skin is peeled off, die fleshy part is mealy. It is not medicine. It is a thirst quencher; grows under the melkbos (*Euphorbia mauritanica*)]

(AST. 2010, pers. comm.): "Gehoor dis medisyne; Gert Dirkse het dit gebruik."
[I heard that it is medicine; Gert Dirkse used it.]

(GD. 2010, pers. comm.): "Medisyne; die skil word gedroë en gemaal en saam met water gedrink vir pyne in die lyf en as maag nie lekker is nie (maagkrampe)."
[Dried fruit pericarp (skil) is powdered and taken with water for body pains, stomach ailments (stomach cramps).]

4.2. Literature
(Marloth, 1917) [p.43]; (Watt and Breyer-Brandwijk, 1962) [p.501]; (Smith, 1966) [p.257, 258]; (Archer, 1994) [p.37, 40, 42, 43, 55]; (Rood, 1994) [p.57]; (Hutchings et al., 1996) [p.84]; (Van Wyk and Gericke, 2000) [p.44]; (Skead, 2009) [p.60]; (De Beer and Van Wyk, 2011)
54. *Leonotis leonurus***

1. **Taxonomic data**

1.1. **Family:** Lamiaceae

1.2. **Scientific name:** *Leonotis leonurus* (L.) R.Br.

1.3. **Synonyms:**
   - *Leonotis africana* Mill.
   - *Leonotis grandiflora* Moench
   - *Leonotis leonurus* (L.) R.Br. var. albiflora Benth.
   - *Phlomis leonurus* L.

1.4. **Description:** Perennial. Shrub. Ht 2-5 m. Alt 5-1980 m.

1.5. **Distribution:** EC, KZN, LIM, M, WC (not indigenous to the Kamiesberg; cultivated in gardens)


3. **Herbarium specimen:** [PNV81], (Appendix 3 - Figure 54)
4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, pers. comm.): “In die tuine geplant, vir hoë bloeddruk, griep, suiker, trek blare en blomme af soos tee.”
[Planted in gardens; infusion of leaves and flowers used for the treatment of high blood pressure, influenza and diabetes.]

(EK. 2011, pers. comm.): “Gebruik vir skerpioen-steek, slangbyte en ook by ander medisyne gegooi.”
[Used as remedy for scorpion stings and snake bites and in mixtures with other medicine.]

(MJ. and MG. 2010, pers. comm.): “Nie `n Nama medisyne nie, word nou wel gebruik.”
[This plant was not originally used by the Nama people, but now it is used as medicine (unspecified).]

4.2. Literature

(Pappe, 1868) [p.33]; (Smith, 1895) [p.27, 28, 103]; (Dykman, 1908) [p.118]; (Marloth, 1917) [p.21]; (Kling, 1923) [p.15, 16, 17]; (Laidler, 1928) [p.441]; (Githens, 1948) [p.94]; (Batten and Bokelman, 1966) [p127]; (Smith, 1966) [p.395, 504]; (Palmer, 1985) [p.97, 157]; (Ellis, 1989); (Dyson, 1994) [p.41]; (Roberts, 1992) [p.128, 129]; (Rood, 1994) [p.59]; (Palmer, 1995) [p.98]; (Anonymous, 1998) [p.17]; (Van Wyk and Gericke, 2000) [p.128, 168, 188]; (Scott and Hewett, 2008) [p.350]; (Van Wyk, 2008) [p.337]; (Van Wyk et al., 2009) [p.188]; (Wileman, undated) [p.3]
55. *Limeum africanum*

1. Taxonomic data

1.1. **Family:** Molluginaceae
1.2. **Scientific name:** *Limeum africanum* L. subsp. *canescens* (E.May. ex Fenzl) Friedrich
1.3. **Synonyms:** No
1.4. **Description:** Perennial. Dwarf shrub, herb. Ht 0.1-0.2 m. Alt 550-1370 m.
1.5. **Distribution:** NC, WC


3. Herbarium specimen: [PNV82], (Appendix 3 - Figure 55)

4. Recorded medicinal uses

4.1. **Kamiesberg**
(GD. 2010, pers. comm.): “Vir babatjies, stupe en vir grootmense; Vuil bloed, en siek voel ook vir grootmens stupe (epilepsia). Dit word droog en fyn gebruik met t`nôroboegoee. Vir siek voel, meng baarbos met slangbos (*Stoebe vulgaris*), dit word gekook, baie goed.”

[A decoction of the plant mixed with *t`nôroboegoee* (*Pteronia camphorata*) is used for infants with convulsions, for epilepsy and blood impurities. For general malaise (?) (“siek voel”) it is mixed with *slangbos* (*Stoebe vulgaris*) as decoction]

(JvW. 2011, pers. comm.): “Gebruik vir vroumens kwale om die nageboorte af te kry.”
[Used for women’s ailments, for a retained placenta.]

4.2. **Literature**
No medicinal uses have been recorded in literature.
56. Lobostemon paniculatus

1. Taxonomic data

1.1. Family: Boraginaceae
1.2. Scientific name: Lobostemon paniculatus (Thunb.) H.Buek
1.4. Description: Perennial. Shrub. Ht 0.3-0.8 m. Alt 105-1650 m
1.5. Distribution: WC


3. Herbarium specimen: [PNV44], (Appendix 3 - Figure 55)

4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010 pers. comm.): “Die blare word afgetrek en gedroog gemaak en as poeier op wonde en die blare as kompres op brandwonde gesit, sodat dit vinnig genees. Sulke blou-pers blomme.”
[Leaves are infused, dried and powdered and used on wounds and burn wounds to aid healing. The flowers are purple-blue.]

(AW. 2011, pers. comm.): “Die blare word gebruik om op brandwonde te sit.”
[Leaves used as compress on burn wounds.]

(GD. 2010, pers. comm.): “Kook hom saam met ander medisyne vir winde en as maag medisyne.”
[A leaf decoction used with other plants (unspecified) for the treatment of flatulence and stomach ailments.]

(JC. and JW. 2010, pers. comm.): “Genees in agt dae, die blare word op sere en wonde gesit.”
[The leaves are used as compress on wounds and sores – heals within eight days.]

(JvW. 2011 pers. comm.): “Gebruik die blare vir brandwonde.”
[Leaves used for burn wounds.]

(MJ. and MG. 2010, pers. comm.): “n Salf is van hom gemaak vir sere, die blare word met vet uitgebraai.”
[An ointment of the leaves is used for sores; the leaves are roasted in fat.]
4.2. Literature
No medicinal uses have been recorded in literature for this species. Other Lobostemon species are well known for their traditional use as “Khoisan plasters” to treat knife wounds and other wounds (e.g. Van Wyk and Gericke, 2000; Van Wyk et al., 2009).
57. *Malva parviflora***

1. Taxonomic data

1.1. **Family:** Malvaceae

1.2. **Scientific name:** *Malva parvifolia* L.

1.3. **Synonyms:** No

1.4. **Description:** Annual, occ. Perennial. Herb. Length 0.15 – 0.4 m. Alt 15-1405 m

1.5. **Distribution:** B, EC, FS, G, KZN, L, LIM, M, N, NC, NW, WC (naturalised exotic and weed in the Kamiesberg)


3. Herbarium specimen: [NV116], (Appendix 3 - Figure 57)

4. Recorded medicinal uses

4.1. Kamiesberg

(AW. 2010, pers. comm.): “Die gemaalde droë blare kan soos `n salf saam met vaselien gebruik word vir sere.”

[Powdered leaves with Vaseline can be used as ointment on sores.]

4.2. Literature

58. *Melianthus pectinatus*

1. Taxonomic data

1.1. **Family:** Melianthaceae
1.2. **Scientific name:** *Melianthus pectinatus* Harv. subsp. *pectinatus*
1.3. **Synonyms:** No
1.4. **Description:** Perennial. Shrub. Ht 0.6-1.5 m. Alt 580-915 m.
1.5. **Distribution:** N, NC


3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 58)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Kook die groen blare, wag tot die afkooksel lou is en spoel dan seer bene daarmee af en blare kan opgesit word [(t’kou= sit op) die blare].”

[A lukewarm decoction used as wash and a compress of the leaves are used for painful legs.]

(AST. 2010, pers. comm.): “Kook die blare, baai seer bene/ seer voete in die water, hou die blare en pak dit op die bene, ook ‘n salf kan gemaak word. As kompres op gebreekte bene ook op wonde, sere en verstuite enkels, die wortels word gebruik vir blaas moeilikheid (kook twee tot drie keer, gooie die water af, teen die vierde keer kan dit gedrink word, dan is die gif uit).”

[Leaf ointment, wash or compress used for painful legs and feet. Used as compress on fractured legs, wounds, sores and abrasions. A root decoction can be taken to treat bladder ailments (but only after repeated leaching to remove the poison).]
(AW. 2011, pers. comm.): “Gebruik die blare as was vir seer bene.”
[Leaves used as wash for painful legs.]

(CC. 2011, pers. comm.): “Gebruik die blare as pleister.”
[Leaves used as compress (unspecified).]

(EK. 2011, pers. comm.): “Gebruik `n aftreksel van die blare as was en as kompres vir krampe en vir bene wat pyn.”
[Used as wash and compress for painful and cramping legs.]

(GB. 2011, pers. comm.): “Gebruik as pleister op pyne en trek die blaar af vir griep.”
[Used as compress on pains and a leaf infusion is used for influenza.]

(GD. 2010, pers. comm.): “Wortel kan gesnuif word, saam rooistorm en boertwak vir kopseer.”
[The root is used as snuff with rooistorm (Galium tomentosum), cloves and tobacco for headache.]

(GJ., JJ., PD. 2010, pers. comm.): “Die groen blare word gebruik. `n kompres kan van die blare gemaak word. Pynlike voete kan ook gewas word met `n aftreksel van kriekiebos se blare.”
[The green leaves are used as compress and an infusion can be used as a wash for painful feet.]

(GK. 2011, pers. comm.): “Gebruik vir rumatiek; seer bene kan in `n warm aftreksel van die blare gesit word.”
[The leaves are used for rheumatism and as warm wash (bath) for painful legs.]

(JB. 2011, pers. comm.): “Kook die plant in water en was pynlike bene in die water, ook as kompres gebruik.”
[An infusion of the plant can be used as compress and wash for painful legs.]

(JC. 2010, pers. comm.): “Dit is `n medisynebos; is goed vir pyne, moet hom net opsit, nie drink nie.”
[This is a good medicine for pains; it can be used only as compress, not to be taken orally.]

(JL. 2011, pers. comm.): “Blare word gebruik as kompres op pyne.”
[Leaves used as compress on pains.]

(JvW. 2011, pers. comm.): “Maak die bloed skoon as jy hom drink, daarom ook vir VIGS; kook, en gooi ander bosse by.”
[A decoction, mixture with other herbs, is used as blood purifier and for AIDS.]

(MJ. and MG. 2010, pers. comm.): “Van die wortel is `n snuif gemaak, hy moet droog, bruin wees; Net in een neusgat- `n klein bietjie: vir hoofpyn.”
[The roots are used as snuff; the root must be dry and brown, snuff used in only one nostril, and a very small bit, to treat headache.]
(PD. 2011, pers. comm.): “Maak van hom (blare) `n warm pleister vir pyn.”
[Leaves used as hot compress for pain.]

4.2. Literature
(Pappe, 1868) [p.6, 7]; (Marloth, 1917) [p.52]; (Smith, 1966) [p.312]; (Kling, 1923) [p.13, 20];
(Archer, 1990) [p.967]; (Archer, 1994) [p.69, 70]; (Cowling and Pierce, 1999) [p.48]; (Van Wyk and Gericke, 2000) [p.200]; (Manning, 2008) [p.117]
59. *Mentha longifolia*

1. **Taxonomic data**

1.1. **Family:** Lamiaceae

1.2. **Scientific name:** *Mentha longifolia* (L.) Huds. subsp. *capensis* (Thunb.) Briq.

1.3. **Synonyms:**

- *Mentha capensis* Thunb.
- *Mentha longifolia* (L.) Huds.
- Mentha longifolia (L.) Huds. subsp. *capensis* (Thunb.) Briq. var. *cooperi* Briq. ex T.Cooke

1.4. **Description:** Perennial. Herb. Ht up to 1.5 m. Alt 75-2590 m.

1.5. **Distribution:** EC, FS, L, NC, NW, WC

3. Herbarium specimen: [PNV44], (Appendix 3 - Figure 59)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB, 2010, 2011, pers. comm.): “Ballerja is as medisyne teen griep gebruik; gebruik as vroumensmedisyne.”
[Used for the treatment of influenza. Used for women`s ailments.]

[Used as a remedy for influenza. Leaves stuffed in a small pillow are used as a mosquito repellent (at windows).]

(AW, 2011, pers. comm.): “Gebruik as `n salf vir seer bene; die blaar word in tee gegooi vir geur.”
[Ointment used for painful legs; used to flavour tea.]

(EK, 2011, pers. comm.): “Die blare word gebruik vir griep, winde; gebruik saam met ysterbos (Dodonaea viscosa var. angustifolia).”
[The leaves are used for influenza and flatulence, with ysterbos (Dodonaea viscosa var. angustifolia).]

(GB, 2011, pers. comm.): “Gebruik soos tee vir griep en koors, en die blare word soos `n pleister gesit op sere en pyne.”
[Used as infusion for influenza and fever; the leaves are placed (as compress) on pains and sores.]

(GD, 2010, pers. comm.): “Vir suikersiekte: kook skoon. Ook vir onsedelike siekte- maal die wortel fyn en sif t`gôro (Pteronia camphorata) blare by en rooistorm (Galium tomentosum) wortel.”
[A leaf decoction used for diabetes (without any other herbs); decoction with the powdered root, mixed with t`gôro (Pteronia camphorata) leaves and rooistorm (Galium tomentosum) root is used for sexually transmitted diseases.]

(GJ., JJ., PD, 2010, pers. comm.): “Ballerja kan vir inflammasie pyn soos in die knie, as `n kompres op die inflammasie gesit word, of vir brand voete.”
[Leaves used as compress on pains/inflammation (e.g. knees) and for burning feet.]

(JB, 2011, pers. comm.): “Gebruik vir griep en maagmoeilikheid saam met jantjebêrend en t`noubie blare, sweet hom uit dat jy bang raak.”
[Used as decoction with jantjebêrend and t`noubie leaves for influenza and stomach ailments; diaphoretic (to the extreme).]

(JL, 2011, pers. comm.): “Dieolie word gebruik soos `n koors stroop en kook as medisyne vir verkoue.”
[Syrup from the oil is used for fever and a decoction for colds.]
(JvW. 2011, pers. comm.): “Gebruik vir ‘n erge verkoue saam met t’oubie / ysterhout.”
[Decoction with t’oubie / ysterhout (Dodonaea viscosa var. angustifolia) used for a severe cold.]

(JW. 2010, pers. comm.): “In my tuin van hom geplant, kan ‘n lekker tee van hom maak, lekker geur. Vir koors: meng ballerja met salie, t’noubie, jantjie-bêrend (Sutherlandia frutescens) en halwe proppie brandewyn.”
[I have planted some in my garden, it makes a tasty tea. A brandy tincture with salie, t’noubie and jantjiebêrend is used for fever.]

