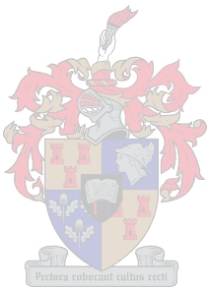
Phytogeography of Namibia:

A taxon approach to the spermatophyte flora

PATRICIA CRAVEN



Thesis presented in partial fulfillment of the requirements for the degree of Master of Science at the University of Stellenbosch

Study Leader: Dr P.J. Vorster

Date: March 2002

Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my original work and that I have not previously in its entirety or in part submitted it at any university for a degree

SUMMARY

Two key attributes of biodiversity, species richness and endemism are documented, analysed and mapped for the indigenous spermatophyte plant taxa of Namibia. A provisional diversity map is presented and transitional zones were shown to be the most significant for species richness.

Distribution maps of the majority of endemic species in Namibia are shown together for the first time. Combinations of these data were used to map the overall distribution of endemic taxa, localities where significant numbers of local endemics occur, as well as the species that can be found in taxon phytogeographic centres. Recurring patterns are evident and areas of high species concentrations are catalogued. This thesis has contributed to the knowledge of the large number of plant taxa for which Namibia is solely responsible, i.e. endemics restricted to within the political borders of Namibia. The mapping used an updateable, but permanent dataset on which future applications can be based. Examples of the uses of phytogeographic information proposed, include not only the traditional role in the identification of species in the herbarium, but also in creating a better basis for future policy especially in the development of land management strategies and conservation of Namibia's plant wealth.

OPSOMMING

Twee sleutelkenmerke van biodiversiteit, naamlik spesiesrykheid en endemisme word dokumenteer, ontleed, en karteer vir die inheemse saadplante van Namibië. 'n Voorlopige kaart van diversiteit word voorsien waaruit blyk dat oorgangsgebiede die belangrikste is vir spesiesrykheid. Verspreidingskaarte van meeste van die endemiese spesies in Namibië is word vir die eerste keer gesamentlik aangebied. Kombinasies van hierdie gegewens is gebruik om die algehele verspreiding van endemiese taksa, plekke waar betekenisvolle aantalle plaaslike endemiese taksa voorkom, sowel as die spesies wat voorkom in takson-geografiese sentrums, te karteer. Herhalende patrone is sigbaar, en gebiede met hoë specieskonsentrasies is gelys. Hierdie tesis het bygedra tot die kennis van 'n groot aantal plantsoorte waarvoor Namibië alleen verantwoordelik is, synde endemiese soorte wat beperk is tot binne die polieke grense van Namibië. Die kartering het 'n opdateerbare, maar permanente, databasis gebruik waarop toekomstige aanwendings baseer kan word. Voorbeelde van die gebruike van plantgeografiese inligting wat voorgestel is, sluit in tradisionele gebruik in die identifikasie van species in die herbarium, sowel as die skepping van 'n beter fondament vir toeskomstige beleid in veral die ontwikkeling van bestuurstrategië en bewaring van Namibia se planterykdom

ACKNOWLEDGEMENTS

This project would never have been possible without all those collectors who labouriously dried specimens, wrote notes and sent their specimens to herbaria. The work of herbarium staff in identifying and curating the specimens was essential, and the curators and staff are thanked.

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CHAPTER 1: INTRODUCTION

Phytogeography is the study of the geographical distribution of plants
(Little & Jones 1980).

Traditionally the concern of the plant geographer was the effects of *species* distributions. The trend today is to approach this broad definition either as the geography of separate components (species, genera or families), called taxon phytogeography (or floristic phytogeography when the entire flora of a region is considered), or the geography of vegetation (plant communities).

Vegetation covers the earth's surface as a whole (Kellman 1980) and results in the general effect produced by the growth of some or all of these in combination (Good 1974). Vegetation scientists see plants in communities that share similar climatological, geological and edaphic requirements and seek explanations for distribution patterns in environmental factors. Vegetation studies are often aimed more at optimising agricultural benefits than maintaining floristic diversity (A.E. Van Wyk & Smith 2001). Vegetation units have been mapped for Namibia as a whole (biomes and natural vegetation), and for smaller areas like veldtypes.

The situation with regard to the distribution of taxa (species, genera or families) or flora, is considerably different. Distribution maps for Namibian taxa can be found in widely scattered publications and unpublished form in the herbarium, but there is no inventory of what is available. Some of these distribution maps have been used to identify taxon phytogeographic centres, i.e. centres of outstanding species concentration and endemism in Namibia.

Each and every species has its own particular geographical distribution, which may be large or small, continuous, or broken up into a more complicated pattern (Polunin 1960). It may have evolved *in situ*, or occupies a secondary area into which it dispersed for some reason. Distribution ranges usually show a pattern and generally have an explanation, e.g. climatic, physiographic, edaphic or biotic conditions, some migratory ability of the plant and/or the evolutionary and geological or more recent history. Usually many of these conditions come into play (Polunin 1960). The distribution of different species may be allopatric, i.e. originating in or occurring in different geographical regions, without overlapping distributions, or sympatric, i.e. those that are in the same geographical range. There are numerous reasons why information on species distributions is necessary. Knowing which species are present and their distribution is essential in developing an inventory and *Flora* of a region. A plant's distribution is one of the aspects used in defining the taxonomic limits of closely related species. Because spatial isolation is so important in speciation, knowledge of the distribution of a species is often useful in the herbarium for identification purposes. It is also fundamental to optimal planning and sustainable development, and can assist in defining priorities for action. It is of increasing importance as pressure mounts on the untransformed vegetation of Namibia.

This thesis sets out to document the geographical distribution of indigenous spermatophyte taxa in Namibia. It maps the general distribution of spermatophyte species, endemic species individually, the geographical range of endemic species as well as areas where concentrations of endemic species occur. Examples of how the spatial

information obtained can be used and its potential in management plans and other purposes will be emphasised. Possible reasons for the distribution patterns in the past and present are reviewed in literature.

Taxon phytogeography is dependent on the collection, identification and recording of plants in the field. The development of floristic databases that allow quick and efficient retrieval of these data, as well as data scattered in the literature (e.g. in monographs), is a tremendous step forward. Besides producing up-to-date computerised distribution maps, the new methods have the potential to be used, not only to transform data into knowledge bases, but also to make these available to those who would benefit from the analysis.

This study has been made possible firstly by the hard work of meticulous collectors in the past and secondly by the data, and their accessibility due to the database called SPMNDB. The structure of this database and data elaboration, e.g. habitat, is well planned and useful, but an understanding of the problems associated with data retrieval and use is essential in order to utilise it fully.

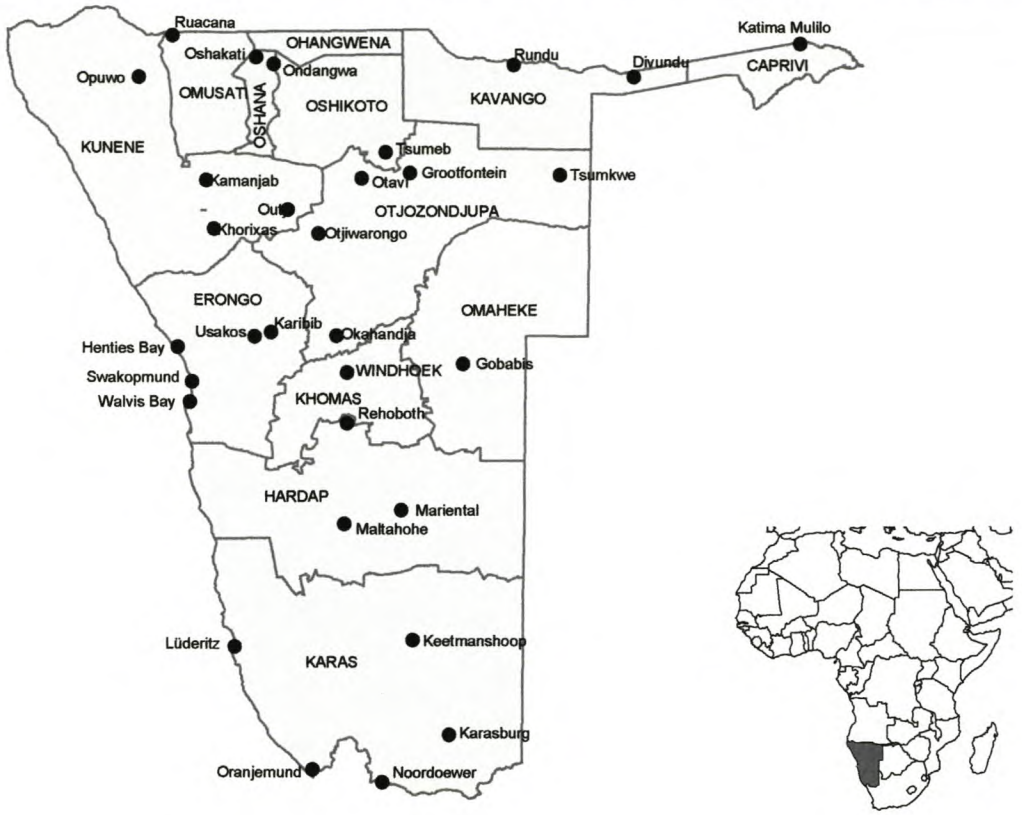
The distribution maps compiled for this study will be used in the National Herbarium of Namibia (WIND), and contribute to the *Flora of Namibia* programme which aims to document the plant taxa of Namibia. The study incorporates research carried out for the *Atlas of Namibia* (Mendelsohn *et al.* in prep.) and the *Threatened Plants Programme* of the National Botanical Research Institute (NBRI). This included a contribution to *Southern African Red Data List* of SABONET (Golding in prep.) and input into *The Parks and Wildlife Management Bill*, 2001 of Namibia.

CHAPTER 2 – THE STUDY AREA

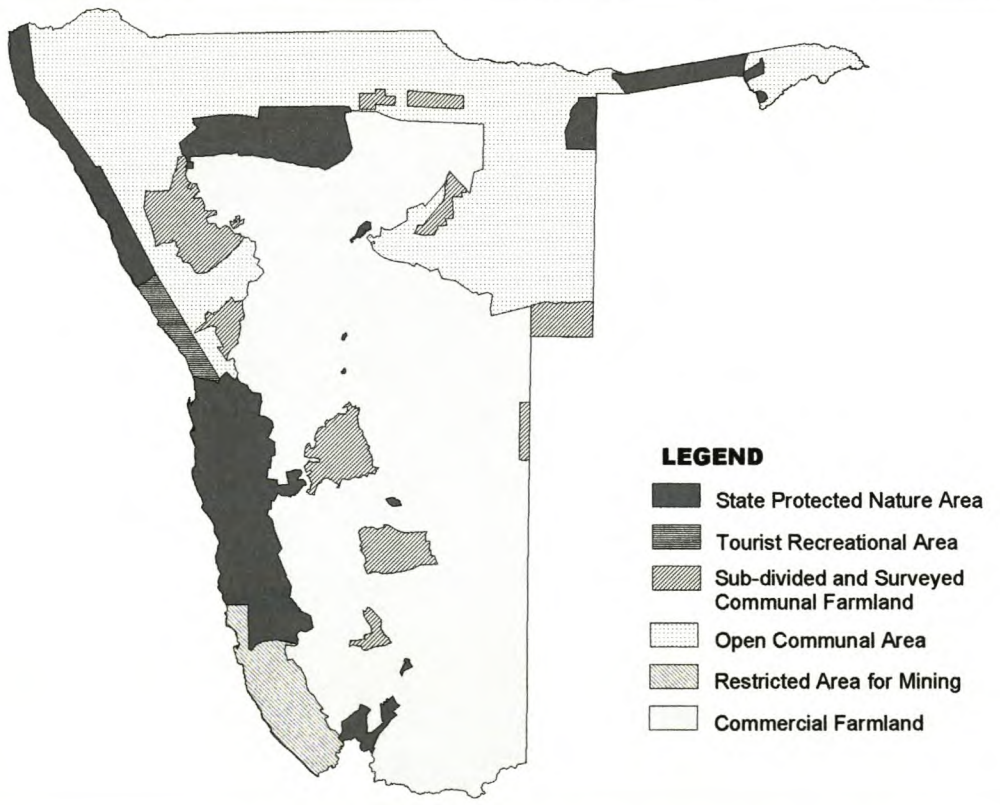
Namibia is the most arid country in sub-Saharan Africa and covers a total surface area of 824 295 km^2 (Barnard 1998). The southern border, with the Republic of South Africa, is the Orange River from where it stretches over 2000 km to the Kunene River in the north and Angola. Botswana lies in the east.

The Namib Desert, along the west coast, varies from sand dunes to gravel plains and ends at the foothills of the escarpment. The Kalahari Desert lies in the east. The political regions and major towns are shown in Map 1 as well as its position on the African continent. Windhoek is the capital city with Oshakati and Walvis Bay, the next most populous. Most of the land in Namibia is used for agriculture (Map 2), but a sizable portion has had restricted access due to mining and conservation. Most of the farming is based on natural grazing for stock, both small and large, with game farming increasing in importance.

Map 1: Political regions and major towns in Namibia with an insert showing Namibia's location in Africa



Map 2: Land use



2.A PHYSICAL ASPECTS

Physical features, such as the climate, soils and topography largely determine the abundance and diversity of plants and animals. Some of these physical aspects are presented here in maps, the shapefiles of which are available in ArcView, a Geographic Information System (GIS), that can be used as overlays on plant data to show relationships between the biological and physical features of Namibia.

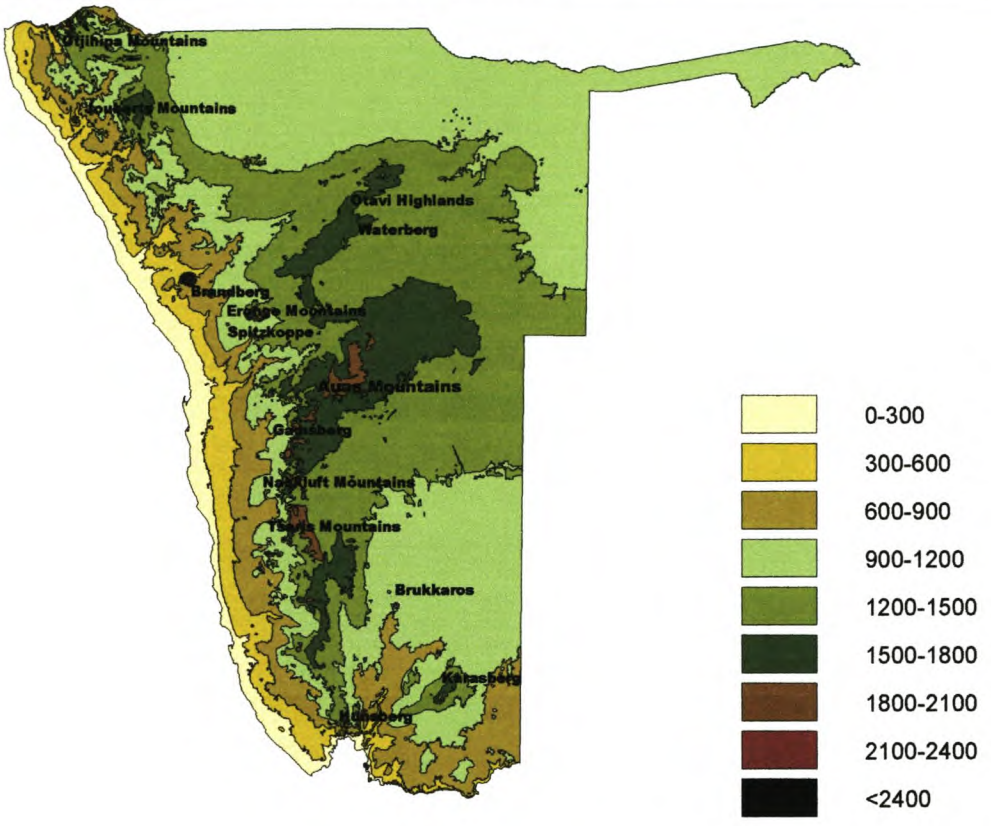
The topography of Namibia can be divided broadly into three sections: a narrow coastal plain, the escarpment, and a plateau in the interior. Elevation contours and some mountain ranges are shown in Map 3. The highest mountain, the Brandberg, is over 2500 m above sea level. Others of importance are the Baynes (2038 m), Erongo (2319 m) and the Gamsberg (2346 m). The central plateau reaches an elevation of over 1500 metres around the Windhoek and stretches almost the length of the country.

Most of the rivers in Namibia (Map 4) flow only after strong rains and are dry watercourses for most of the year. Perennial rivers can only be found along the borders, e.g. the Kunene, Kavango, Zambezi and Kwando-Linyanti-Chobe in the north and the Orange in the south. Numerous non-perennial rivers in Namibia flow from east to west, e.g. the Swakop, Kuiseb, Ugab Rivers. They arise in areas of higher rainfall and flow through areas of decreasing rainfall until they end in the desert in the west. These rivers carry water into the desert under the sand or on the surface after rain. They support vegetation and may extend the range of plants far west into the desert. The Fish and Konkiep Rivers are the most conspicuous seasonal rivers flowing southwards.

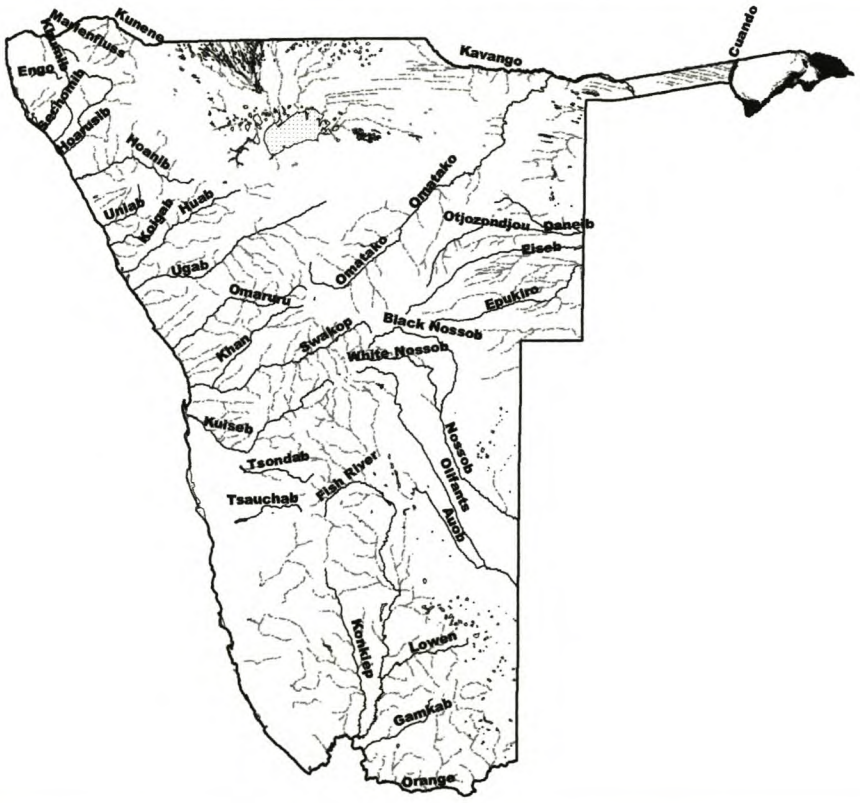
The National Laboratory of Namibia, in the Ministry of Agriculture, Water and Rural Development is developing a soil map for Namibia based on fieldwork, which will replace the generalised view shown in Map 5. Basically the soils of Namibia are thin and infertile and only a few areas have soils with potential for crop production.

The mean annual rainfall in Namibia (Map 6), increases from the coast inland and from south to north. The average for the coast is given as 50 mm with the northeast receiving up to 500 mm. The two most important characteristics are unpredictability and scarcity. Most of the rain falls in summer, but the southwestern corner receives winter rainfall. The highest precipitation occurs in the northeast, which provides good agricultural possibilities. Another source of moisture for plants is coastal fog. With low rainfall and high evaporation, over 69% of the country it is regarded as semi-arid and 16 % as arid (Barnard 1998).

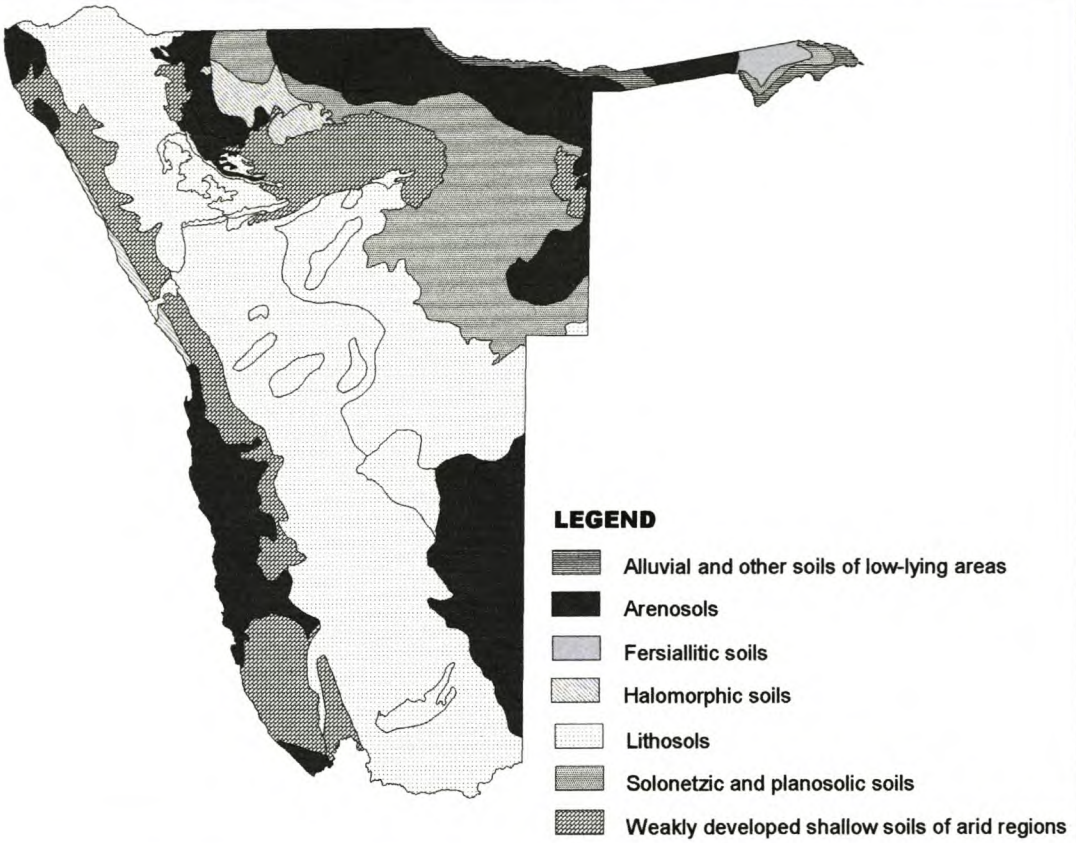
Map 3: Elevation contours and mountains



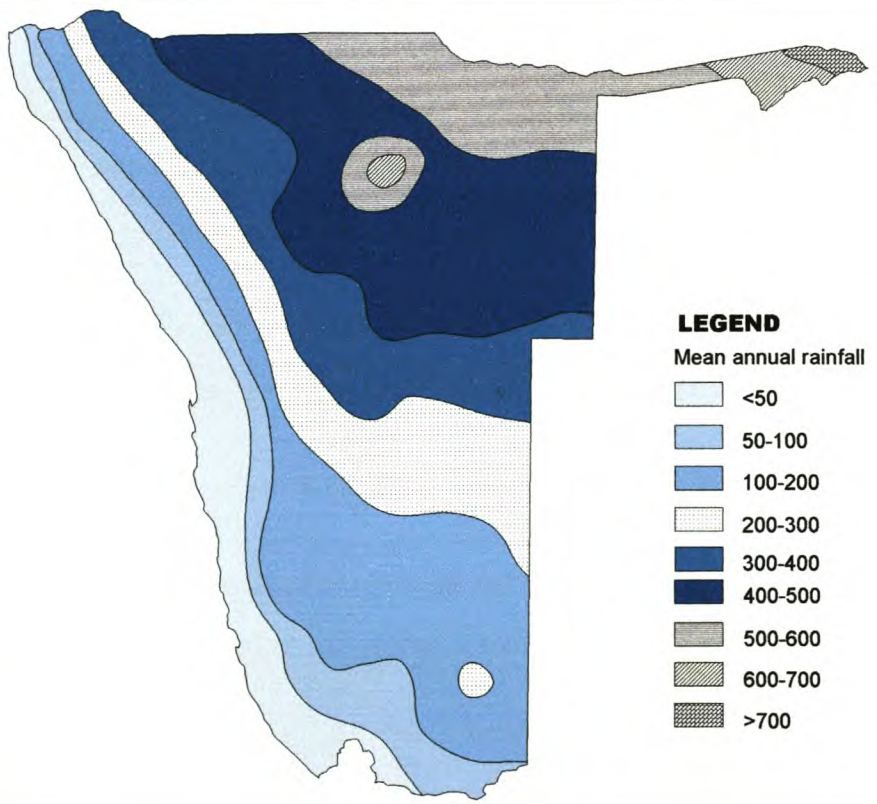
Map 4: The river systems in Namibia



Map 5: Simplified soil map of Namibia from Engineering Geology of Southern Africa, Volume 4, 1985.



Map 6: Mean annual rainfall



2.B BOTANICAL BACKGROUND

2.B.i The flora

The National Herbarium of Namibia (WIND), a subsection of the National Botanical Research Institute of Namibia (NBRI), houses the National Plant Collection and co-ordinates research into plant taxa in Namibia. The standard reference for identification of taxa is *Prodromus einer Flora von Südwestafrika,* edited by Merxmüller (1966–1972). It was written in German and is today outdated for a number of species, thus other literature, listed in the *Checklist of Namibian plant species* (Craven 1999), as well as the *Flora of southern Africa*, which includes Namibia, except for the Caprivi Region are used extensively. To a much lesser extent the *Flora Zambeziaca* and *Flora of tropical east Africa* series are consulted. Although certain species, i.e. those limited to northwest Namibia may be covered in *Conspectus Florae Angolensis*, it is not used as it was never completed, is written in Portuguese, and is fairly outdated.

Namibia is one of the regions covered in the publication on the names and distribution of plants in southern Africa by Arnold & De Wet (1993) and in the plant lists of Lebrun & Stork (1991–1997). Discrepancies between the above lists were highlighted in the most recent inventory of Namibian plant species (Craven 1999).

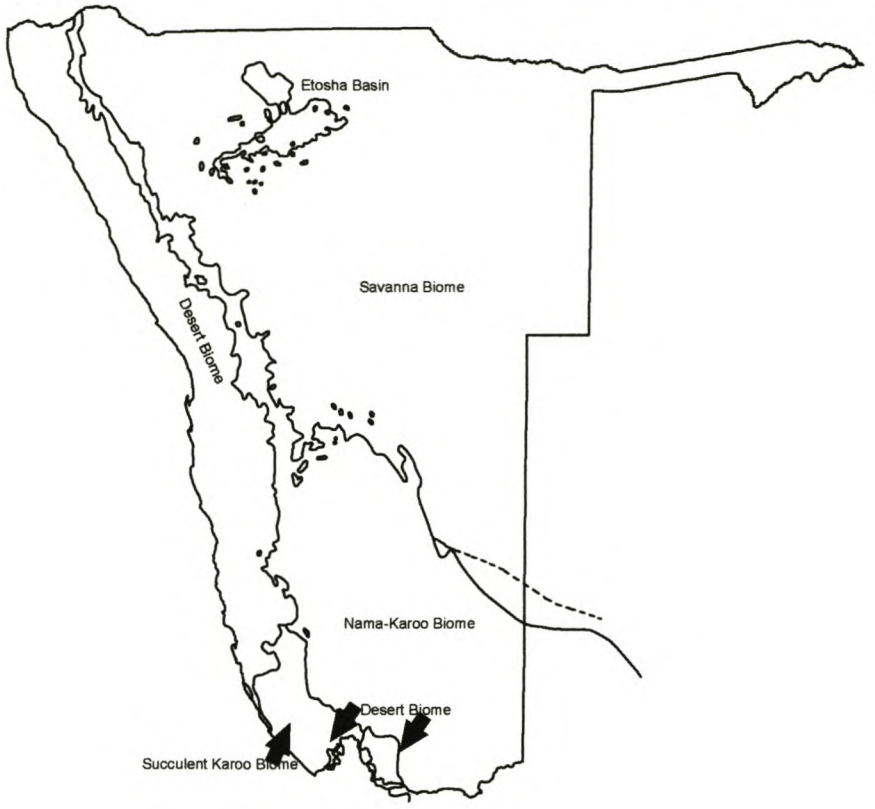
Information on important collectors in Namibia can be found in Giess (1989) and Gunn & Codd (1981), and notable collectors and the herbaria, in which their specimens are housed, are tabled in Appendix 1.

2.B.ii The vegetation

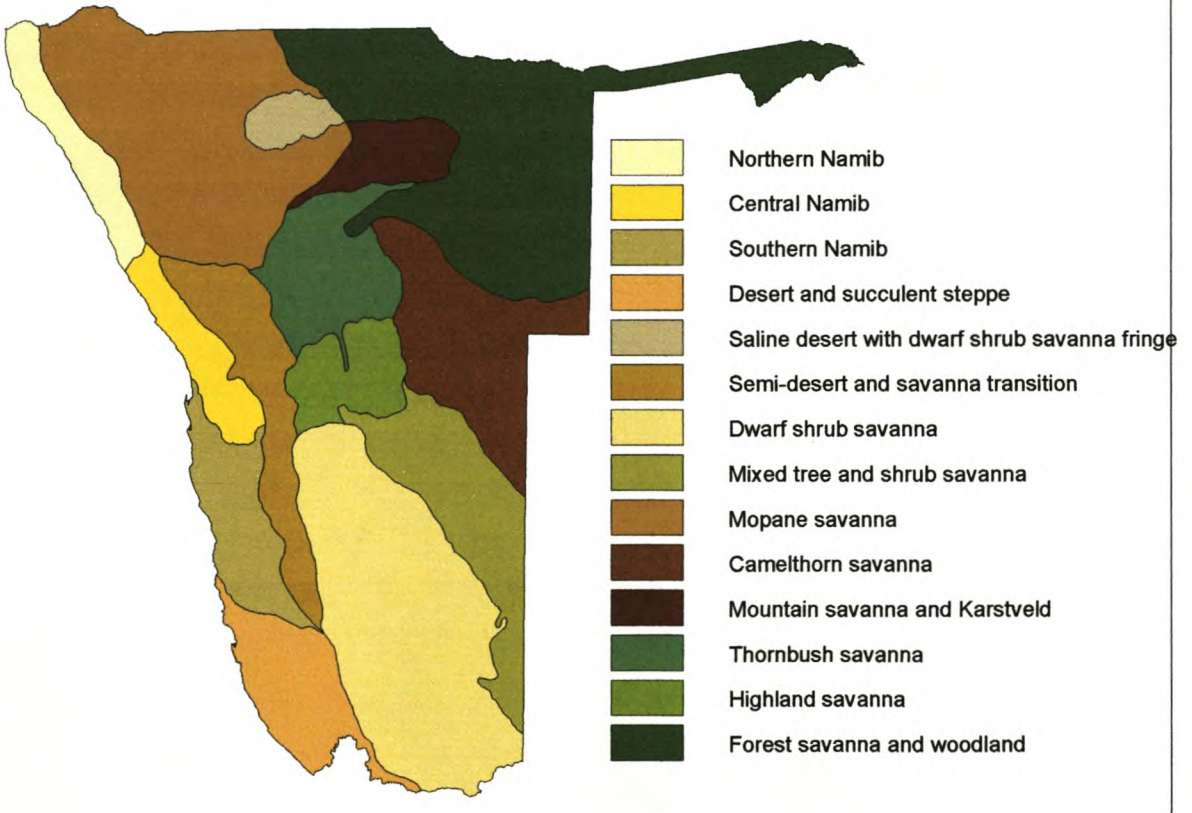
Biomes, broad ecological units representing major life zones of large natural areas defined mainly by vegetation structure and climate in southern Africa (Low & Rebelo 1996) were defined and mapped (Map 7) for Namibia by Irish (1994). He proposed a few modifications to scheme for southern Africa by Rutherford and Westfall (1994), particularly of the borders of the *Succulent Karoo* and *Desert* biomes and around Etosha.