(LC. 2010, pers. comm.): “Ek gebruik dit vir tee, lekker ‘ment’ tee is van ballerja gemaakt, het ‘n kalmerende effek.”
[The leaves used as tea or tea substitute and has a calming effect.]

(MJ. and MG. 2010, pers. comm.): “Ballerja word in die tee (five roses) gegooi vir geur. Dit word ook vir babetjies se siektes gebruik- blare afgetrek.”
[The leaves are used as tea flavouring and for infant ailments.]

(SC. 2011, pers. comm.): “Medisyne vir griep en koors.”
[Medicine for influenza and fever.]

(SW. 2011, pers. comm.): “Kook die blare vir verkoue.”
[Decoction used for colds.]

4.2. Literature
(Pappe, 1868) [p.32]; (Phillips, 1917) [p.241]; (Laidler, 1928) [p.443]; (Watt and Breyer-Brandwijk, 1962) [p.522]; (Watt and Breyer-Brandwijk, 1962) [p.522]; (Batten and Bokelman, 1966) [p.126]; (Smith, 1966) [p.314]; (Jacot Guillarmod, 1971) [p.441]; (Roberts, 1982) [p.244]; (Palmer, 1985) [p.137]; (Ellis, 1989); (Archer, 1990) [p.967]; (Archer, 1994) [p. 56, 66, 67, 68, 69, 70, 97]; (Dyson, 1994) [p.43]; (Shearing and Van Heerden, 1994) [p.124]; (Rood, 1994) [p.60]; (Palmer, 1995) [p.62]; (Hutchings et al., 1996) [p269]; (Anonymous, 1998) [p.5]; (Van Wyk and Gericke, 2000) [p.128, 188]; (Van Wyk, 2008) [p.337]; (Van Wyk et al., 2009) [p.196]; (De Beer and Van Wyk, 2011)
60. *Mentha spicata***

1. **Taxonomic data**

1.1. **Family:** Lamiaceae
1.2. **Scientific name:** *Mentha spicata* L.
1.3. **Synonyms:** *Mentha viridus* (L.) L.
1.4. **Description:** Herb
1.5. **Distribution:** FST, NC (naturalised) (exotic species, cultivated in gardens)


3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 60)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST 2011, pers. comm.): “Gebruik die blare as tee vir infeksies en menstruele pyne en as sitbad vir aambeie.”
[An infusion of the leaves is used for inflammation, menstrual pains and as a sit bath for haemorrhoids.]

(JC. and JW. 2010, pers. comm.): “Gebruik saam met voëlent as tee vir die skildklier.”
[An infusion with voëlent is used as remedy for the thyroid gland.]

(JvW. 2011, pers. comm.): “Drink vir griep.”
[Infusion used for influenza.]

(SC. 2011, pers. comm.): “Gebruik as medisyne.”
[Used as medicine (unspecified).]

(PD. 2011, pers. comm.): “Gebruik as medisyne.”
[Used as medicine (unspecified).]

4.2. **Literature**

(Dykman, 1908) [p.113]; (Roberts, 1983) [p.106]; (Johnson and Hutching, 1986) [p.150, 153]; (Van Wyk, 2008) [p.337]
1. Taxonomic data

1.1. Family: Solanaceae

1.2. Scientific name: *Nicotiana glauca* Graham

1.3. Synonyms: No

1.4. Description: Perennial. Shrub, occ. tree. Ht 1.2-5 m. Alt 45-1705 m.

1.5. Distribution: B, EC, FS, G, KZN, L, LIM, M, N, NC, NW, WC (naturalised exotic)


3. Herbarium specimen: [PNV86], (Appendix 3 - Figure 61)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Die blare kan op pyne gepak word, maak bietjie warm, die pyne gaan dan weg.”

[Warmed leaves used as compress on pains.]

(AST. 2010, pers. comm.): “Pleister vir pyne op bene.”

[Compress for painful legs.]

(EK. 2011, pers. comm.): “Gebruik vir epileptiese aanvalle; op wonde as kompres.”

[Used for epilepsy and as compress on wounds.]
(GB. 2011, pers. comm.): “As warm kompres op pyne.”
[Used as warm compress on pains.]

(GK. 2011, pers. comm.): “Blare word afgetrek om seer bene in te baai.”
[Used as wash for painful legs.]

(JB. 2011, pers. comm.): “Die blare kan op pyne gepak word (t’kou).”
[Leaves used as compress on pains.]

(JC. and JW. 2010, pers. comm.): “Gebruik as pyn kussing. Vir kopseer, het die blare op sy kop gesit. Help vir pyn. Kan hom nie drink, hy is giftig.”
[Leaves used as compress for headaches and pains. It is poisonous.]

(JL. 2010, 2011 pers. comm.): “Vir oorpy, kan jy jou oor baai, met ‘n aftreksel daarvan of ‘n stukkie van die blaar in jou oor sit. Van die droë blare kan ‘n salf gemaak word vir sere.”
[Leaves used as plug or as wash for earache; dry leaves used as ointment on sores.]

(JW. 2011, pers. comm.): “Gebruik vir fyt vingers as pleister en sit op kop vir koppyn.”
[Placed as compress on whitlow fingers and on the head for headache.]

(MB. 2011, pers. comm.): “Die blare word gebruik as kompres.”
[Leaves used as compress.]

(MJ. and MG. 2010, pers. comm.): “Die blare word as pleister gebruik, vir pyne. Dit is giftig.”
[The leaves are used externally as poultice, for pains. It is poisonous.]

(SC. 2011, pers. comm.): “Gebruik as pleister op pyne.”
[Used as compress on pains.]

4.2. Literature
62. *Notobubon pearsonii*

1. **Taxonomic data**
   
   1.1. **Family:** Apiaceae  
   1.2. **Scientific name:** *Notobubon pearsonii* (Adamson) Magee  
   1.3. **Synonyms:** *Peucedanum pearsonii* Adamson  
   1.4. **Description:** Perennial. Shrub. Ht 0.4-0.69 m. Alt up to 1700 m.  
   1.5. **Distribution:** NC, WC

2. **Vernacular names:** (AST. 2010, 2011 pers. comm.): “org”; (EK. 2011, pers. comm.): “orgbos”

3. **Herbarium specimen:** [PNV44], (Appendix 3 - Figure 62)

4. **Recorded medicinal uses**
   
   4.1. **Kamiesberg**  
   (AST. 2010, pers. comm.): “Word gebruik vir asma; Org word gebruik vir TB. Dit word saam met jantjiebêrend en t’nouroeboegoeg gebruik. Kookwater word op die blare gegooi en laat trek, soos ‘n tee, drink drie maal per dag so kelkie vol. Dit is die beste bos vir TB. ‘n Ou vrou het dit gebruik, as die TB pasiente huis toe gestuur word, maar hulle is nog nie heeltemaal gesond nie; dit het hulle gehelp om aan te sterk.”  
   [Used for asthma and tuberculosis; it is used in combination with *jantjiebêrend* (*Sutherlandia frutescens*) and *t’nouroeboegoeg* (*Pteronia camphorata*); an infusion is made and used three times a day, about a small glass full. It is the best medicinal plant for tuberculosis. An old women gave it to TB patients who were sent home after their treatment (but not yet fully recovered) to help them regain their strength.]

   (EK. 2011, pers. comm.): “Kook en gebruik vir slym op die longe (longontsteking).”  
   [Used as decoction for mucus on the lungs (pneumonia).]

4.2. **Literature**  
No medicinal uses have been recorded in the literature.
63. *Olea europaea* subsp. *africana*

1. Taxonomic data

1.1. **Family:** Oleaceae

1.2. **Scientific name:** *Olea europaea* L. subsp. *africana* (Mill.) P.S.Green

1.3. **Synonyms:**
- *Olea africana* Mill.
- *Olea europaea* L. subsp. *cuspidata* (Wall. ex G.Don) Cif.

1.4. **Description:** Perennial. Shrub, tree. Ht 2-14 m. Alt 5-2479 m.

1.5. **Distribution:** B, EC, FS, G, KZN, L, LIM, M, N, NC, NW, S, WC

2. Vernacular names: (Pappe, 1868) [p.iv]: “olive trees”; (Dykman, 1908) [p.153]: “oliwenhouttoppe”; (Marloth, 1917) [p.42]: “ijzerhout, zwart ijzerhout”; (Laidler, 1928) [p.442]: “wild olives, P/koem”;
3. Herbarium specimen: [PNV87], (Appendix 3 - Figure 63)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Die blare word gekook en gedrink as aan borskwale lei, dit is ook goed vir hoes. Die bessie kan geëet word. Kook die blare vir hartprobleme.”
[Leaf decoction is used for chest ailments and coughs. The berries are edible. A leaf decoction is used for heart ailments.]

(AST. 2010, pers. comm.): “Olienhout; die blare en bas is bitter, maar kan gekook word. Vir rugprobleme en winde word `n tee van die blare gemaak. Die blare word saam met suiker gekook en as hoes en griep medisyne gebruik, saam met taalbos, t`oubie, wynruit en bergsalie.”
[The leaves and the bark are bitter, but can be chewed. A leaf infusion is used for backache and flatulence. Leaves are boiled with sugar and used as medicine for coughs and influenza, together with taaibos, t`oubie, wynruit en bergsalie.]

(AW. 2010, pers. comm.): “Van die blare word `n salf gemaak en wasmiddel vir sere in hare.”
[Leaves are used for making an ointment and as a wash for sores on the scalp.]

(GD. 2010, pers. comm.): “Die bas en die blare word gebruik as kruiemedisyne. Die blare word gedroog en gekook saam met ander kruie vir maag vuiligheid en kwale. Die bas word afgeskraap en gestamp om gedrink te word.”
[The bark and the leaves are used as medicine. The leaves are dried and boiled with other herbs for stomach ailments. The bark is scraped off and stamped for use as drink.]

(GJ., JJ., PD. 2010, pers. comm.): “Olienblare word saam met vaselien op `n wond ‘geplak’. Die pitte is ook gebruik as skaap-skeer lootjies.”
[The leaves are used with Vaseline as poultice on a wound. The seeds were used as sheep shear markers.]

(GK. 2011, pers. comm.): “`n Tee van die blare word gebruik vir naarheid en duisligheid.”
[A leaf infusion is used for nausea and dizziness.]

(JB. 2011, pers. comm.): “Die bas word gebruik vir maagkwale.”
[Bark used for stomach ailments.]

(JvW. 2011, pers. comm.): “Die bas word gekook vir suiker.”
[A bark decoction is used for sugar (diabetes).]
(LC. 2010, 2011, pers. comm.): “Die werker by ons (Koos “Pens”) het vir my ma blare getrek en laat drink vir ‘n verskriklike brongitis hoes. Ek eet bessies ook vir die lekker.”

[One of the workers made an infusion of the leaves for my mother to drink for a serious bronchitis cough. The berries are also edible.]

(SC. 2011, pers. comm.): “Die bas word gebruik vir medisyne.”

[The bark is used for medicine (unspecified).]

4.2. Literature
64. *Oncosiphon suffruticosum*

1. Taxonomic data

1.1. Family: Asteraceae

1.2. Scientific name: *Oncosiphon suffruticosum* (L.) Källersjö

1.3. Synonyms:
- *Cotula tanacetifolia* L.
- *Matricaria multiflora* Fenz ex Harv.
- *Pentzia suffrictiosa* (L.) Hutch. ex Merxm.
- *Pentzia tanacetifolia* (L.) Hutch.
- *Tanacetum suffruticosum* L.

1.4. Description: Annual. Herb. Ht 0.1-0.6 m. Alt 15-1500 m.

1.5. Distribution: N, NC, WC


3. Herbarium specimen: [PNV88], (Appendix 3 - Figure 64)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Van die blare word medisyne vir kindertjies gemaak – vir winde” [Leaves used to make medicine for infants – to treat for flatulence.]

(AST. 2010, pers. comm.): “Gebruik vir borsmoeilikheid, die wortel. Word ook gebruik om borsmelk te stop.”
[The root used for chest problems; used to stop lactation.]

(AW. 2011, pers. comm.): “Gebruik as medisyne vir kind stupe.”
[Used for convulsions in children.]

(EK. 2011, pers. comm.): “Gebruik vir babatjies met trekkings, die vars blare word uitwendig gebruik.”
[Leaves used externally for infant convulsions.]

(GD. 2010, pers. comm.): “Die blare word gekook vir kwale vir klein kindjies se winde, kindersiek, ’n halwe teelepeltjie word ingegee.”
[A leaf decoction used for infants with flatulence (‘winde’) and for children’s ailments; half a teaspoon is given.]

(GJ., JJ., PD. 2010, pers. comm.): “Die blom en blare van stinkkruid word as pruimpie gekou teen sooibrand”
[The flowers and the leaves are chewed as a remedy against heartburn.]

(GK. 2011, pers. comm.): “Gebruik vir niermoeilikheid; drink, vierde dag raak dit beter.”
[Used for kidney ailments; drink it, on the fourth day there will be improvement.]

(JB. 2011, pers. comm.): “Babatjie medisyne, vir winde, as die kind nie drink nie.”
[Used for infant flatulence.]

(JAJ. 2010, pers. comm.): “Stinkkruid word gedroog en dan word kookwater daarop gegooi en dit kan as dit bietjie afgekoel het, vir babas met winde ingegee word. Word ook as voetpoes vir sweetvoete in die skoene gesit.”
[A leaf infusion used for infants with flatulence. Powdered leaves are placed in shoes for sweaty feet.]

(JL. 2011, pers. comm.): “Gebruik die blare as pleister op pyne.”
[The leaves are used as compress on pains.]

(JvW. 2011, pers. comm.): “Kook `n stroop van die blare vir griep en koors.”
[Syrup made from the leaves for treating influenza and cough.]

(JW. 2010, pers. comm.): “As sweet voete en dit stink, kan `n voetpoes gemaak word van stinkkruid, droog en fyn in die skoen.”
[Dry, powdered leaves are used in shoes for sweaty feet with a bad odour.]

(LC. 2010, pers. comm.): “Ons het gesê stinkkruid is onkruid, maar ek het ook gehoor die blare kan help vir sooibrand, deur die blare te kou. Ons het dit nooit gebruik nie.”
[I have heard it can be used for heartburn, by chewing the leaves, but we never used it]
(MJ. and MG. 2010, pers. comm.): “Jong saailing plantjie word uit die grond getrek (die plant mag nog nie blom nie), en die sap van die plant word gemeng met moedersmelk, ’n teelepeltytjie vol daarvan word dan vir ’n babetjie gegee vir winde en skree stuipe. Die blare word gekneus en gemeng met moedersmelk om die babetjie daarvan in te gee.”

[Juice of bruised leaves (of a young plant not yet flowering) is mixed with mother’s milk and one teaspoon is given to infants with colic and convulsions.]

(SC. 2011, pers. comm.): “Gebruik vir verkoue saam met ander bosse.”

[Used for colds together with other herbs.]

(PD. 2011, pers. comm.): “Gebruik vir naarheid, pluk en maak `n pruimpie van die blare, sluk die sap.”

[Used for nausea; leaves are chewed and the juice swallowed.]

4.2. Literature

(Pappe, 1868) [p.23]; (Dykman, 1908); (Marloth, 1917) [p.91]; (Kling, 1923) [p.16, 17]; (Laidler, 1928) [p.435, 443]; (Watt and Breyer-Brandwijk, 1962) [p.254]; (Smith, 1966) [p.520]; (Palmer, 1985) [p.153]; (Rood, 1994) [p.35]; (Anonymous, 1998) [p.15]; (Van Wyk and Gericke, 2000) [p.130]; (Von Koenen, 2001) [p.149]; (Van Wyk, 2008) [p.338]; (Van Wyk et al., 2009) [p.212]; (De Beer and Van Wyk, 2011)
65. *Othonna daucifolia*

1. Taxonomic data

1.1. **Family:** Asteraceae
1.2. **Scientific name:** *Othonna daucifolia* J.C.Manning and Goldblatt
1.3. **Synonyms:** *Doria abrotanifolia* Harv.
1.4. **Description:** Perennial. Shrub. Ht 1-1.25 m. Alt up to 150 m.
1.5. **Distribution:** NC


3. **Herbarium specimen:** [NVD8], (Appendix 3 - Figure 65)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Daar is `n langbeen en `n kort been; die kort een is bokrepuis, hy is taai (t'gaai= plak vas) op sere en soos pleister of om doring uit te trek.”

[There are two different kinds – a long and a short one; the shorter one is also called *bokrepuis*, and have a sticky resin which is used as poultice on sores and as blister-plaster for thorns.]

(AST. 2011, pers. comm.): “kook die harpuis, goed vir die maag.”

[Decoction of the resin is used for stomach ailments.]

(GD. 2010, pers. comm.): “Die gom kan op eelte wat oop gemaak is gesit word, druk `n lappie daaroor, daar kom nie weer `n eelt nie.”

[The resin is used as poultice on an opened callus; a bandage is placed over the resin; the callus will not re-appear.]

4.2. **Literature**

(Laidler, 1928) [p.444]
66. *Othonna* sp. B

1. **Taxonomic data**

1.1. **Family:** Asteraceae


3. **Herbarium specimen:** [NV113], (Appendix 3 - Figure 66)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

   (AB., JB. 2011, pers. comm.): “Die gom word soos `n pleister op `n sweer of fyt gesit.”

   [The resin is used as poultice on sores and whitlow.]

4.2. **Literature**

   No medicinal uses have been recorded in the literature.

   **Note:** The species identification was done by Dr John Manning (Compton Herbarium) and Mr Nick Helme (associated with the Compton Herbarium).
67. Parmelia spp.

1. Taxonomic data

1.1. Family: Parmeliaceae


3. Herbarium specimen: [NVD8], (Appendix 3 - Figure 67)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, 2011, pers. comm.): “As medisyne vir rug moeilikheid, gebruik vir vroumense wat babatjie gekry het om die nageboorte af te kry, saam met taaibos en klipsweet” [Infusion used for back problems; used for a retained placenta with taaibos and klipsweet.]

(AST. 2010, 2011, pers. comm.): “Medisyne: vir onvrugbare moeders wat nie kan babies kry nie. Klipblom word gemeng met vrouebos. Word gekook; ´n tee word daarmee gemaak en gedrink tydens periode tyd. Dit word ook gebruik vir aambeie, die klipblom word saam met olienhoutboom-blare gekook en gedrink; ´n Verdere gebruik is vir sere op die kop, die kop word dan daarmee gewas. Klipblom word met vet gemeng en op bloedvinte geplaas. Ook gebruik om die nageboorte af te kry” [Infusion used for infertile woman, mixed with vrouebos (see unidentified species); which is used during menstruation. It is also used for haemorrhoids in combination with olienhoutboom leaves (a decoction is drunk); it is also used as a wash for sores on the scalp. Klipblom is mixed with fat and and applied to boils/furuncles. Used for a retained placenta]

(AW. 2011, pers. comm.): “Word op sere gesit.” [Used as compress on sores.]

(GB. 2011, pers. comm.): “Gebruik vir mondseer by babas en word afgetrek vir griep.”
[Used for infants with mouth sores and an infusion is used for influenza.]

(GD. 2010 pers. comm.): “Klipblom: kook hom goed, gooi water in `n skoon ding af en voeg twee eetlepels suiker by, kook dit tot dit `n stroop is. Die klipblom kan weg gegooi word. Dit word gedrink vir griep, verkoue, alle kwale, rugmoeilikheid, werk in die uriene.”
[A syrup is made by adding sugar to drained water of decocted klipblom which is used for influenza, colds, all ailments and back problems; it works in the urine.]

(GJ. 2010, pers. comm.): “Die klipblom word fyngemaak en as `n pleister op wonde gesit. Klipblom kan ook afgekook word en saam met suiker tot `n bruin stroop en as medisyne vir `borsmoeilikheid’; hierdie medisyne maak die slym in die bos los, dit werk honderd persent.”
[This powdered and used as poultice on wounds. Can be boiled with sugar to form a brown syrup that is an excellent medicine for chest problems, to loosen the mucus.]

(EK. 2011, pers. comm.): “Dit word gebruik as haarwasmiddel vir vaal kolle en drink vir bloed skoonmaak en pyn.”
[Used as wash for ringworm, an infusion is taken orally as blood purifier and for pain.]

(JB. 2011, pers. comm.): “Gebruik vir pyn van rugmoeilikheid.”
[Used for pain caused by back problems.]

(JC. and JW. 2010, pers. comm.): “Klipblom, twee soorte, die wyfie sit plat en die mannetjie is so oop. Stroop vir borskwale, met suiker, kook hom, drink hom. Gebruik vir rugkwale. Vir begin tande kry, seermond en melksproei, kan die mond daarmee was. Droë blare.”
[There are two different kinds of klipblom; the female klipblom grows flat, and the male klipblom is more open. Syrup made with sugar is used for the treatment of chest ailments, and back problems; decoction of dry leaves used for mouth sores and oral thrush and as a wash with dry material for teething problems in babies.]

(JL. 2011, pers. comm.): “Gebruik vir mondsere by kinders, vir rugpyn en maagpyn.”
[Used for children with mouth sores, backache and for stomach ache.]

(JvW. 2011, pers. comm.): “Gebruik vir maagkwale (pyne).”
[Used for stomach ailments (stomach ache).]

(ML. 2010, pers. comm.): “Klipblom: Gebruik vir mondsere, en rug moeilikheid”
[Used for mouth sores and back troubles.]

(MJ. and MG. 2010 pers. comm.): “Ons noem hom ook heuningnessie; kind se salf vir kopseire.”
[An ointment used for children with sores on scalp.]

(SC. 2011, pers. comm.): “Trek hom af vir medisyne; verskeie gebruike.”
[Infusion used for various ailments (unspecified).]

(PD. 2011, pers. comm.): “n Aftreksel van die plant word gedrink en sit dit ook aan vir aambeie.”
[The plant is taken orally as infusion and applied topically for haemorrhoids.]
4.2. Literature
68. Pelargonium antidysentericum

1. Taxonomic data

1.1. Family: Geraniaceae
1.2. Scientific name: Pelargonium antidysentericum (Eckl. and Zeyh.) Kostel. subsp. antidysentericum
1.3. Synonyms: No
1.4. Description: Perennial. Shrub. Ht 0.5-1.5 m. Alt 610-915 m.
1.5. Distribution: N, NC, WC


3. Herbarium specimen: [NVD8], (Appendix 3 - Figure 68)

4. Recorded medicinal uses

4.1. Kamiesberg
(AST. 2011, pers. comm.): “As jou menstruasie stop, word die rooi binnewortel droog saam kook water gedrink om dit weer te laat begin.”
[An infusion of the dry red inner root is used to start menstruation, if it has stopped.]

(GD. 2010, pers. comm.): “Gebruik ook vir kwale vir die bors en die maag. Die wortel word gekook, gedroog en fyngemaal, gooi dit in warm water en drink.”
[A root decoction is used for stomach ailments and chest ailments.]

(LC. 2010, pers. comm.): “Ek het gehoor dit help teen diaree.”
[I have heard that it helps for diarrhoea.]

4.2. Literature
(Pappe, 1868) [p.5]; (Kling, 1923) [p.10]; (Laidler, 1928) [p.434, 443]; (Githens, 1948) [p.99]; (Watt and Breyer-Brandwijk, 1962) [p.453]; (Smith, 1966) [p.402, 463, 438]; (Roberts, 1992) [p.169]; (Archer, 1994) [p. 54, 55, 66]; (Rood, 1994) [p.56]; (Van Wyk and Gericke, 2000) [p.92]; (Van Wyk, 2008) [p.338]; (De Beer and Van Wyk, 2011)
69. *Pelargonium hypoleucum*

1. Taxonomic data

1.1. **Family:** Geraniaceae  
1.2. **Scientific name:** *Pelargonium hypoleucum* Turcz.  
1.3. **Synonyms:** *Pelargonium harveyanum* R.Knuth  
1.4. **Description:** Perennial. Herb, scrambler. Ht 0.1-0.3 m. Alt up to 155 m  
1.5. **Distribution:** EC, WC


3. Herbarium specimen: [NV33], (Appendix 3 - Figure 69)

4. Recorded medicinal uses

4.1. **Kamiesberg**  
(AST. 2010, 2011, pers. comm.): “Word gebruik vir appelkoosmaag (diaree), dit is `n maagmedisyne, die wortel word gebruik.”  
[The root is used as remedy for diarrhoea.]  

(JvW. 2011, pers. comm.): “Die wortel word gekook vir maagmoeilikheid, rug, blaaskwale en period pyne.”  
[A root decoction is used for the treatment of stomach ailments, backache, bladder ailments and menstrual pains.]

4.2. **Literature**  
No medicinal uses have been recorded in the literature. It is possible that Laidler (1928) confused this species with “*Pelargonium anceps*” (now known as *P. grossularioides*).
70. *Pteronia camphorata*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Pteronia camphorata* (L.) L. var. *camphorata*

1.3. **Synonyms:**

- *Pteronia aspera* Thunb.
- *Pteronia camphorata* (L.) L.
- *Pteronia camphorata* (L.) L. var. *aspera* (Thunb.) Harv.
- *Pteronia laricina* Houtt. ex DC.

1.4. **Description:** Perennial. Shrub. Ht 0.15-1.5m. Alt 100-3500m.

1.5. **Distribution:** NC, WC


3. **Herbarium specimen:** [NV36], (Appendix 3 - Figure 70)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, 2011 pers. comm.): “Die plant het smal blaartjies. Gebruik as medisyne, snuif, saam met ander kruie; vir tandpyn (trek in melk of water; die takkie); vir steek in die oor (vat die droë blare en maak ’n poeier wat op watte in die oor gesit word) - dit het ‘n pyn-dodende effek; trek ook daai wind uit. Dit word ook saam org (*Notobubon pearsonii*) en *jantjiebérend* gebruik vir TB, so halwe kelleke, drie keer ‘n dag; dit is die beste medisyne vir tuberkulose, word gegee vir die mense wat klaar in die hospital was en herstel van TB.”

[The leaves are narrow. Powdered leaves used medicinally as snuff (mixed with other herbs). The leaves and twigs infused in milk or water are used to alleviate toothache; dry powdered leaves applied on cotton wool for relief from earache – it has an analgesic effect; used for flatulence; leaf infusion is used with *org* (*Notobubon pearsonii*) and *jantjiebérend* to treat tuberculosis (about 125 ml) of this mixture used three times a day is considered as the best medicine and tonic for convalescent tuberculosis patients.]

(EK. 2011, pers. comm.): “Hy is ‘n boegoe, gebruik vir kinders met steek in die oor saam met moedersmelk, gooi in die oor en maak toe met ‘n pluisie (watte); word gemeng met melk ook vir grootmense met steek in die oor.”

[It is a buchu; used as medicine for earache for infants, mixed with mothers milk as ear drops (cover with cotton wool); mixed with milk and used by adults to treat ear infection.]

(GB. 2011, pers. comm.): “Trek hom af vir rumatiek.”
An infusion used for rheumatism.

(GD. 2010, pers. comm.): “Dis ‘n bos. Die wortel maal dit fyn, vir babatjies, stuipe en vir grootmense - gebruik vir vuil bloed, en siek voel ook vir grootmens stuipe (epilepsie). Die blare word droog en fyn gebruik. Vir siek voel, meng met baarbos (Limeum africanum) en slangbos (Stoebe vulgaris), dit word gekook, baie goed. Die plant het so ‘n knopie, pluisie.”

[powdered roots used for infants with febrile convulsions, powdered leaves used for convulsions and epilepsy in adults, as blood purifier; leaf decoction mixed with baarbos (Limeum africanum) and slangbos (Stoebe plumosa) for general malaise.]

(GK. 2011, pers. comm.): “Die blare word gebruik vir oorsteek.”
[Leaves are used for earache.]

(JB. 2011, pers. comm.): “As poeier gebruik vir kinders se steek in die oor.”
[Used as powder for earache in children.]

(JvW. 2011, pers. comm.): “Die blaar word poeier gemaak en dan tee, dit is bitter, en gebruik vir winde.”
[Powdered leaf used as bitter infusion for flatulence.]

4.2. Literature
(Van Wyk and Gericke, 2000) [p.216, 224]
71. *Pteronia cinerea*

1. **Taxonomic data**

1.1. **Family:** Asteraceae  
1.2. **Scientific name:** *Pteronia cinerea* L.f.  
1.3. **Synonyms:** *Pteronia canescens* DC.  
1.4. **Description:** Perennial. Dwarf shrub. Ht 0.3-0.9 m. Alt 600-1140 m.  
1.5. **Distribution:** NC, WC

2. **Vernacular names:** (AST. 2010, pers. comm.): “boegoe”; (EK. 2011, pers. comm.): “silverboegoe”

3. **Herbarium specimen:** [NV42], (Appendix 3 - Figure 71)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
(AST. 2010, 2011, pers. comm.): “Word gedrink vir lae rugpyn, gebruik as tee vir suiker probleme.”  
[Leaf infusion used for low back pain and for diabetes.]

(EK. 2011, pers. comm.): “Gooi hom by bossiemedisyne.”  
[Used with other medicinal shrubs.]

4.2. **Literature**  
No medicinal uses have been recorded in the literature.
72. *Quaqua mammillaris*

1. **Taxonomic data**

1.1. **Family:** Asclepiadaceae (Apocynaceae)

1.2. **Scientific name:** *Quaqua mammillaris* (L.) Bruyns

1.3. **Synonyms:**
   - *Boucerosia mammillaris* (L.) N.E.Br.
   - *Caralluma mammillaris* (L.) N.E.Br.
   - *Caralluma winkleriana* (Dinter) A.C.White and B.Sloane
   - *Sarcophagophilus winklerianus* Dinter
   - *Stapelia mammillaris* L.
   - *Stapelia pulla* Aiton

1.4. **Description:** Perennial. Succulent, shrub. Ht 0.1-0.6 m. Alt 150-1100 m.