A preliminary vegetation map for Namibia (Map 8), was developed by Giess (1971).
Both these maps were based on fieldwork and prompted by a dire need for vegetation classifications that could be used by other disciplines.
A revised look at vegetation mapping in Namibia will be published in *Atlas of Namibia* (Mendelsohn *et al.*, in prep.).

Map 7: Biomes of Namibia (Irish 1994)



Map 8: Vegetation map of Namibia (Giess 1971)



2.B.iii Large scale phytogeographic divisions in Africa

Marloth (1908) provides the historical background to large scale phytogeographic divisions in southern Africa and the earliest maps. Maps drawn by Drège in 1843, Grisebach in 1871, Rehmann in 1880, Engler in 1882, Drude in 1887, Bolus in 1886 and Schimper in 1898 are shown, as well as Marloth's own interpretation of the phytogeographic divisions. The early maps refer to the area north of the Orange River as Kalahari, but Schimper (in Marloth 1908) indicated that the Karoo desert and semi-desert extend beyond the Orange River into Namibia. The only study to assess the flora of Namibia in relation to the Cape Flora is that of Rennie (1936).

According to Werger (1978), the first more detailed, phytogeographical division in Africa resulted in a map by Lebrun (1947 in Werger 1978). This work has formed the basis of most subsequent phytogeographical subdivisions of Africa. Volk (1966) provided some evidence for floristic regions of Namibia based on distribution maps mainly of tree and some grass species.
Werger (1978) produced a map in which Namibia falls into three floristic units:

- the *Zambezian Domain,*
- the *Kalahari Domain*
- *Namaqualand-Karoo Domain*

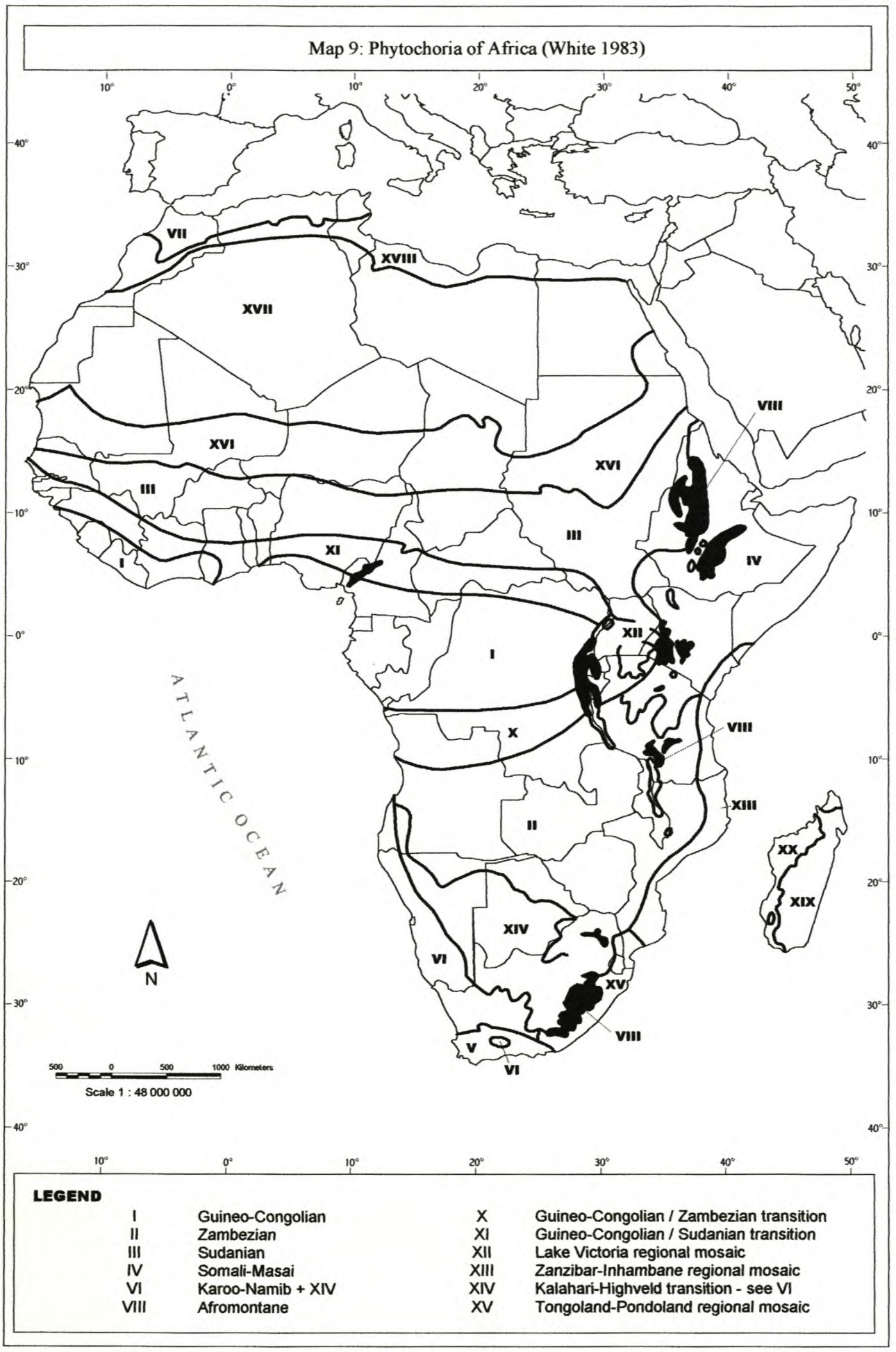
The phytogeographical approach of White (1983) emphasised endemism. He recognised eighteen phytochoria with centres of plant diversity and endemism for Africa. Some authors and approaches still commonly use this concept and his terminology today. But, as A.E. Van Wyk & Smith (2001) point out, it is important to establish the specific mapping criteria, before comparing different maps. These "Regional Centres of Endemism" of White (1983) should not be confused with a centre of endemism which is determined by a high concentration of species with very restricted distributions, i.e. a product of taxon phytogeography.

The three areas of importance to Namibia, shown in Map 9, are:

- *Zambezian Regional Centre of Endemism*: with one endemic genus that also occurs in Namibia, namely *Volkiella* (Goldblatt 1978).
- *Kalahari-Highveld Transition Zone* with genus *Neuradopsis* restricted to here.
- *Karoo-Namib Regional Centre of Endemism.*

The various units have been analysed floristically in unequal proportions, and differences in delimitation of the areas are evident. Werger (1973, 1978), Nordenstam (1974), Jürgens (1991) and Hilton-Taylor (1996) made contributions to the analysis and circumscription of the *Karoo-Namib Region.*

After detailed taxonomic studies, some researchers have plotted the distribution of species within the framework proposed by White (1983), e.g. Polhill (1982). Gibbs Russell & Robinson (1983) mapped the distribution of grass species within phytochoria of Werger (1978) to test speciation within different phytochoria. Polhill & Wiens (1998) show that 70% of the species of Loranthaceae in Africa are confined to one of the main chorological divisions. Thirty-five species occur in the *Zambezian Region* and ten species in the *Kalahari-Highveld Transition Zone* and *Karoo-Namib.*



2.B.iv Floristic and vegetation studies in Namibia

Unfortunately the differences between studies on taxa and the flora as a whole, and those of vegetation have been confused by some workers in Namibia, e.g. a recent review on vegetation studies in Namibia (Burke & Strohbach 2000) include plant checklists of Giess (1970b, 1981, 1983) and Nordenstam (1970, 1974, 1982a). In addition, terminology of taxon phytogeography like *Gariep* (Nordenstam 1969), has been used in the large-scale mapping by Jürgens (1991), despite a different approach and aim. Jürgens (1991) uses the subdivisions and maps of Werger (1978) and White (1983) as a starting point for his consideration of phytogeographic subdivisions, but his basis is habitat information and life form. He also recognises zones like the *Southern African Leaf Succulent Zone*, based on the predominance of leaf succulent chamaephytes (Jürgens 1986, 1990). This type of classification has no part in floristic or taxon phytogeographic studies where taxa are mapped irrespective of growth form (Volk 1966) and solely on the taxonomic unit (Smith 1994). Other subdivisions suggested by Jürgens (1991), e.g. *Damaraland-Kaokoland Domain* are based on inadequate information as shown by the examples provided to substantiate his views.

Another problem is the use by Jürgens (1991) of the term *Nama-Karoo,* a word associated in southern Africa with biomes. A possible reason for the confusion is that the approach of Jürgens (1991) is difficult to categorise. Cowling & Hilton-Taylor (1997) refer to it under phytogeographic divisions, but do not use the mapped changes. Burke & Strohbach (2000) include it under their discussion on biomes in a vegetation review.

Jürgens' ongoing mapping project in Namibia (Burke & Strohbach 2000) is therefore considered to be vegetation based and is thus not considered relevant to this study.

CHAPTER 3: TAXON PHYTOGEOGRAPHY IN NAMIBIA

3.A AIM OF STUDY

The aim of this study is to find out what information is available on the distributions of spermatophyte taxa in Namibia and to map and discuss the following sub-divisions:

1. Plant species diversity
2. Species with disjunct distributions
3. Taxa endemic to Namibia
4. Using taxon phytogeographic information

Emphasis is on documenting endemic Namibian taxa, i.e. the endemic genera, endemic species, their overall distribution, areas of importance for local endemic species, and endemic species in centres of outstanding species concentration and endemism. This study will provide maps for taxonomic purposes and general plant information, as well as demonstrate the application of this information.

3.B APPROACH

The approach to this study is based on the four stages of taxon phytogeography recognised by Stott (1981):

1. Collecting, identification and recording of plants in the field
2. Mapping plant distributions from the data collected
3. Classification of the plant distributions into recognisable groups or patterns
4. Using the information obtained from mapping plant distributions.

The availability of information obtained from collecting, identifying and recording plants in the field on a database, i.e. SPMNDB, which has georeferenced specimens from the herbaria of WIND and PRE, makes taxon phytogeography possible in Namibia.

The need for information on plant distributions in Namibia has been identified as a priority. Requests for such details have not only been expressed by botanists, but also by other disciplines and workers involved in the development of land management strategies.

The approach to this thesis reflects these two aspects, i.e. SPMNDB will be used to study identified priorities.
The study will therefore be appropriate on a national basis. Theories on past history and origins of the plants, while of value in reconstruction of the evolution and phylogenetic relationships of taxa, are considered of secondary importance to that of present-day distributions and the role that analysis of the distribution patterns can play in conserving Namibia's plant diversity.

The term *phytogeography* and therefore *phytogeographic centres* or *regions* have been used in different context by different approaches and authors to such an extent that A.E. Van Wyk & Smith (2001) recommend that one establish the specific mapping criteria and approach taken, before comparing different maps.

Taxon phytogeography in this thesis refers to the study of the geographical distribution of taxa, i.e. families, genera and species, and *phytogeographic groups* and *centres* are determined by a high concentration of taxa with very restricted distributions.
In order to prevent any confusion, such centres will be referred to as *taxon phytogeographic centres* in this thesis.

The term species is used to include infraspecific taxa like subspecies and variety.

Plant names are given without author citations in the text, but these can be found in the inventory in Appendix 3.

Terminology used in this thesis follows the definitions in the glossary (page 97).

F3.C LITERATURE REVIEW AND DEFINITIONS

3.C.i Mapping plant distributions

Maps are more than lines on paper and the history and trends in mapping plant distributions are discussed by Friis (1999). Each method has its advantages and disadvantages and the use and scales should be carefully considered before mapping. Maps reveal just as much by what they exclude as what they include. Botanists have traditionally used a variety of methods to map plant distributions including dot mapping, mapping by outlining, mapping by administrative units, or mapping by grids (Skov 2000).

Dot maps indicate presence by means of various symbols in various sizes. Edwards & Leistner (1971) developed a degree reference system for citing biological records within degree squares which is commonly used in southern Africa. The dot does not cover the exact spot where the record was made, but provides sufficient information to be of value. Dot maps are generally in black and white, but have also been overlaid onto coloured features like topography (Polhill & Wiens 1998), which are not only attractive, but also more informative. Outline maps, like those of Jürgens (1992) generalise distributions and may be of less value due to subjective judgement caused by lack of suitable background information (Skov 2000). Generalised distribution maps as in tree books for southern Africa, e.g., Coates Palgrave (1991) are practical, but studies based on these maps like O'Brien & Peters (1998) can only be of a very broad nature. The use of Global Positioning by Satellite (GPS) in plant collecting is becoming more common and can result in very accurate distribution maps. Although the results may be invaluable for certain types of studies, such readings may have to be kept confidential in cases of rare collectors' items. Such locality data were used in the evaluation of the status of *Aloe pillansii* (Loots & Mannheimer in press), one of the two Namibian plants in CITES Appendix I.

3.C.ii Plant distributions and mapping of Namibian plants

The first publication with routine information on distribution of Namibia's flora (Merxmüller 1966–1972) indicated distribution per previous magisterial districts. This series contributed greatly to the knowledge and interest in the geographical distribution. It has been used for mapping by numerous researchers, e.g. Maggs *et al.* (1994).

Namibian sources for plant distributions

In WIND, the computer program MAPPIT, developed at PRE and connected to SPMNDB, provided an easy and effective method for mapping distribution data. Results can be seen in the publications of NBRI on the Cyperaceae (Clarke & Mannheimer 1999) and water plants (Clarke & Klaassen 2001), in brochures (Craven & Klaassen 1998) and local publications for the farming community (Craven & Jacobi 1998a & b, Craven 2000c). The journal of the Ministry of Agriculture, Water and Rural Development, *Agricola*, also carries articles on plants with mapped distributions, e.g. Loots (2001) and Uiras (2001). Early issues of *Dinteria*, when still published in conjunction with WIND, included distribution maps on local plants like *Ceropegia, Brachystelma* and *Tenaris* (Bruyns 1984), *Euphorbia* (Leach 1976), *Lindernia intrepidus* (Giess 1969a), *Moringa ovalifolia* (Giess 1972), *Myrothamnus flabellifolius* (Puff 1978), *Nicotiana africana* (Giess 1982), *Rhigozum* (Giess 1968b),

Rhynchelytrum and *Tricholaena* (Zizka 1987), *Sphaeranthus* (Kers 1969) and *Welwitschia mirabilis* (Giess 1969b). Distribution records of plant species also appear in area checklists. Depending on the details provided and reasons for mapping, the data can be used for mapping in certain circumstances. Examples include Swakopmund to Cape Frio (Giess 1968a), Etosha Pan (Nordenstam 1970), the Brandberg (Nordenstam 1974), Luderitz Bay to Spencer Bay (Robinson & Giess 1974). The journal of The Ministry of Nature Conservation in Namibia, *Madoqua*, has on rare occasions included plant data with maps, e.g. Cole (1987), Jankowitz (1992b). Van der Walt (1974) also includes useful georeferenced specimen data. Distribution maps are regularly included in the newsletter of the *Namibian Tree Atlas Project*, to help atlassers with their identification and to encourage collections in under-collected areas. A large number of more common grasses are mapped in Namibia's own grass book (Müller 1983). General distribution maps for six notable plants are included in a new *Atlas of Namibia* (Mendelsohn *et al.* in prep.).

African publications

The number of African serial publications in which taxonomic revisions and papers, that include maps, can be found is considerable. Technical publications of the National Botanical Institute in Pretoria are the most valuable. Since 1979, *Flora of Southern Africa* (Codd *et al.* 1963 to present) has included grid-dot maps for all species, e.g. *Helichrysum* in Hilliard (1983). *Bothalia* has published grid dot maps since the nineteen-sixties, e.g. De Winter (1965). Depending on the nature of the study, outline maps were also used, e.g. Munday (1983). *Flowering Plants of Africa* have more recently included distribution maps, e.g. Welman *et al.* (1999). Other southern African publications providing mapped distributions are the *South African Journal of Botany*, which started with maps as far back as 1971, e.g. Van der Walt (1971); and *Contributions from the Bolus Herbarium* have published a revision of *Hessea, Strumaria* and *Carpolyza* by Snijman (1994), a synopsis of the genus *Lotononis* by B-E. Van Wyk (1991) and others, with maps.

Foreign publication

The most worthwhile foreign taxonomic publication that included maps on Namibian taxa is undoubtedly *Mitteilungen aus der Botanischen Staatssammlung, München*. The strong links between WIND and M for many years, resulted in much scientific work on our flora being published in that journal. The earliest paper to include mapped distributions is probably that of Friedrich (1956). This was followed by Herre & Friedrich (1959) and a five hundred-page paper on some genera of Asteraceae by Roessler (1959). Other examples include an account of *Felicia* (Grau 1973) and *Aloe* (Giess 1970a).

Additional journals that publish relevant articles with maps are so numerous that only the more important will be mentioned with an example. *Annals of the Missouri Botanic Garden* (Goldblatt 1990), *Botaniska Notiser* (Nordenstam 1966, Bremer 1978), *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* (Bruyns 1993,1999), *Edinburgh Journal of Botany* (Meve & Liede 1996), *Kew Bulletin* (Dandy 1966), *Mededelingen Landbouwhogeshool Wageningen* (Venter 1979), *Nordic Journal of Botany* (Hedrén 1990), *Opera Botanica* (Nordenstam 1969, 1982b, Wanntorp 1988), *Symbolae Botanicae Upsaliensis* (Kelbessa 1990). The proceedings of AETFAT in Mitteilungen aus dem Institut für Allgemeine Botanik, Hamburg include generalised maps (Peters 1990).

A supplement to Plant Systematics and Evolution covered the genus *Duvalia* by Meve (1997). An additional series of Kew Bulletin provided maps of species occurring in Namibia because it looked at the geographical affinities of the flora of Jebel Marra (Sudan Republic) (Wickens 1976). Two other excellent publications from Royal Botanic Gardens Kew, from a mapping point of view are Vollesen's (2000) book on the genus *Blepharis* and *Mistletoes of Africa* by Polhill & Wiens (1998).

Unpublished manuscripts

Useful maps in unpublished manuscripts include the thesis of Jankowitz (1972a) on *Aloe;* Jordaan (1995) on *Gymnosporia;* Maggs (1998b) on the Cucurbitaceae; Van Zyl (2000) on *Zygophyllum*; Vorster on *Mariscus* (1978) amongst others. These are particularly useful sources of specimen data with georeferenced specimens that may be in herbaria other than PRE or WIND.

Books

The large and taxonomically complex family Mesembryanthemaceae has been covered in two books, Herre (1971) and Smith *et al.* (1998), but the maps provide broad outlines of the distribution of the genera only. Publications on genera of the Mesembryanthemaceae with mapped distributions are *Lithops* (Cole 1987, 1988) and *Conophytum* (Hammer 1993). Other books on specific taxa deal with *Crotalaria* (Polhill 1982), *Gladiolus* (Goldblatt & Manning 1998), *Pelargonium* (Van der Walt 1977, Van der Walt & Vorster 1981, 1988), *Moraea* (Goldblatt 1986), Orchidaceae (Linder & Kurzweil 1999), and *Acacia* (Steyn 1994) includes a few mapped distributions for Namibia. The distribution of parasitic plants that occur in Namibia are mapped in Visser (1981) and grasses are covered in southern Africa by Chippindall & Crook (1976) and Gibbs Russell *et al.* (1991). Distribution maps of trees can be found in Coates Palgrave (1991), B. Van Wyk & P. Van Wyk (1997), Von Breitenbach (1995) and a book on the family Combretaceae (Carr 1988).

Publications on Namibia's plants were summarised by Giess (1989) in his *Bibliography of South West African Botany,* and the library at the National Botanical Research Institute has a database of later articles and publications.

3.C.iii Plant species diversity

Biodiversity is generally understood at three levels – genetic, species and ecosystem. *Species diversity* is considered in this study to refer to the variety of species within a local geographical area or region.

Caldecott, *et al.* (1996) separated the current knowledge of biodiversity into global, regional, national, ecoregional and site information. Namibia has been included in region based studies of diversity like those of Goldblatt (1978), Cowling *et al.* (1989) and Gibbs Russell (1985, 1987). However the account of Linder (2001) on patterns of plant species endemism and richness for the African flora does not include arid areas like most of Namibia.

Species richness is usually inferred from a simple grid-diversity count (Linder 2001) and methods for ranking species on the basis of their genetic diversity are available, but not sufficiently advanced to be applicable yet. This approach is probably also premature if one considers the number of large and important families in the flora for which there is no recent and/or adequate taxonomic treatment (Cowling & Hilton-Taylor 1994).

The first national assessment and map of relative species richness was that of Maggs *et al.* (1994). It was based on distributional data per magisterial district following *Prodromus einer Flora von Südwestafrika* (Merxmüller 1966–1972) as well as other literature. A re-assessment was made for the Biodiversity Country Study (Maggs 1998a, Maggs *et al.* 1998).

Maggs & Guarino (1995) presented the ecogeographic diversity of the family Cucubitaceae in Namibia. The aim of the analysis was to device a strategy for the maximal sampling of species diversity within a botanical family.
Diversity of species with altitude, for specific sites or localities was looked at by Moisel (1982) and Rutherford (1992). A diversity map of north central Namibia (Mendelsohn *et al.* 2000) is based on the diversity of different vegetation units and is not comparable with that of mapping species diversity.
Species richness for individual species have been mapped after taxonomic study, e.g. B-E. Van Wyk (1991), Bruyns (2000b).

Bruyns (2000b) suggested the following five factors as being relevant in the geographical concentration of the Stapelieae (Apocynaceae):

1. Very localised species
2. Overlap of distributions of summer rainfall species with winter rainfall species
3. Rock types and soil types
4. Altitude
5. Depth in soil

3.C.iv Species with disjunct distributions

Disjuncts are defined as having a distribution pattern broken into two or more parts not in the same region or area. Distributional disjunctions are to be found in many, perhaps most, groups of plants (Fryxell 1967). Remarkable disjunct patterns in many taxa (animals and plants) of dry areas was first pointed out by Engler in 1921 (Werger 1983). There is no single explanation for all disjunct patterns and each case must be studied on its own merit (Stott 1981). Numerous authors have recorded taxa that occur in north Africa, sometimes including Arabia or even India, and again in southern Africa, e.g. Fryxell (1967), Verdcourt (1969), Nordenstam (1969, 1974), De Winter (1971), Lebrun (1971), Goldblatt (1978), Venter (1979), Hilliard (1994), Ihlenfeldt (1994, 2000), Paton *et al.* (1994), Thulin (1994), Meve & Liede (1996), Thulin & Johansson (1996), Meve (1997), Van Zyl (2000) and Bruyns (2000b). Recent taxonomic work on *Senecio flavus* (Coleman *et al* 2001) has shown it to be distributed in North Africa, Spain and the Canary Islands, and in Namibia. Jürgens (1997) summarised the data of earlier authors.

Species mentioned by these authors are: *Atriplex vestita, Barleria lancifolia, Bergia polyantha, Cienfuegosia digitata, Commicarpus squarrosus, Corbichonia decumbens, Corrigiola litoralis, Cyamopsis senegalensis, Dicoma capensis, Endostemom tenuiflorus, E. tereticaulis, Enneapogon desvauxii, E. scaber, Eragrostis curvula, E. glandulosipedata, E. porosa, E. trichophora, Hypoestes forskaolei, Geigeria acaulis, Gossypium anomalum, Hermannia modesta, Jamesbrittenia adpressa, Kohautia aspera* (also in India), *Litogyne gariepina, Microcharis disjuncta, Monsonia angustifolia, Monsonia senegalensis, Odyssea paucinervis, Osyris lanceolata, Rogeria adenophylla, Sesamum alatum, Stipagrostis obtusa, Tribulocarpus dimorphanthus, Trichodesma africanum, Triraphis pumilio, Tylophora fleckii, Zygophyllum simplex and Z. decumbens.* Genera with disjunct distributions in north Africa and sometimes in Arabia and India are: *Citrullus, Codon, Cyanella, Dicerocaryum, Duvalia, Euryops, Hydnora, Kissenia, Lotononis, Pterodiscus, Sesamothamnus, Stipagrostis, Tetrapogon, Turnera, Walleria, Wellstedia, Xerophyta* and *Zygophyllum.* There are also a number of genera in southern arid areas with sister species in north Africa and Arabia, e.g. *Camptoloma, Heliotropium, Kissenia, Stipagrostis* and *Tricholaena.*

Other disjunct patterns are:

- Species occurring in Namibia and with a disjunct distribution in the Cape: *Lotononis maculata* and *Lotononis sparsiflora* (B-E. Van Wyk 1991).
- Species from northern Namibia (and maybe Angola) and with disjunct populations in Mozambique: *Barleria senensis, Abutilon austro-africanum, A. engleranum* (Hilliard 1994) and *Stapelia kwebensis* (Bruyns 2000a). A possible explanation for this pattern is the distribution by water in an east-west or west-east direction along the rivers in northeast Namibia.

Meve & Liede (1996) consider *Tylophora fleckii* to have a disjunct population in northeast Africa, but this is based on inadequate material with morphological variation and needs confirmation. Generalised maps in Coates Palgrave (1991) indicate striking disjuncts in southern Africa, e.g. *Carissa haematocarpa* and *Schotia afra* var. *angustifolia* from Namibia and Eastern Cape; *Albizia brevifolia*
from northwest Namibia and further east, e.g. Zimbabwe, *Nuxia oppositifolia* from Namibia (Angola) and Mozambique.

3.C.v Taxa endemic to Namibia

Endemic taxa are defined here as those taxa restricted to within the political borders of Namibia.

As A.E. Van Wyk & Smith (2001) point out, data on endemism would be more useful if given by floristic province rather than by political subdivision. The artificial definition of endemism used here, was only followed due to the large number of species involved. Priority, for study, was given to the plants that are the sole responsibility of Namibia and cross border species could be considered on completion of these. According to A.E. Van Wyk & Smith (2001), most of the *Kaokoveld* centre has some kind of protection. This is due to conserved areas in Angola, a narrow strip along the coast of Namibia, and the communal conservancies in Namibia. Unfortunately communal conservancies in Namibia are only concerned with animals and plants are not included in their management plans. In addition, according to Huntley & Matos (1994), conservation of vegetation in Angola has deteriorated considerably since independence and the protection of individual species has not yet been provided for by legislation. It is therefore vitally important that endemic *Kaokoveld* species in Namibia are afforded extra attention.

The only published paper on endemic plant taxa in Namibia assesses the genus *Aloe* (Müller, 1985). Craven (1999, 2000a & b) indicates endemic species in the inventory of Namibian plants. Numerous taxonomic papers mention endemism and they are covered in the data review on page 31.

The first map to indicate the overall distribution of endemics in Namibia (Maggs *et al.* 1994) was based on 145 species. They were chosen at random and their distributions, according to herbarium sheets, were plotted per half degree square. Areas highlighted as important included the Kaokoveld, Windhoek, Naukluft and Southern Namib. The inclusion of the Naukluft as an important area was questioned and considered to be an artifact of high collecting intensity. This has since proved to be the case. At about the same time Rebelo (1994) mapped endemics of southern Africa including Namibia. His data differs from that of Namibia's, being based on PRE compared to WIND holdings. He does not indicate which plants are considered endemic to Namibia as no definition of endemism or plant lists are given.

The next mapping attempt examined areas where considerable numbers of local endemics occurred (Maggs *et al.* 1997). It was based on records obtained from about 600 species, which made up about 16% of the indigenous flora. Due to the large numbers involved in the research, only species occurring within the borders of Namibia were included. Like Linder (2001), localised endemics were measured by the number of species restricted to one or two grids.

Maps published in Simmons (1998) and Simmons *et al.* (1998) were based on updated data from Maggs *et al.* (1997), but changed from quarter degree square to half-degree squares. The aim was to obtain an overall picture of endemism among all Namibia organisms, to predict centres of diversity and suggest sites needing protection. As could be expected with the present state of knowledge and differences in interpretation of data and results, the conclusions show the unrealistic nature of such an ambitious objective. To conclude that an additional 140 quarter degree squares would be required to protect Namibia's endemic plants, i.e. another 11% of the land area, is

irresponsible considering the sensitive land issue and needs of the indigenous people of Namibia. If the endemic plants already found within protected areas had been removed from the dataset prior to the analysis, the resulting figure would be much lower and therefore more acceptable. In addition, no attempt was made to look at centres of importance for localised endemic species as set out in Maggs *et al.* 1997.

3.C.vi Factors known to affect diversity and endemism

Mountains are typically rich in endemics and the degree of endemism usually increases with altitude. When located in deserts they are mesic refugial islands (Major 1988). Mountains form ideal refuges in times of climate change. Two centres of species richness and endemism in Namibian highlands were identified by Hilliard (1994), namely the *Namibian Central and Southern Highland Centre* and the *Waterberg-Otavi Centre.* The richness of the latter may be more due to the limestone than the altitude, but the former is substantiated by Nordenstam's (1974) identification of a number of endemics from the Brandberg. B-E. Van Wyk (1991) deduces from his study of *Lotononis* that patterns of endemism within this genus agree with the concept of highland refugia, and subsequent speciation in and around these centres would explain the localised distribution of the species and most of the sections.

Many hot deserts have very high endemism in spite of their limited flora and vegetation (Major 1988). With the exception of Australia, the endemism of deserts (Sahara and south California) is much increased by the mountains within them. In Namibia, the Brandberg Mountain is an example (Craven & Craven 2000).

The restriction of endemic taxa to peculiar or isolated substrata (serpentine, limestone, quartzite, calcareous sands) is a widespread phenomenon in some areas (Cowling *et al.* 1992). Examples from Namibia can be found in the tribe Manuleae (family Scrophulariaceae) in the Waterberg-Otavi area. Four endemic *Jamesbrittenia* species are found in this area of mostly limestone (Hilliard 1994).

Microclimates are important for survival in harsh environments. Many of the Stapelieae (Apocynaceae) and other succulents in Namibia grow under shrubs that provide protection from grazing, erosion & direct radiation (Meve 1997). Mists from the west coast are also responsible for more favourable microclimates, e.g. Namuskluft.

Endemics may be the result of *in situ* speciation (neoendemics) or may be relicts of species once more widely distributed, but which have since become extinct elsewhere (palaeoendemics) (Myers & Giller 1988). No attempt is made here to classify or explain any Namibian taxon in this way.

3.C.vii Namibian near-endemic species

Near-endemics are defined here as species that extend marginally into another region, i.e. beyond the political borders of Namibia. Two noteworthy areas for endemics and near-endemics in Namibia have been identified under the auspices of the *IUCN Plant Conservation Programme* as centres of exceptional species richness and endemism (Davis & Heywood 1994). They are the *Kaokoveld* in the northwest and the *Succulent Karoo* in southwest. Both are elaborated on by Hilton Taylor (1994a & b) and the unpublished data used by Hilton Taylor (pers. comm.) have been used in the compilation of inventories for this study (pages 59 & 62). The *Kaokoveld* has also been reassessed by Craven (in press) and is covered in A.E. Van Wyk & Smith (2001). The second area, the *Western Cape Domain (Succulent Karoo)*, has been divided into a number of phytochoria and centres of endemism by Hilton Taylor (1994b). The important areas from the Namibian point of view are the *Southern Namib Desert* and adjacent *Gariep Centre*. The latter is also included in A.E. Van Wyk & Smith (2001) which Hilton Taylor (1994b) considers essentially a geographic rather than phytogeographic centre.

3.C.viii Inselberg flora

Inselbergs in different geographic regions are said to be floristically distinct, however there appears to be no consensus on what constitutes an inselberg. Porembski & Barthlott (1996) define inselbergs as solitary, monolithic mountains or groups of mountains that rise abruptly from the surrounding landscape with vegetation differing markedly from that of the surroundings due to harsh environmental conditions (i.e. more or less devoid of soil cover and high degree of insolation). Seine *et al.* (2000), referring to the *Zambesian region*, indicate that inselbergs, as defined above, are less frequent in Namibia, Botswana and Mozambique, than in Malawi, Tanzania, Zambia and Zimbabwe. Examples of inselberg species given by Jürgens & Burke (2000) in a contribution to a publication on inselbergs, editesd by Porembski & Barthlott, include endemics like *Jensenobotrya lossowiana, Commiphora anacardiifolia, Turnera oculata,* as well as the widespread encroacher, *Dichrostachys cinerea*. None of these generally qualify as representative of inselbergs and their inclusion can only be to the authors "somewhat wider definition" (Jürgens & Burke 2000) not only of inselberg, but also the Namib Desert and endemism.

A study of an inselberg in the Southern Namib, Hauchab, found no endemic species, but revealed that it is an isolated outlier for a number of species (Burke *et al.* 1998). Evidence from other studies, e.g. Moussavi *et al.* (2001), would suggest that results from short-term studies in arid environments should be considered with caution. Not only can the floral component of such an inselberg vary considerably in the short term due to the duration, amount and timing of rainfall, but episodic good rain years may occur once a century and result in a different composition and richness of plants.

3.C.ix Taxon phytogeographic centres in Namibia

Once a taxonomic study has been completed and distributions plotted, areas of congruence can be identified and the plants arranged into recognisable *groups*. Further analysis of these *groups* may result in the identification of *centres* of outstanding species concentration and endemism, e.g. the *Cape element* (Weimarck 1941), the *Gariep Centre* (Nordenstam 1969). These taxon phytogeographic *groups* or *centres,* have their own distinctive complement of species (A.E. Van Wyk & Smith 2001) and as pointed out on page 14, must not be confused with the "centre of endemism" of White (1983) like the *Karoo-Namib* region, or the *Succulent Karoo* or *Nama Karoo* regions of Jürgens (1991), which are on a completely different scale and not based purely on the species present.

Taxon phytogeography in southern Africa was pioneered by Weimarck (1941). He listed the following as essential ingredients for this type of study: recently monographed work, all available material, and exact maps in order to have "data as rich in detail as possible" so that "one may then look upon the restricted area as true". He divided the Cape species he worked with, into taxon phytogeographical groups according to their distributions. These groups were reassessed and taxon phytogeographic centres recognised. Only one species found in Namibia is recorded in this paper. The concept was however built on by other researchers for areas outside the Cape region, e.g. Nordenstam (1969), Hilliard (1994), and B-E. Van Wyk (1991) who indicated that regional endemism in *Lotononis* agrees well with the generalised patterns distinguished by Weimarck (1941).

Nordenstam (1969) placed the 89 species of *Euryops*, which are mainly distributed in southern Africa, into 24 groups according to their distributions. Further analysis resulted in the recognition of nine centres of outstanding species concentration and endemism in the region or taxon phytogeographic centres. One of these was important to Namibia, namely, the *Gariep Centre*. Nordenstam (1969) predicted that some species would be found on both sides of the Orange River and this has been verified by the collection of *Euryops multifidus* on both sides of the Orange River. Other species, e.g. two orchids mentioned by Bruyns (1989) and the distribution and species concentrations identified by Hartmann (1987) in the subtribe Leipoldtiinae (Mesembryanthemaceae) confirm the *Gariep Centre*.

After detailed study of the tribe Manuleae (Scrophulariaceae), Hilliard (1994) found that species sympatric with *Euryops* fit well into the proposed *groups* of Nordenstam (1969). This scheme was therefore adopted by Hilliard (1994) with modifications, additional *groups* added and *centres* identified. Delimitations of the areas and examples of species given by Nordenstam (1969) and Hilliard (1994) are as follows:

- *The Karroo Ubiquists* are widely distributed species, in the karroid areas of the Cape and may spread into the Free State, low-lying parts of Lesotho, and Namibia. Examples from Hilliard (1994) are *Manulea schaeferi, Sutera partriotica* and *Zaluzianskya peduncularis.* Nordenstam (1969) gives the following: *Euryops asparagoides, E. lateriflorus* and *E. subcarnosus.*

- *The Namaqualand-Cape Group* has a western distribution from Namaqualand south into the *Cape Floral Region*; they may cross the Orange into the Diamond Area and Warmbad district of Namibia, or extend slightly eastwards into karroid areas, e.g. *Zaluzianskya benthamiana* and *Euryops multifidus.*

- *The Namaqua Group* is equal to *the Namaqua Centre*. The species are distributed from the Diamond Area and Warmbad district of Namibia south through Namaqualand to the Olifants River, e.g. *Jamesbrittenia aridicola, Euryops dregeanus, E. walterorum.*

- *The Gariep Group* is equivalent to the *Gariep Centre* and is discussed and mapped on page 62.

- *Arid Northern Cape-Namibia Group* extends from the Orange River, north to Vryburg and Gordonia, and in the southern half of Namibia, e.g. *Jamesbrittenia adpressa, Jamesbrittenia canescens var. canescens, Jamesbrittenia integerrima, Jamesbrittenia tenella, Jamesbrittenia megadenia, Manulea gariepina, Manulea burchellii, Manulea leptosiphon* and *Zaluzianskya diandra.*

- *The Namibia Central and Southern Highland Group* and the *Namibia Western Escarpment Group* were combined to make the *Namibia Central and Southern Highland Centre* which is discussed on page 67.

- *The Kaokoveld Group* is mapped and discussed on page 59.

- *The Waterberg-Otavi Mountains Group* is equal to the *Waterberg-Otavi Centre* and mapped on page 66.

- *The Interior Savanna Group* of species are often widely distributed in the savannas and woodlands of Namibia, Botswana, northern Cape, western Transvaal, western Zimbabwe, e.g. *Antherothamnus pearsonii, Jamesbrittenia atropurpurea* subsp. *pubescens, Jamesbrittenia canescens* var. *seineri, Jamesbrittenia concinna* and *Melanospermum foliosum.*

- *The Tropical African Ubiquists* species are widely distributed in the savannas and grasslands of tropical Africa, where they are confined to moist places, e.g. *Jamesbrittenia elegantissima.*

3.C.x Phytogeographic relationships of the plants of a particular area

The distributions of plants found on the Brandberg Mountain have been analysed with regard to their occurrence in other areas (Nordenstam 1974). Plants endemic to the Brandberg, the *Kaoko Element* (from southern Angola to the Karibib district), the *Karoo-Namib* species, *Sudano-Zambesian* species, *Disjunct Afro-arid Element* and the widespread species are listed. The list of endemics is updated by Craven & Craven (2000).

3.C.xi Phytogeographic relationships, species diversity, and proposals on the evolution of species

The phytogeographic relationships of the following families have been published: the Amaryllidaceae (Vorster 1999) which states that there is no clear centre of diversity for the Amaryllidaceae in Namibia, Molluginaceae (Adamson 1960), Poaceae (Clayton & Cope 1979) and Velloziaceae (Ayensu 1973). Due to the detailed studies on genera of the Iridaceae by Goldblatt (1983, 1986, 1990, 1994) and Goldblatt & Manning (1998), this family is probably the best known when it comes to phytogeographic relationships.

Hartmann (1994) analysed the composition of the Mesembryathemaceae of the *Little Karoo Centre* and suggested that the origin of this family is a non-winter rainfall area. Although the area of study is not in Namibia, some of the maps cover parts of this country. Jürgens (1990) discusses the possible use of the Mesembryathemaceae in other arid regions.

Phytogeographic relationships of many local genera have been studied and a few examples are given, e.g. *Mariscus* (Vorster 1983), *Crassula* (Jürgens 1995), *Monsonia* (Venter 1983) and one of the oldest relevant studies is that of Norlindh (1943, 1946) on the Calenduleae (Asteraceae). Bremer (1978) concludes that the ancestor of the genus *Leysera* belonged to what is now the southern African flora. The recent, wide distribution of the genus was probably achieved during the evolution of the present-day species. Species concentrations and distributions of *Duvalia* (Meve 1997) indicate that only one, of the four species found in Namibia, occurs in any particular degree square. Balkwill & Balkwill (1998) carried out a comprehensive analysis of the distribution patterns of *Barleria* on a global scale, after completion of a monographic infra-generic classification. Two centres of diversity are identified in Africa where the richest representation occurs. Of interest to Namibia, is that on a local scale, many of the species show highly restricted distributions, apparently related to particular soil types and possibly to the short-distance, ballistic mode of seed dispersal. The different sections of *Pelargonium* have been mapped (Van der Walt & Vorster 1983). As no fossil material of *Pelargonium* is known, deductions about the centre of origin can only be made on the present distribution of the species. They occur mainly in the winter-rainfall region, but several sections extend through the summer rainfall region.

The distribution of the narrow endemic, *Nicotiana africana*, provides one of the most intriguing puzzles (Giess 1982). Kinahan (1989) believes this to be an introduced species as it is a New World group with no close relatives in Africa and is represented here by a single species. Cytological and biochemical evidence (Gerstel *et al.* 1979) however suggest that it is not closely related to wild tobacco (*Nicotiana tabacum*), but to a possible relationship with an Australian and south Pacific island taxon, and how it or its ansestors could have reached Africa remain a puzzle.

Cladistic biogeography assumes that the correspondence between phylogenetic relationships and area relationships is biogeographically informative (Crisci 2001). Comparisons between area cladograms derived from different plant species that occur in a certain region allow general patterns to be elucidated. The approach has been applied to the tribe Stapelieae (Apocynaceae) (Bruyns 2000b) and *Anacampseros* (Gerbaulet 1994). Suggestions on the origin of the African flora have been made by Nordenstam (1982b) from his studies on *Ornithoglossum*, B-E. Van Wyk (1991) on *Lotononis*, Polhill (1982) on *Crotalaria,* and anomalies in patterns of dry vegetation are discussed by Werger (1983) and Jürgens (1997).

An understanding of the geographic evidence and principles of distribution is basic to interpreting the origin, migration, and evolution of taxa and floras (Radford *et al.*1974). Knowing the distributions of species on national scale, i.e. in Namibia, will not contribute significantly on their own, however it is assumed that interpretations will be possible when more studies have been completed and the data can be combined for assessment.

Some taxonomists have indicated geographic occurrence of species within specific biomes, e.g. Van Zyl (2000) and Van Zyl & Marais (in prep.), but these studies are not discussed here, as they are not relevant to taxon phytogeography. Bruyns (2000b) provides this information in addition to other phytogeographic data.

3.D DATA

Data and datasets available in Namibia are:

- An inventory of indigenous spermatophyte species in Namibia (Craven 1999, 2000a & b).
- An inventory of species endemic to Namibia (Craven 1999).
- Collected specimens on the database SPMNDB, i.e. computerised data of the identified, georeferenced collections of plants housed in the herbaria WIND and PRE.
- Distribution maps in numerous publications and in the herbarium as discussed in the literature review.
- Inventory of species occurring in taxon phytogeographic centres, already identified by other researchers, e.g. Hilliard (1994), Hilton Taylor (pers. comm.), Nordenstam (1969), Craven (in press) and A.E. Van Wyk & Smith (2001).
- Shape files of Namibian features that can be used as overlays with the plant distributions, allowing GIS applications.

3.D.i The inventory of indigenous spermatophytes in Namibia

The inventory of Namibian Spermatophytes (Appendix 3), is based on the *Checklist of Namibian plant species* (Craven 1999, 2000a & b), but updated where necessary from literature, SPMNDB, and botanists in other herbaria, e.g. NBG. The list of Lebrun & Stork (1991–1997) was compared to the Namibian inventory for additional information on distributions and nomenclature.

Each entry is based on the availability of a voucher specimen. Species known from only one odd collection on the database was removed from this list pending further investigation. Certain taxonomic work was not considered, e.g. Müller-Doblies (1990), where voucher specimens are not available for comparative purposes and descriptions are minimal. Research that has resulted in keys and diagnostic features that can be used in the herbarium are given preference, e.g. the revision of Gerbaulet (1992) is used in preference to that of Rowley (1994). Not only did Gerbaulet determine *Anacampseros* specimens in WIND, but the keys and descriptions are easier to follow.

The rediscovery of *Senecio kotschyanus* in Iran, a distinct species known only from the type specimen collected in 1842 (Moussavi *et al.* 2001), emphasises the importance of not excluding species from arid areas that are known from type specimen or one collection only. Rediscovery after a good rain cycle is possible.

3.D.ii The inventory of species endemic to Namibia

Endemic species are listed in the *Checklist of Namibian plant species* (Craven 1999, 2000a & b) and updated in Appendix 3. Endemics were identified from specimen data and numerous literature sources, e.g. Archer (1998), Balkwill & Balkwill (1988), Cannon & Theobald (1967), Hilliard (1999), Nordenstam (1980), Venter & Verhoeven (1986, 1996) and Venter *et al.* (1990). Kolberg (1990-1995) initiated the compilation of the list of endemics at WIND for the preparation of the biodiversity report (Maggs *et al.* 1994). It was updated, computerised and continued by Craven (Maggs *et al.* 1997) for the Biodiversity Country Study (Barnard 1998), for the *Atlas of Namibia* (Mendelsohn *et al.* in prep), and is ongoing for the evaluation of species for the *Southern*

African Red Data Lists publication (Golding in prep.) and Namibia's threatened plants programme. Recent publications, e.g. Leistner (2000) were consulted for updating the taxonomic status of endemic genera. Literature relevant to the Brandberg and Kaokoveld are listed in Craven & Craven (2000) and Craven (2001). Williamson (1997) lists the plants found in the Diamond Area and mentions the number of endemic species, but does not specify, so the information could not be included here. Endemism in some genera appears inflated due to numerous infraspecific taxa (Maggs *et al.* 1998), e.g. *Lithops* with 92% endemism due to the many subspecies and varieties was therefore not used in this mapping exercise. Certain genera, e.g. *Salsola, Tetragonia, Crassula, Euphorbia* and some in the family Mesembryanthemaceae, urgently need revision and not all potential endemic species were therefore included. A list of species known only from type specimens was obtained from the literature during preparation of the inventory of plants and endemics occurring in Namibia.

3.D.iii The collected specimens and database

Over 120 000 specimens are available for mapping purposes.

The following bias however is reflected in the herbarium collections and must be considered when using the data:

- Interesting, accessible areas, e.g. beside main roads, are well-collected compared to less traveled spots or localities where ethnobotany studies were carried out or where botanists like Giess and Strey owned farms
- Well-known, common plants are under-collected
- Succulents, geophytes, etc., are under-represented in the collection as live collections are not yet included on the database
- Plants that are difficult to press e.g. succulents and water plants are under-represented
- Some collections of specific regions are housed in herbaria where computerised data are not yet available, e.g. plants from the Diamond Area are housed in NBG.
- Some collectors prefer to house valuable collections (e.g. types) in well-known herbaria (K, NBG)
- There is a noticeable lack of specimens from some reserves and game parks.

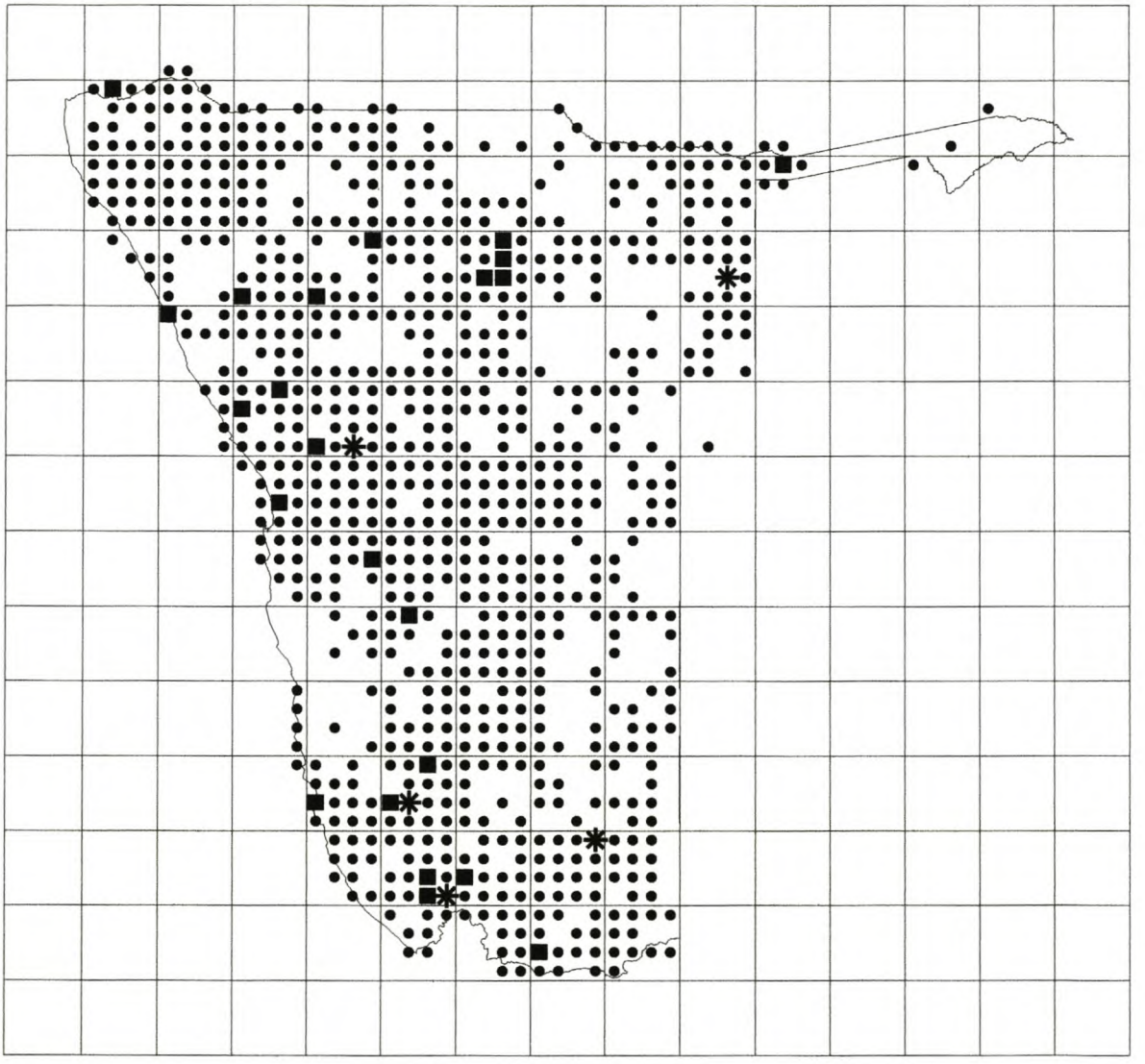
Holdings of the National Herbarium in Pretoria (PRE) and of WIND with georeferenced specimen data were used for the distribution maps. Georeferencing of specimens started many years ago following the quarter degree square system of Edwards & Leistner (1971). All specimens have now been incorporated onto the database and the number of specimens in WIND lacking a quarter degree square reference is low. Quality control and proofreading is ongoing and the quality of the datasets improves daily. Readings used for the diversity map, i.e. number of species per quarter degree square, started prior to WIND being fully computerised. A certain amount of quality control was carried out on the data from the datasets, but specimens were not re-determined or viewed except in exceptional cases. Data, e.g. habitat that may affect the evaluation of the maps were obtained from notes on the SPMNDB specimens as well as literature.

The following factors that may affect computerised data and the use of these are:

- General input errors
- WIND was inactive for many years due to lack of facilities, there is therefore a backlog of more recent specimens
- Knowledge of collectors and collections increases the value of the data, e.g. a collecting trip to the Kaokoveld in an extremely dry period has resulted in numerous specimens under the names of Leistner, Steenkamp, Oliver and Vorster requiring re-evaluation
- A lag in updating taxonomy and redetermined specimens
- Taxonomical discrepancies between PRE & WIND
- Old data may lack adequate locality information or have general distribution notes and therefore may be incorrectly recorded or lack a quarter degree square reference
- Computerised herbarium records date back to the earliest collections. It is therefore possible that some plants no longer occur in the area recorded
- Qualified staff need to interpret the labels during data input, e.g. garden plants must not be inadvertently included (like those of Range from the early 1900s). The quarter degree square indicated must reflect where the plant was collected and not where it was grown (like some Dinter specimens from Grootfontein area which were grown in the nursery in Okahandja).

An example of the quality, quantity and distribution of the major collection in WIND is shown in Map 10. It indicates the distribution and collecting intensity of the first curator of WIND, W. Giess. This is used as evidence that the specimen data used in this study is numerous and covers all of Namibia.

Map 10: Distribution and collecting intensity of the first curator of WIND, W. Giess.



50 0 50 100 150 200 Kilometers

- Grids Giess collected in
- Grids where Giess collected between 101 and 300 specimens
- Grids where Giess collected between 301 and 600 specimens

3.E METHODS

Using the data sources discussed above, queries were run in the database to obtain the following:

- Lists of georeferenced endemic and disjunct species
- The number of species recorded per quarter degree squares throughout Namibia
- The number of endemic species recorded per quarter degree square in Namibia.

The above lists were then combined in various ways and prepared in a format that could be used with a computer program called ArcView. The program is a Geographical Information System (GIS), i.e. a system that compiles, stores and analyses mapped data. It allows questions to be asked on the data, shows the results visually and can also update and alter data easily. Numerous shape files that can be used as overlays, examples of which are shown in Chapter 2, are available in Namibia.

Maps were drawn according to the following headings:

1. **Plant species diversity:**
   - The number of indigenous spermatophyte species recorded per quarter degree square (Map 11)
   - The number of species per quarter degree square divided into five classes (Map 12)
   - A provisional plant species diversity map for Namibia (Map 13)

2. **Species with disjunct distributions** (sixteen examples)

3. **Taxa endemic to Namibia**
   a) Endemic genera (Maps 14 & 15)
   b) Endemic species (Appendix 5)
   c) Overall distribution of endemics (Maps 16 & 17)
   d) Areas of importance for local endemics (Maps 18 & 19)
   e) Species known from type specimen and/or one or two collections only (Map 20)
   f) The distribution of species known from one quarter degree square only (Map 21)
   g) Species occurring in specific localities, e.g. along and near the west coast (Map 22 & 23)
   h) Endemics in taxon phytogeographic centres
      - the *Kaokoveld* (Map 24 & 25)
      - the *Gariep Centre* (Map 26 & 27)
      - the *Waterberg-Otavi Centre* (Map 28)
      - the *Namibia Central and Southern Highland Centre* (Map 29)
   i) Endemics in different families (Map 30–35)

Details of the methodology used for developing the provisional diversity map for Namibia are in Appendix 2.

3.F RESULTS AND DISCUSSION

The results are discussed according to the following subdivisions:

1. **Plant species diversity**
2. **Species with disjunct distributions**
3. **Taxa endemic to Namibia**
4. **Using taxon phytogeographic information.**

3.F.i Plant species diversity

A simple grid-diversity count with each species having equal weight is the method usually used to map species diversity and the result for Namibia is illustrated in Map 11. The same data sorted into five classes grading from quarter degree squares with the lowest number of species to those with the highest number are shown in Map 12.

The most species per quarter degree square were recorded in the quarter degree squares 2217CA (Windhoek), with 1918CA (Grootfontein), 2716DD (Rosh Pinah), 2116DD (Okahandja) and 2616CB (Aus) being the next most diverse. These were followed by two quarter degree squares in the wetter northeast region, namely 1821AB (Dikhundu) and 1719DD (Rundu), and three from the Otavi-Tsumeb region, but together with these are three quarter degree squares from the dry west, i.e. 2115DC (Grootrooiberg), 2114BA (Brandberg) and 2416AB (Bullspoort). Many of the gaps noted could be attributed to incomplete data input at the start of the project and inconsistent data quality, discussed on page 31. Some of the lowest recordings were made in the Omaheke region and these are almost certainly a reflection of under-collecting rather than low diversity. The Kaukauveld, in eastern Namibia, also appeared under-collected, but on investigation it was found that georeferencing for this area had been difficult due to exact localities being poorly documented.

The pattern indicates that, unlike on the continent of Africa as a whole, where the most species-rich areas are in the wetter parts of the continent (Linder 1999), in Namibia transitional areas are more important. For example, the species-rich Rosh Pinah area lies at the border of the winter and summer rainfall regimes. It is also influenced by fog from the sea. Aus, east of Luderitz, is also affected by the fog, but its species-richness is undoubtedly due to the diverse nature of the topography (the start of the escarpment) and varying substrate (scattered granite outcrops in the area). The Waterberg Mountain area appears diverse as the vegetation on the plains and that from the sandy upper parts overlap on the slopes.

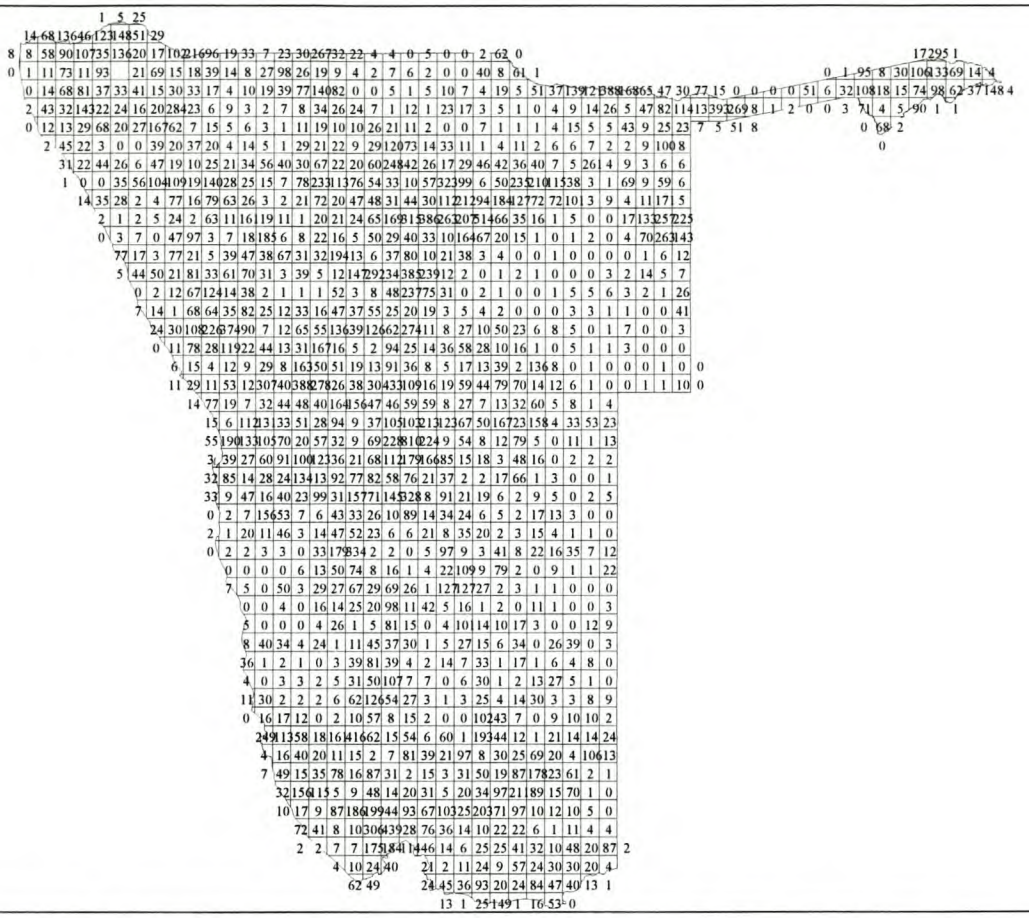
Because the reasons for many of the gaps and problem areas were evidently due to incomplete and poor quality data, an experiment was carried out to try and rectify them. The process, explained in detail in Appendix 2, can be summarised as follows:

- Problem quarter degree squares were rechecked as data input was completed and many of the discrepancies corrected on the database because of on-going quality control
- Keyword searches were carried out on the database and compared to quarter degree readings
- Literature, i.e. checklists for specific areas like Rodin (1985), Giess & Snyman (1986), Hines (1992) and Clarke (1999) was consulted

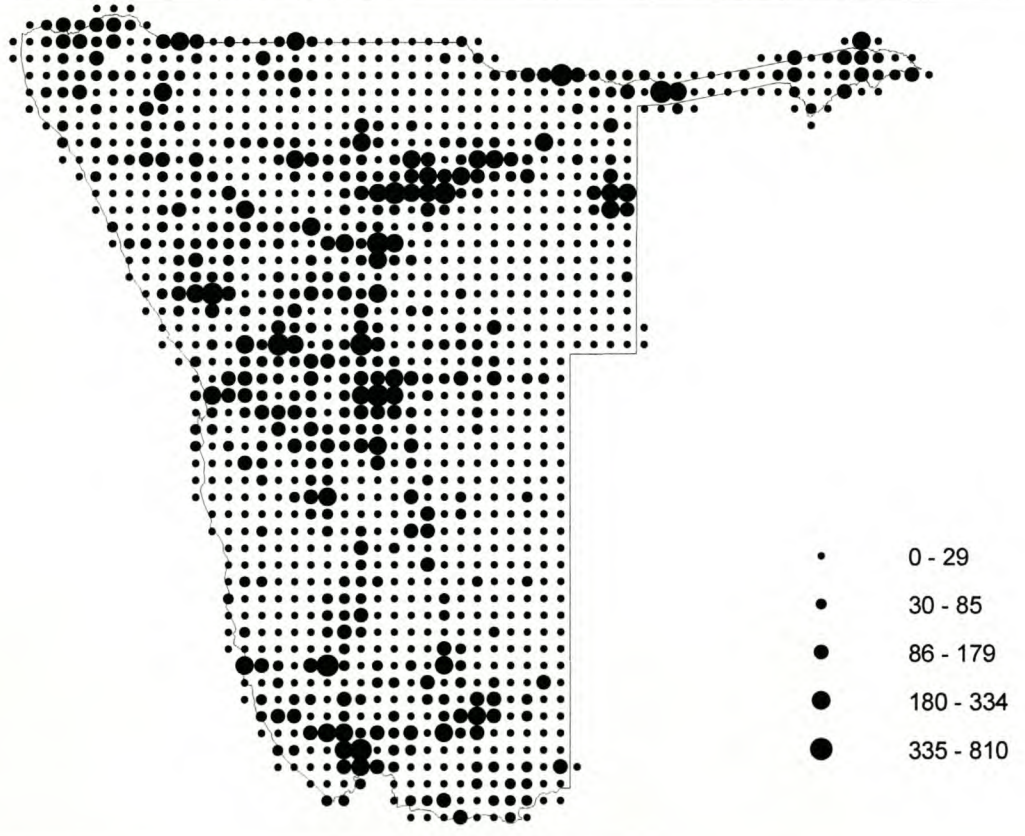
- Views and experience of colleagues and knowledgeable people were obtained
- ArcView shapefiles of Namibian features were used as overlays to draw accurate borders and define localities.