1.5. **Distribution:** N, NC, WC

2. **Vernacular names:**
   - (Marloth, 1917) [p.3]: “aas blom”;
   - (Smith, 1966) [p.598]: “aroena, ghwaap”;
   - (Archer, 1982) [p.441]: “aruna, bokhorings”;
   - (Metelerkamp and Sealy, 1983) [p.5, 8]: “aroena”;
   - (Archer, 1994): “aroena”;
   - (Van Wyk and Gericke, 2000) [p.74]: “aroena”;
   - (Le Roux and Wahl, 2005) [p.228]: “aroena”;
   - (Anonymous, 2006) [p.9]: “aroena”;
   - (AB. 2011, pers. comm.): “au roena, bokhoring”;
   - (AST. 2011, pers. comm.): “au roena”;
   - (AW. 2011, pers. comm.): “au roena”;
   - (CC. 2011, pers. comm.): “au roena”;
   - (EK. 2011, pers. comm.): “au roena”;
   - (GD. 2010, pers. comm.): “au roena”;
   - (GB. 2011, pers. comm.): “au roena”;
   - (JvW. 2011, pers. comm.): “au roena”;
   - (LC. 2010, pers. comm.): “ouroena”;
   - (PD. 2011, pers. comm.): “aroena”;
   - (SC. 2011, pers. comm.): “au roena”;
   - (SW. 2011, pers. comm.): “au roena”

3. **Herbarium specimen:** [NVD8], (Appendix 3 - Figure 72)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   - (AW. 2011, pers. comm.): “Gebruik vir kanker”
   - [Used for cancer.]

   - (GD. 2010, pers. comm.): “Geëet as nie eetlus het nie.”
   - [Used as appetite stimulant.]

   - (JvW. 2011, pers. comm.): “Gebruik om honger te maak.”
   - [Used as appetite stimulant.]

4.2. **Literature**
   - (Van Wyk and Gericke, 2000) [p.74]
73. *Radyera urens*

1. **Taxonomic data**

1.1. **Family:** Malvaceae  
1.2. **Scientific name:** *Radyera urens* (L.f) Bullock  
1.3. **Synonyms:**  
   - *Allenia urens* (L.f) E.Phillips  
   - *Hibiscus curcurbitinus* Burch.  
   - *Hibiscus urens* L.f.  
1.4. **Description:** Perennial. Shrub, herb. Ht. 0.15 – 0.91 m. Alt 100-1420 m  
1.5. **Distribution:** N, B, NW, G, FS, NC, WC, EC


3. **Herbarium specimen:** (photo in Le Roux and Wahl, 2005 used for identification) (Appendix 3 - Figure 73)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
(AB., JB. 2011, pers. comm.): “Die blare word gepak op pyne, wonde en brandwonde.”  
[Used leaves are used as compress on pains, wounds and burn wounds.]

4.2. **Literature**  
(Le Roux and Wahl, 2005) [p.212]
74. *Ricinus communis***

1. **Taxonomic data**

1.1. **Family:** Euphorbiaceae

1.2. **Scientific name:** *Ricinus communis* L.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Tree, shrub. Ht 0.6-7 m. Alt 15-1465 m.

1.5. **Distribution:** B, EC, G, KZN, L, LIM, M, N, NC, NW, S, WC (naturalised exotic)

(JB. 2011, pers. comm.): “olieboom”;

3. **Herbarium specimen:** [NVD8], (Appendix 3 - Figure 74)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2011, pers. comm.): “Gee dit vir babatjies, dit maak dat hulle magies gereeld is (purgemiddel).”
[Used for infants as purgative.]

(AST. 2010, pers. comm.): “Vir wonde, die pitjie kan in ‘n pan geskroei word en met gaas op wonde gesit word, soos brandserie en op pitsere. Olierige pit. Blare as kompres op pyne.”
[An ointment of roasted seeds are used as compress with bandages on wounds, burn wounds and boils. The seed has a high oil content. Leaves used as compress on pains]
(CC. 2011, pers. comm.): “Die blare word op die wang gesit vir tandpyn en ook op swelsels en pyne.”
[Leaves placed as compress on the cheek for toothache and on swellings and pains.]

(EK. 2011, pers. comm.): “Die blare word gebruik vir die pyn, vir skouers met rumatiek, sit die blaar net so op. Die saad word gebrand en fyngemaal vir koorsblare.”
[Fresh leaves applied as compress on pains, rheumatism; The burnt, powdered seeds are used for mouth ulcers.]

(GB. 2011, pers. comm.): “Kan `n pleister van die blare maak, die pitjies en vet kan op sere en koorsblare gesmeer word.”
[Leaves used as compress; ointment of seeds mixed with fat rubbed onto sores and mouth ulcers.]

(GD. 2010, pers. comm.): “Die pitte kan gebraai word. Plak die blare op wonde.”
[The seeds can be roasted and the leaves used as poultice on wounds.]

(GK. 2011, pers. comm.): “Die olie van die pit word aan die vel gesmeer om dit sag te maak, dis t`őboe goed (mooinaakgoed).”
[The oil of the seed is used as skin cream for softening the skin (cosmetic use).]

(LC. 2011, pers. comm.): “gebruik as kompres op pyne.”
[Used as compress on pains.]

(JB. 2011, pers. comm.): “Die blare word gebruik om op pyne te sit.”
[The leaves are used as compress on pains.]

(JC. 2010, pers. comm.): “My oorlede ma het olibome gepluk, die blare lou gemaak en op pyn gesit, hoofpyn en soos op knie pyn. Die sade word in die in vuur warm gemaak om `n salf mee te maak, vir seer lippe, koorsblare en vir droë lippe.”
[My mom used to make a compress of the lukewarm leaves for pains, such as headache and knee pain. The seeds can be roasted in the fire and used as an ointment for dry and sore lips and mouth blisters.]

(JL. 2011, pers. comm.): “Gebruik die blare as `n kompres vir pyne en as pleister op sere.”
[Leaves are used as compress on pains and as poultice on sores.]

(JvW. 2011, pers. comm.): “Die pitte word fyngemaak en as pleister op dorings en pitsere gesit; die blare as kompres word op kop gesit vir kopseer, trek hitte van die pyne (inflammasie).”
[Powdered seeds used as poultice on thorns and boils; the leaves are used as compress on the head for headache and used as compress for inflammation.]

(AW. 2011, pers. comm.): “Die pitjies word gestamp en die olie kan gesmeer word; die blare kan as kompres op pyne gesit word.”
[The oil from powdered seeds can be used as ointment; leaves used as compress on pains.]
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(MJ. and MG. 2010, pers. comm.): “`n Knie van `n man was baie seer; `n kompres van die blare kaal op die knie het gehelp. Olie vir kinders.”
[The leaves used as compress for inflamed limbs (painful knees); oil used as purgative for children.

(PD. 2011, pers. comm.): “Maak die blaar warm en sit dit op pyn; die sade kan fyngemaak word as salf.”
[Warmed leaf used as compress on pain; seeds can be powdered and used as ointment.]

4.2. Literature
(Smith, 1895) [p.123]; (Dykman, 1908); (Githens, 1948) [p.69]; (Ayensu, 1978) [p.138];
(De Beer and Van Wyk, 2011)
75. *Rumex cordatus*

1. **Taxonomic data**

1.1. **Family:** Polygonaceae  
1.2. **Scientific name:** *Rumex cordatus* Poir.  
1.3. **Synonyms:**  
   *Rumex cordatus* Desf.  
   *Rumex sarcorhizus* Link  
   *Rumex tuberosus* Thunb.  
1.4. **Description:** Annual, occ. Perennial. Herb. Ht 0.15-0.5 m. Alt 3-1140 m.  
1.5. **Distribution:** NC, WC, EC

2. **Vernacular names:**  
   (AST. 2010, pers. comm.): "tongblaar";  
   (AW. 2011, pers. comm.): "tongblaar";  
   (EK. 2011, pers. comm.): "tongblaar";  
   (GK. 2011, pers. comm.): "tongblaar";  
   (JvW. 2011, pers. comm.): "tongblaar";  
   (LC. 2011, pers. comm.): "tongblaar"

3. **Herbarium specimen:** [PNV57], (Appendix 3 - Figure 75)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
   (AST. 2010, pers. comm.): "Word gekook en geëet; dit word ook gebruik vir pyne, soos inflammasie in die nek, die blaar word dan lou gemaak en daarop gesit."  
   [It is edible, prepeared as a dish; lukewarm leaves are used as compress for pains (such as an inflamed neck).]

   (AW. 2011, pers. comm.): "Blare word net so op sere en pynbene (kompres) gesit."  
   [Leaves used as compress on sores and painful legs.]

   (EK. 2011, pers. comm.): "Die blare word op sere en puisies gesit en ook op pyne."  
   [Leaves used as compress on sores, acne and also on pains.]

   (GK. 2011, pers. comm.): "Gebruik soos pleister op pyne op die gesig."  
   [Used as poultice for facial pains.]

4.2. **Literature**  
No medicinal uses have been recorded in the literature.
76. *Ruta graveolens***

1. Taxonomic data

1.1. **Family:** Rutaceae

1.2. **Scientific name:** *Ruta graveolens* L.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Shrub, dwarf shrub, herb. Ht 0.7-1.5 m. Alt 50-950 m.

1.5. **Distribution:** EC, M, NC, WC (naturalised exotic) (cultivated in gardens)


3. **Herbarium specimen:** [NVD8], (Appendix 3 - Figure 76)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**


[A leaf decoction used for menstruation pains (excellent medicine).]

(AST. 2010, pers. comm.): “Gebruik vir verkoue en gip in medisyne.”

[Used for colds and influenza.]

(AW. 2011, pers. comm.): “Blare word gebruik as tee vir verkoue en gip saam met als.”

[Leaves used as infusion with *als* (*Artemisia afra*) for colds and influenza.]
(EK. 2011, pers. comm.): “Goed vir vrouedele, vrouesiekt en blaasprobleme, meng met jantjiebêrend.”
[Used as infusion with jantjiebêrend for women’s ailments and urinary tract infections.]

(GD. 2010, pers. comm.): “Een van die belangrikste medisyne.”
[Used for unspecified ailments (one of the most important medicines).]

(GK. 2011, pers. comm.): “Trek die blare af vir naarheid.”
[A leaf infusion is used for nausea.]

(JB. 2011, pers. comm.): “Gebruik vir suikerprobleme en griep.”
[Used for diabetes and influenza.]

(JC. and JW. 2010, pers. comm.): “Medisyne vir koorsigheid”
[Medicine to treat fevers.]

(JL. 2011, pers. comm.): “Gebruik vir suikerprobleme en griep.”
[Used for diabetes and influenza.]

(JvW. 2011, pers. comm.): “Gebruik vir griep en koors saam met als en groenamara.”
[Used for influenza and fever with als and groenamara.]

(LC. 2010, pers. comm.): “Gebruik as ontwurming, ’n tee word gemaak met die blaartjies. Genadiglik het ek dit net een keer as kind ingekry; dis baie sleg.”
[A leaf infusion is used as vermifuge. Luckily I had to take it only once as a child; it has a very bad taste.]

(MJ. and MG. 2010, pers. comm.): “Wynruit is ‘n urine-drywer, word ook gedrink vir lae rug en nier pyn. ‘n Goeie medisyne vir pyne.”
[Leaves used for kidney ailments (pains), as diuretic and for low back pain and other pains.]

(PD. 2011, pers. comm.): “Gebruik as medisyne.”
[Used medicinally (unspecified).]

(PR. 2011, pers. comm.): “Gebruik vir griep.”
[Used for influenza.]

(SC. 2011, pers. comm.): “Gebruik as medisyne.”
[Used medicinally (unspecified).]

4.2. Literature
(Dykman, 1908); (Kling, 1923) [p.11]; (Githens, 1948) [p.69]; (Watt and Breyer-Brandwijk, 1962) [p.920, 922]; (Smith, 1966) [p.103]; (Roberts, 1983) [p.3]; (Chiej, 1984) [no.270]; (Johnson and Sokutu, 1985) [p.141]; (Palmer, 1985) [p.161]; (Roberts, 1985) [p.113]; (Rood, 1994) [p.90, 91, 92]; (Anonymous, 1998) [p.19]; (Van Wyk and Gericke, 2000) [p.132]; (Van Wyk, 2008) [p.338]; (Van Wyk et al., 2008) [p.701]; (Van Wyk et al., 2009) [p.250]; (De Beer and Van Wyk, 2011)
77. *Salix mucronata*

1. **Taxonomic data**

1.1. **Family:** Salicaceae

1.2. **Scientific name:** *Salix mucronata* Thunb. subsp. *capensis* (Thunb.) Immelman

1.3. **Synonyms:**

- *Salix capensis* Thunb.
- *Salix capensis* Thunb. var. *gariepina* (Burch.) Anderson
- *Salix mucronata* Thunb. var. caffra Burtt Davy
- *Salix mucronata* Thunb. var. integra Burtt Davy

1.4. **Description:** Perennial. Tree. Ht 1 – 3 m. Alt 30-2125 m.

1.5. **Distribution:** N, NW, FS, KZN, L, NC, WC, EC


3. **Herbarium specimen:** [NVD8], (Appendix 3 - Figure 77)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, 2011, pers. comm.): “Vir rugpyn word die blare gekook, getrek en gedrink.”

[A leaf infusion or decoction is used for backache.]
(AST. 2010, pers. comm.): “Gebruik vir rugprobleme, trek blare as tee, sit blare op kop vir koppyn en op ‘n stywe nek.”
[Leaf infusion used for backache; leaf compress for headache and a stiff neck.]

(CC. 2011, pers. comm.): “Die wortel word gebruik vir siek honde.”
[The root is used for sick dogs.]

(GD. 2010, pers. comm.): “Kook die blare vir rugkwale (anti-inflammatories).”
[Leaf decoction used for back ailments (anti-inflammatory).]

(JB. 2010, 2011, pers. comm.): “Vir hoofpyn word die blare geëet, die sap word gesluk en jy sweet die hoofpyn uit, word ook gekook vir rugpyn.”
[The leaves are chewed for headache, the sap is swallowed (headache cure is ascribed to diaphoretic action), leaf infusion used for backache.]

(JL. 2011, pers. comm.): “Die blare word gekook vir rugprobleme.”
[A decoction of the leaves is used for back problems.]

(JvW. 2011, pers. comm.): “Die blare word gedrink vir aambeie saam met aambeibos.”
[Leaves are used used with *aambeibos* (*Chironia baccifera*) to treat haemorrhoids.]

(PD. 2010, pers. comm.): “Die warm blare word op pyn plekke gesit.”
[Warm leaves applied as compress on pains.]

(SC. 2011, pers. comm.): “Drink ’n tee van die blare, dis ’n goeie medisyne vir pyne, kan ook as pleisters gebruik word.”
[Leaf infusion and compress used for pains.]

4.2. Literature
(Dykman, 1908) [p.116]; (Batten and Bokelman, 1966) [p.57]; (Coates Palgrave, 1977) [p.92]; (Roberts, 1982) [p.59, 60]; (Johnson and Sokutu, 1985) [p.130]; (Ellis, 1989); (Archer, 1994) [p.66]; (Van Wyk and Gericke, 2000) [p.132]; (Van Wyk et al., 2000) [p.275]; (Von Koenen, 2001) [p.168]; (Van Wyk, 2008) [p.338]; (Van Wyk et al., 2008) [p.700]; (Van Wyk et al., 2009) [p.252]
78. *Salvia dentata*

1. **Taxonomic data**

1.1. **Family:** Lamiaceae

1.2. **Scientific name:** *Salvia dentata* Aiton

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Shrub. Ht 0.6-2 m. Alt 151-1525 m.