The first maps (Maps 11&12) were therefore "manually" adjusted and resulted in Map 13, a *provisional diversity map* for Namibia, which forms the basis of the *diversity map* in the *Atlas of Namibia* (Mendelsohn *et al.* in prep.).

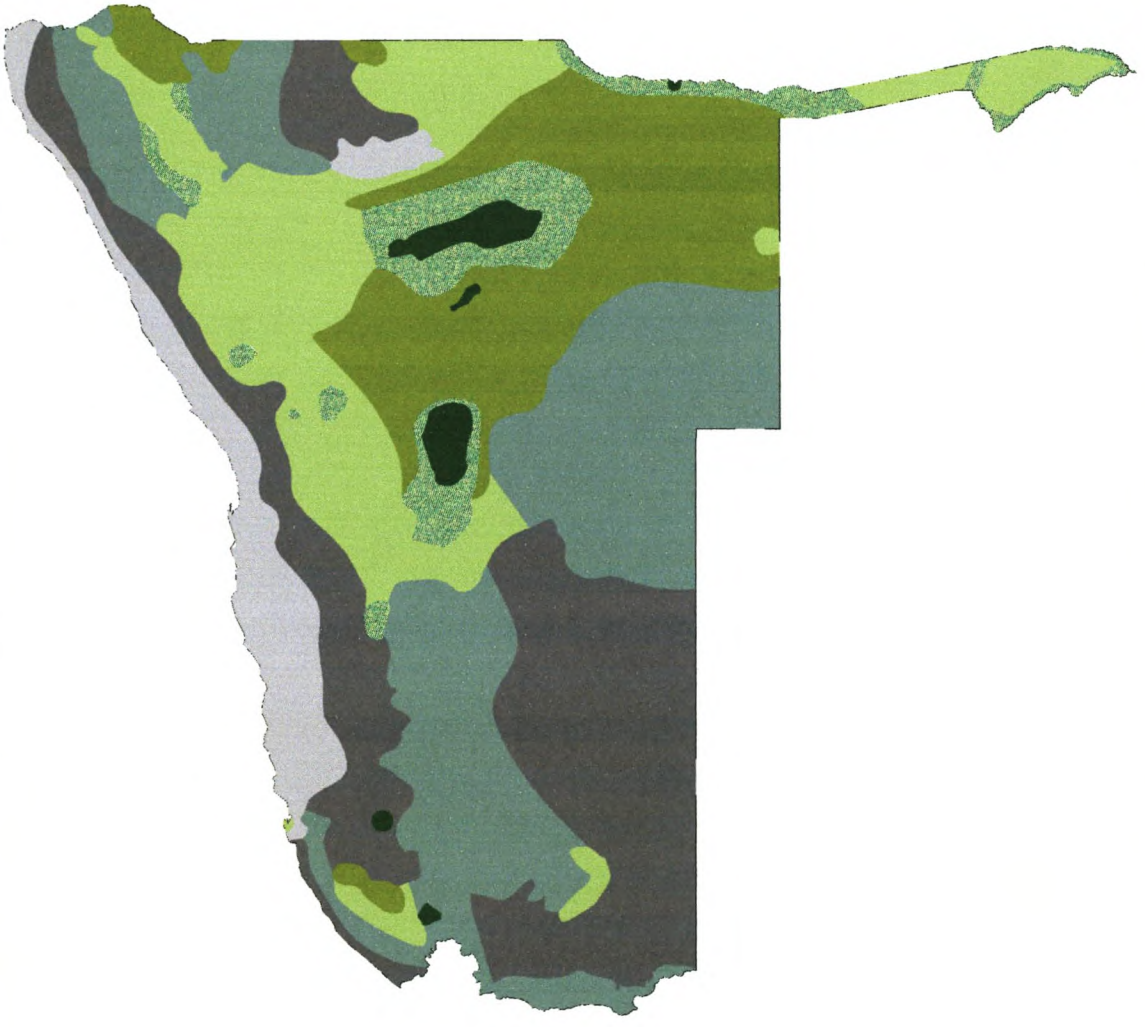
Map 11: Number of indigenous spermatophyte species recorded per quarter degree square in Namibia

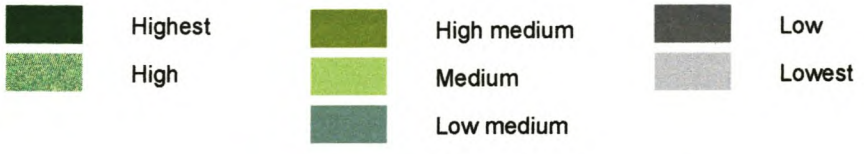


Map 12: The number of species per quarter degree square divided into five classes



Map 13: Provisional plant species diversity map for Namibia





The *provisional diversity map* for Namibia (Map 13), is essentially an overview of the knowledge of species-level diversity in Namibia, at this point in time. To have the plant diversity map correspond to those of other organisms in the *Atlas of Namibia*, the editors, (Mendelsohn *et al.* in prep.) inserted numerical values for the diversity classes. The values are based on what the database reflected rather than the actual number of plant species per unit. As the latter is still largely unknown, relative terms as used here, e.g. high to low, are preferred.

All unique specimens available for this study were considered for this analysis, irrespective of the date collected or the life span of individuals. In other words, some specimens date back to the 19th century and species with extremely short life spans, e.g. *Chamaegigas intrepidus* (Gaff & Giess 1986) are included. This map therefore indicates diversity over time, and not all the elements will ever be present at the same time.

No "best" method for mapping species diversity has been settled on yet, therefore the adding of other data to a purely quantitative account of number per quarter degree square was purely experimental. It does however appear to have made a positive contribution to the value of the map, in particular in defining boundaries of zones. Areas like the dune sea along the coast, the sandy low lying areas of the Caprivi, the Etosha pan, the Kalahari sands, etc. were outlined using shapefiles and given a value for the whole area. Some areas, like the Kavango were however found to be inadequately covered and still need further evaluation in respect of the number of taxa, as well as the limits of the area. The map is no longer a reflection of the holdings of the herbaria only, but an indication of species diversity for Namibia.

A problem encountered with a map of this scale is how to show important small-scale variations. Significant areas of high diversity caused by transitional conditions were therefore enlarged out of proportion to their size, e.g. the Brandberg, Aus and Rosh Pinah.

The most species rich areas on the final map remain the same as those indicated after mapping species per quarter degree square, i.e. Windhoek-Okahandja, the Otavi-Tsumeb-Grootfontein triangle, Aus and Rosh Pinah and small sections in the northeast, but the borders of these areas have been better defined on this provisional diversity map.

To protect biodiversity, both the number and quality of species should be taken into account. Some species are definitely more important to conserve than others are, i.e. those that represent the only representatives of a genus or family, like the unique *Welwitschia* (Cowling & Hilton Taylor 1994). Although this is a very valid point, it is difficult to carry out and was not taken into consideration in this provisional diversity map.

3.F.ii Species with disjuncts distributions

Numerous species were mentioned in the literature review (page 25) as examples provided by other researchers of species with disjunct distributions, mainly with north Africa.

Species found to have disjunct distributions within Namibia are listed below and mapped on page 43 & 44. These are *Adromischus schultianus* subsp. *schuldtianus* (Crassulaceae), *Aloe dichotoma* (Asphodelaceae), *Anacampseros albissima* (Portulacaceae), *Antizoma miersiana* (Menispermaceae), *Colophospermum mopane* (Fabaceae), *Commiphora namaensis* (Burseraceae), *Commiphora oblanceolata* (Burseraceae), *Diospyros acocksii* (Ebenaceae), *Jamesbrittenia major* (Scrophulariaceae), *Leucophrys mesocoma* (Poaceae), *Mentha longifolia* subsp. *wissii* (Lamiaceae), *Olea europaea* subsp. *africana* (Oleaceae). The species are in a variety of families from Poaceae to Menispermaceae, the latter with very few representatives in Namibia. The most obvious pattern of disjunction is between the Brandberg Mountain and southern Namibia, e.g. *Antizoma miersiana, Diospyros acocksii* and *Mentha longifolia* subsp. *wissii* occur on the mountain itself, while *Commiphora namaensis* is found at the base and surrounds. Reasons for this pattern and why it should be possible in species from four different families are unknown. *Commiphora oblanceolata* appears to be the only plant occurring in the Kaokoveld and again in fairly isolated pockets in the Central Namib.

The disjunct distribution of *Jamesbrittenia major* and *Mentha longifolia* subsp. *wissii* may be due to transfer by humans for use. Only two collections of the former were found in northwest Namibia at a large settlement, while the latter belongs to a genus of plants known for herbal use.

Aloe dichotoma is common in southern Namibia and *Olea europaea* subsp. *africana* is frequent in the northeast. Both are also found scattered further away, especially at high altitudes. The former occurs on the Brandberg Mountain, while the latter occurs on the upper parts of the Hunsberg Mountains. They appear to be relicts from the past when they must have been more widespread. Substrate may be the reason for the disjunct distribution patterns of *Colophospermum mopane* and that of the minute *Anacampseros albissima,* although the presence of frost may also affect the former.

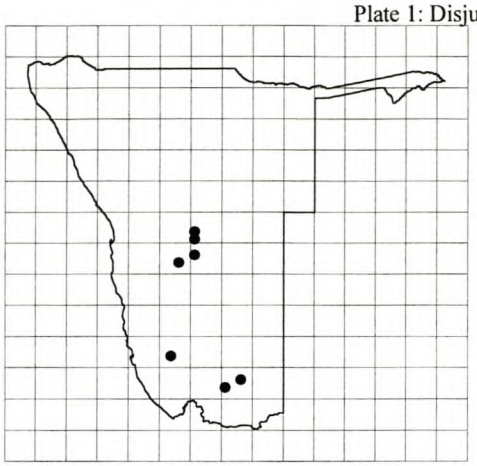
The Namibian distributions of the following species, that have disjunct localities in neighbouring countries, are shown on page 44.

Table 1: Namibian species that have disjunct localities in neighbouring countries

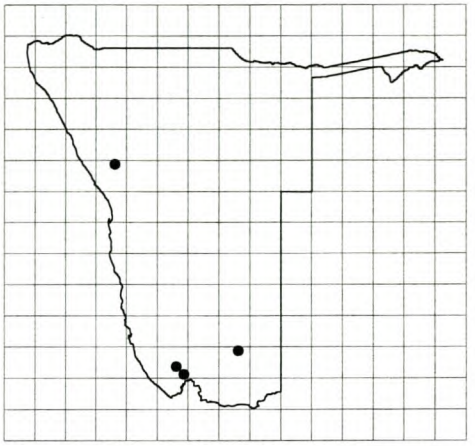
SPECIES	FAMILY	DISTRIBUTION
Carissa haematocarpa	Apocynaceae	Usually occurs along watercourses or rocky gorges in southern Namibia and the Eastern Cape
Rhus leptodictya	Anacardiaceae	Kaokoveld of Namibia only and again in eastern parts of southern Africa
Schotia afra var. *angustifolia*	Fabaceae	Usually occurs along watercourses or rocky gorges in southern Namibia and the Eastern Cape
Strophanthus amboensis	Apocynaceae	Angola and at scattered spots in the northern half of Namibia, usually on hills or mountains
Trema orientalis	Ulmaceae	Erongo Mountains of Namibia only, but is widespread elsewhere in Africa as well as in tropical Asia. It is a common pioneer of disturbed ground, has been planted for soil reclamation, is a good timber tree and is known for its medicinal use elsewhere
Volkiella disticha	Cyperaceae	Only known from a few collections in Namibia and one in Zambia

Disjunctions are significant, no matter what the cause, as they tend to show trends of change. This information is necessary when plants are evaluated for a Red Data List using the IUCN categories. Disjunct distributions may also indicate unknown uses of plants, overutilisation over time, etc.

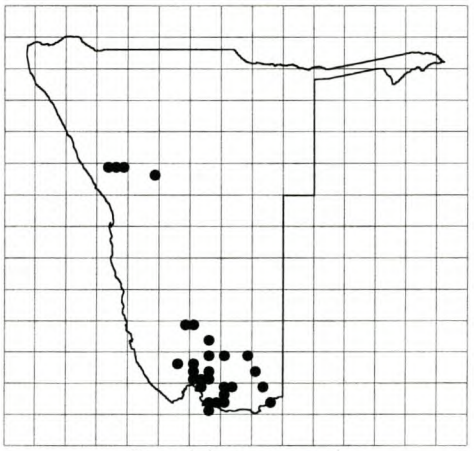
Plate 1: Disjunct species in Namibia



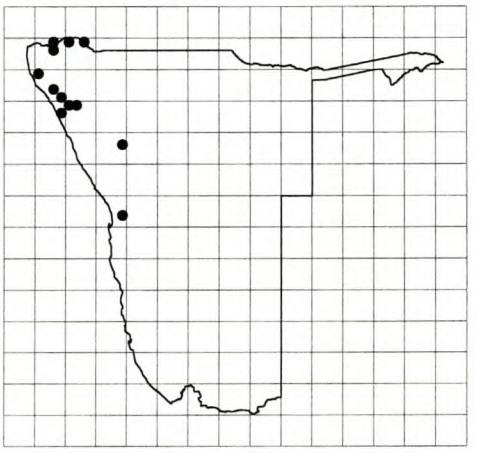
Adromischus schultianus subsp. schuldtianus



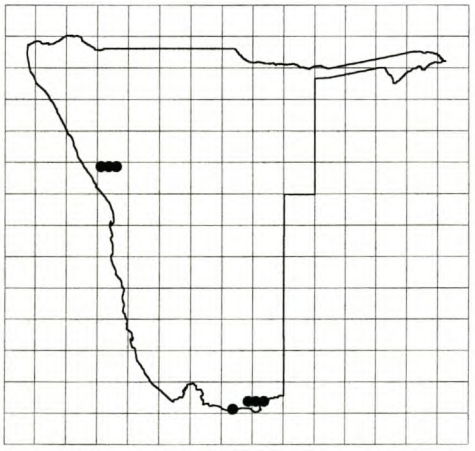
Antizoma miersiana



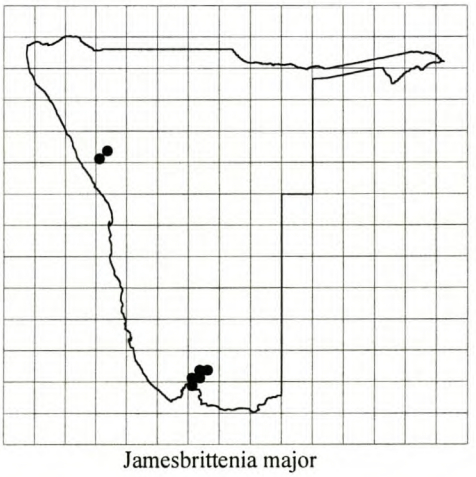
Commiphora namaensis



Commiphora oblanceolata

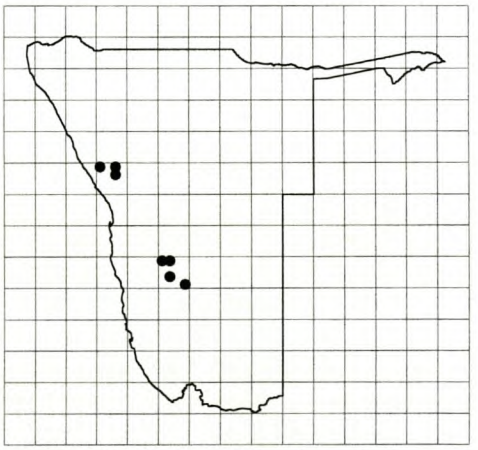


Diospyros acocksii



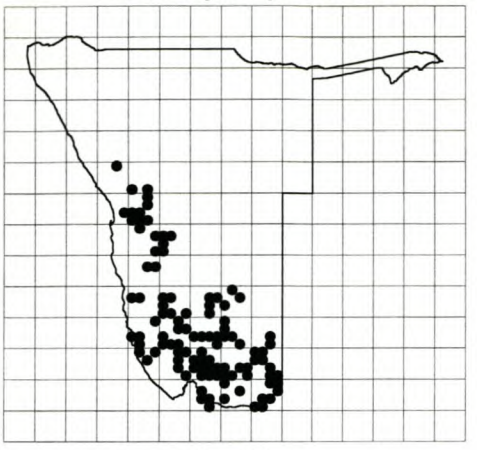
Jamesbrittenia major

Leucophrys mesocoma

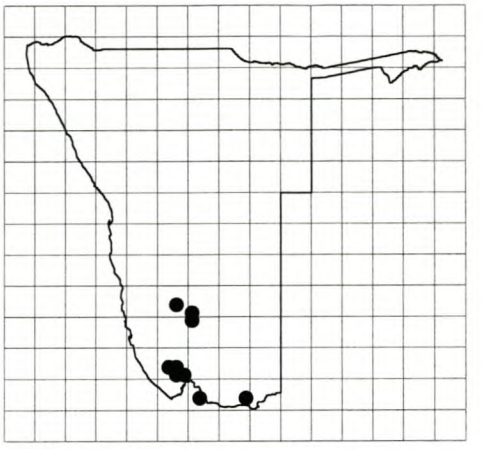


Mentha longifolia subsp. wissii

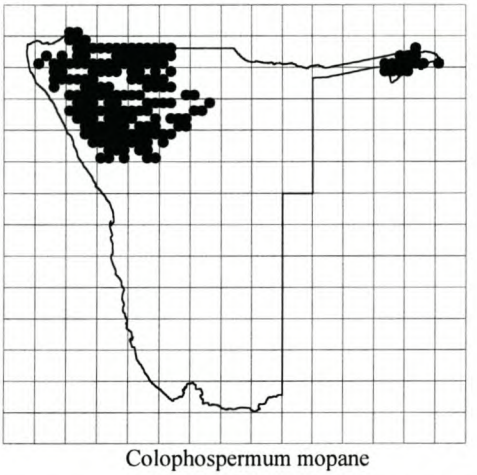
Plate 2: Disjunct species in Namibia and distributions of species with disjunctions elsewhere



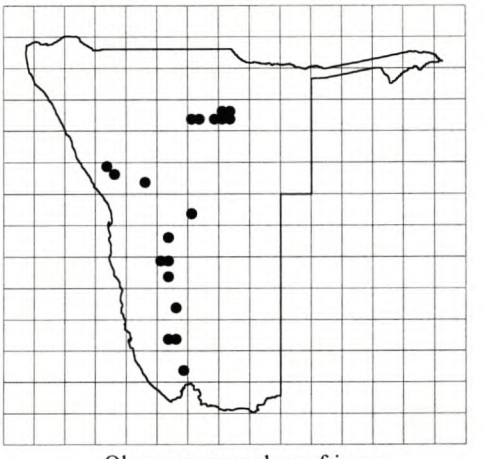
Aloe dichotoma



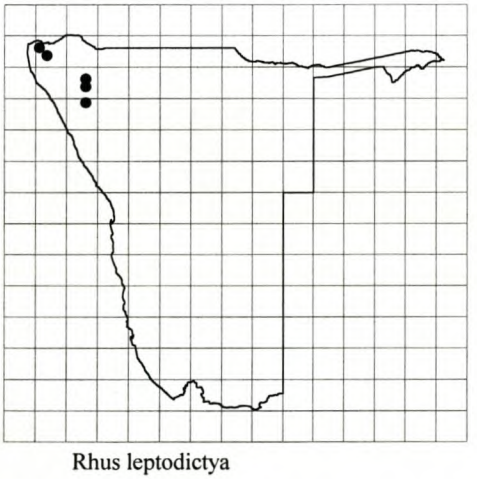
Carissa haematocarpa



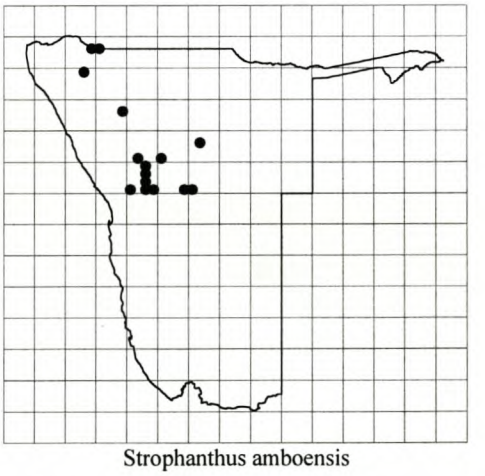
Colophospermum mopane



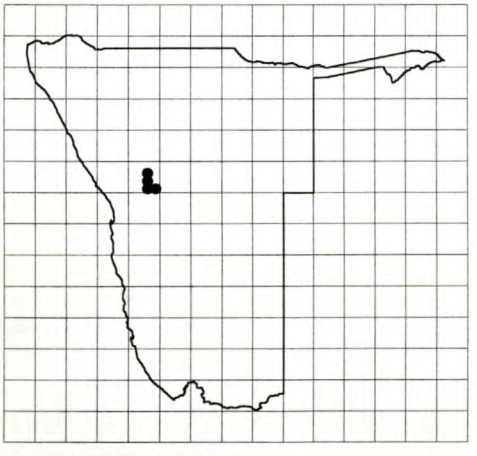
Olea europaea subsp. africana



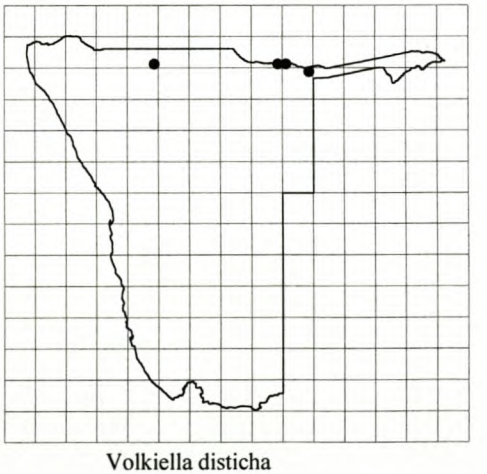
Rhus leptodictya



Strophanthus amboensis



Trema orientalis



Volkiella disticha

3.F.iii Taxa endemic to Namibia

3.F.iii.a Endemic genera

Sixteen genera are endemic to Namibia. The family Mesembryanthemaceae has the most endemic genera (four) and Scrophulariaceae has three. Family Apiaceae, with two endemic genera, is of particular interest as it has very few representatives in species and number of individuals in Namibia. The most recently described genus, *Baynesia* (Apocynaceae) (Bruyns 2000a), attests to the fact that new genera may still be described in Namibia, especially in certain families that require revision, e.g. the family Mesembryanthemaceae.

Among the genera that are considered near-endemic and not included in the Table 2, but important to Namibia, are *Ruschianthemum* (Mesembryanthemaceae), which occurs just over the border in the northern Cape, *Antiphiona* (Asteraceae), *Marcelliopsis* (Amaranthaceae), and Welwitschia (Welwitschiaceae) which are endemic to Namibian and Angola and *Volkiella* (Cyperaceae) which has been recorded once in Zambia.

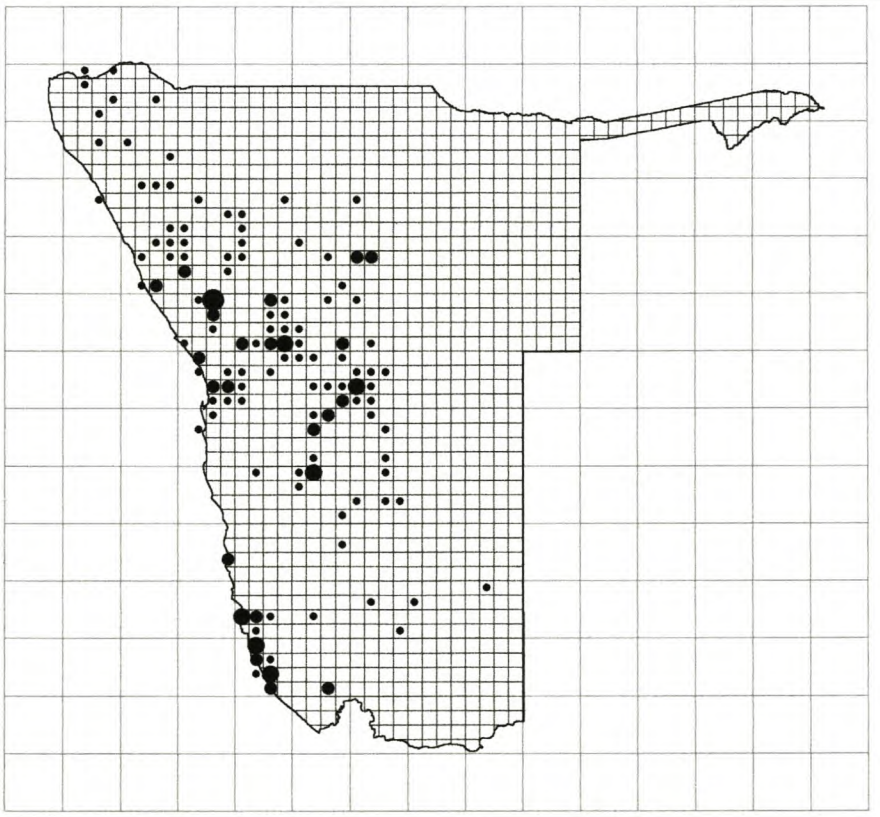
Table 2: Genera endemic to Namibia and the number of quarter degree squares in which they occur

Family	**Genus**	**No of quarter degree squares in which they are recorded**
Amaranthaceae	*Arthraerua*	18
Apiaceae	*Marlothiella*	5
Apiaceae	*Phlyctidocarpa*	6
Apocynaceae	*Baynesia*	1
Asteraceae	*Eremothamnus*	8
Asteraceae	*Ondetia*	42
Campanulaceae	*Namacodon*	9
Mesembryanthemaceae	*Jensenobotrya*	1
Mesembryanthemaceae	*Namibia*	3
Mesembryanthemaceae	*Ruschianthus*	1
Mesembryanthemaceae	*Synaptophyllum*	5
Poaceae	*Kaokochloa*	16
Scrophulariaceae	*Chamaegigas*	12
Scrophulariaceae	*Dintera*	1
Scrophulariaceae	*Manuleopsis*	28
Zygophyllaceae	*Neoluederitzia*	1

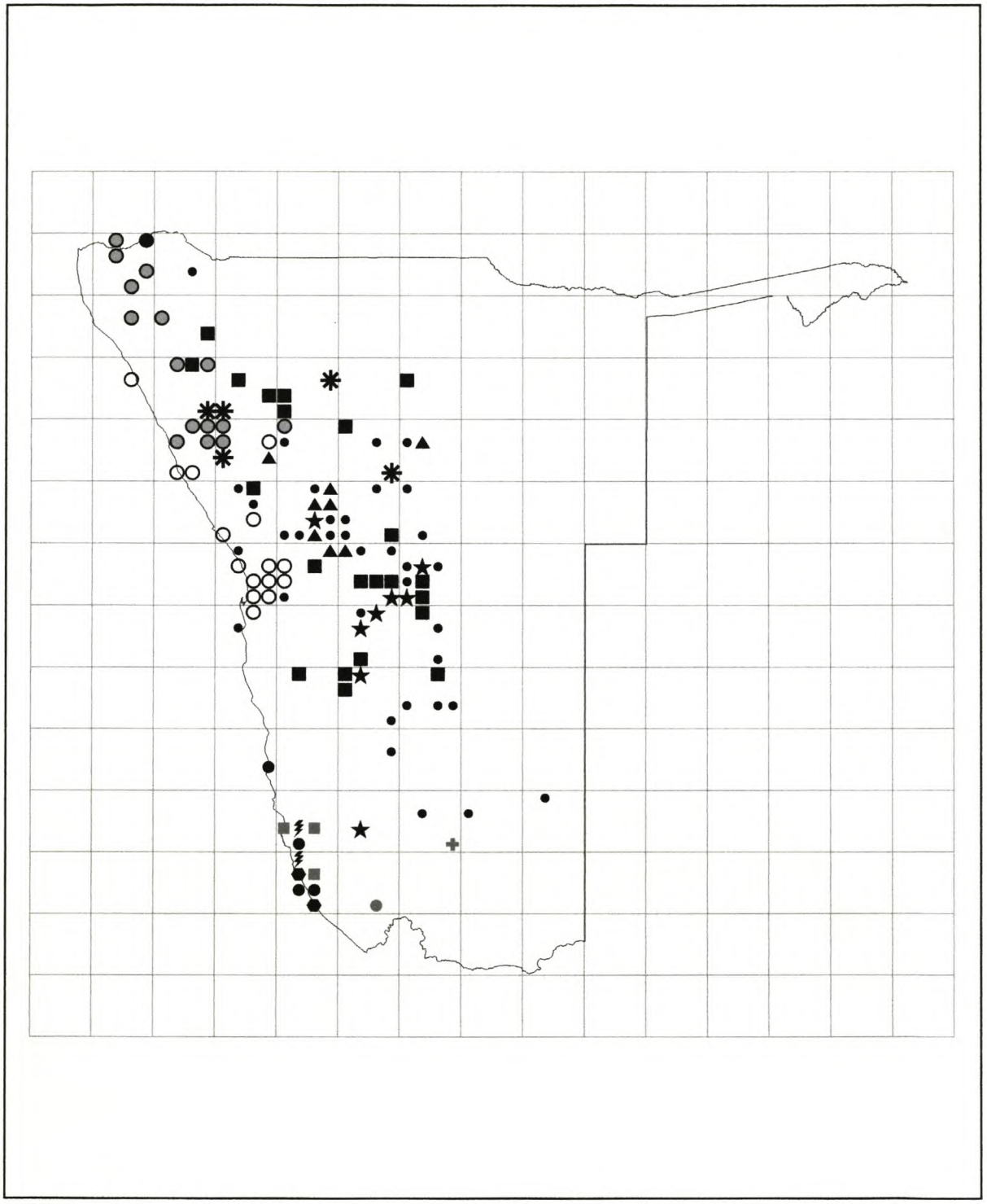
If the most widespread endemic genus *Ondetia*, is excluded from the data, then the majority of endemic genera would occur in the central and western parts of Namibia. *Ondetia* occurs close to Botswana and may eventually be found there (Craven & Klaassen 1998). It is very closely related to *Geigeria,* (which is presently under revision) and often mistaken for a *Geigeria* species in the field.

The number of endemic genera recorded per quarter degree square are shown in Map 14. No endemic genera are found in the northeast, which is also the area with the highest precipitation. Endemic genera are more common in the dry west and only the more widespread ones are also found on the escarpment, e.g. *Ondetia* and *Manuleopsis*. *Arthraerua, Eremothamnus, Marlothiella, Namibia, Neoluederitzia* and *Synaptophyllum* occur along the coast, while *Baynesia* and *Namacodon* are found at higher altitudes. *Chamaegigas* is a hydrophyte that prefers pools found in granite outcrops in the central Namibia. The four genera in family Mesembryanthemaceae occur in the winter rainfall region of southwest Namibia. The distribution and names of species mapped in Map 14 are indicated in Map 15.

Map 14: The number of endemic genera per quarter degree square in Namibia



Map 15: The distribution of species of endemic genera



3.F.iii.b Endemic species

Over 540 of the provisional list of nearly 600 endemic spermatophyte species recorded for Namibia have been mapped individually and used in the analysis and various maps. Reasons for not mapping every endemic are given in the data review (page 31) and below. A look at the listed and mapped plants in Appendix 5 shows that they come from many different families, genera and localities. Endemics occur in 62 out of 157 families and in 231 out of 958 different genera and were recorded in 722 quarter degree squares.
Some endemic species are very widespread and well represented in the collection as shown in the Table 3.

Table 3: The most widespread endemics with the number of quarter degree squares in which they occur

Species	**Number of quarter degree squares**
Cleome suffruticosa	64
Commiphora saxicola	62
Felicia smaragdina	52
Commiphora virgata	47
Acrotome fleckii	42
Ondetia linearis	42
Solanum rigescentoides	41

Over 100 species have been recorded in only one quarter degree square, 59 in two, and nearly fifty in three and four quarter degree squares. The reasons for species being only recorded in one or two quarter degree squares, range from rarity to species that are difficult to collect or make into herbarium specimens. This analysis has highlighted taxa that need further fieldwork. Endemics with very restricted ranges, i.e. those known from type specimens or only a few collections, are listed and their distributions mapped jointly on Map 20.

It is evident from the maps that certain species should rather be considered near-endemic as they would probably be found in neighbouring countries after further searching. A number of species in the genus *Commiphora* and family Acanthaceae, particularly the genus *Petalidium*, were removed from the analysis for this reason and will be evaluated after this work is completed. A geological map, especially of the Orange River area, shows that the substrate differs on the other side of the border and so certain geology-specific plants may be restricted to one country only. Species that occur near the border, but on mountaintops or in habitats that are not considered to occur over the border include *Baynesia lophophora.*

Species in families like the Mesembryanthemaceae, Euphorbiaceae and Oxalidaceae that need taxonomic revision were mapped when there were sufficient data, but the numerous varieties of *Lithops* and *Conophytum* species were excluded. Genus *Geigeria* (Asteraceae) is presently under review, thus a conservative approach was taken to the number of potential species restricted in distribution to Namibia. *Pteronia,* also in the family Asteraceae, urgently needs revision, but the currently recognised species are distinct and therefore were mapped.
Some of the recently described species in the family Crassulaceae, e.g. *Crassula aurusbergensis* and *Tylecodon*

aridimontanus may need to be re-considered. The 36 Namibian endemic species in the genus *Salsola* (out of total of 62 in Namibia), are noted in Table 4, however the data are insubstantial and not considered adequate for inclusion in any analysis of endemic species.

Table 4 shows which families and genera have the most endemics in Namibia. The percentage endemism for each genus is indiacted and was obtained by using column two which gives the number of species in the family that occur in Namibia.

Table 4: Families and genera with five or more endemic species

Family	**No of species in family**	**No of endemic species in family**	**% endemism**	**Genus**	**No of Species/ subspecies/ varieties**	**No of endemic**	**% endem-ism**
Mesembryanthemaceae	215	95	44%	*Antimima*	8	7	88%
				Juttadinteria	8	6	75%
				Ruschia	16	6	38%
				Conophytum	16/5	Numerous infraspecific	
				Lithops	20/11/5	Numerous infraspecific	
Asteraceae	379	68	18%	*Eriocephalus*	11	5	45%
				Geigeria	19/2	6	32%
				Pteronia	23	5	22%
				Senecio	26	5	19%
Acanthaceae	140	44	31%	*Barleria*	25/1	8	32%
				Blepharis	16	6	38%
				Monechma	18/1	7	39%
				Petalidium	26	10	38%
Chenopodiaceae	90	39	43%	*Salsola*	62	36	58%
Fabaceae	338	34	10%	*Indigofera*	54/0/6	7	13%
				Lotononis	22	5	23%
Apocynaceae	171	33	19%	*Brachystelma*	11	5	45%
				Hoodia	11/1	4	36%
Scrophulariaceae	136	31	23%	*Jamesbrittenia*	36/0/1	15	42%
Euphorbiaceae	134	30	22%	*Euphorbia*	67/2/6	26	39%
Poaceae	416	25	6%	*Eragrostis*	57/0/1	8	14%
				Stipagrostis	27/2/3	10	37%
Asphodelaceae	54	19	35%	*Aloe*	26/0/1	10	38%
				Bulbine	8	5	63%
Hyacinthaceae	90	18	20%	*Albuca*	17	5	29%
				Ornithogalum	22	5	23%
Sterculiaceae	59	10	17%	*Hermannia*	48	9	19%
Crassulaceae	80	11	14%	*Crassula*	52/6/3	7	13%
Iridaceae	39	8	21%	*Moraea*	10	5	50%
Eriospermaceae	17	7	41%	*Eriospermum*	16	7	44%
Zygophyllaceae	43	7	16%	*Zygophyllum*	30	6	20%
Burseraceae	26	5	19%	*Commiphora*	26	5	19%
Oxalidaceae	14	5	36%	*Oxalis*	13	5	38%

3.F.iii.c Overall distribution of endemics

Overall distribution of endemics is shown in Maps 16 and 17, from a simple grid-diversity count of 722 quarter degree squares. The readings were taken from from herbarium specimens, as well from literature and each species had equal weight. The resulting pattern is considered a better reflection of overall distribution of endemics than the pattern indicating diversity. This is because the numbers of species involved is much smaller than with overall diversity, so more quality control was possible.

Species were included in the assessment when georeferenced data were available, however many are little known or confused in the field with other species and may therefore be under-collected and under represented. The fact that each species has equal weight detracts from the value of the distribution pattern. A quarter degree square with only a few localised species may be far more important than a quarter degree square with many widespread species recorded from it. This pattern should therefore not be used for management planning as done by Simmons (1998) and Simmons *et al.* (1998).

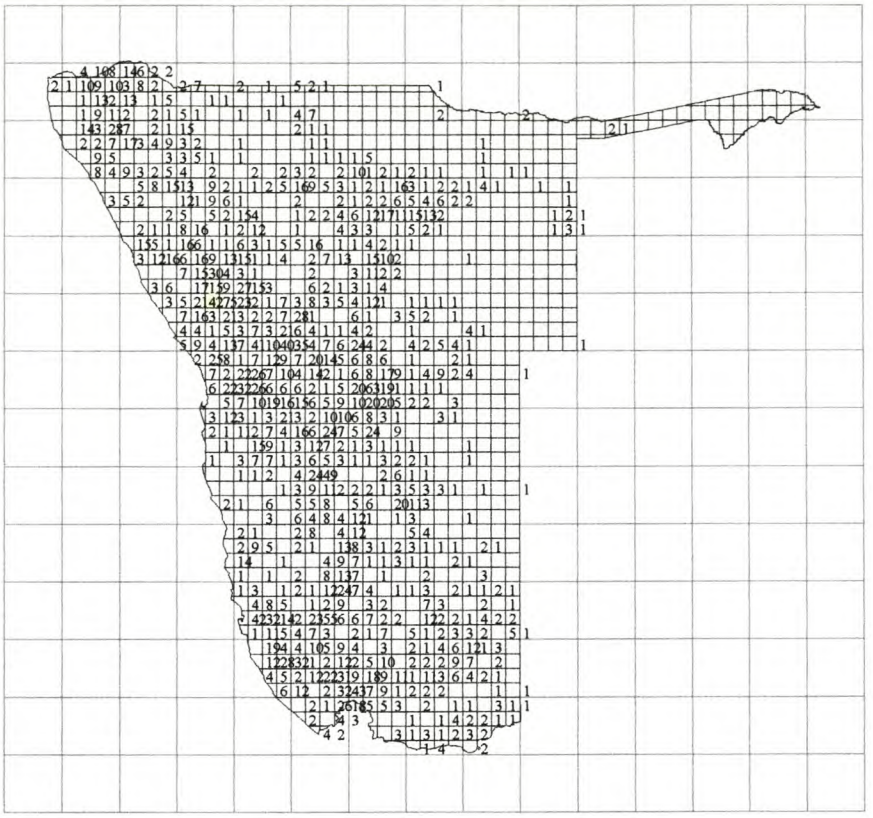
The localities where the quarter degree squares with the most endemics occur, shown in the Table 5, are known to be botanically rich, but collecting intensity has also contributed to the high number of endemics recorded. The Brandberg Mountain has attracted the interest of collectors for many years. It is an extraordinary massive in the desert favoured by researchers and recreational climbers and hikers. The high numbers recorded in the Auas area could be attributed to its proximity to Namibia's largest city making collecting outings easy and regular. During World War II numerous Germans were interned at a concentration camp near Aus. As much of their time was spent botanising, this quarter degree square has a very high number of collections and endemic records. Bullspoort farm was owned and explored by a well-known botanist (R.G. Strey), while the proximity of the farm Namuskluft to roads may make it better collected than other inaccessible areas in the vicinity.

Table 5: The quarter degree squares with the most endemics recorded

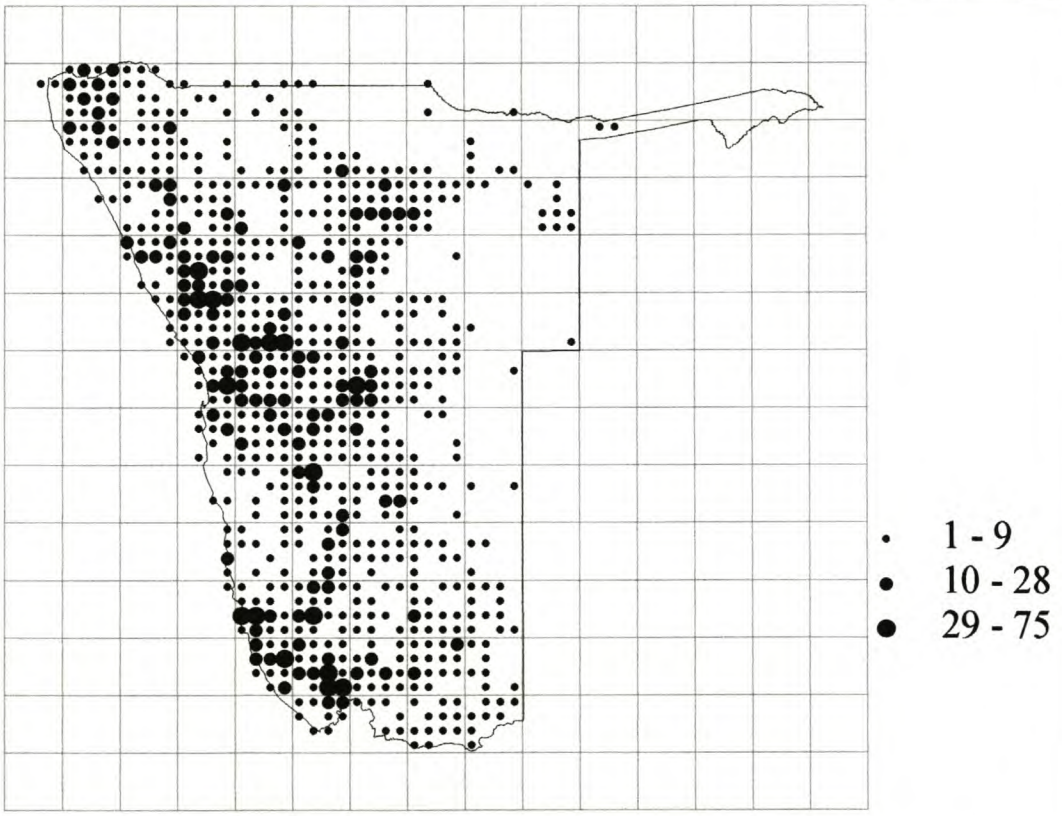
Quarter degree squares	Locality	No of endemic species
2114BA	Brandberg Mountain area	74
2217CA	Windhoek/Auas Mountain area	63
2616CB	The region around the town of Aus	55
2416AB	East of the Nauklauft Mountains/farm Bullspoort	49
2716DD	Namuskluft farm, Namus Mountains	43

One endemic was recorded in 195 different quarter degree squares and 9 quarter degree squares had more than 40 endemics. Three values indicating low, medium and high numbers of species per quarter degree square were chosen subjectively and plotted in Map 17. A map of the overall distribution of endemics, but also indicating areas of importance for local endemics, will be published in the *Atlas of Namibia* (Mendelsohn *et al.* in prep.). It is based on these data and maps, but as the dataset is continually being updated due to quality control and input, details may differ marginally.

Map 16: The number of endemic species per quarter degree square in Namibia



Map 17: The number of endemic species per quarter degree square divided into three classes



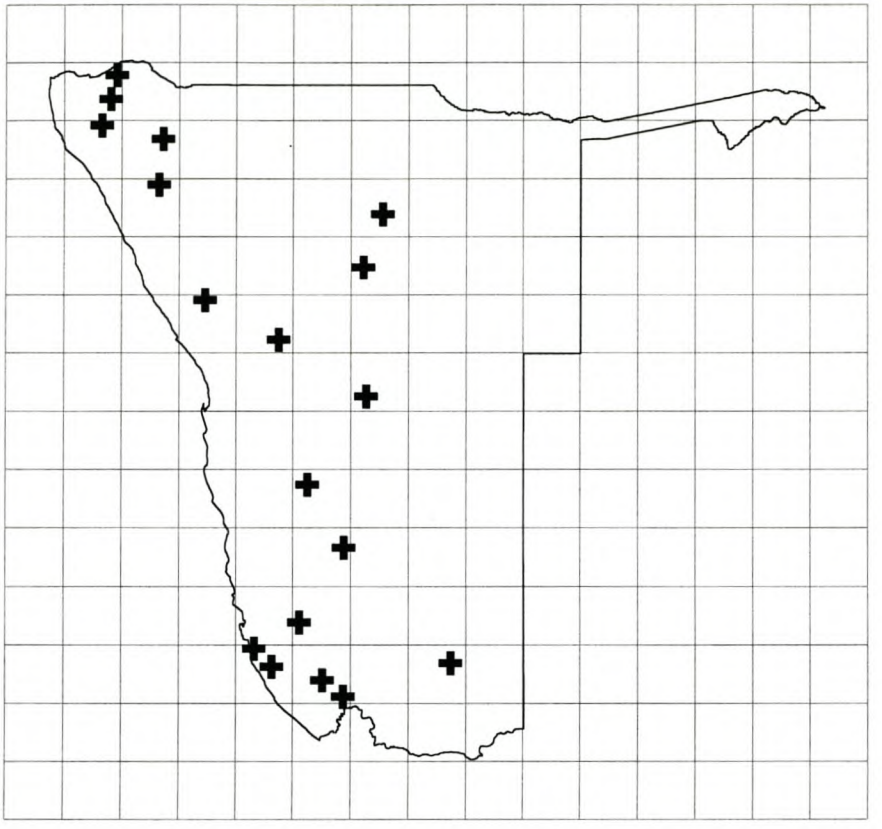
3.F.iii.d Areas of importance for local endemics

Rearrangement and analysis of the data used to map overall diversity resulted in a clear demarcation of areas where significant numbers of species with restricted distributions occur. According to Map 18, these areas are mainly in western Namibia, but also in the central regions, where most are associated with high elevations.

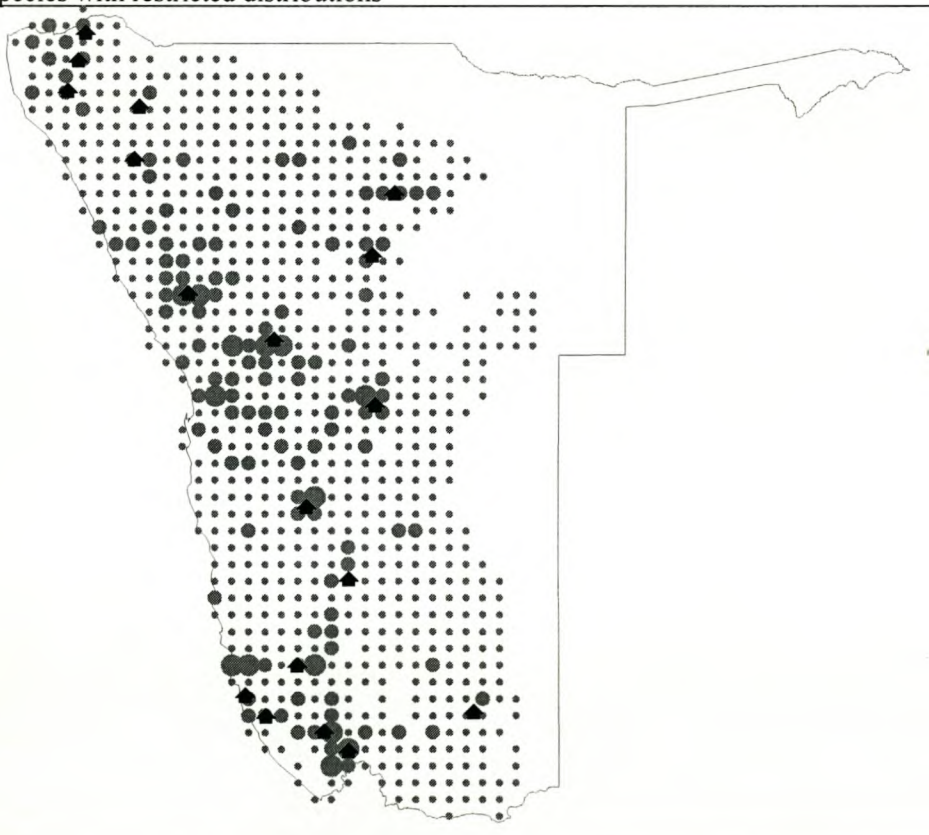
Cowling *et al.* (1992) pose the question: are endemics a heterogeneous group taxonomically or do certain species have a higher than expected probability of being endemic? Certain taxa require more floristic studies and fieldwork before conclusions can be drawn, but a provisional assessment suggests that localities are home to a variety of species from various taxonomic groups. For example, of the seven endemics restricted to Aus, three are species of Mesembryanthemaceae, and one each from families Euphorbiaceae (*Euphorbia),* Fabaceae (*Lotononis),* Oxalidaceae (*Oxalis*) and a Poaceae (*Stipagrostis*).
Plants presently know from the Klinghardt Mountains are from five different families, e.g. *Blepharis meyeri* and *Justicia cuneata* subsp. *hoerleiniana* (Acanthaceae), *Conophytum taylorianum* subsp. *taylorianum* (Mesembryanthemaceae), *Eriocephalus klinghardtensis* (Asteraceae), *Hoodia officinalis* subsp. *delaetiana* and *Tromotriche ruschiana* (Apocynaceae), and *Lessertia cryptantha* (Fabaceae). The prominence of a family like Acanthaceae is surprising as it is not generally associated with winter rainfall regions and the succulent type vegetation associated with the southwest corner of Namibia. The Otavi-highland area has endemics from the Scrophulariaceae (*Jamesbrittenia fragilis* and *Jamesbrittenia dolomitica*), Apocynaceae (*Brachystelma recurvatum*), Fabaceae (*Decorsea dinteri* and *Eriosema harmsiana*), Poaceae (*Eragrostis sabinae*) and Asteraceae (*Geigeria otaviensis*). The family with a representative in nearly every localised area is the Apocynaceae. The reasons can be found in the list of factors suggested by Bruyns (2000b) on page 22, as being relevant in the geographical concentration of the tribe Stapelieae (Apocynaceae).

Overlaying Map 18 onto Map 17 shows clearly that areas of importance for high numbers of endemics are not necessarily the same areas of importance for species with restricted distributions.

Map 18: Locations where significant numbers of species with restricted distributions occur



Map 19: The overall distribution of endemic species with arrows showing important locations for species with restricted distributions



3.F.iii.e Species that are known from type specimen only

The result of a search for species that, to date, are only represented by the type specimen or one or two collections are shown in Table 6. References for each species are documented in Craven (1999, 2000a & b).

Table 6: Species known from type and/or one or two collections only

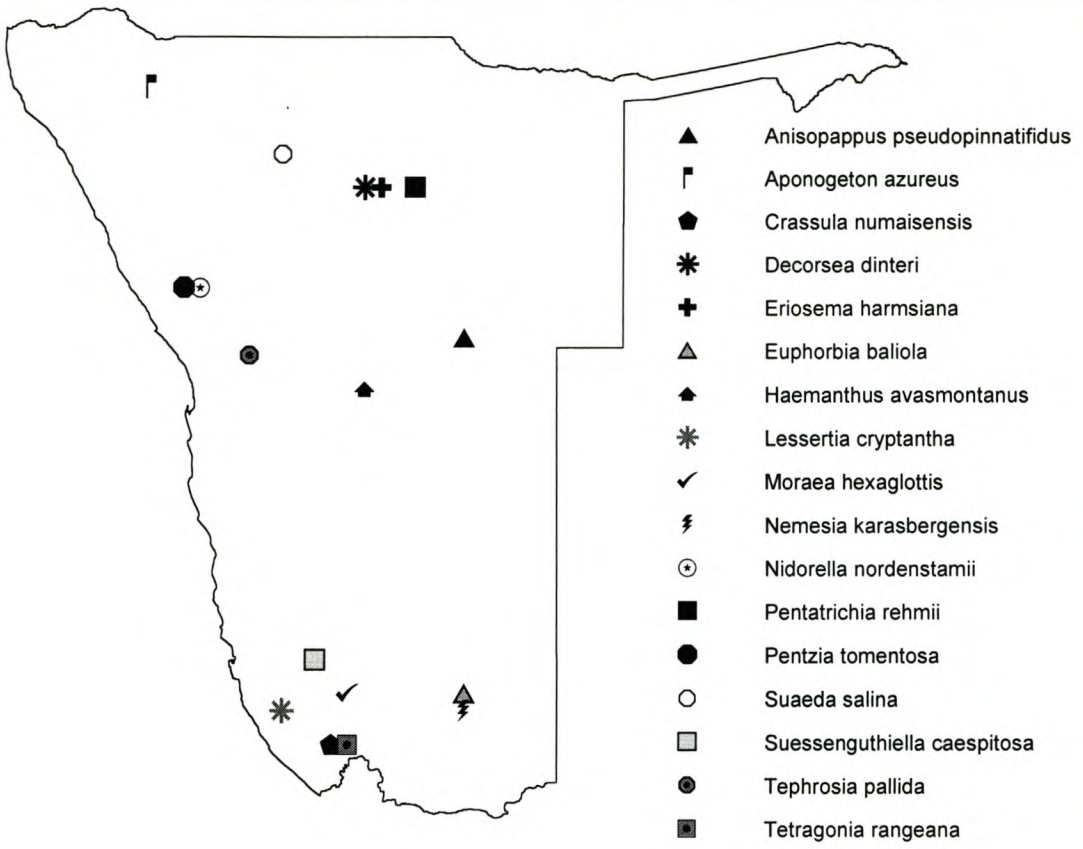
Species	Grid	Date of type collection
Anisopappus pseudopinnatifidus	2118DC	collected in 1963
Aponogeton azureus	1813BB	collected in 1974
Crassula numaisensis	2716DC	although only known from the type specimen, this is considered to be a distinct species
Decorsea dinteri	1917CA	known from type and one other collection only
Dintera pterocaulis	2017AD	not collected since 1920s
Eriosema harmsiana	1917CB	only collected in the 1930s
Euphorbia baliola	2718BA	collected in 1912
Euphorbia lavrani	2017AC	known from type & one other collection, is restricted to limestone and therefore maybe fragmented
Felicia gunillae	2114AB	collected in a very good rain year, 1963, searched for, but not found since
Haemanthus avasmontanus	2217CA	known from type specimen only, collected in 1923, but according to the description it is very distinct, growing on steep south-facing micaceous schist ledges
Lessertia cryptantha	2715BD	collected in 1922
Lotononis mirabilis	2616CB	known from type and two specimen only, not collected since1920s
Moraea hexaglottis	2716BB	collected in 1922
Nemesia karasbergensis	2718BC	collected in 1913
Nidorella nordenstamii	2114BA	collected in good rain year, 1963, searched for, but not found since
Pentatrichia rehmii	1917DB	described in 1934
Pentzia tomentosa	2114AB	collected in 1963
Suaeda salina	1915BB	collected in 1963
Suessenguthiella caespitosa	2616CB	known from the type and one specimen only, described in 1960, not collected since 1929, probably overlooked as it very small
Tephrosia pallida	2215AB	
Tetragonia rangeana	2716DD	known from type and two specimens collected in 1913. It was considered a synonym in *Prodromus einer Flora von Südwestafrika* and therefore may turn out to have been overlooked

The distributions of species known from type specimen or only a few collections (Map 20), show that these species are found throughout Namibia, with the highest number in the Brandberg Mountain, Otavi-Waterberg Highlands and in the south of Namibia. The majority was collected in years of outstanding rainfalls in Namibia, e.g. 1963, 1974. It is noteworthy that for the period of exceptional rain in the Namib Desert, around 1934, no single collections were made. One may therefore speculate that in abnormally wet years the majority of species are not uncommon or rare. Maps 20 and 21 highlight species and areas requiring further research, both in the field and in the herbarium.

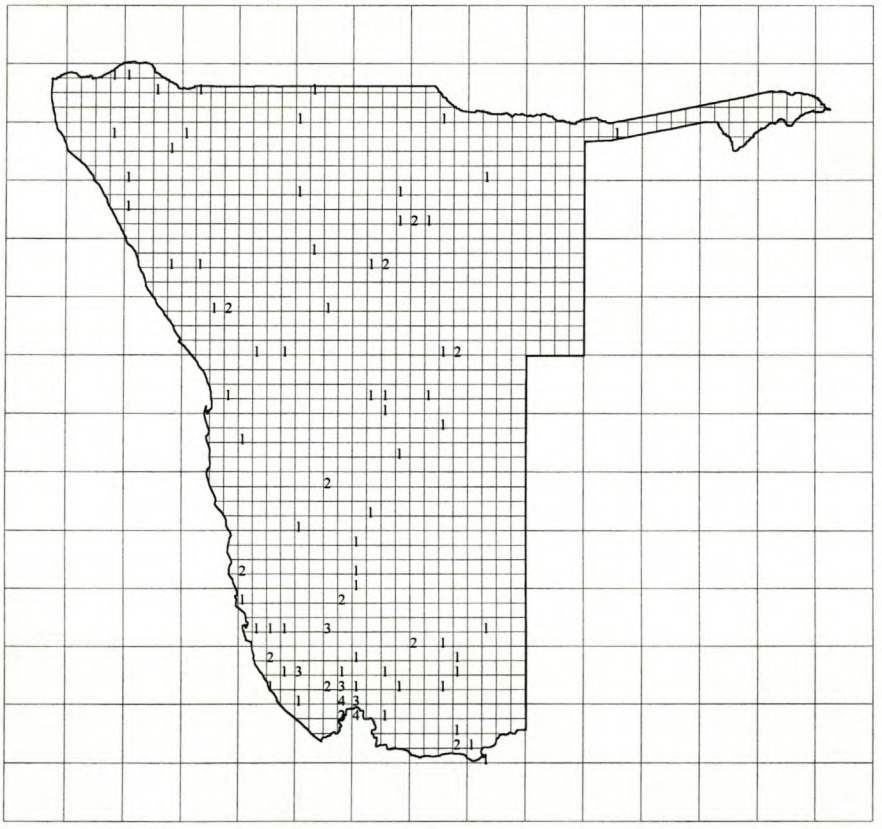
3.F.iii.f Species that have only been recorded in one quarter degree square

The distribution of 109 endemic species known from one quarter degree square only are shown in Map 21. It is premature to come to conclusions about why these species are scarse in collections and found only in these localities. One reason could be that collectors are often not at the right spot at the right time. This is a very important factor in an arid climate with unpredicatable and variable rainfall.

Map 20: Species known from type specimen and/or one or two collections only



Map 21: The distribution of species known from one quarter degree square only



3.F.iii.g Species occurring in specific localities

The following species, (see Map 22), are endemic to the Namib Coast:

Arthraerua leubnitziae (Amaranthaceae)
Crassula elegans subsp. *namibensis* (Crassulaceae)
Eragrostis pygmaea (Poaceae)
Eremothamnus marlothianus (Asteraceae)
Euphorbia verruculosa (Euphorbiaceae)
Frankenia pomonensis (Frankeniaceae)
Jensenobotrya lossowiana (Mesembryanthemaceae)
Juttadinteria simpsonii (Mesembryanthemaceae)
Lasiopogon ponticulus (Asteraceae)
Marlothiella gummifera (Apiaceae)
Myxopappus hereroensis (Asteraceae)
Othonna clavifolia (Asteraceae)
Pteronia spinulosa (Asteraceae)
Stipagrostis hermannii (Poaceae)
Stipagrostis namibensis (Poaceae)
Stipagrostis ramulosa (Poaceae).