1.5. **Distribution:** NC, WC


3. **Herbarium specimen:** [PVD95], (Appendix 3 - Figure 78)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Word saam met t`noubie en bokmis gemeng en gekook wat dan as medisyne vir masels gebruik word. Bergsalie is `n bos wat ook vir griep, verkoue, koors en as was vir sere op `n kind se kop gebruik word.” [Mixed with t`noubie (*Dodonaea viscosa* var. *angustifolia*) and goat droppings and used as decoction to treat measles. Also used for influenza, colds, fever and as wash for sores on a child’s scalp.]

(AST. 2011, pers. comm.): “Word gebruik vir griep en vir masels (saam met bokmis).” [Used for influenza and for measels with goat droppings.]

(AW. 2011, pers. comm.): “Word gebruik vir griep saam met jantjiebêrend.” [Used for influenza with *jantjiebêrend*.]

(CC. 2011, pers. comm.): “Word saam met bloekomblare en jantjiebêrend gekook vir griep.” [As decoction with *bloekom* (*Eucalyptus* sp.) leaves and *jantjiebêrend* for influenza.]

(EK. 2011, pers. comm.): “Verkoue medisyne.” [Used for the treatment of colds.]
(GB. 2011, pers. comm.): “Gebruik vir griep en vir masels (saam met bokmis); breek die koors.”
[Used for influenza and measles (with goat droppings); it breaks the fever.]

(GD. 2010, pers. comm.): “Gebruik vir griep en verkoues.”
[Used for influenza and colds.]

(JB. 2011, pers. comm.): “Gebruik vir griep, verkoue, koors en as was vir sere op kinders se kop.”
[Used for influenza, colds, fever and as wash for sores on children`s scalps.]

(JC. 2010, pers. comm.): “Verkoue en griep.”
[Used for colds and influenza.]

(JL. 2011, pers. comm.): “Gebruik vir griep, verkoue en pyne.”
[Used for influenza, colds and pains.]

(JW. 2010, pers. comm.): “Verkoue en griep, meng met t`goubee, taibos, grandpa.”
[Used for colds and influenza, mixed with *Dodonaea viscosa* var. *angustifolia*, *Searsia undulata* and aspirine.]

(JvW. 2011, pers. comm.): “n Stroop word gemaak van die blare en suiker, wat gebruik word vir griep en suiker en kindersiek.”
[Syrup used for influenza, diabetes and children`s ailments.]

(MJ. and MG. 2010, pers. comm.): “Bloublomsalie word saam met stukkies bokmis gemeng vir masels by kinders. Die meisies was hulle hare vir die mooi daarmee.”
[Used with goat droppings for children with measles. Girls used it as a hair rinse.]

(PD. 2011, pers. comm.): “Gebruik as medisyne.”
[Used medicinally (unspecified).]

(SC. 2011, pers. comm.): “Blare gebruik vir verkoue.”
[Leaves used for the treatment of colds.]

4.2. Literature
(Laidler, 1928) [p.442]; (Archer, 1990) [p.967]; (Archer, 1994) [p. 66, 69]
79. *Salvia lanceolata*

1. **Taxonomic data**

1.1. **Family:** Lamiaceae

1.2. **Scientific name:** *Salvia lanceolata* Lam.

1.3. **Synonyms:**
   - *Salvia hastifolia* Benth.
   - *Salvia nivea* Thunb.

1.4. **Description:** Perennial. Shrub. Ht 1 – 2 m. Alt 15-1500 m.

1.5. **Distribution:** NC, WC


3. **Herbarium specimen:** [photo in Le Roux and Wahl (2005) used for identification], (Appendix 3 - Figure 79)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AST. 2011, pers. comm.): “Die blare word gebruik vir griep.”
   [Leaves used for treating influenza.]

4.2. **Literature**
   (Archer, 1990) [p.967]; (Archer, 1994) [p. 69]; (Van Breda and Barnard, 1991) [p.154]
80. *Salvia verbenaca*

1. Taxonomic data

1.1. **Family**: Lamiaceae

1.2. **Scientific name**: *Salvia verbenaca* L.

1.3. **Synonyms**:
   - *Salvia clandestina* L. var. *angustifolia* Benth.
   - *Salvia clandestina* L. var. *clandestina*

1.4. **Description**: Perennial. Herb. Ht 0.15-0.4 m. Alt 45-1670 m.

1.5. **Distribution**: N, NW, FS, NC, WC, EC


3. **Herbarium specimen**: [NV114], (Appendix 3 - Figure 80)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AST. 2011, pers. comm.): “Blare word gebruik as medisyne vir grieperigheid, net soos die bruinsalie ook.”
   [Leaves used for influenza.]

4.2. **Literature**
   (Webb, 1948) [p.69]; (Palmer, 1985) [p.149]; (Roberts, 1992) [p.262]
81. *Sarcocaillon* species

1. Taxonomic data

1.1. Family: Geraniaceae


3. Herbarium specimen: [PNV105], (Appendix 3 - Figure 81)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2010, pers. comm.): “Dit kan gekook word en vir diere ingegee word om nageboorte af te kry.”
[A decoction used to expel retained placenta of animals.]

(CC. 2011, pers. comm.): “Dit word gebruik vir aambeie en ook as bokke `n dooie lam gehad het, om die nageboorte af te kry.”
[Used for haemorrhoids and for animals with a retained placenta.]

(JvW. 2011, pers. comm.): “Maak die stammetjies fyn en gee vir `n dier/ mens in om nageboorte af te kry.”
[Used for a retained placenta in humans and animals.]

(LC. 2010, 2011 pers. comm.): “Afgetrek en gebruik vir die diere om van nageboorte ontslae te raak.”
[A decoction used to expel retained placenta in animals.]

(SC. 2011, pers. comm.): “Gebruik om nageboorte af te kry by diere en vir maagpyn vir mense.”
[Used for a retained placenta in animals and for stomach ache in humans.]

4.2. Literature

(Laidler, 1928) [p.443]; (Shapera, 1930) [p.260]; (Watt and Breyer-Brandwijk, 1962) [p.455]; (Eliovson, 1972) [p.24]; (Palmer, 1985) [p.135]
82. *Sceletium tortuosum*

1. **Taxonomic data**

1.1. **Family:** Mesembryanthemaceae

1.2. **Scientific name:** *Sceletium tortuosum* (L.) N.E.Br.

1.3. **Synonyms:**

- *Mesembryanthemum aridum* Moench
- *Mesembryanthemum concavum* Haw.
- *Mesembryanthemum tortuosum* L.
- *Pentacoilanthus tortuosus* (L.) Rappa and Camarrone
- *Phyllobolus tortuosus* (L.) Bittrich
- *Sceletium boreale* L.Bolus
- *Sceletium compactum* L.Bolus
- *Sceletium concavum* (Haw.) Schwantes
- *Sceletium framesii* L.Bolus
- *Sceletium gracile* L.Bolus
- *Sceletium jouberti* L.Bolus
- *Sceletium namaquense* L.Bolus var. *namaquense*
- *Sceletium namaquense* L.Bolus var. *subglobosum* L.Bolus
- *Sceletium ovatum* L.Bolus
- *Sceletium tugwelliae* L.Bolus
- *Tetracoilanthus concavus* (Haw.) Rappa and Camarrone

1.4. **Description:** Perennial. Succulent. Ht up to 0.2 m. Alt 500-950 m.

1.5. **Distribution:** EC, NC, WC


3. **Herbarium specimen:** [PNV97], (Appendix 3 - Figure 82)
4. Recorded medicinal uses

4.1. Kamiesberg

(A.B. 2010 pers.comm.): “Dit is medisyne vir babetjies se winde en as die maag nie lekker is nie (ongestel).”
[Leaves used for flatulence (colic) in infants and stomach ailments.]

(AST. 2010, pers. comm.): “Vir kinders gebruik; word gemeng met droë witvergeet (wortel), in `n lappie wat dan in melk of water gedruk word en dan ingegee word. Ook vir koliek, skree babatjies. Hy gaan na die kop.”
[Used for children; the plant is dried and mixed with dry witvergeet root (Asclepias crispa), it is then placed in a piece of linen and dipped into water or milk and a few drops are given to infants with colic. “It goes to the head” (psychoactive).]

(AW. 2010 pers.comm.): “Word afgetrek vir kinders wat hardlywig is en ook gebruik as kalmeermiddel.”
[Used as infusion for constipation in children and is also used as sedative.]

(CC. 2011 pers.comm.): “Gebruik vir maagpyn”
[Used for stomach ache.]

(EK. 2011 pers.comm.): “Goed vir winde.”
[Used for flatulence.]

(GB. 2011 pers.comm.): “Gebruik vir naarheid, maagkrampe, winde en babas met winde.”
[Used for nausea, stomach cramps, flatulence and infant flatulence.]

(GD. 2010, pers. comm.): “Medisyne vir babatjies. `n Paar druppeltjies saam melk in mond (om aan te suig) maak die winde los en laat die kind slaap.”
[Used as medicine for infants - a few drops in milk are given for flatulence and to help the child sleep.]

(GK. 2011 pers.comm.): “Gebruik as jou maag moeilik is, maak jy dronk as jy dit kou.”
[Used for stomach ailments; it makes you drunk if you chew it.]

(JB. 2011, pers. comm.): “Kinders medisyne, kou maak mense bedwelm.”
[Children’s ailments, chewing the leaves causes intoxication.]

(JC. 2010, pers. comm.): “Winde vir babatjie, maag seer; slaapmiddel meng met melk (dose hom) net `n paar druppeltjies, net dat hy slaap.”
[Leaves used as decoction with milk for infants with flatulence, stomach ache and used for infants to make them sleep.]

(JL. 2010, pers. comm.): “Gebruik vir babas wat windering is, kalmeer soos `n slaappil en is `n maag medisyne vir volwassenes. Gebruik as `n soort koorsstroop”
[Used for infants with flatulence, is a sedative which cause babies to sleep and is used for adults for stomach ailments. Can be made as a syrup for fevers.]
(JW. 2010, pers. comm.): “Kougoed is mos ook twee soorte, mak kougoed, pruimpies gemaak, ingesluk. Slaapmiddel vir babetjie. Wilde kougoed - weet nie wat hulle van hom maak.”
[Used for infants to make them sleep.]

(JvW. 2011 pers.comm.): “Gebruik vir winde, maagkwale en maak ’n kind/ babatjie laat slaap.”
[Used for flatulence, stomach ailemnts and cause infants to sleep.]

(LC. 2010, pers. comm.): “Dit is verkoop op Gamoep, vir die werkers. Dit het bekendgestaan as ’geelvoorskoot’ as versagtingswoord. Pappa het dit baie gekoop, vir die werkers. Mamma het ’n paar druppels in melk gekook en so drie druppels daarvan ingegee vir koliek en maagkrame, as die kindjie bietjie moeilik is, is dit in die mond gesit. Die boere het ook ”n paar druppels vir ’n hiperaktiewe hond ingegee, die hond het dan geslaap.”
[It was known under the name ‘geelvoorskoot’ (= “yellow apron”, used as a euphemism) and sold in the town Gamoep. My dad used to buy it for the farm workers. My mom used to add a few drops to milk and boiled it - a few drops of this decoction were given as remedy for colic and stomach cramps. The farmers also used it as sedative for hyperactive dogs, to make them sleep.]

(MJ. and MG. 2010, pers. comm.): “Pruim soos ’n soort twak. Word gebruik vir pyn op die maag, kop pyn, babatjies wat skree sonder ’n rede, laat slaap die kind, gee hom net ’n paar druppels, baie min.”
[The leaves are chewed like a kind of tobacco. It is used for stomach ache, headache and for babies with colic; only a few drops will cause them to sleep.]

(PD. 2011 pers.comm.): “Gebruik vir kindersiekte, pruim dit al van vyf jaar oud!”
[used for children`s ailments; I have been chewing it since I was five years old.]

(SC. 2011 pers.comm.): “Gebruik vir klein kinders.”
[Used medicinally for infants.]

(SW. 2011 pers.comm.): “Gebruik vir babas se winderigheid.”
[Used for infant flatulence.]

4.2. Literature
(Van der Stel, 1685) [p.788]; (Pappe, 1868) [p.17]; (Marloth, 1917) [p.48]; (Laidler, 1928) [p.440]; (Laidler, 1928) [p.440]; (Laidler, 1928) [p.440]; (Shapera, 1930) [p. 212, 317, 411, 412]; (Githens, 1948) [p.96]; (Watt and Breyer-Brandwijk, 1962) [p.11]; (Smith, 1966) [p.276, 309]; (Eliovson, 1972) [p.24, 119]; (Archer, 1994) [p.70, 128]; (Rood, 1994) [p.73]; (Anonymous, 1998) [p.11]; (Cowling and Pierce, 1999) [p.48]; (Van Wyk and Gericke, 2000) [p.172, 210]; (Scott and Hewett, 2008) [p.346]; (Van Wyk et al., 2009) [p.200]; (Anonymous, undated) [p.16]
83. *Schinus molle***

1. Taxonomic data

1.1. **Family:** Anacardiaceae

1.2. **Scientific name:** *Schinus molle* L.

1.3. **Synonyms:** None

1.4. **Description:** Perennial. Tree. Ht 4-10.65 m. Alt 185-1300 m.

1.5. **Distribution:** B, EC, G, LIM, NC, WC (naturalised exotic) (cultivated as ornamental and shade tree)


3. **Herbarium specimen:** [PNV98], (Appendix 3 - Figure 83)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Blare word as `n kompres op pyne geplaas.”

[Leaves used as compress on pains.]

(AW. 2011, pers. comm.): “Pak die blare op pyne.”

[Leaves used as compress on pains.]

(EK. 2010, pers. comm.): “Blare as kompres vir rugprobleme, lê op bed van blare.”

[Leaves used as compress for back problems; lay on a bed of leaves.]

(GB. 2011, pers. comm.): “Gebruik as trekpleister vir dorings.”

[Used as blister-plaster for thorns.]

(GD. 2010, pers. comm.): “Blare word op wonde en sere as kompres gesit.”

[Leaves used as compress on wounds and sores.]

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(GK. 2010, pers. comm.): “As jy siek voel, met koors en die skouers pyn, sit die blare tussen die blaaie, dit laat jou gesond sweet.”
[For general malaise and fever with shoulder pains, leaves as compress on back (between the shoulders); it causes perspiration.]

(JB. 2011, pers. comm.): “Maak van die blare ’n warm kompres op wang vir tandpyn, ook op ander pyne.”
[Used as warm compress on cheek for toothache and on other pains.]

(JL. 2010, pers. comm.): “Peperboom het ek geleer word gebruik vir die vlieë, hang hom op in die huis; my ouma het dit vir pyn op die knieë geplak, net onder die knieë olie gesmeer en dit daarop geplak, as pleister op pyne.”
[Used as fly repellent, hang (a bunch) in the house. Used as compress on sore knees, oil is smeared just below the knee and the leaves are then placed on the oil.]

(JW. 2010, pers. comm.): “Blare word op die seer knieë geplak, vir pyn.”
[Leaves used as compress on painful knees.]

(MJ. and MG. 2010, pers. comm.): “Blare op die kop vir pyn en koors.”
[Leaves are used as compress on the head for pain and fever.]