To date, the only monocotyledon endemics along the coast are grasses (Poaceae) with four species, and the best represented family is the Asteraceae with five species. Many of the species are restricted to either the northern or southern Namibia, or even isolated rocky outcrops near the shoreline, e.g. *Jensenobotrya lossowiana.*
The Namibian endemic genus *Arthraerua,* is unusual, not only for its frequency along the coast, but because the family, Amaranthaceae, is generally characterised by naturalised and numerous weedy species in Namibia.

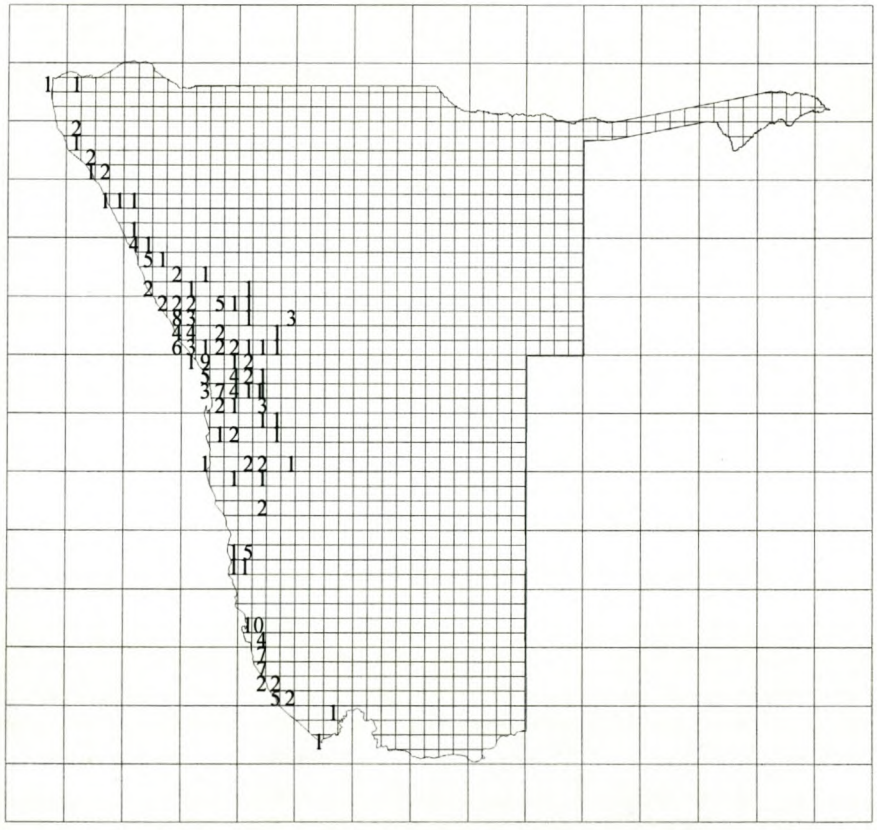
The following species, while limited to western Namibia, have wider distributions within the area:

Aizoanthemum galenioides (Aizoaceae)
Aloe namibensis (Asphodelaceae)
Blepharis gigantea (Acanthaceae)
Cleome carnosa (Capparaceae)
Crotalaria colorata subsp. *colorata* (Fabaceae)
Ectadium latifolium (Apocynaceae)
Helichrysum marlothianum (Asteraceae)
Hypertelis caespitosa (Molluginaceae)
Jamesbrittenia fimbriata (Scrophulariaceae)
Lotononis schreiberi (Fabaceae)
Raphionacme haeneliae (Apocynaceae)
Stipagrostis pellytronis (Poaceae)
Stipagrostis seelyae (Poaceae)
Trianthema hereroensis (Aizoaceae).

The number of species per quarter degree square are recorded in Map 23. It would appear that the highest density of these species is in the Central Namib. The 14 species mapped come from ten different families. The initial list included more species, but some were removed from the dataset pending further investigation. Records from east of the Namib Desert may be due to incorrect identifications or to possible eastern migrations of species in abnormally good rain years. *Salsola* species have been identified along the west coast, particularly in westward flowing ephemeral rivers, but are also not included here, as further revision may result in new taxonomic delimitation's for the genus.

Map 22: Distribution of species endemic to the Namib coast

Map 23: The number of species per quarter degree square that occur only in western Namibia



3.F.iii.h Endemics in taxon phytogeographic centres

Numerous endemic species mapped during this study were found to fit into taxon phytogeographic groups and centres identified by Nordenstam (1966, 1969) and Hilliard (1994), discussed on page 27.

3.F.iii.hA. The *Kaokoveld*

The word *Kaokoveld* has been used to describe the generally arid northwestern corner of Namibia and a floristic group or centre. It includes the southwestern Angola and northwestern Namibia. The southern limit is unclear and it is refered to variously as a centre or region. Shortridge (1934) included the area as far south as the Ugab River when discussing the mammals of South West Africa, Nordenstam (1974) mentions the Karibib district, A.E. Van Wyk & Smith (2001) consider the Koigab River to be the southern border and Craven (in press) discusses the plants occurring as far south as the Hoanib River. Despite this lack of definition, it has long been recognised as an area rich in species and endemism (Maggs *et al.* 1994, Maggs 1998a, Hilton-Taylor 1994a).

The *Kaokoveld* was first discussed from a floristic point of view by Weimarck (1941), who recognised an *Angolan Subcentre* and proposed that the isolated montane areas of Namibia may be part of this centre. Later Volk (1964) proposed a *Kaoko Element*, which was elaborated on by Nordenstam (1974) when he included numerous plants from the Brandberg in this group. Hilliard (1994), however feels that the flora of Angola is "too ill-known ... to be confident about recognizing a centre of endemism there", but does differentiate between a highland and a lowland group. The two species, *Jamesbrittenia canescens* var. *laevior* and *Jamesbrittenia heucherifolia*, included by Hilliard (1994), are confined to southern Angola and northern Namibia. They are considered an interesting phytogeographical group that contrasts with the *Eastern Ubiquists*, where the link to Angola is through the eastern part of southern Africa.

The *IUCN Plant Conservation Programme* has identified the *Kaokoveld Centre* as a centre of exceptional species endemism (Davis & Heywood 1994) with the Brandberg Mountain included as an outlier (Hilton Taylor 1994a).

The distributions of many of the species included by Nordenstam (1974), Hilton-Taylor (unpublished data) and A.E.Van Wyk & Smith (2001) as elements of the *Kaokoveld* were found to cover a very large part of northwest Namibia. The species listed below and mapped (Map 24) are from the list of *Kaokoveld* endemics by A.E. Van Wyk & Smith (2001). Many of these species occur in both Angola and Namibia.

Acacia montis-usti
Acacia robynsiana
Adenium boehmianum
Agelanthus discolor
Aloe corallina
Aloe dewinteri
Aloe dinteri
Baynesia lophophora
Blepharis ferox
Caralluma peschii
Ceraria longipedunculata
Cleome laburnifolia
Commiphora anacardiifolia
Commiphora crenato-serrata
Commiphora giessii
Commiphora kraeuseliana
Commiphora multijuga
Commiphora virgata
Commiphora wildii
Corchorus merxmuelleri
Cyphostemma juttae
Cyphostemma omburense
Eriocephalus pinnatus
Euphorbia chamaesycoides
Euphorbia damarana
Euphorbia insarmentosa
Euphorbia kaokoensis
Euphorbia leistneri
Euphorbia monteiroi subsp. *brandbergensis*
Euphorbia otjipembana

Euphorbia pergracilis
Euphorbia volkmanniae
Helichrysum erubescens
Hermannia merxmuelleri
Hoodia parviflora
Jamesbrittenia chenopodioides
Jamesbrittenia heucherifolia
Kaokochloa nigrirostris
Kirkia dewinteri
Lavrania haagnerae
Marcelliopsis denudata
Monechma serotinum
Moringa ovalifolia
Obetia carruthersiana
Othonna brandbergensis
Pachypodium lealii
Petalidium canescens
Petalidium ohopohense
Phaulopsis semiconica
Phlyctidocarpa flava
Plectranthus unguentarius
Priva auricoccea
Rhigozum virgatum
Rhinacanthus kaokoensis
Ruellia bignoniiflora
Senecio alliariifolius
Sesamothamnus leistneri ined.
Turnera oculata var. *paucipilosa*
Welwitschia mirabilis

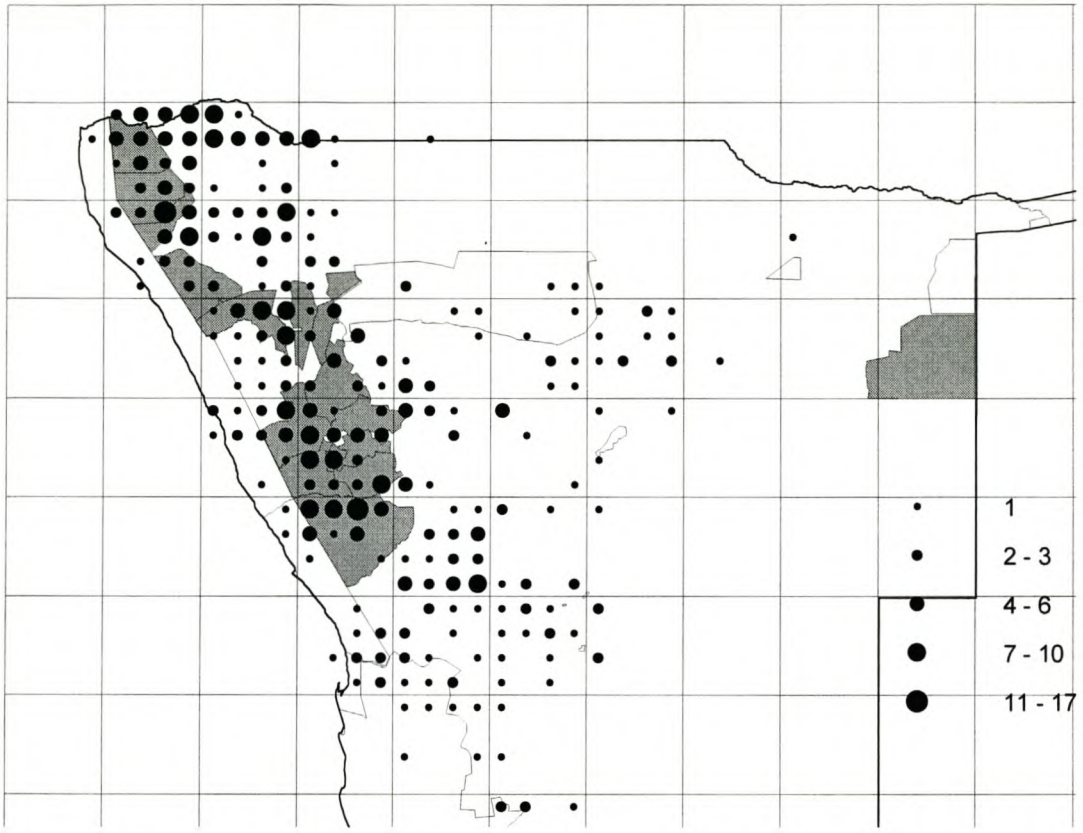
The following species mapped in Map 25 are endemic to the Namibian portion of the Kaokoveld as defined by Craven (in press) i.e. the region from the Kunene River to the Hoanib River in the south.

Aloe corallina
Aloe dewinteri
Aponogeton azureus
Baynesia lophophora
Blepharis ferox
Ceraria longipedunculata
Cleome laburnifolia
Commiphora giessii
Euphorbia kaokoensis
Euphorbia leistneri
Euphorbia otjipembana
Euphorbia pergracilis
Helichrysum erubescens
Hibiscus merxmuelleri
Indigofera anabibensis
Kirkia dewinteri
Lavrania haagnerae
Monechma serotinum
Petalidium subcrispum
Plectranthus unguentarius
Priva auricoccea
Rhinacanthus kaokoensis
Ruellia bignoniiflora
Sesamothamnus leistneri ined.
Turnera oculata var. *paucipilosa*

The quarter degree square in which the Baynes Mountains are situated and another quarter degree square that includes Sanitatis and Orupembe contain six endemics each. Four endemics are found in the Sesfontein area. The family with the most endemics is the Acanthaceae with five representatives and the other endemics are from a wide variety of families.

To conserve assets on a national scale, it is necessary to either refine the large area recognised on a subcontinental scale (Map 24) or to divide the centre into subcentres. Map 25 indicates a possible subcentre. It shows the distribution and concentration of species limited to the region between the Kunene and Hoanib Rivers.
Further analysis and breakdown of the patterns of distribution of species in both Maps 24 & 25, will undoubtedly highlight other areas of importance for diversity and endemism.

Map 24: Kaokoveld endemics listed by Van Wyk & Smith (2001) with the parks and conservancies shown



Map 25: Number of species per quarter degree square endemic to the Namibian section of the Kaokoveld with the rivers in the area shown

3.F.iii.h.B The *Gariep Centre*

Like the *Kaokoveld*, the *Gariep Centre* lacks consistency in definition, however numerous authors have discussed it. Broadly it stretches from Aus in the north to Steinkopf in the Republic of South Africa in the south and to the escarpment in the east. It includes the lower reaches of Orange River in the west and Warmbad in the east.

Although Hilton Taylor (1994b) considers it to be essentially a geographic rather than phytogeographic centre, both Nordentam (1969) and Hilliard (1994) recognise it as a taxon phytogeographic centre of importance for numerous species and it is their concept, oulined on page 27, that is followed here. The present known distributions of the species identified by the latter two authors and listed below were plotted (Map 26) and an indication of the Namibian section of the centre outlined:

Euryops mucosus
Jamesbrittenia bicolor
Jamesbrittenia glutinosa
Jamesbrittenia major
Jamesbrittenia megaphylla
Jamesbrittenia ramosissima
Jamesbrittenia sessilifolia
Manulea aridicola
Manulea namibensis
Manulea robusta
Phyllopodium hispidulum
Phyllopodium namaense.

The following endemic species resulted in a list of numerous species found only within the outline of the *Graiep Centre*. Their distribution and number per quarter degree square are shown in Map 27.

Aloe erinacea
Androcymbium exiguum subsp. *exiguum*
Antimima eendornensis
Antimima modesta
Antimima quarzitica
Arctotis frutescens
Astridia hallii
Berkheya schinzii
Blepharis fleckii
Blepharis spinifex
Bulbine tetraphylla
Caesalpinia merxmuellerana
Cephalophyllum confusum
Cheiridopsis caroli-schmidtii
Conophytum taylorianum subsp. *ernianum*
Crassula ausensis subsp. *ausensis*
Crassula ausensis subsp. *giessii*
Crassula numaisensis
Dinteranthus microspermus
Drosanthemum nordenstamii
Ebracteola derenbergia
Euphorbia angrae
Euphorbia lavrani
Euphorbia mauritanica var. *foetens*
Euphorbia namuskluftensis
Euryops mucosus
Gorteria diffusa subsp. *parviligulata*
Haematoxylum dinteri
Helichrysum deserticola
Hoodia ruschii
Huernia hallii
Huernia plowesii
Indigofera acanthoclada
Indigofera merxmuelleri
Jamesbrittenia bicolor
Juttadinteria attenuata
Lachenalia giessii
Lachenalia klinghardtiana
Lachenalia namibiensis
Lachenalia pearsonii
Lavrania picta subsp. *parvipunctata*
Lebeckia dinteri

Lotononis mirabilis
Lotononis pachycarpa
Lycium grandicalyx
Merxmuellera rangei
Mesembryanthemum pellitum
Monechma calcaratum
Monechma callothamnum
Monechma crassiusculum
Monsonia deserticola
Moraea hexaglottis
Moraea rigidifolia
Nemesia violiflora
Oxalis luederitzii
Oxalis pseudo-cernua
Oxalis schaeferi
Pegolettia plumosa
Petalidium cymbiforme
Pteronia rangei
Rhadamanthus namibensis
Rhus problematoides
Ruellia aspera
Schwantesia succumbens
Senecio giessii
Senecio hermannii
Stipagrostis lanipes
Strumaria hardyana
Suessenguthiella caespitosa
Tetragonia rangeana
Trachyandra ensifolia
Trachyandra glandulosa
Wahlenbergia erophiloides
Zygophyllum giessii.

In each of 35 quarter degree squares in the *Gariep Centre* only one endemic has been recorded and the quarter degree squares with the most recorded endemics are indicated in Table 7.

Table 7: The quarter degree squares in the *Gariep Centre* in which the most endemics have been recorded

Quarter degree squares	**No of endemic species**	**Locality**
2716DA	27	Witputz
2716DD	27	Namuskluft
2616CB	23	Aus
2716DC	18	west of Namuskluft

Factors that influence the number of endemics recorded per quarter degree square are:

- accessibility by road
- access to the Diamond Area has always been restricted
- the influence of the topography and substrate
- the ability of the sea mist to reach inland via the valleys
- the high percentage of succulents which are underrepresented in the herbarium.

These factors must be taken into account when considering localities of importance for species richness as they undoubtedly play a role. Further fieldwork will determine to what extent.

Possible subcentres of the Namibian portion of the *Gariep Centre* identified by the relatively numerous local endemics found there are tabled (Table 8) to suggests areas and species needing further investigation.

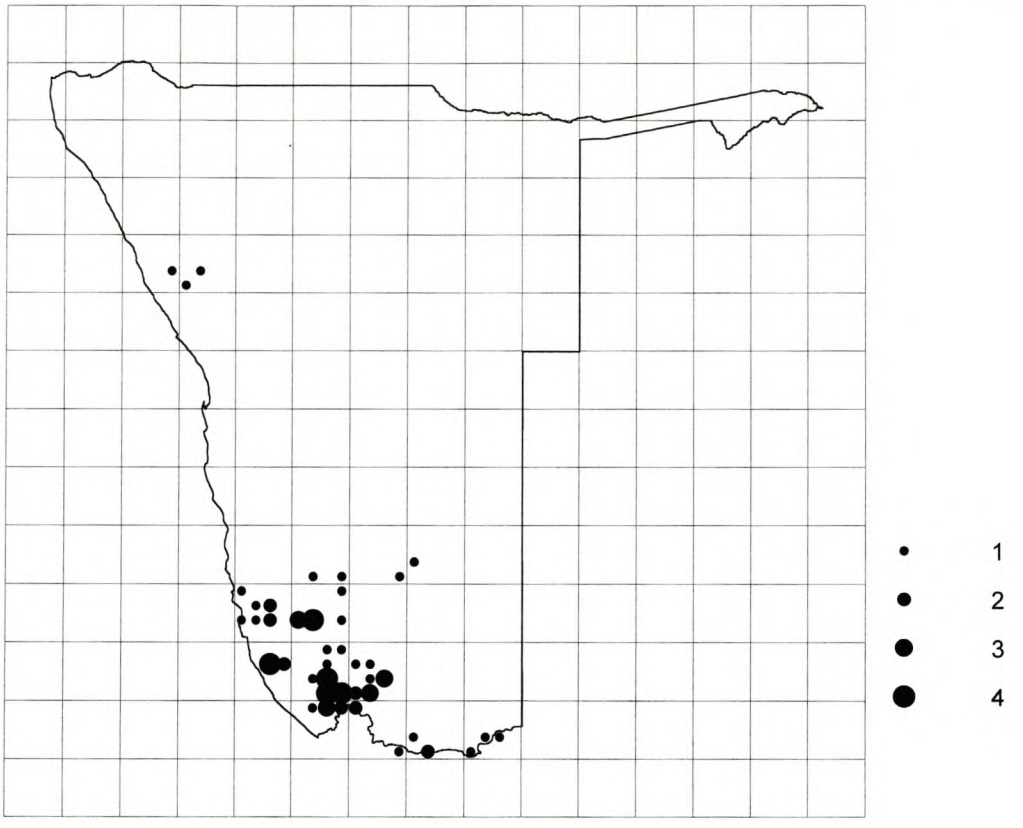
Table 8: Localised species in the *Gariep Centre* and the only localities in which they have been recorded

Locality	**Species**
Aus	*Eragrostis kingesii, Euphorbia mauritanica* var. *foetens, Helichrysum deserticola, Juttadinteria ausensis, Lotononis mirabilis, Moraea graniticola, Oxalis luederitzii, Oxalis schaeferi, Suessenguthiella caespitosa, Stipagrostis lanipes*
From the Huib Hoch Plateau to Namus Mountains	*Antimima quarzitica, Drosanthemum nordenstamii, Lachenalia giessii, Monechma callothamnum* (and Hunsberg), *Moraea rigidifolia, Nemesia violiflora, Senecio giessii* (and Hunsberg), *Strumaria hardyana, Trachyandra glandulosa*
Huib Hoch Plateau and in the Karas Mountains	*Lycium grandicalyx* and *Indigofera merxmuelleri*
Hunsberg Mountains	*Caesalpinia merxmuellerana, Oxalis hunsbergensis* ined., *Petalidium cymbiforme, Senecio hermannii*
Namus Mountains	*Antimima modesta, Arctotis frutescens, Crassula numaisensis, Euphorbia angrae, Euphorbia lavrani, Euphorbia namuskluftensis, Euryops mucosus, Lachenalia namibiensis, Rhadamanthus namibensis, Tetragonia rangeana, Zygophyllum giessii*
Warmbad district	*Antimima eendornensis, Schwantesia constanceae, Schwantesia succumbens*

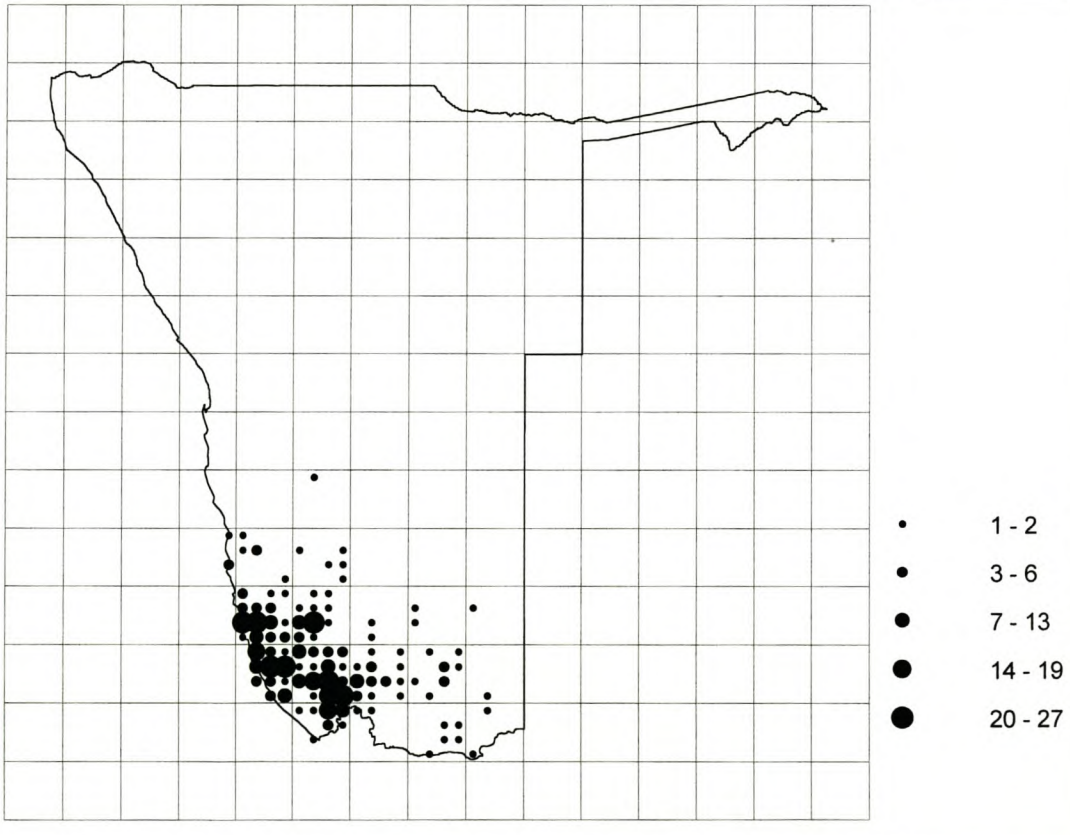
Although field work will probably result in many of these species being recorded further afield, some like *Caesalpinia merxmuellerana* and *Zygophyllum giessii* that are conspicuous, have not been found to be widespread despite intense searching.

No attempt was made to divide the western section of the *Gariep Centre* into smaller groups. The restricted access and predominantly succulent flora suggests that there are insufficient data compared to the eastern part, which is also well known and collected by the author.

Map 26: Distribution of species representative of the Gariep Centre - Nordenstam (1969) and Hilliard 1984)



Map 27: Distribution and number of endemic species per quarter degree square in the Gariep Centre



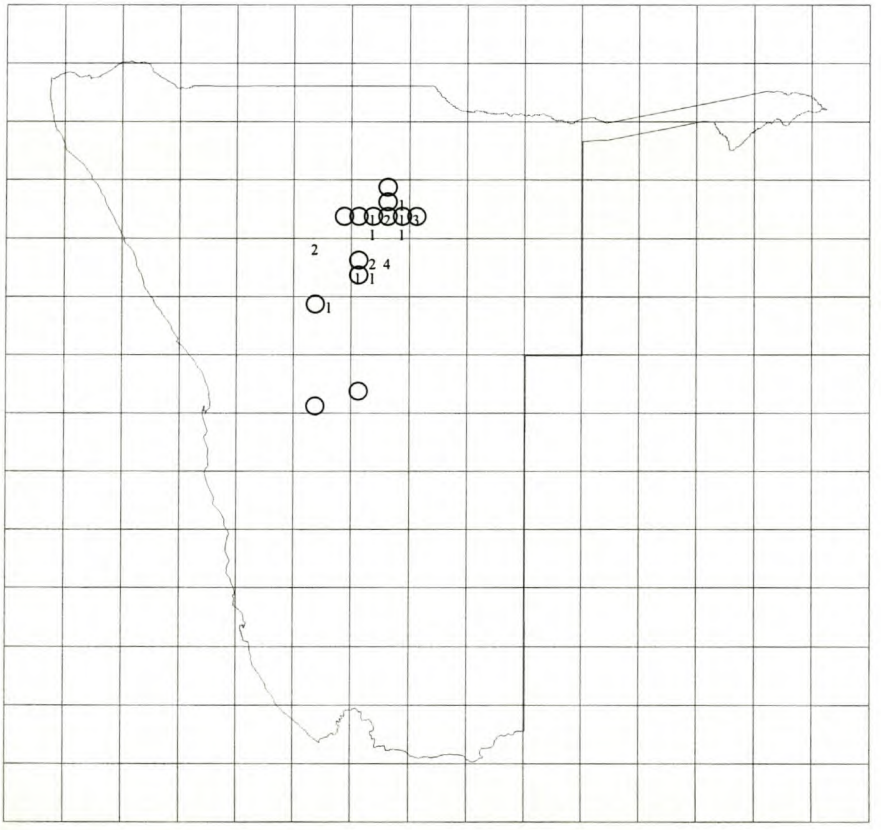
3.F.iii.h.C The *Waterberg-Otavi Centre*

The species that are probably endemic to these mountains according to Hilliard (1994) are *Jamesbrittenia acutiloba, Jamesbrittenia dolomitica, Jamesbrittenia giessii* and *Jamesbrittenia fragilis.* The latter has since been found in the Windhoek area. Hilliard (1994) emphasised the limestone substrate when providing representatives from the family Scrophulariaceae. Before additional species, e.g. *Plectranthus dinteri* (also in Windhoek region), *Heteromorpha papillosa, Pentatrichia avasmontana* and *Thesium xerophyticum* (also on the Gamsberg Mountains) are included in this centre, it will be necessary to assess the substrate on which they grow. In addition, the genus *Thesium*, is in need of revision and although both the genera *Plectranthus* and *Heteromorpha* have been revised, little or no fieldwork was carried out in Namibia. *Pentatrichia* is presently under revision.

Species that appear restricted to the Waterberg are *Dintera pterocaulis, Eriospermum citrinum* and *Eriospermum lavranosii.*

The *Waterberg-Otavi Centre* with species that are probably endemic to these mountains according to Hilliard (1994), as well as other endemic species that appear restricted to this region as are shown in Map 28.

Map 28: Distribution of species representative of the Waterberg-Otavi Centre of Hilliard (1994)

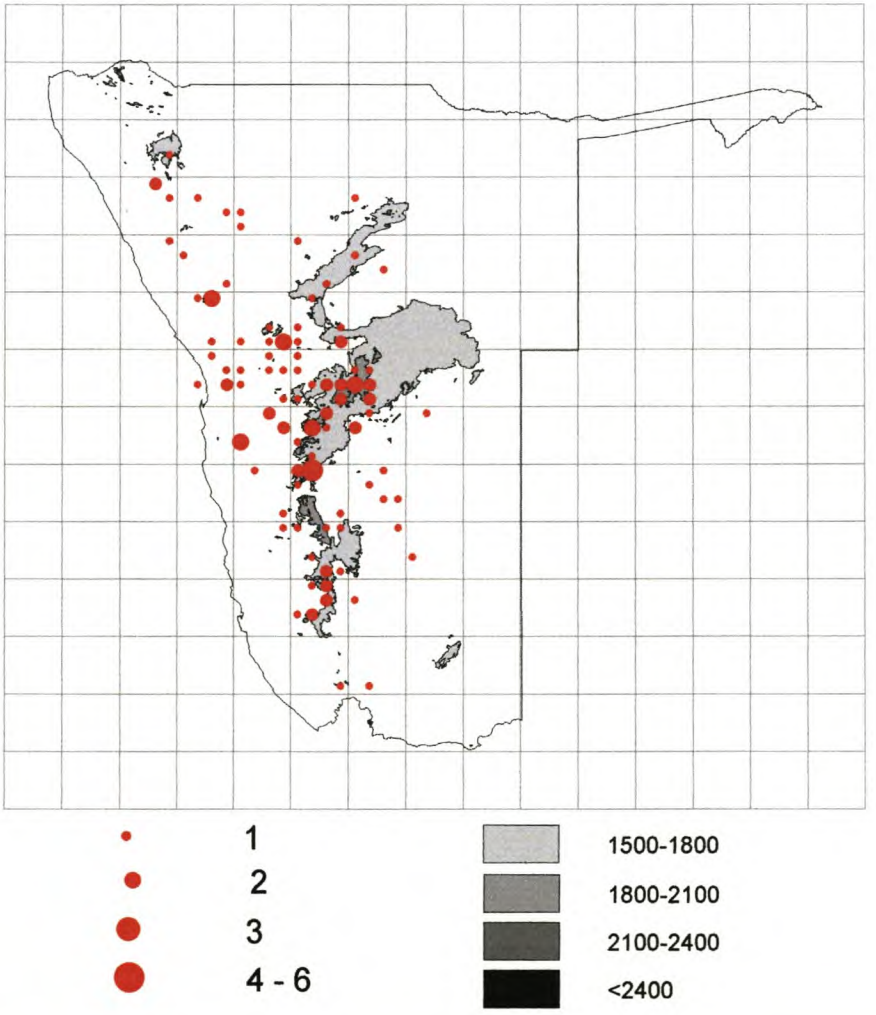


Circles indicate species recognised by Hilliard (1994)

3.F.iii.h.D The Namibia Central and Southern Highland Centre

The Brandberg, Erongo, Khomashochland, Auas, Gamsberg, Nauklauft, Tiras, Karasberge and surrounding high ground, usually above c. 900 m are included in this centre by Hilliard (1994). The limestone area centred on the Waterberg is not included, but it may stretch into Botswana. The following species are representative according to Hilliard (1994): *Camptoloma rotundifolium, Jamesbrittenia barbata, Jamesbrittenia chenopodioides, Jamesbrittenia fimbriata, Jamesbrittenia fleckii, Jamesbrittenia hereroensis, Jamesbrittenia lyperioides, Jamesbrittenia maxii, Jamesbrittenia pallida, Jamesbrittenia pilgeriana, Jamesbrittenia primuliflora, Manulea conferta, Manulea dubia, Manulea tenella* and *Manuleopsis dinteri. Jamesbrittenia primuliflora* has been collected much further south than the other species and could join another subgroup of plants that reach into the arid mountains just north of the Orange River near the Fish River. Map 29 shows the distribution of these species as well as elevation contours over 1500 m.

Map 29: Distribution of species in the Central and Southern Highland Centre (Hilliard 1994)



Results of an analysis of mapped endemics in the *Namibia Central and Southern Highland Centre* are shown in the Table 9. Species are listed in the localities in which they have been recorded to date provided they were recorded as being found at higher elevations, as prescribed by the definition of this centre.

Table 9: Endemic species restricted to specific localities in the *Namibia Central and Southern Highland Centre*

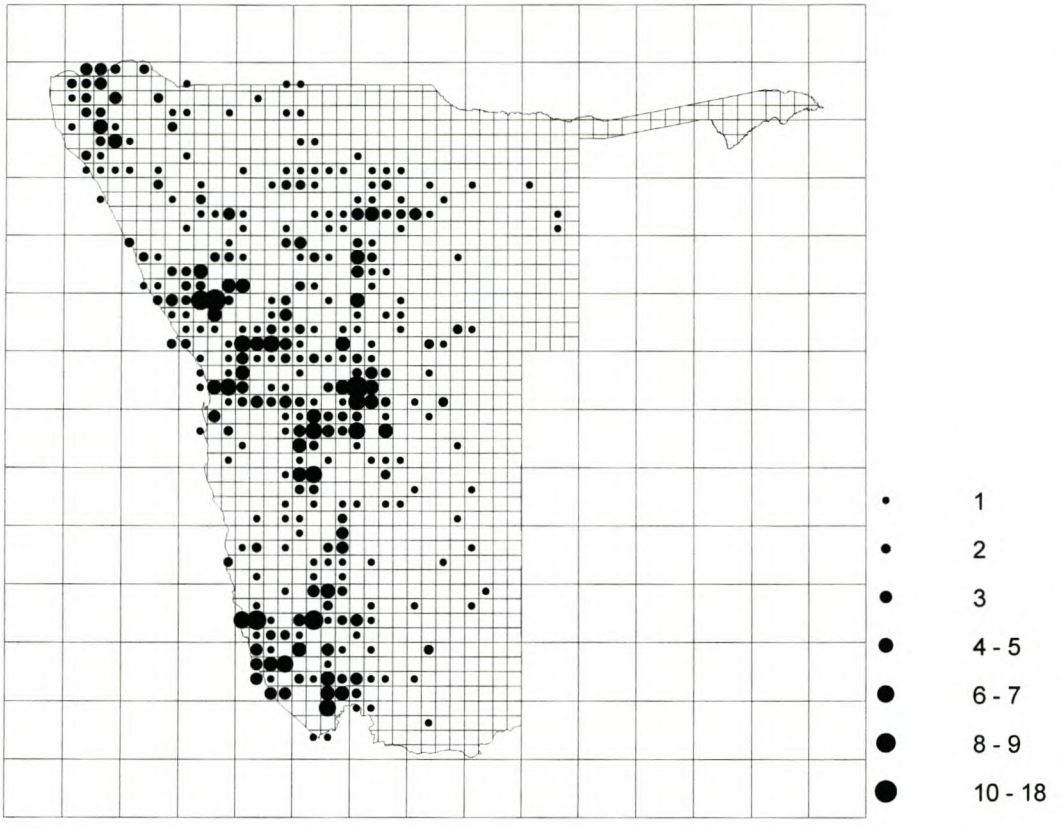
Location	**Endemic species**
Brandberg	*Felicia gunillae, Lithops gracilidelineata* subsp. *brandbergensis, Nidorella nordenstamii, Pentzia tomentosa, Plumbago wissii* and *Ruellia brandbergensis.*
Brandberg, Spitzkop	*Euphorbia monteiroi* subsp. *brandbergensis* and *Nicotiana africana* (Erongo)
Brandberg, Auas, Gamsberg	*Aloe viridiflora*
Brandberg, Gamsberg	*Cucumella clavipetiolata* (and Nubib) *Jamesbrittenia hereroensis* (and Naukluft) *Microloma hereroense* (and Naukluft) *Othonna brandbergensis* (and Satanskop)
Brandberg, Erongo	*Corchorus merxmuelleri* (and western hills), *Hermannia merxmuelleri* and *Tephrosia griseola*
Spitzkop	*Diclis tenuissima*
Auas Mountains	*Cyperus rehmii, Dicoma dinteri, Ebracteola montis-moltkei, Haemanthus avasmontanus, Hibiscus discophorus, Lapeirousia avasmontana*
Auas, Gamsberg	*Crotalaria aurea* and *Namacodon schinzianum* (also Naukluft & Erongo)
Naukluft	*Jamesbrittenia pilgeriana*
Gamsberg, Naukluft	*Euclea asperrima* and *Dombeya rotundifolia* var. *velutina* (and Spitzkop)
Gamsberg, Naukluft, Tiras	*Aloe sladeniana, Blepharis spinifex, Ebracteola derenbergia, Hoodia ruschii, Huernia plowesii, Jamesbrittenia lyperoides* (also Auas), *Lavrania picta* subsp. *parvipunctata, Rhus volkii, Selago nachtigalii*
Karas Mountains	*Euphorbia baliola, Hoodia juttae, Nemesia karasbergensis, Raphionacme namibiana, Stapelia pearsonii*

3.F.iii.i Endemic species in different families

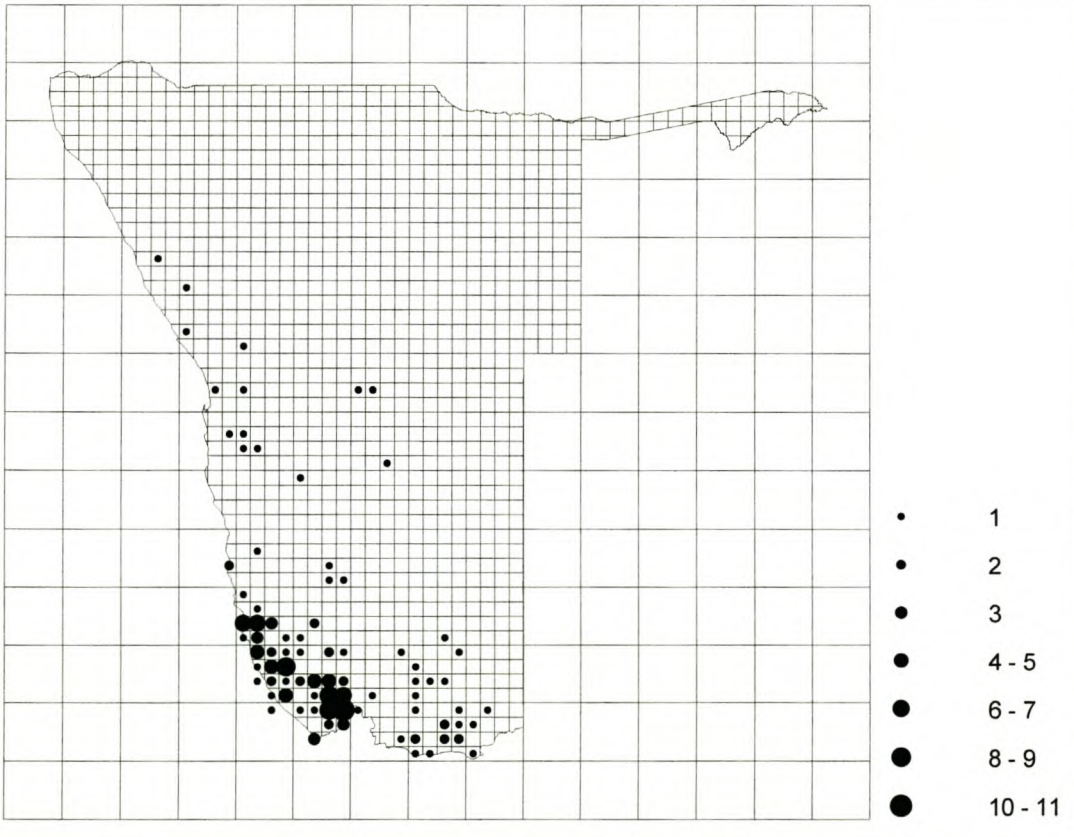
The differences that can be seen in the geographical distribution of endemic species in different families are shown in Maps 30 to 33. The taxonomy of the family Mesembryanthemaceae need revision and it is unrepresented in herbaria because the numerous succulent species are difficult to press into herbarium specimens. A noticeable difference in area of occurrence in Namibia is however evident when compared to the family Asteraceae for example. The most obvious conclusion is that the centre of species richness and endemism of family Mesembryanthemaceae in Namibia is the winter rainfall region, while the family Asteraceae is distributed throughout Namibia and occurs in both rainfall regimes.

At a glance and at this scale of mapping the distribution of endemics in the families Acanthaceae and Scrophulariaceae (maps 32 & 33) appear similar. A closer look however reveals numerous differences and these are even more marked when genera are compared, e.g. the genus *Petalidium* (Acanthaceae) (Map 34) and genus *Jamesbrittenia* (Scrophulariaceae) (Map 35). No endemic species of the latter are found in the northwest, while no endemic species of the former are found in the southwest. Endemic *Petalidium* species are most common in the northwest, especially the Erongo region, as well as in the Fish River area in southern Namibia.

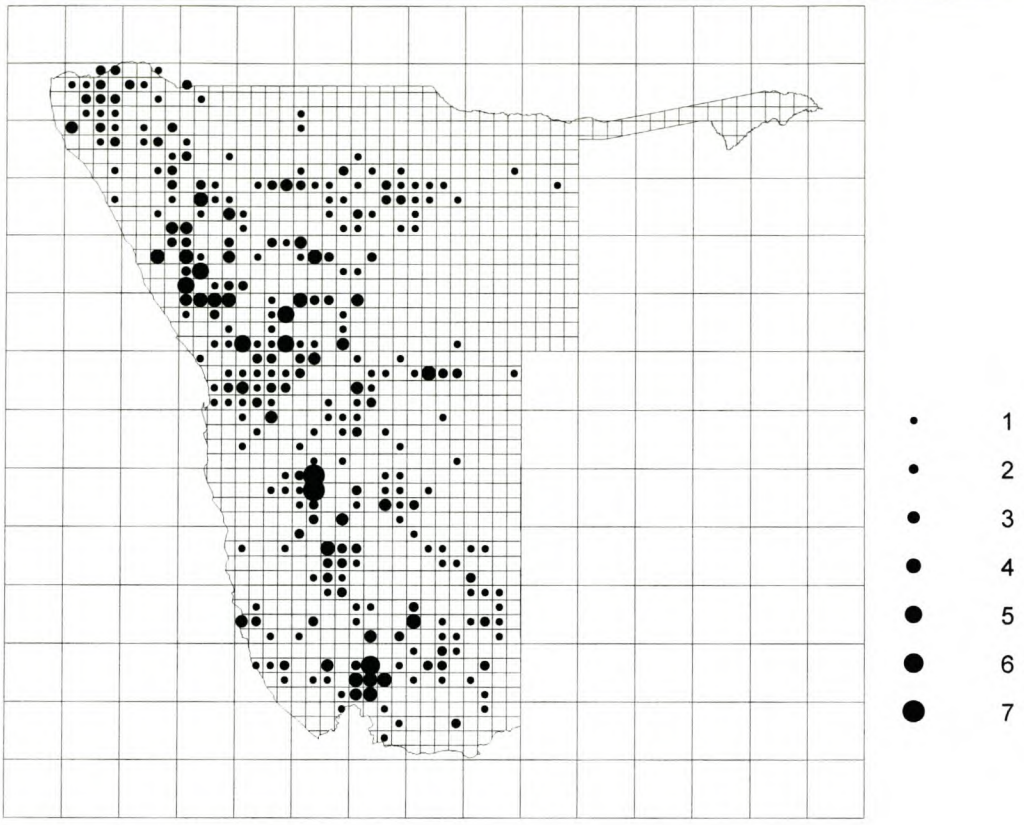
Map 30: The distribution of endemics in the family Asteraceae



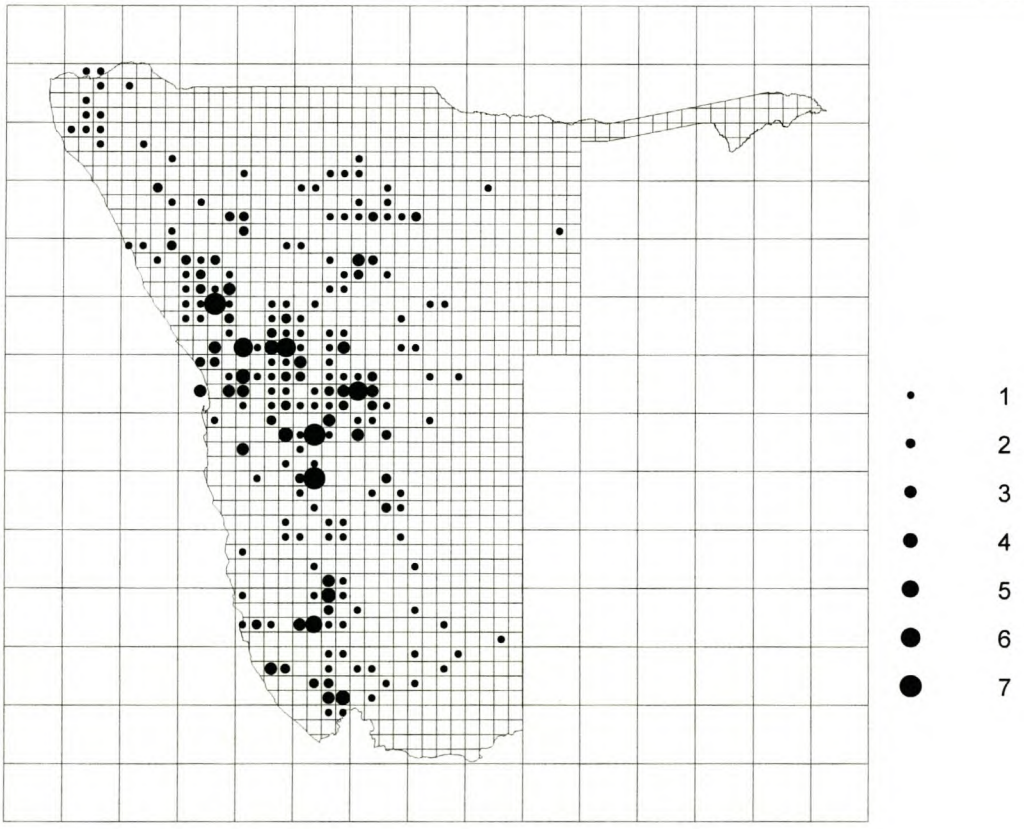
Map 31: The distribution of endemics in the family Mesembryanthemaceae



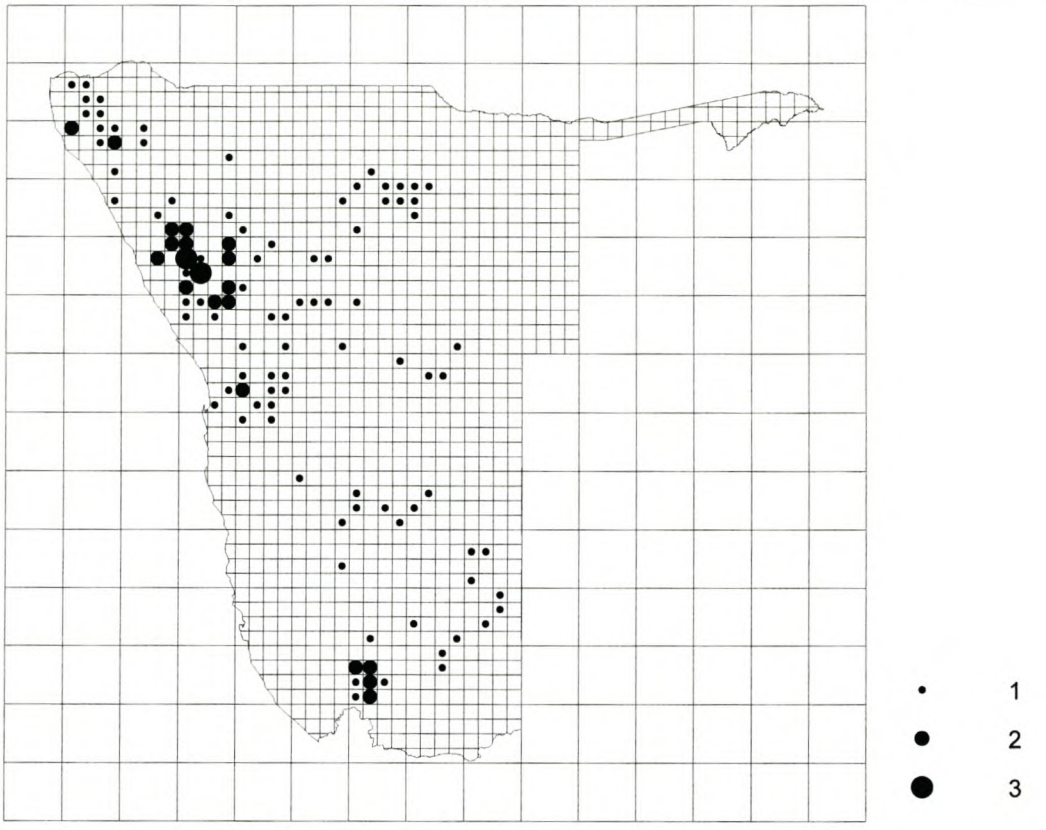
Map 32: The distribution of endemics in the family Acanthaceae



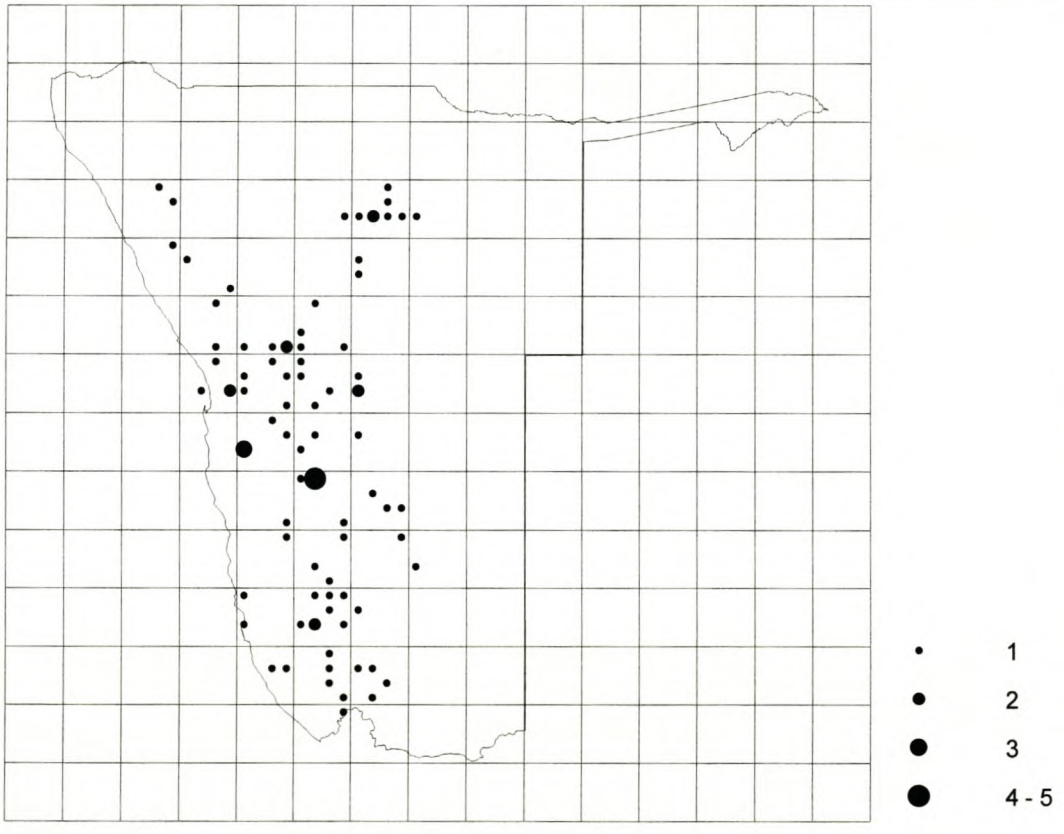
Map 33: The distribution of endemics in the family Scrophulariaceae



Map 34: The distribution of endemics in the genus Petalidium



Map 35: The distribution of endemics in the genus Jamesbrittenia



3.F.iv Using taxon phytogeographic information

Applications can be summarised as follows:

3.F.iv.a Collecting

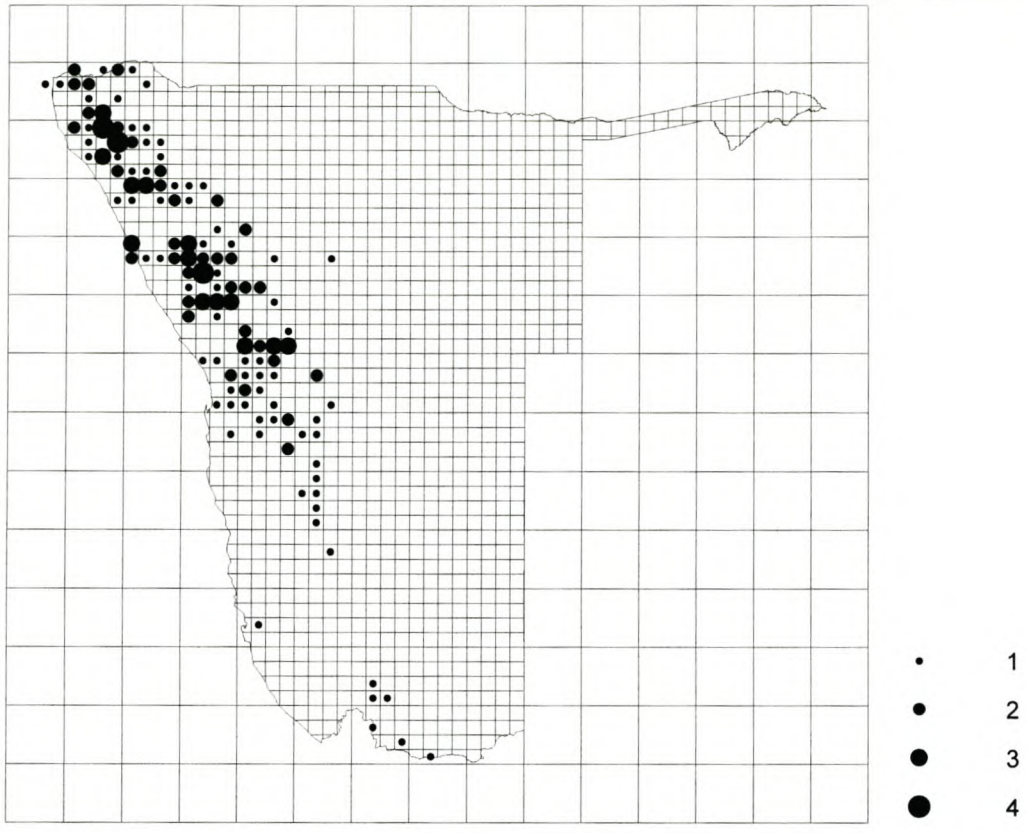
The number of species recorded per quarter degree square is used to deduce patterns of plant diversity in Map 11. When the number of specimens in the herbarium for each quarter degree square is recorded instead of the number of species the result is an indication of collecting intensity which can be useful for the following purposes:

- Field trip planning by identifying under-collected areas and disjuncts in collecting so that gaps can be filled
- Compiling preliminary checklist from well-collected areas
- Phytogeographical studies. Knowledge of collecting intensity is required because of the interrelation between collecting intensity and species diversity (Gibbs Russell *et al.* 1984)
- Comparing collecting intensities between different regions, biomes, climate zones, etc.
- Determining gaps in significant areas, e.g. when the diversity map (Map 11) is overlaid with the shape file of conservancies and parks (see Map 38), a noticeable lack of specimens from some reserves and game parks is seen.

3.F.iv.b Taxonomy

- Distribution ranges correlated with differences or similarities in structural features have been and are the basis for the determination of species at various levels.
- Maps of species distributions are one facet of the documentation of the flora of a region
- For identification of taxa in the herbarium, distribution maps are used. The obvious differences in the distribution of some species of the same genus as seen in the maps in Appendix 5 will support a decision on identification.
- Geographical information can highlight priority taxa for research. Maps 36 and 37 show the distribution of the endemics in the genera *Commiphora* and *Zygophyllum.* The need for cross-border research, i.e. with Angola is obvious when considering the genus *Commiphora.*

Map 36: The distribution of endemics in the genus Commiphora



Map 37: The distribution of endemics in the genus Zygophyllum

3.F.iv.c Predicting a taxon's potential distribution

Tables 8 and 9 list taxa recorded from limited localities within larger centres determined by species with similar distributions. It is probable that some of these species will be found in other locations in this centre as has been shown by field work on species thought previously to be endemic to the Brandberg (Craven & Craven 2000). These tables indicate potential areas of distribution and this should be considered in fieldwork planning.

3.F.iv.d Assessing plants that may be affected by environmental changes e.g. mining, over-grazing, desertification, loss of pollinators, etc.

Although the current georeferencing of specimens is at quarter degree square scale with implied limitations of scale, the information is of use for prevention of over-utilisation or destruction during mining operations for example. In 1966 Volk mapped the distribution of *Dichrostachys cinerea* in Namibia. Overlaying this map with the present distribution indicates clearly that the species has spread considerably over the past decades.

3.F.iv.e Evaluation and listing potentially threatened plants

In order to categorise priorities for conserving species, the following questions are asked: is it restricted to a very limited area (phytogeography), e.g. local endemic? Does the taxon have closely related populations elsewhere (taxonomy), e.g. a monotypic endemic?

Mapped distributions answer the first question. In addition, the new criteria developed by the IUCN for categorising species requires knowing the area of extent and area of occupancy of a species. Mapped data, even on quarter degree square level go a long way in supplying this information. The data used here were also used in the evaluation of species for a *Red Data List* in Namibia (Golding, in prep.).

3.F.iv.f Adding value to herbaria

One way of realising the value of herbaria and their holdings is to make the data readily available in "user-friendly" formats for people other than taxonomists. When captured and stored plant distribution data are used with other spatial data, e.g. administrative borders – regions etc, infrastructure – roads, towns, or climatic features like rainfall, the results can be used for development of land management strategies and other application.

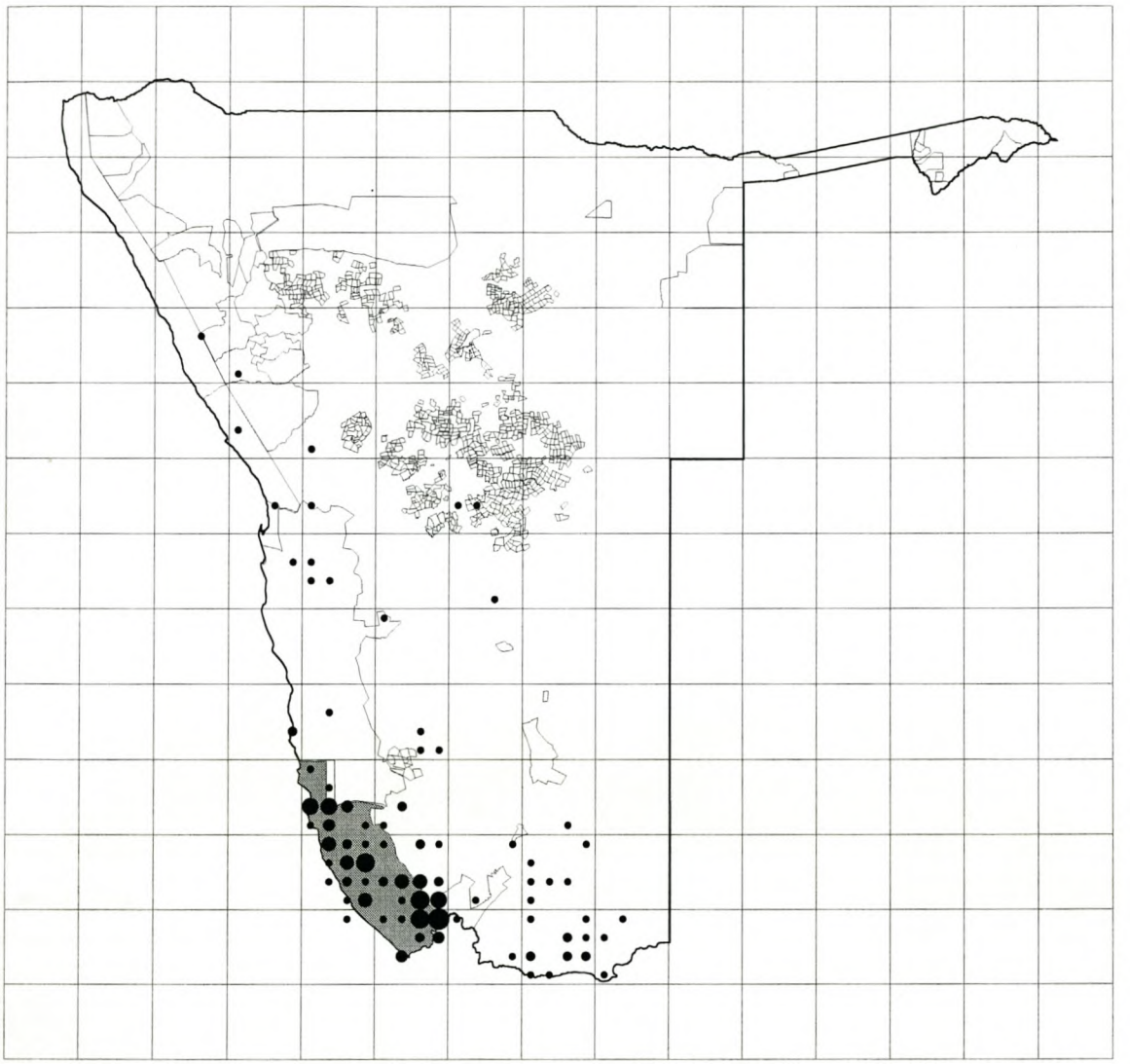
3.F.iv.g Assessing the adequacy of existing reserve system and identifying potential areas of importance

In the past the establishment of reserves or national parks was made with insufficient account taken of the uniqueness of what is preserved and deserving areas have been neglected. Barnard *et al.* (1998) suggest that Namibia is "a case history of how not to develop a protected area network".