4.2. Literature
(Watt and Breyer-Brandwijk, 1962) [p.51, 52]; (Githens, 1948) [p.120]; (Smith, 1966) [p.336]; (Von Reis Altschul, 1973); (Johnson and Hutching, 1986) [p.78]; (Van Wyk et al., 2000) [p.278]; (Van Wyk et al., 2008) [p.701]
84. *Searsia burchellii*

1. **Taxonomic data**

1.1. **Family:** Anacardiaceae

1.2. **Scientific name:** *Searsia burchellii* (Sond. ex Engl.) Moffett

1.3. **Synonyms:**
- *Rhus burchellii* Sond. ex Engl.
- *Rhus undulata* Jacq. var. *burchellii* (Sond.) Schönland

1.4. **Description:** Perennial. Shrub, tree. Ht 0.25-5 m. Alt 60-2000 m.

1.5. **Distribution:** FS, L, N, NC, WC

2. **Vernacular names:**
   - (Archer, 1994) [p. 47]: “nara”;
   - (Archer, 1994) [p. 48]: “lnara”;
   - (Archer, 1994): “t narra, taailbos, kuni-bush, tgarra”;
   - (Powrie, 2004) [p.101]: “koeniebos, kunibos, kuniebos, Namakwalandse groentaalbos, taalbos”;
   - (Anonymous, undated) [p.22]: “taalbos, t narra”; (AB. 2011, pers. comm.): “taalbos”;
   - (JvW. 2011, pers. comm.): “taalbos” (LC. 2010, pers. comm.): “t garra”;
   - (PR. 2011, pers. comm.): “taalbos, gharrabos”;
   - (SC. 2011, pers. comm.): “taalbos”

3. **Herbarium specimen:** [NV115], (Appendix 3 - Figure 84)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   - (AST. 2011, pers. comm.): “Blare word afgetrek en gebruik vir griep.”
   - (AW. 2011, pers. comm.): “Gebruik vir verkoue.”
   - (CC. 2011, pers. comm.): “Gebruik vir hoes en koors.”
   - (EK. 2011, pers. comm.): “Dit is medisyne vir griep en maagaandoenings.”
   - (GC. 2011, pers. comm.): “t`arra tak word gekou en die sap gesluk vir maagpyn.”
   - (JvW. 2011, pers. comm.): “Gebruik om `n vrou skoon te maak van die nageboorte.”
(PR. 2011, pers. comm.): “Gebruik vir maagkrampe.”
[Used for stomach cramps.]

(SC. 2011, pers. comm.): “Gebruik as medisyne.”
[Use as medicine (unspecified).]

4.2. Literature
(Johnson and Hutching, 1986) [p.76]; (Archer, 1994) [p.37]; (Archer, 1994) [p.47, 48, 50, 55, 57, 66, 87, 95, 102, 103, 105, 106]; (Anonymous, undated) [p.22]
85. *Senecio cinerascens*

1. **Taxonomic data**

1.1. **Family:** Asteraceae

1.2. **Scientific name:** *Senecio cinerascens* Aiton

1.3. **Synonyms:**
- *Cineraria seminuda* Klatt
- *Senecio namaquanus* Bolus
- *Senecio tomentosus* Salisb.

1.4. **Description:** Perennial. Dwarf shrub, shrub. Ht 0.3-1.5 m. Alt 305-2000 m.

1.5. **Distribution:** N, NC, WC

2. **Vernacular names:** (Le Roux and Wahl, 2005) [p.285]: “vieroulap, handjiesbos”;

3. **Herbarium specimen:** [PNV99], (Appendix 3 - Figure 85)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Die blare kan afgetrek word en vir griep. Die handjiesbos se blare kan ook gestamp word om op sere te sit”
[Leaf infusion is used for influenza. The leaves can also be bruised and used as compress on sores.]

(AST. 2010, pers. comm.): “Stamp fyn en sit op wonde as kompres. Gebruik vir griep. Kook dit vir bloeddruk, meng dit met jantjiebêrend.”
[Bruised leaves used as compress on wounds. Leaf infusions used for influenza and with jantjiebêrend for the treatment of high blood pressure.]

(AW. 2011, pers. comm.): “Gebruik vir griep en pyne.”
[Used for influenza and pains.]
(EK. 2011, pers. comm.): “Pak die blare op die kop vir hoofpyn, drink vir winde, pyne en koors.”
[Leaves are used as compress for headache and as infusion for flatulence, pains and fever.]

(GB. 2011, pers. comm.): “gebruik as pleister op brandwonde, ook gebruik as maagspoel vir hardlywigheid.”
[Used as poultice on burn wounds and as infusion for constipation.]

(GD. 2010, pers. comm.): “Stamp en kook hom as medisyne vir griep en verkoues (word alleen gebruik, nie in `n mengsel nie).”
[Pounded leaves used as decoction for treatment of influenza and colds (used alone, not in a mixture).]

(GJ., JJ., PD. 2010, pers. comm.): “Vieroulapbos kan op pyne as kompres opgesit word.”
[Can be used as compress on pains.]

(GK. 2011, pers. comm.): “Blare gebruik as pleister op pyne.”
[Leaves are used as compress on pains.]

(JB. 2011, pers. comm.): “maal met vet as pleister vir sere.”
[Powdered leaves mixed with fat used as plaster for sores.]

(JC. and JW. 2010, pers. comm.): “Medisyne vir pyne en so, kan op pyne gesit word en gedrink word.”
[Used as medicine for pains; can be used topically and orally.]

(JL. 2011, pers. comm.): “Blare gebruik as pleister op pyne.”
[Leaves used as compress on pains.]

(JvW. 2011, pers. comm.): “Gebruik as pleister vir brandwonde, sere en wintershande; ook vir verkoue saam met ander bosse.”
[Used as plaster (poultice) on burn wounds, sores and chilblained hands; used orally for colds in a mixture with other plants.]

(LC. 2010, pers. comm.): “Kan as medisyne gedrink word vir maag aandoenings en maagkrampe.”
[Leaf infusion taken for stomach ailments and stomach cramps.]

(SC. 2011, pers. comm.): “Blare gebruik as pleisters.”
[Leaves used as plasters (poultice).]

4.2. Literature
(Von Reis Altschul, 1973); (Anonymous, undated) [p.23]
1. Taxonomic data

1.1. Family: Asteraceae
1.2. Scientific name: Senecio scapiflorus (L'Hér.) C.A.Sm.
1.3. Synonyms: No
1.4. Description: Perennial. Herb. Ht 0.2-0.5 m. Alt 30-1310 m.
1.5. Distribution: NC, WC


3. Herbarium specimen: [NV23], (Appendix 3 - Figure 86)

4. Recorded medicinal uses

4.1. Kamiesberg

(AST. 2010, pers. comm.): "Dis `n ander kapokbos. Die kapokbos het geel blomme, klein, sag. Die pitjie kan wegvlieg. Gebruik vir sere, omlope, vaal kolle, was met `n aftreksel en drink."
[This is a different type of kapokbos. Yellow flowers, and the seed can fly away. Leaf infusion used as wash for sores and ringworm and taken orally.]

(AW. 2011, pers. comm.): "Gebruik vir kindersiekte soos masels." [Used for children`s ailments, such as measles.]

(GK. 2011, pers. comm.): "Gebruik vir vaal kolle op die kop." [Used for ringworm.]

(GK. 2011, pers. comm.): "Die blare word gebruik as was vir vaal kolle op die kop (was `n paar maal), die hare val dan uit." [The leaves are used as wash (several times) for ringworm on the scalp; it causes hair loss.]

(JvW. 2011, pers. comm.): "Gebruik vir die suur winde van babatjies." [Used for flatulence (acidity) in infants.]

4.2. Literature

No medicinal uses have been recorded in literature.
87. *Stoebe plumosa*

1. Taxonomic data

1.1. Family: Asteraceae

1.2. Scientific name: *Stoebe plumosa* (L.) Thunb.

1.3. Synonyms:
- *Artemisia ambigua* Thunb.
- *Artemisia vermiculata* L.
- *Elytropappus ruschiatus* Dinter
- *Stoebe burchellii* Levyns
- *Stoebe cinerea* Thunb. var. *plumosa* (Less.) Harv.
- *Stoebe plumosa* (L.) Thunb.
- *Stoebe vulgaris* Levyns

1.4. Description: Perennial. Shrub. Ht 0.6-1.5 m. Alt 0-2200 m.

1.5. Distribution: EC, FS, G, KZN, L, LiM, M, N, NC, NW, S, WC


3. Herbarium specimen: [NV34], (Appendix 3 - Figure 87)

4. Recorded medicinal uses

4.1. Kamiesberg

(AB. 2011, pers. comm.): “Kook die blare en takkies en drink vir pyn.”
[Leaves and twigs taken as decoction for pain.]

[Leaf infusion used orally for treatment of backache and kidney ailments.]

(GK. 2011, pers. comm.): “Gebruik vir vrou na kraam om dit aan haar te smeer, vir pyn.”
[Used as ointment to massage woman after labour for relief of pain.]

(JL. 2011, pers. comm.): “Gebruik vir pyne.”
[Used for pains.]

(JvW. 2011, pers. comm.): “Gebruik as medisyne vir pyne.”
[Used as medicine for pain.]
(MJ. and MG. 2010, pers. comm.): “Gebruik vir kindersiektes. Die blare is afgestroop, gekneus in lepeltjie, en gee die kind so drie druppeltjies in.”
[Infusion of bruised leaves used for children’s ailments (about three drops are given).]

4.2. Literature
(Watt and Breyer-Brandwijk: 1962) [p.292]
88. **Silene burchellii**

1. **Taxonomic data**

1.1. **Family:** Caryophyllaceae  
1.2. **Scientific name:** *Silene burchellii* Otth. var. *pilosellifolia* (Cham. and Schltdl.) Sond.  
1.3. **Synonyms:**  
   - *Silene burchellii* Otth. var. *macrorrhiza* R.E.Fr.  
   - *Silene burchellii* Otth. *pilosellaefolia* Sond.  
1.4. **Description:** Perennial. Herb. Ht 0.05 – 0.4m. Alt 600 – 2425 m  
1.5. **Distribution:** EC, LIM, G, M, FS, KZN, L, NC

2. **Vernacular names:**  
   - (Smith, 1895) [p.87]: “[i-Yeza lehashe (African language)]”
   - (Phillips, 1917) [p.45]: “[lepatla, lithotvana, kopane (Sesotho)]”
   - (Batten and Bokelman, 1966) [p.68]: “gunpowder plant, [iYeza lehashe (Xhosa)]”
   - (Hutchings et al., 1996) [p96]: “bladder campion, kruitbossie, [igwayintombi elincane, injuju ;(Zulu)]”
   - (Von Koenen, 2001) [p.175]: “kruitbossie”

3. **Herbarium specimen:** [NV28], (Appendix 3 - Figure 87)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
   - (AST. 2010, pers. comm.): “Die plant word soos witverget (Asclepias crispa) gebruik, as snuff.”  
   - [The plant is used in the same way as witverget (Asclepias crispa), as snuff.]

4.2. **Literature**  
   - (Smith, 1895) [p.87]; (Phillips, 1917) [p.48]; (Githens, 1948) [p.121]; (Watt and Breyer-Brandwijk: 1962) [p905]; (Batten and Bokelman, 1966) [p.68]; (Jacot Guillarmod, 1971) [p.453]; (Hutchings et al., 1996) [p.96]; (Von Koenen, 2001) [p.170]
89. *Solanum guineense*

1. **Taxonomic data**

   1.1. **Family:** Solanaceae
   
   1.2. **Scientific name:** *Solanum guineense* L.

   1.3. **Synonyms:**
   
   *Solanum aggregatum* Jacq.
   
   *Solanum dasypus* Drège ex Dunal

   1.4. **Description:** Perennial. Shrub or dwarf shrub. Ht 0.5-1.5 m. Alt 15-670 m.

   1.5. **Distribution:** EC, NC, WC

2. **Vernacular names:** (LC. 2010, pers. comm.): “*koosbasterblaar*”

3. **Herbarium specimen:** [NVD17], (Appendix 3 - Figure 89)

4. **Recorded medicinal uses**

   4.1. **Kamiesberg**
   
   (LC. 2010, pers. comm.): “My ouma-grootjie het die blare gestamp en met vet gemeng vir sere, ons het dit: ‘ouma se groen salf’, genoem.”

   [My great grandmother mixed the pounded leaves with fat and used the ointment for sores; we used to call it “grandma’s green ointment”]

   4.2. **Literature**

   No medicinal uses have been recorded in literature.
1. **Taxonomic data**

1.1. **Family:** Solanaceae

1.2. **Scientific name:** *Solanum tomentosum* L. var. *tomentosum*

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Shrub, dwarf shrub. Ht 0.5-1.5 m. Alt 10-1785 m.

1.5. **Distribution:** EC, FS, L, NC, WC


3. **Herbarium specimen:** [NV46], (Appendix 3 - Figure 90)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Die bessie word gebruik vir tandpyn, giftig nie drink nie.”

[The berry is used for toothache; it is poisonous and must not be swallowed.]

(JvW. 2011, pers. comm.): “Die wortel kan gesnuif word; ook gebruik vir aambeie.”

[The root can be used as snuff and medicinally used for haemorrhoids.]

(MG and MJ. 2011, pers. comm.): “Salf word van die bessies gemaak wat gebruik word vir puisies.”

[Ointment of berries used for acne.]

4.2. **Literature**

91. *Stachys rugosa*

1. Taxonomic data
   1.1. **Family:** Lamiaceae
   1.2. **Scientific name:** *Stachys rugosa* Aiton
   1.3. **Synonyms:**
      - *Stachys crenulata* Briq.
      - *Stachys multiflora* Benth.
   1.4. **Description:** Perennial. Shrub. Ht 0.3-1.2 m. Alt 180-2900 m.
   1.5. **Distribution:** EC, L, N, NC, WC

2. Vernacular names:
   - (Marloth, 1917) [p.22]: “dassie’bos”;
   - (Marloth, 1917) [p.43]: “Jacob-jong”;
   - (Laidler, 1928) [p.442]: “stink sali”;
   - (Watt and Breyer-Brandwijk, 1962) [p.1443]:
     - “[taraputswe (Sotho)]”;
   - (Smith, 1966) [p.602]: “dassiebos, jakob-jong, karooette, klipkarooette(bossie), muishondkruie, teebossie, vaalteeba(bossie)”;
   - (Palmer, 1985) [p.132]:
     - “dassiebos, kliptee, vaalteeba, karooette”;
   - (Von Koenen, 2001) [p.179]: “dassiebos, boesmantee”;
   - (Powrie, 2004) [p.104]: “boesmankruie, boesmanstee, boesmantee, dassiebos, jakkalspis, jakobjong, jeukbos, karooette, karooettebossie, kliptee, klipteebossie, koorsbos, kruie, muishondkruie, vaalteeba, vaalteeba(bossie)”;
   - (AB. 2011, pers. comm.): “koorsbos”;
   - (AST. 2010, pers. comm.): “koorsbos”;
   - (EK. 2011, pers. comm.): “bergsalie”;
   - (LC. 2011 pers.comm.): “stinkbos”;
   - (JB. 2011, pers. comm.): “koorsbos”;
   - (JL. 2011, pers. comm.): “koorsbos”;
   - (JvW. 2011, pers. comm.): “stinkkoorsbos”

3. Herbarium specimen: [NV27] [NV49], (Appendix 3 - Figure 91)

4. Recorded medicinal uses

4.1. Kamiesberg
   - (AB. 2011, pers. comm.): “Gebruik vir griep.”
     [Used for influenza.]

     [Leaf decoction used for fevers, colds and influenza.]

   - (EK. 2011, pers. comm.): “Gebruik vir koors, trek die blare af.”
     [Leaf infusion used for fever.]

   - (JB. 2011, pers. comm.): “Blare gebruik vir koors.”
     [Leaves are used for fever.]

   - (JL. 2011, pers. comm.): “Gebruik vir griep, as `n mengsel.”
     [Used for influenza, in mixtures.]
(JvW. 2011, pers. comm.): “Kook saam met t’noubee vir koors.”
[Used as decoction with t’noubie for fever.]

4.2. Literature
(Laidler, 1928) [p.442]; (Githens, 1948) [p.121]; (Watt and Breyer-Brandwijk, 1962) [p.527, 591]; (Smith, 1966) [p.197, 258]; (Jacot Guillarmod, 1971) [p.454]; (Palmer, 1985) [p.132]; (Rood, 1994) [p.63]; (Von Koenen, 2001) [p.179]
92. Sutherlandia frutescens

1. Taxonomic data

1.1. **Family:** Fabaceae

1.2. **Scientific name:** *Sutherlandia frutescens* (L.) R.Br.

1.3. **Synonyms:** *Colutea frutescens* L.;
* Sutherlandia speciosa E. Phillips & R.A. Dyer;
* Sutherlandia microphylla Burch. ex DC.

1.4. **Description:** Perennial. Shrub, dwarf shrub, Ht 0.4-3 m. Alt 10-2318 m.

1.5. **Distribution:** B, EC, FS, KZN, L, M, N, NC, WC [The Namaqualand and Namibian form of the species is known as *S. speciosa* or *S. frutescens* subsp. *speciosa*; the erect form with oblong pods is know as *S. microphylla* or *S. frutescens* subsp. *microphylla* – it is cultivated in gardens in the Kamiesberg area but occurs naturally at lower altitudes in southern Namaqualand (see Van Wyk and Albrecht, 2008)]


3. Herbarium specimen: [PNV100], [PNV101] (Appendix 3 - Figure 92)

4. Recorded medicinal uses

4.1. Kamiesberg
(AB. 2010, pers. comm.): “Word gebruik vir griep, die blare word afgetrek. Word ook gebruik teen suikersiekte en kanker.”
[Leaf infusion used for influenza; also used for diabetes and cancer.]

(AST. 2010, pers. comm.): “Die blare en takkies is gebruik as medisyne vir suikersiekte, die plant word ook gebruik as ’n teenmiddel vir kanker. ’n Swart nurse het dit gekook vir griep en wonde, die mense soek dit. Dis verskriklik bitter. Word gebruik saam met org en t’norraboegoe vir tuberkulose.”
[The leaves and the twigs are used as infusion to treat diabetes; the plant is also used as remedy for cancer, influenza and wounds; used with org and t’norraboegoe for tuberculosis.]

(AW. 2011, pers. comm.): “Word gekook en gebruik vir koors.”
[Decoction used for fever.]

(CC. 2011, pers. comm.): “Gebruik vir koors en hoes.”
[Used for fever and coughs.]

(EK. 2011, pers. comm.): “Gebruik vir kanker en hoë suiker.”
[Used for cancer and diabetes.]

(GB. 2011, pers. comm.): “Gebruik vir griep; daar is ’n mannetjie en ’n wyfie plant, maar hulle word dieselfde gebruik.”
[Used for influenza; there are male (mannetjie) (S. microphylla) and female (wyfie) (S. spesiosa) plants but they are used in the same way.]

(GD. 2010, pers. comm.): “Kook, dis vir als goed. Gebruik vir griep en verkoue en vir kindsiekte om die winde uit te kry.”
[A decoction used for all ailments; used for influenza, colds and children’s ailments (flatulence in children).]

(GJ., JJ., PD. 2010, pers. comm.): “Daar is twee soorte; die wyfie, die plat een en die mannetjie, die een wat regop groei langs riviere en laagtes. Jantjiebêrend kan ook vir seer voete gebruik word. Jantjiebêrend, taiboom blare en t`noubee blare is saamgevoeg en gebruik as medisyne vir griep.”
[There are two different types, a female (S. speciosa) and male (S. microphylla) plant. A leaf wash can be used for painful feet; leaf infusion with taiboom (Searsia sp.) and t`noubee leaves used as medicine for influenza.]

(GK. 2011, pers. comm.): “Gebruik vir suiker probleme.”
[Used for diabetes.]

(JB. 2010 pers.comm.): “Word gebruik vir hoë bloedsuiker en ek het gehoor dit is ´n teenmiddel vir kanker, word ook gebruik vir maagprobleme.”
[leaf infusion used for high blood pressure (and apparently as an antidote for cancer); it is also used for stomach problems.]

(JC. 2010, pers. comm.): “Bitter ding, so hy maak jou bloed ook lekker as die suiker in jou bloed nie lekker is nie.”
[Very bitter, leaf infusion used for diabetes and blood sugar problems, due to the bitter taste.]

(JL. 2011, pers. comm.): “Gebruik vir suiker en griep.”
[Used for influenza and diabetes.]

(JvW. 2011, pers. comm.): “Gebruik vir asma, tering en kook saam met hosabis vir koors, griep en TB.”
[Used for the treatment of asthma and tuberculosis; decoction with hosabis (Dicoma capensis) is used for fever, influenza and tuberculosis.]

(JW. 2010, pers. comm.): “Kook, en afwater, water is so giftig, maak hom deurmekaar met ander bos vir verkoue, koors en griep.”
[The plant (leaves) is boiled and the water drained (the water is poisonous); leaf infusion used with other herbs for the treatment of colds, fever and influenza.]

(LC. 2010, pers. comm.): “Gebruik vir verkoue en griep; Ek het later gehoor dit word ook gebruik vir diabetes, omdat dit so bitter is.”
[Used as a remedy for colds and influenza, I have also heard later that it is used as a remedy for diabetes, because of the bitter taste.]
(MJ. and MG. 2010, pers. comm.): “Kankerbossie kan om sere gevryf word, dit sorg vir genesing. Drink hom vir griep, maak van die blaartjies ‘n tee.”
[Leaf infusion can be applied around a wound to aid the healing; a leaf infusion is used for influenza.]

(PD. 2011, pers. comm.): “Drink vir pyne en maag.”
[Decoction used for pains and stomach ailments.]

(PR. 2011, pers. comm.): “Gebruik as medicine.”
[Used as medicine (unspecified).]

(SC. 2011, pers. comm.): “Goeie medisyne vir griep, verkoue en maagpyn.”
[Good medicine for influenza, colds and stomach ache.]

4.2. Literature
(Pappe, 1868) [p.11]; (Smith, 1895) [p.62, 66, 86, 116, 138]; (Marloth, 1917) [p.18, 25]; (Phillips, 1917) [p.83]; (Kling, 1923) [p.20]; (Laidler, 1928) [p.443]; (Shapera, 1930) [p.411]; (Githens, 1948) [p.121]; (Smith, 1966) [p.275]; (Batten and Bokelman, 1966) [p.68]; (Jacot Guillarmod, 1971) [p.454]; (Eliovson, 1972) [p.98]; (Roberts, 1982) [p.55]; (Palmer, 1985) [p.97, 124]; (Ellis, 1989); (Archer, 1990) [p.966, 967]; (Van Breda and Barnard, 1991) [p.154]; (Archer, 1994) [p. 66, 67, 69, 70]; (Dyson, 1994) [p.3, 57]; (Rood, 1994) [p.53]; (Shearing and Van Heerden, 1994) [p.82]; (Anonymous, 1998) [p.9]; (Cowling and Pierce, 1999) [p.48]; (Cowling and Pierce, 1999) [p.150]; (Van Wyk and Gericke, 2000) [p.192]; (Van Wyk and Gericke, 2000) [p.148]; (Van Wyk and Gericke, 2000) [p.182]; (Le Roux and Wahl, 2005) [p.180]; (Anonymous, 2006) [p.8]; (Manning, 2008) [p.118]; (Van Wyk and Albrecht, 2008) [p.620]; (Van Wyk et al., 2008) [p.700]; (Van Wyk et al., 2009) [p.280]; (De Beer and Van Wyk, 2011); (Anonymous, undated) [p.12]; (Wileman, undated) [p.7]
1. **Taxonomic data**

1.1. **Family**: Scrophulariaceae  
1.2. **Scientific name**: *Teedia lucida* (Sol.) Rudolphi  
1.3. **Synonyms**:  
   - *Capraria lucida* Sol.  
   - *Lantana capensis* Thunb  
1.4. **Description**: Perennial occ. Annual. Shrub, dwarf shrub, herb. Ht 0.02-2 m. Alt 20 – 2400 m  
1.5. **Distribution**: LIM, M, S, KZN, L, NC, WC, EC

2. **Vernacular names**: (Le Roux and Wahl, 2005) [p.239]: "*klipkersie*"; (AST. 2011, pers. comm.): "*klipdruiwe*"

3. **Herbarium specimen**: [PNV106], (Appendix 3 - Figure 93)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**  
   (AST. 2011, pers. comm.): "Tee vir vrouekwale, vir nageboorte om af te kom en ook gebruik vir inflammasies."  
   [Infusion used for women’s ailments, for retained placenta and inflammation.]

4.2. **Literature**

   No medicinal uses have been recorded in literature.
1. Taxonomic data

1.1. **Family:** Aliaceae

1.2. **Scientific name:** *Tulbaghia alliacea* L.f.

1.3. **Synonyms:** No

1.4. **Description:** Perennial. Herb, geophyte. Ht 0.26-0.45 m. Alt 50-2250 m.

1.5. **Distribution:** WC (cultivated in a garden in Nourivier; apparently another species with white flowers occurs naturally in the Kamiesberg; Archer (1994) reported uses for *T. dregei* Kunth in the Kamiesberg)


3. Herbarium specimen: [NVD8], (Appendix 3 - Figure 94)

4. Recorded medicinal uses

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Gebruik om koors te breek en vir griep, met die groot griep (1918). Snuif vir hoofpyn”
[Used for the treatment of fever as well as for influenza during the influenza epidemic of 1918. Used as snuff for headache.]

(AST. 2010, pers. comm.): “Vir kinders as winderig, by kougoed indruk, ook vir ore en maagkrampe.”
[Used to treat children with flatulence, added to kougoed (*Sceletium tortuosum*), used for earache and stomach cramps.]
(AW. 2011, pers. comm.): “Afgetrek in melk, gebruik vir griep.”
[A milk infusion used for influenza.]

(EK. 2011, pers. comm.): “Baie goed vir winde.”
[Used for flatulence.]

(GD. 2010, pers. comm.): “Word gebruik as kos; knol is medisyne om winde uit te kry.”
[The plant is edible and the bulb is used for flatulence.]

(JB. 2011, pers. comm.): “Snuif vir hoofpyn”
[Used as snuff for headache.]

(JC. JW. 2010, pers. comm.): “Groei hier by ons, in die veld, ek gebruik hom ook vir medisyne, maagsiektes. Witterige blommetjie, sterk ruik. Mengsel met vrouebos ingegee na kraam.”
[Grows in the veld; I use it for the treatment of stomach ailments; it has a whitish flower and a strong smell. An infusion with vrouebos (unidentified species) is used for a mother after labour.]

(SC. 2011, pers. comm.): “Gebruik vir medisyne, weet nie meer waarvoor nie.”
[Used as medicine (can no longer remember for which ailment).]

4.2. Literature
(Pappe, 1868) [p.41]; (Kling, 1923) [p.17]; (Watt and Breyer-Brandwijk, 1962) [p.716]; (Jacot Guillarmod, 1971) [p.456]; (Lucas and Pike, 1971) [p.12]; (Wright, 1963) [p.100]; (Batten and Bokelman, 1966) [p.10]; (Roberts, 1982) [p.233]; (Palmer, 1985) [p.159]; (Johnson and Hutchings, 1986) [p.79]; (Ellis, 1989); (Palmer, 1995) [p.27]; (Hutchings et al., 1996) [p37]; (Van Wyk and Gericke, 2000) [p.63]; (Scott and Hewett, 2008) [p.347]; (Van Wyk et al., 2008) [p.700]; (Van Wyk, 2008) [p.339]; (Van Wyk et al., 2009) [p.298]; (Anonymous, undated)
95. *Tylecodon wallichii*

1. **Taxonomic data**

1.1. **Family:** Crassulaceae

1.2. **Scientific name:** *Tylecodon wallichii* (Harv.) Toelken subsp. *wallichii*

1.3. **Synonyms:** *Cotyledon wallichii* Harv.

1.4. **Description:** Perennial. Shrub, succulent. Ht 0.3-1 m. Alt 50-1500 m.

1.5. **Distribution:** EC, NC, WC


3. **Herbarium specimen:** [PNV102], (Appendix 3 - Figure 95)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AB. 2010, pers. comm.): “Stamp hom fyn op seer of kan doring uittrek.”

[Bruised leaves used as poultice on broken-off thorns.]

(AST. 2010, pers. comm.): “Die blare kan as kompres gebruik word op wonde en op bloedvinte.”

[Leaves used as compress on wounds and boils.]
(EK. 2011, pers. comm.): “Gebruik op fyt vinger, stamp sy stam en sit op die vinger, dit trek
die fyt skoon uit.”
[Pounded stem used on whitlow finger.]

(GJ., JJ., PD. 2010, pers. comm.): “Krimpsiek dit word fyn gemaal, kan `n fyt vinger gesond
maak.”
[Used as compress on a whitlow finger.]

(JB. 2010, pers. comm.): “Gebruik om dorings uit te haal, is gemaal en op sere gesit.”
[Used as poultice for broken-off thorns and as compress on sores.]

(JvW. 2011, pers. comm.): “Die bas word van die stam afgehaal en soos `n treksalf op `n
doring of pitseer op die vinger of voet gebruik.”
[The bark is removed from the stem and the stem is used as a poultice and ointment on
thorns and boils.]

(MJ. and MG. 2010, pers. comm.): “`n Trekpleister word van die t`nomgamma gemaak en op
die afgebreekte doring gesit. Die pleister moet warm wees, om die plek sag te maak.”
[A warm leaf is used as poultice and blister-plaster on a broken-off thorn.]

4.2. Literature
(Laidler, 1928) [p.440]; (Laidler, 1928) [p.445]; (Shapera, 1930) [p.413]; (Steyn, 1934)
[p.227]; (Watt and Breyer-Brandwijk, 1962) [p. 318]; (Smith, 1966) [p.312]; (Kellerman et al.,
1988) [p.134]; (Cowling and Pierce, 1999) [p.150]; (Archer, 1994)
96. *Urtica urens***

1. **Taxonomic data**

1.1. **Family:** Urticaceae

1.2. **Scientific name:** *Urtica urens* L.

1.3. **Synonyms:** No

1.4. **Description:** Annual. Herb. Ht 0.1-0.5 m. Alt 20-2685 m.

1.5. **Distribution:** EC, FS, G, KZN, L, M, N, NC, WC (naturalised exotic)


3. **Herbarium specimen:** [PNV103], (Appendix 3 - Figure 96)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**

(AST. 2010, pers. comm.): “Gebruik vir neus bloei, as ’n snuif, om die bloed te stop.”
[Leaves used as a snuff to treat a bleeding nose; to stop the bleeding.]

(AW. 2011, pers. comm.): “Droë blare kan gerook word en die rook stop neusbloeding, die wortel kan ook afgetrek word.”
[Dry leaves can be smoked to stop a bleeding nose; the roots can also be used (as infusion).]
(EK, 2011, pers. comm.): “Drink `n tee van hom om fiks te raak (moenie hom kook nie, gooi net kook water op hom.”
[Used as an infusion to increase stamina, as tonic (only as infusion, not decoction.)

(LC. 2010, 2011, pers. comm.): “In die oorlog het die beeste dit gevreet. Het gehoor die engelse bredies is ook hiervan gemaak. `n Ou predikant vroër het geglo dis goed vir jig. My skoonsuster het gehoor dat dit vir een of ander iets goed is en sy het gereeld vir haar brandneukel tee gemaak. Kan ook jou hare met `n aftreksel afspoel.”
[In the war time the cattle grazed on it, it is known that the English people used to made dishes with it. I knew a pastor who used the leaves as an infusion for the treatment of gout. My sister-in-law also used to make a tea from it; she believed it is good for her health. An infusion can be used as hair wash]

(GD. 2010, pers. comm.): “Nie `n medisyne nie.”
[The plant is not a medicine.]

4.2. Literature
(Dykman, 1908); (Kling, 1923) [p.15]; (Webb, 1948) [p.167]; (Watt and Breyer-Brandwijk, 1962) [p.1043, 1044, 1045, 1046]; (Chiej, 1984) [no.319]; (Palmer, 1985) [p.139]; (Shearing and Van Heerden, 1994) [p.50]; (Hutchings et al., 1996) [p78]; (Anonymous, 1998) [p.5]; (Von Koenen, 2001) [p.189]; (Van Wyk, 2008) [p.339]; (Van Wyk et al., 2008) [p.701]
97. *Viscum capense*

1. **Taxonomic data**

1.1. **Family:** Viscaceae

1.2. **Scientific name:** *Viscum capense* L.f.

1.3. **Synonyms:**
   - *Aspidixia capensis* (L.f.) Tiegh.
   - *Aspidixia robusta* (Eckl. and Zeyh.) Tiegh.
   - *Viscum rigidum* Engl. and K.Krause
   - *Viscum robustum* Eckl. and Zeyh.

1.4. **Description:** Perennial. Shrub Parasite. Ht 0.3-0.5 m. Alt 4-1465 m.

1.5. **Distribution:** LIM, M, N, NC, WC


3. **Herbarium specimen:** [NVD7], (Appendix 3 - Figure 97)

4. **Recorded medicinal uses**

4.1. **Kamiesberg**
   (AB, 2010, pers. comm.): “Goed vir suiker- die litjies word afgetrek.”
   [Stem infusion used as remedy for diabetes.]

   (AST, 2010, 2011, pers. comm.): “Gebruik vir aambeie, kook en was; en vir eetlus trek `n tee, ook gebruik vir oorprobleme en vir rugprobleme.”
Decoction used for haemorrhoids and an infusion taken as tea to stimulate appetite; used for ear problems and back problems.

(AW. 2011, pers. comm.): “n Tee word gebruik vir verkoue.” [Infusion used for colds.]

(CC. 2011, pers. comm.): “Veemedisyne, vir waterpens.” [Veterinary medicine, for waterpens.]

(EK. 2011, pers. comm.): “Vir vroue na babatjie, om vrou se binnekant skoon te maak, stamp en sweet hom en maak tee, hy maak jou honger.” [Used for a retained placenta after giving birth; fermented plant used as tea to give appetite.]

(GB. 2011, pers. comm.): “Gebruik vir siek boklammetjies.” [Veterinary medicine, used for sick lambs.]

(GD. 2010, pers. comm.): “Medisyne vir winde en maag: word gestamp en dan toe gepak sodat hy sweet en bruin word. Dan word hy droog gemaak en as ´n tee gedrink.” [Stem fermented and dried is used as an infusion for the treatment of stomach ailments and flatulence.]

(GJ., JJ., PD. 2010, pers. comm.): “Voëlent; ´n tee kan van die voëlent gemaak word wat dan kan dien as medisyne vir suikersiekte. Dit word ook gebruik om nageboorte van diere af te kry.” [An infusion can be used for diabetes; It is also used to expel the placenta in livestock.]

(JC. and JW. 2010, pers. comm.): “eet; tee vir die skildklier saam met kruistem.” [Edible; an infusion with kruistem (Mentha spicata) is used for the thyroid gland.]

(JL. 2010, pers. comm.): “Die taabos het die voëlent, met die lijtjies, diaab et medisyne. Meng met jantjiebêrend vir iemand wat suiker het. Drink soos in ´n tee.” [An infusion with Sutherlandia frutescens can be used as remedy for diabetes.]

(JvW. 2011, pers. comm.): “Gebruik soos ´n tee vir gries, dit laat jou sweet.” [Used as an infusion for influenza, it is diaphoretic.]

(LC. 2010, pers. comm.): “Tee om omgekrapte maag te stop.” [Infusion is used to stop an upset stomach.]

(MB. 2011, pers. comm.): “Gebruik as medisyne.” [Used medicinally (unspecified).]
(SW. 2011, pers. comm.): “n Tee word gemaak vir griep.”
[Infusion used for influenza.]

4.2. Literature
(Pappe, 1868) [p.19]; (Dykman, 1908); (Kling, 1923) [p.14]; (Laidler, 1928) [p.442]; (Watt and Breyer-Brandwijk, 1962) [p.731]; (Smith, 1966) [p.323]; (Roberts, 1983) [p.33]; (Johnson and Hutchings, 1986) [p.86]; (Anonymous, 1998) [p.17]; (Rood, 1994) [p.69, 70]; (Hutchings et al., 1996) [p81]; (Van Wyk and Gericke, 2000) [p.116]; (Von Koenen, 2001) [p.191]; (Van Wyk, 2008) [p.339]; (Van Wyk et al., 2009) [p.306]; (De Beer and Van Wyk, 2011); (Anonymous, undated) [p.25]
Unidentified species

98. vrouebos, t`gou

- Pelargonium sp.? / Elytropappus sp.? –

(AST. 2011, pers. comm.): “Vrouebos is ook genoem die t`gou. Die blare word saam met kliplblom gebruik vir vroue wat nie kan kinders kry nie, dit word gebruik tydens menstruasie.”
[Leaf decoction with kliplblom (Parmelia sp.) is used for infertile woman during menstruation.]

(GD. 2011, pers. comm.): “Die blare word gekook vir pyne binne jou en `n tee van die blare en blomme word gebruik vir die blaas en die niere, dis `n belangrike bos.”
[Leaf decoction used for internal pains and an infusion of the flowers used for bladder and kidney ailments (“an important herb”).]

(JvW. 2011, pers. comm.): “Gebruik vir die baarmoeder na die geboorte.”
[Used for a retained placenta.]

99. bitterkamroë, bitterpatat

- Kedrostis sp.?-

(AST. 2011, pers. comm.): “Maak `n tee van hom, maar gebruik eers die derde keer (so dis `n flou aanmaaksel) vir diabetes.”
[Used as a weak infusion (first two infusions discarded) for diabetes.]

(EK. 2011, pers. comm.): “Gebruik vir suikersiek.”
[Used for diabetes.]

(GD. 2011, pers. comm.): “Gebruik vir maagprobleme, as die maag vas is en vir vuil winde.”
[Decoction used for stomach ailments, constipation and flatulence.]

(JL. 2011, pers. comm.): “Die skil word gebruik vir maagprobleme en pyne.”
[Peel used for stomach ailments and body pains.]

(JvW. 2011, pers. comm.): “Word in melk gemaak en gebruik om die bloed skoon te maak.”
[Infusion in milk used as blood purifier.]
100. *stinkkamaroetjie, stinkkambroë*

- *Kedrotis foetidissima* (Jacq.) Cogn.?-

(GD, 2011, pers. comm.): “Gebruik vir maagprobleme en lyf seer.”
[Used for stomach ailments and body pains.]

(JC, JW. 2011, pers. comm.): “Gebruik soos snuif vir ’n maag wat pla, kan ook as tee gebruik word.”
[Used as snuff and infusion for stomach complaints.]

101. *rivierkweek*

(JvW. 2011, pers. comm.): “Gebruik vir vrouekwale.”
[Used for women`s ailments.]
APPENDIX 3

PHOTOGRAPHS OF MEDICINAL PLANTS OF THE KAMIESBERG
Figure 1. *Acorus calamus*
Photograph: B.-E Van Wyk

Figure 2. *Agathosma betulina*
Photograph: B.-E Van Wyk

Figure 3. Left: *Aloe dichotoma* tree; middle: flowers of *Aloe dichotoma*; right: A construction (house) with *Aloe dichotoma* trunks

Figure 4. *Aloe ferox*
Photographs: B.-E Van Wyk

Figure 5. *Aloe microstigma* subsp. *microstigma*
Figure 6. Aloe variegata
Photograph: B.-E Van Wyk

Figure 7. Anginon difforme

Figure 8. Antizoma miersiana

Figure 9. Arctotis laevis
Photograph left: B.-E Van Wyk

Figure 10. Artemisia absinthium
Photograph left: B.-E Van Wyk

Figure 11. Artemisia afra
Photograph left: B.-E Van Wyk
Figure 12. *Artemisia vulgaris*
Photograph left: B.-E Van Wyk

Figure 13. *Asclepias crispa*

Figure 14. *Aspalathus linearis*
Photograph left: B.-E Van Wyk

Figure 15. *Ballota africana*
Photograph left: B.-E Van Wyk

Figure 16. *Bulbine frutescens*
Photographs: B.-E Van Wyk

Figure 17. *Bulbine praemorsa*
Figure 18. *Bupleurum mundii*

Figure 19. *Carpobrotus edulis* subsp. *edulis*
Photograph left: B.-E Van Wyk

Figure 20. *Cassytha ciliolata*
Photograph left: B.-E Van Wyk

Figure 21. *Cheilanthes induta*

Figure 22. *Chironia baccifera*
Photograph left: B.-E Van Wyk

Figure 23. *Chrysocoma ciliata*
Figure 24. Conicosia elongata

Figure 25. Conyza scabrida
Photograph left: B.-E Van Wyk

Figure 26. Cotyledon orbiculata

Figure 27. Crassula muscosa

Figure 28. Datura stramonium
Photograph: B.-E Van Wyk

Figure 29. Dianthus micropetalus
Photograph: B.-E Van Wyk
Figure 30. *Dicoma capensis*
Photograph: B.-E Van Wyk

Figure 31. *Diospyros austro-africana*
Photograph left: B.-E Van Wyk

Figure 32. *Diosma acmaeophylla*
Photograph left: B.-E Van Wyk

Figure 33. *Dittrichia graveolens*

Figure 34. *Dodonaea viscosa* var, *angustifolia*

Figure 35. *Elytropappus rhinocerotis*
Figure 36. *Eriocephalus punctulatus*

Figure 37. *Eriocephalus species*
Photograph: B.-E Van Wyk

Figure 38. *Eucalyptus sideroxylon*

Figure 39. *Euphorbia mauritanica*
Photograph: B.-E Van Wyk

Figure 40. *Euryops lateriflorus*

Figure 41. *Felicia sp.*
Figure 42. Galenia africana

Figure 43. Galium capense subsp. namaquense

Figure 44. Galium tomentosum

Figure 45. Gethyllis sp.
Photograph: B.-E Van Wyk

Figure 46. Gomphocarpus cancellatus

Figure 47. Gomphocarpus fruticosus
Photograph left: B.-E Van Wyk
Figure 48. *Gunnera perpensa*

Figure 49. *Helichrysum rutilans*
Photograph left: B.-E Van Wyk

Figure 50. *Helichrysum odoratissimum*
Photograph: B.-E Van Wyk

Figure 51. *Hermbstaedtia glauca*; Photograph Zelda Wahl (Le Roux and Wahl, 2005) [p.105]

Figure 52. *Hoodia gordonii*
Photograph: B.-E Van Wyk

Figure 53. *Hydnora africana*
Photograph: B.-E Van Wyk
Figure 54. *Leonotis leonurus*
Photograph: B.-E Van Wyk

Figure 55. *Limeum africanum*

Figure 56. *Lobostemon paniculatus*

Figure 57. *Malva parvifolia*
Photograph: B.-E Van Wyk

Figure 58. *Meliantus pectinatus*
Photograph left: B.-E Van Wyk

Figure 59. *Mentha longifolia*
Photographs: B.-E Van Wyk
Figure 60. *Mentha spicata*
Photograph: B.-E Van Wyk

Figure 61. *Nicotiana glauca*

Figure 62. *Notobubon pearsonii*

Figure 63. *Olea europaea* subsp. *africana*
Photograph: B.-E Van Wyk

Figure 64. *Oncosiphon suffruticosum*

Figure 65. *Othonna daucifolia*
Figure 66. *Othonna* sp. B

Figure 67. *Parmelia* species

Figure 68. *Pelargonium antidysentericum*
Photographs: B.-E Van Wyk

Figure 69. *Pelargonium hypoleucum*

Figure 70. *Pteronia camphorata*

Figure 71. *Pteronia cinerea*
Photograph left: B.-E Van Wyk
Figure 72. *Quaqua mammilaris*
Photograph: B.-E Van Wyk

Figure 73. *Radyera urens*; Photograph: Zelda Wahl (Le Roux and Wahl, 2005) [p.212]

Figure 74. *Ricinus communis*
Photograph left: B.-E Van Wyk

Figure 75. *Rumex cordatus*

Figure 76. *Ruta graveolens*
Photograph left: B.-E Van Wyk

Figure 77. *Salix mucronata*
Photographs: B.-E Van Wyk
Figure 78. *Salvia dentata*

Figure 79. *Salvia lanceolata*; Photograph: Zelda Wahl (Le Roux and Wahl, 2005) [p.235]

Figure 80. *Salvia verbenaca*

Figure 81. *Sarcocaulon* species
Photograph: B.-E Van Wyk

Figure 82. *Sceletium tortuosum*
Photographs: B.-E Van Wyk

Figure 83. *Schinus molle*
Figure 84. Searsia burchellii

Figure 85. Senecio cinerascens

Figure 86. Senecio scapiflorus

Figure 87. Stoebe plumose
Photograph left: B.-E Van Wyk

Figure 88. Silene burchellii
Photograph left: B.-E Van Wyk

Figure 89. Solanum guineense
Photograph left: B.-E Van Wyk
Figure 90. *Solanum tomentosum*
Photographs: B.-E Van Wyk

Figure 91. *Stachys rugosa*
Photograph left: B.-E Van Wyk

Figure 92. *Sutherlandia frutescens*

Figure 93. *Teedia lucida*; Photograph: Zelda Wahl (Le Roux and Wahl, 2005) [p.239]

Figure 94. *Tulbaghia alliacea*

Figure 95. *Tylecodon wallichii*
Figure 96. *Urtica urens*

Figure 97. *Viscum capense*
Photograph left: B.-E Van Wyk
APPENDIX 4

PHOTOGRAPHS OF NON-PLANT PRODUCTS USED MEDICINALLY IN THE KAMIESBERG
Figure 98. Heraceum/ Dassiepis

Figure 99. Klipsweet

Figure 100. Blou bomeester
Figure 101. Wit bomeester. Photographs: B.-E van Wyk