In theory, plants in protected areas are secure and therefore should not require additional legal protection. Composite species maps can therefore be used to indicate species, localities or habitats that are protected or could be protected.

Map 38 shows the distribution of all Namibia's endemic species of family Mesembryathemaceae and is overlaid with the shapefile of the conservancies and protected areas in Namibia. Clearly very few species are presently within any form of protected areas. This is despite many of the genera being collectors items. The majority occur within the Diamond Area (the grey area on Map 38), for which a landuse use plan is presently being devised.

Map 38: The distribution of endemics in the family Mesembryanthemaceae in relation to protected areas in Namib



50 0 50 100 150 200 Kilometers

Diamand Area

Communal conservancies

Commercial conservancies

Parks

3.G CONCLUSIONS

Caldecott *et al.* (1996) name species richness and endemism as two key attributes of biodiversity that reflect the complexity and uniqueness of natural ecosystems. This thesis presents these two attributes of Namibia's plant diversity in visual form and by so doing has contributed to our knowledge and understanding of these important attributes and accentuated the remarkable plant diversity of Namibia.

Approximately 4000 indigenous spermatophytes occur in Namibia with almost 600 endemics.

A comprehensive literature review provides sources of information on plant distributions. An inventory of mapped species was not considered, as modern technology allows up to date distribution maps to be produced quickly and efficiently. The older maps are however still useful and necessary for comparing distribution patterns in the past with the present.

Plant species diversity

The provisional plant species diversity map is the first of its kind for Namibia. It used updateable, but permanent computerised datasets so that future editions will be extensions of this map. The map reveals that, in Namibia, transitional zones are the most important for species richness. The reason is probably because this is where the distribution of plants with different geographic affinities overlap.

On a regional scale there appears to be a strong correlation between species richness and endemicity (Rebelo 1994), but to apply this on a national scale (Maggs 1998a) is here considered invalid because of the difference in scale. Areas indicated on Map 13 as being species rich, would be lost in the lower resolution of a map of a larger area, so that the values indicative of richness are not comparable. Maps of overall endemicity and of locations where significant numbers of endemic occur, were not overlaid onto the diversity map for comparison, because transitional zones are generally small in scale and not easy to indicate accurately.

Using this provisional map for management purposes or predictions is therefore not advised. It does however show the many areas that are more diverse than they may appear during periods of harsh conditions, which may last for years or decades. The map is considered provisional as both the delimited areas and the numbers of species predicted for the regions need further refinements.

Disjunct distributions

Species with disjunct distributions in Namibia are illustrated in Plates 1 & 2 and the Namibian populations of species with disjunct distributions in other countries are shown in Plate 2. These are only a few examples to show the varying patterns, different families involved and to highlight the need for further fieldwork and research into the possible causes. At this stage the causes remain speculative, but the past climatic and geological history of Namibia appear to have played a role.

Endemics

This study has emphasised the uniqueness of the Namibian flora by demonstrating the number, variety and distributions of the endemic genera and species. A previous lists of endemic plants was updated and as many as possible were mapped. The only area of Namibia where endemics were not found is the northeast. This forms part of the *Zambezian Domain* of White (1983) (Map 9) which extends into countries further north.

The general pattern of overall endemic diversity and centres of importance for local endemics does not differ very significantly from previous attempts by the author, but the patterns described here are based on more and better quality data and therefore considered more accurate.

The distributions of individual endemics are shown here visually for the first time (Appendix 5). It is evident that the endemic flora is rich and diverse and represents a wide variety of families and genera. This is largely because there are many different geographic affinities and not because the area as a whole has its own endemic flora.

Due to the large number of endemics, trends in distribution can be seen, but it would be premature to draw conclusions on possible reasons for the distribution patterns. Indications are that, like in other parts of the world, factors that increase the likelihood of endemism are mountains, hot deserts, diversity of substrates and microclimates. A few examples have been shown, e.g. the *Jamesbrittenia* species on the limestone in the Otavi highlands.

This appears to be the first study where the distributions of the endemic species for a country in southern Africa were mapped, i.e. the plants for which Namibia is solely responsible. Every effort must be made to increase our knowledge of them and to ensure they are conserved. As Brenan (1978) stresses, knowledge of local endemism will help to create a better basis for future policy and this study has already provided sufficient information on Namibia's endemics to start formulating conservation strategies. For example, the localities where numerous local endemics are found are considered more important for conservation action than what can be gained from the overall distribution pattern of the endemics.

Many endemics have been provisionally assigned to taxon phytogeographic centres. These results require further evaluation and refinement of the larger areas and division into subcentres. This is essential if they are to contribute to the conservation of biodiversity in Namibia. The need for additional information, e.g. on microclimatic conditions, altitude or substrate preferences that will allow further analysis is also apparent.

Using taxon phytogeographic information

The approach to this study was to make it appropriate from a Namibian point of view and to emphasis the valuable collection and database available at the National Herbarium of Namibia. Herbarium collections have limitations and are often unsystematically updated, but they are usually available for many species and provide systematically compiled inventories of specimen data and species. Databases are needed for the development of ecologically sensitive land management strategies and herbarium databases are best positioned to fulfil this new role, especially when coupled to a GIS. Issues previously considered critical concerning the scarcity of high quality data that hampers the development of biogeography and the insignificant role that biogeography plays in biodiversity conservation (Crisci 2001), can now be rectified.

One of the conclusions drawn from the study was how valuable actual fieldwork is for updating this information. It is more important than manipulation of scanty, and often old, data (Beentje 1996). In addition the value of this data will only increase with quality control and continuous incorporation of newly collected specimens from targeted areas and species. One major problem is that more resources are needed to maintain the collections than the datasets. It is essential that agreements regarding data exchange and remuneration for this type of data be put in place to compensate taxonomists. Resources are needed to do the groundwork for improving the datasets, and maintain and update the collections. If the datasets are used and manipulated by others for their professional and financial gain, without fieldwork, the valuable role that taxon phytogeography can play will be jeopardized.

"Biogeography is a strange discipline. In general, there are no institutes of biogeography; there are no departments of it. There are no professional biogeographers – no professors of it, no curators of it. It seems to have few traditions. It seems to have few authoritative spokesmen." Quote from Nelson (1978) in Crisci (2001). Modern electronic methods of storage and retrieval that can transform databases into knowledge bases are changing this perception and that of the role of herbaria and taxon phytogeography.

CHAPTER 4: REFERENCES

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CHAPTER 5

ABBREVIATIONS AND ACRONYMS

BOL – Bolus Herbarium, University of Cape Town

CITES – The Convention on International Trade in Endangered Species of Fauna and Flora

GIS – Geographic Information Systems

GTZ – Global Environment Facility

IUCN – The World Conservation Union

K – Herbarium of the Royal Botanic Gardens, Kew

NBG – Compton Herbarium, National Botanical Institute, Kirstenbosch, Cape Town

NBRI – National Botanical Research Institute

NBTF – National Biodiversity Task Force

PRE – National Herbarium, Pretoria

PRECIS – Pretoria National Herbarium Computerised Information System

SABONET – Southern African Botanical Diversity Network

SAM – South Africa Museum Herbarium

SPMNDB – Specimen database of the National Botanical Institute, Pretoria and the National Herbarium of Namibia (WIND)

WIND – National Herbarium of Namibia

GLOSSARY

Allopatric refers to species of populations originating in or occurring in different geographical regions, without overlapping distributions.

Biodiversity

1. A measure of the total number of species present.
2. A measure of the number of species present and their relative abundance (Little & Jones 1980).
3. The total biodiversity of a region is generally unknown, and is commonly expressed simply as the number of animal and/or plant species known to occur in the region (Low & Rebelo 1996).

Biogeography is the science which deals with the geographical distribution of organisms (Little & Jones 1980).

Biomes are broad ecological units representing major life zones of large natural areas. In South Africa these are defined mainly by vegetation structure and climate (Low & Rebelo 1996).

Centres of endemism are areas of endemism delimited by the more or less coincident distribution of species that occur nowhere else.

Chorology is the geographic study of the distribution of organisms (Little & Jones 1980).

Conservation is the wise use of our resources so that they will remain available for our use and enjoyment in the future (Low & Rebelo 1996).

Disjunct

1. The occurrence of related or identical organisms in widely separated geographical areas (Little & Jones 1980).
2. Distribution pattern broken into two or more parts – not in the same region or area.

Distribution is the range or geographical area inhabited by a species (Little & Jones 1980).

Edaphic pertain to, or is influenced by, soil conditions (Little & Jones 1980).

Endemic

1. A plant species, or a vegetation type, which is naturally restricted to a particular, defined region (Low & Rebelo 1996).
2. Native or confined naturally to a particular and usually very restricted geographical area or region (Little & Jones 1980).
3. A taxon is endemic if confined to a particular area through historical, ecological or physiological reasons (Major 1988).

Flora is the total number of plant species within boundaries or an inventory of plants within an area or region.

Geographic information systems (GIS) are generally defined as "..tools that allow for the processing of spatial data into information; generally information tied explicitly to, and used to make decisions about, some portion of the earth." (DeMers 1997 in Skov 2000).

Herbarium: a collection of dried and pressed plant specimens, systematically arranged and labeled; used for taxonomic studies (Little & Jones 1980).

Local endemic: species confined or nearly confined to the respective study area.

Phytogeography is the study of the distribution of plants (Little & Jones 1980).

Regional endemic: species confined to the centres of endemism.

Speciation environments are areas where speciation (micro-evolution) is rapid or has been so in the recent past (Gibbs Russell & Robinson 1983).

Subspecies: a taxonomic subdivision of a species, usually defined as a geographical race (Little & Jones 1980).

Succulent - a plant which accumulates water in fleshy, water-storing stems, leaves or roots or juicy, fleshy, in reference to texture or appearance (Little & Jones 1980).

Sustainable: A practice which can be carried out indefinitely, without adversely affecting the environment, or interfering with the practice. This implies that the practice (e.g. harvesting, grazing, farming) is in balance with the energy, water and mineral cycles of the region, or else is able to be maintained in equilibrium with judicious augmentation of fertiliser or organic material. Excluded are practices which mine resources (e.g. mining, extracting non-replenishable water), which lead to irreversible degradation (e.g. soil erosion, water pollution by fertilisers, salt accumulation) or which compromise natural processes (e.g. canalisation, wetland destruction, seed bank depletion) (Low & Rebelo 1996).

Sympatric

1. those species that originate in or occur in the same geographical range.
2. Species or populations, which occur, close enough together to be within the range of mutual pollinating vectors. (Little & Jones 1980).

They are considered partially sympatric when the distributions overlap to an extent.

Taxon is any taxonomic unit into which living organisms are classified e.g. species, genus or division (Little & Jones 1980).

Vegetation is the general effect produced by the growth of some or all of the plant species in combination.

Vegetation types are when plants are seen in communities, which share similar climate, geological and soil requirements.

Voucher is a specimen preserved for future reference (Little & Jones 1980).

APPENDIX 1

Foreign and southern African herbaria that house Namibian specimens

Information obtained from the Curators 10-10-1996 and compiled by Patricia Craven 21-1-1997; updated 3-1-98.

Table 10: Foreign herbaria that house Namibian specimens

ABBREV.	HERBARIUM	COLLECTORS
AMD	Amsterdam	Dinter, Friedrich, (Schlecter)
B	Berlin	Belck, Bertling, Blanck, Bohr, Boss, Bottrich, Buttner, Dinter (8000), Eberlanz, Eichler, Engler, Fenchel, Fischer, Förmer, v.Francois, v. Fritscg, Gessert, Gürich, Hartmann, Hermann, Höpfner, Kuhn, Kupper, Leuenberger, Raus & Schiers (250), Lotz, Lübbert, Lüderitz, Mansfeld, Marloth, Morgenstein, Moritz, Nachtigal, Pol.Stat.Oas, Pearson, Pechuel-Loesche, Graf Pfeil, Pogge, Range, Rautanen, Rust, Schäfer, Schanderl, Schinz, M. Schlechter, Schultze, Seiner, Seydel (2000), Stapff, Steingròver, v.Trotha, Waibel, Werdermann & Oberdieck (187)
BM	British Museum London	Een, Rand, Rodin, Rogers, Schinz
BR	Meise Belgium	Bommer
BTU	University Berlin	Few
C	Copenhagen	Loeb
CGE	Cambridge Univ. UK	Alexander JE
CORD	Cordoba Argentina	Belck
DBN	Dublin Ireland	Kolbe (with Harvey)
E	Edinburgh UK	Loeb, Schinz
FR	Frankfurt Germany	Kräusel
G	Geneve	Dinter
GB	Gòteborg Sweden	Oertendahl
H	Helsinki	Finnish Missionaries e.g. Elonheimo, Kestilä, Kinges, Liljeblad, Soini, Rautanen; Schinz
HBG	Hamburg	Baum, (Bohr), Dinter, Fischer, Hartman HEK, Ihlenfeldt , v Pöppinghausen, Range (660), Seiner
K	Kew London	Baines, Bommer, Boss, Bradfield, Chapman, Pearson, Rodin, Schinz, Schlieben
L	Leiden Netherlands	Bommer, Fischer, Lam & Meeuse
LD	Lund Sweden	Oertendahl, Petersen
LY	Villeurbanne France	Duparquet
M	Munich	Dinter, Friedrich, Giess, Kinges, Kräusel, Merxmuller, Meyer, Rehm, Schwerdtfeger, Volk, Walter, Wettstein
MO	Missouri Saint Louis	Goldblatt, Praetorius
OXF	Oxford UK	Baines
P	Paris France	Duparquet
S	Stockholm	De Vylder, Dinter, Een, Giess, Kers, Merxmuller, Nordenstam, Ortendahl, Wahlberg
UC	Berkeley California	Loeb, Rodin (living)
UPS	Uppsala	Oertendahl, Rusch
W	Vienna	Fincke (Lichens)
WBM	Würzburg Germany	Volk
Z	Zurich	Fenchel, Fleck, Judt, Kestilä, L. Nels, (Pohle), Rautanen, Schenck, Schinz, Wandres, Wulfhorst

Table 11: Southern African herbaria that house Namibian specimens

Abbrev.	Herbarium	Collectors
BLFU	Bloemfontein #	Venter
BOL	Bolus Cape Town #	Dinter, Holloway, Littlewood, Marloth, Pearson, Rand, Rodin, Range, Schelpe
GRA	Grahamstown	Bradfield, Keet, Rautanen, Schenck, Schinz
J	Moss Jhb #	Davies, Thompson & Miller, Maguire
JRAU	RAU Jhb	
NBG	Compton Cape Town	Giess, Maguire, Purcell, Rutherford, van Jaarsveld
NH	Natal Durban	Tinley, Volk, Ward
NPB	Mtubatuba RSA	Tinley
NU	NU Pietermaritzburg #	Killick,. Rutherford, Rodin, Tinley, Ward dupl, [grasses]
PRE	NBI Pretoria	Bär, Basson, Boss, Bradfield, Briejer, Cannon, De Winter, Giess, Hanekom, Hardy (live), Keet, Kinges, Koch, Leistner, le Roux, Maguire, Marloth, Nägelsbach, Oertendahl, Rehm, Schoenfelder, Schweickerdt, Story, Vahrmeijer, van Balen, van Greuning, van Vuuren, Volk, Watt
SAM	South African Museum CT #	Barnard, Bleek, Dinter, Gillman, Herre, Lightfoot, Marloth, Pearson, Range
SRGH	Harare #	Baum, Dinter, Een, Fleck, Gürich, Hahn, Leach, Rautanen, Rich, Schinz, Smith PA
UWC	Univ. WC CT	Scheffler

References: Gunn, M. & Codd, L.E. 1981. *Botanical exploration of southern Africa*. Balkema, Cape Town.

APPENDIX 2

Method used in developing a preliminary diversity map for Namibia

A. The number of species recorded for each quarter degree square from specimen records on SPMNDB was obtained by quering the database. The number of specimens collected indicate the total number of specimens recorded per quarter degree square.

Table 12: An example of the results obtained when the database was queried for the number of species recorded per quarter degree square

Grid	Grid name	No of taxa recorded	No of specimens collected	Region
2216AB	Onjossa	156	230	Erongo
2315CA	Gobabeb	156	363	Hardap
2218BD	Gobabis	158	198	Omaheke
2216AA	Ombujomenge	164	248	Erongo
1813BC	Kaoko Otavi	167	235	Kunene
2218AD	Witvlei	167	195	Omaheke
2716CB	Aurus	186	290	Karas
2214DA	Swakopmund	190	506	Erongo
2716DA	Witputs	199	359	Karas
1920DA	Tsumkwe	257	465	Otjozondjupa
1920DC	Nama	263	453	Otjozondjupa
2117AA	Quickborn	274	340	Otjozondjupa
2115DD	Karibib	278	497	Erongo
1813BB	Opuwo	284	465	Kunene
2016BC	Otjiwarongo	292	462	Otjozondjupa
1724AD	Katima Mulilo	295	523	Caprivi
2716DC	Spitskop 2	306	589	Karas
2115CC	Spitzkoppe	307	656	Erongo
1917BA	Tsumeb	323	533	Oshikoto
2317AC	Rehoboth	328	473	Hardap
2416AB	Bullspoort	334	685	Hardap
2114BA	Brandberg	374	849	Erongo
2017AC	Elandsvreugde	385	752	Otjozondjupa
1917CB	Otavi	386	729	Otjozondjupa
1719DD	Rundu	388	692	Okavango
2115DC	Grootrooiberg	388	837	Erongo
2616CB	Aus	416	1035	Karas
2116DD	Okahandja	433	697	Otjozondjupa
2716DD	Rosh Pinah	439	1081	Karas
1918CA	Grootfontein	514	976	Otjozondjupa
2217CA	Windhoek	810	3071	Khomas

B SPMNDB was searched by keyword to get selected localities with values. Literature sources provided guide lines for the value given. The Flora database of Craven (WIND) were also used to check specific areas.

Table 13: Localities with the number of taxa recorded.

Locality	No of taxa	No of grids or area	Reference
Brandberg	503	2	Craven & Craven 2000
Bushmanland	400	23	Hines collection for MSc & WIND/PRE
Caprivi	869	25	WIND/PRE
Cuvelai	152	16	Clarke 1999
Daan Viljoen	295	1	Herbarium list
Erongo	302	3	WIND/PRE
Etosha	190	28	Literature & WIND/PRE
Gamsberg	164	2	Giess 1994 & WIND/PRE
Grootfontein	403	2	Unpubl. Strohbach & WIND/PRE
Kalahari Research Station	268	1	Unpubl. Strohbach & WIND/PRE
Kaokoveld	1126	50	Unpubl. Craven & WIND/PRE
Kaukau	308		Giess & Snyman
Kavango	984	57	WIND/PRE
Luderitz/Sperrgbiet	885	26	WIND/PRE
Naukluft	569	4	WIND/PRE especially Strey's collection of Bullspoort
Former Owambo	617	57	Unpubl. Strohbach & WIND/PRE
Waterberg	838	3	Unpubl. Craven & WIND/PRE

The localities identified above were plotted using shapefile overlays in ArcView.

Map 39: Example of localities with specific numbers of taxa per quarter degree square arranged in values

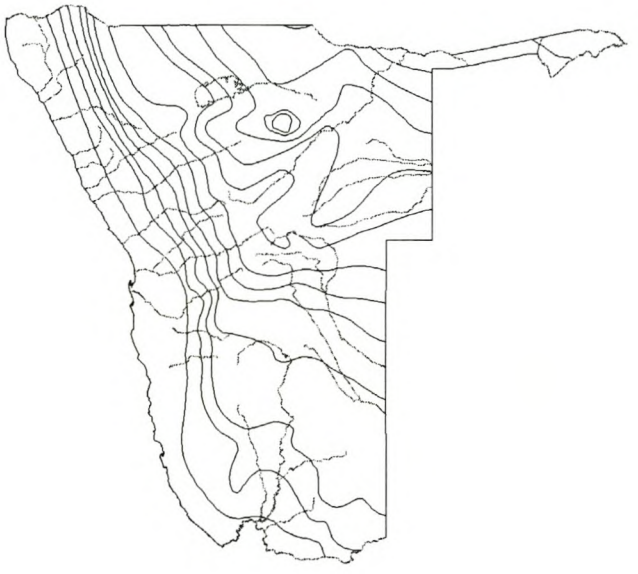
The above information and tables were combined as follows:

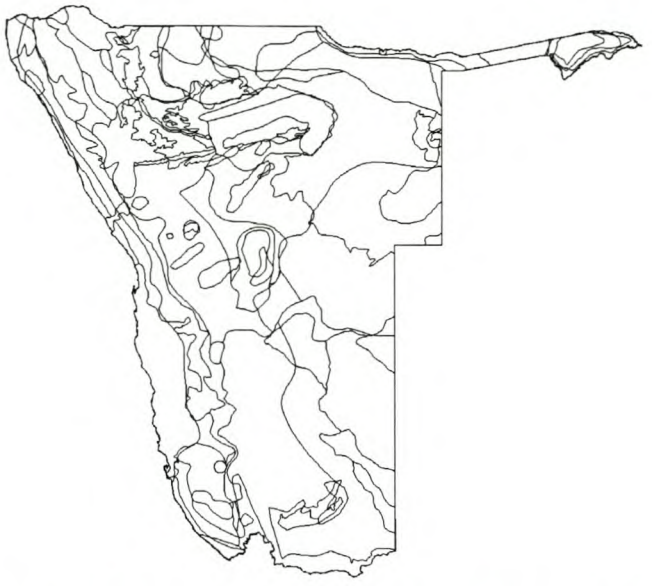
Table 14: Data in Appendix I & II combined with accuracy level into categories of diversity

Diversity value	Locality keyword	No of grids	No of taxa	Grids	No of taxa	Accuracy	Reference
Lowest	Etosha						
	Skeleton Coast			2013AB AD DA CD DC	17/44/2/7/14	Poor - moderate	
Low	Boegoeberg	1	11	2715DD	48	Moderate	
	Brukkaros	2		2517DC DD	2/15	very poor	
	Cuvelai		159	1715CB	115	Moderate	Clarke 1999
	Hakosberge	1	14	2316AB	77	Poor	
	Pomona	1	59	2715AB	51	Good	
	Rossing	1		2214BD	112	Good	
	Swakopmund	1	93	2214DA	140	Very good	
	Tsarisberg	1		2416CD	25	Very poor	
	Trekkopje	1		2215AC	131	Good	
Low medium	Hartmann Mts	6	65	1712AD CB	103/83	Moderate	
	Hunsberg	4	76	2717CA CC	123/84	moderate	
	Klein Karasberg			2718AA AC	52/40	very poor	
	Kovisberg	1		2615CB	153	good	
	Ondongab	1		1916AA	121	moderate	
	Otjihipa	1	59	1712BC	126	moderate	
	Schwarzrand	4		2516BB BD DB DD	81/37/39/107	poor	
	Tirasberg	1	37	2616BA AA AB	156/126	moderate	
Medium	Aha Mts	1	112	1920DD	152	moderate	Story
	Aurus Mts	3 (6)	210	2716CA CB	93/202	good	
	Brandberg west	2		2114AA BC	108/119	moderate	
	Gamsberg	2	164	2316AC AD	33/192	moderate	
	Great Karasberg	3		2718BB BC	209/227	moderate	
	Klinghardt Mts	3	282	2715BC BD	170/118	good	
	Sesfontein-Opuwo	4		1913BA DA DC	111/109	poor	
	Spitzkop	1	296	2115CC	323	good	
	Spitzkop	1	296	2115CC	323	good	
High Medium	Luderitz	1	249	2617CB CA	64 +	good	
	Namutoni	1		1816DD	262	good	
	Ruacana	2		1714AC AD	265/102	good	
	Tsumkwe	2	400	1920DA DC	283/284	good	
High	Brandberg	2	503	2114AB BA	394/267	good	
	Erongo	2	302	2115DA DB DC	172/52/418	moderate	

	Katima Mulilo	1		1724AD	334	moderate	
	Nauklauft/Bullspoort	3	569	2416AA AB AC	228/389/67	good	
	Opuwo	1		1813BB	301	good	
	Otjiwarongo	1		2016BC	315	moderate	
Highest	Aus	1		2616CB	488	good	
	Dikhundu	1		1812AB	421	good	
	Grootfontein	4	403	1918CA	563	good	
	Namusklauft	2	151	2716DD	477	good	
	Okahandja	1	197+	2116DD	459	good	
	Rundu	1		1719DD	492	good	
	Waterberg	3	838	2017AC AD	431/283	good	
	Windhoek	1		2217CA	over 700	very good	

ArcView shapefiles were used to help define outlines and specific areas, like the 50mm isohyte and rivers above or the soils map superimposed onto the provisonal diversity map, below





Gradually a set of values was built up and polygons drawn in ArcView. The attribute file was developed with 9 values which was reduced to 7 values ranging from areas believed to have the highest number of taxa per quarter degree square to those with the lowest (or nothing)

Table 15: Example of part of the attribute file used to draw the Arc View shape file of the preliminary Plant diversity map of Namibia.

Polygon ID	Value	Name of area
2	Highest	Aus
3	Highest	Namuskluft
6	Highest	Otavi-Tsumeb-Grootfontein
4	Highest	Rundu
5	Highest	Waterberg
1	Highest	Windhoek-Okahandja
17	High	Windhoek – north
19	High	Brandberg
9	High	Caprivi – east – river side
12	High	Erongo
20	High	Kavango
18	High	Kwando 1723c
8	High	Naukluft/Bullspoort
13	High	Caprivi – north east river ride
15	High	Opuwo
10	High	Otavi area
14	High	Windhoek – south
28	High medium	Ruacana 1714CA CB
24	High medium	Aurus Mts
26	High medium	Kaokoveld including Otjihipa
22	High medium	Klinghardt Mts
27	High medium	Oshikango 1715BD
25	High medium	Otjiwarongo to Okahandja
29	High medium	Tsumkwe
50	medium plus	Gamsberg
52	medium plus	Great Karasberg
54	medium plus	Otjihipa area
53	medium plus	Sesfontein area

46	medium plus	Spitskoppe
33	medium	Aha Mts
38	medium	Brandberg to Bullsport
27	medium	Caprivi – east
35	medium	Kamanjab to Outjo
44	medium	Luderitz
42	medium	Great Karasberg – north
39	medium	Caprivi – wesr
31	medium	Opuwo – west
82	low medium plus	Aus – east
86	low medium plus	Hartmans Mts
81	low medium plus	Hunsberg
85	low medium plus	Klein Karasberg
84	low medium plus	Swartzrand
70	low medium	1712AD BC
74	low medium	Windhoek – east
69	low medium	Gobabis
72	low medium	Otihipa 1712BB Bd east
83	low medium	Tsarisberg
73	low medium	Cuvelai – west
68	low medium	Sperrgebiet – west
90	low	Central Namib to Lud inland
97	low	Cuvelai
99	low	Northern Namib just in from coast
88	low	Southern Kalahari
92	low	Sperrgebiet coast
102	lowest	Central Namib Coast
100	lowest	Etosha
101	lowest	Luderitz north coast -dunes
105	lowest	Northern Namib coast

APPENDIX 3

Inventory of indigenous spermatophytes in Namibia

The following inventory updates Craven (1999, 2000a & b). It provides the full botanical name, family in which species occur and indicates all species considered endemic. It lists species used in the Preliminary diversity map for Namibia (Map 13) and indicates the families in which the endemic species mapped in Appendix 5 occur.

Genera are arranged in numerical order following the sequence of De Dalla Torre and Harms (1900-1907), the system used in the National Herbarium of Namibia and Craven (1999).

E = endemic to Namibia

Monocotyledons

	Number	Species	Family
	0049	*Typha capensis* (Rohrb.) N.E.Br.	Typhaceae
	0058	*Potamogeton crispus* L.	Potamogetonaceae
	0058	*Potamogeton octandrus* Poir.	Potamogetonaceae
	0058	*Potamogeton pectinatus* L.	Potamogetonaceae
	0058	*Potamogeton pusillus* L.	Potamogetonaceae
	0058	*Potamogeton schweinfurthii* A.W.Benn.	Potamogetonaceae
	0058	*Potamogeton thunbergii* Cham. & Schltdl.	Potamogetonaceae
	0059	*Ruppia cirrhosa* (Petagna) Grande	Ruppiaceae
	0059	*Ruppia maritima* L.	Ruppiaceae
	0062	*Zannichellia palustris* L.	Zannichelliaceae
	0063	*Althenia filiformis* Petit	Zannichelliaceae
	0064	*Najas horrida* A.Braun	Najadaceae
E	0065	*Aponogeton azureus* H.Bruggen	Aponogetonaceae
	0065	*Aponogeton desertorum* Zeyh. ex A.Spreng.	Aponogetonaceae
	0065	*Aponogeton junceus* Lehm.	Aponogetonaceae
	0065	*Aponogeton rehmannii* Oliv.	Aponogetonaceae
	0065	*Aponogeton stuhlmannii* Engl.	Aponogetonaceae
	0066	*Triglochin striata* Ruiz & Pav.	Juncaginaceae
	0072	*Limnophyton obtusifolium* (L.) Miq.	Alismataceae
	0079	*Burnatia enneandra* P.Micheli	Alismataceae
	0088	*Lagarosiphon cordofanus* Casp.	Hydrocharitaceae
	0088	*Lagarosiphon ilicifolius* Oberm.	Hydrocharitaceae
	0088	*Lagarosiphon major* (Ridl.) Moss ex Wager	Hydrocharitaceae
	0088	*Lagarosiphon muscoides* Harv.	Hydrocharitaceae
	0088	*Lagarosiphon verticillifolius* Oberm.	Hydrocharitaceae
	0089	*Vallisneria aethiopica* Fenzl	Hydrocharitaceae
	0095	*Ottelia exserta* (Ridl.) Dandy	Hydrocharitaceae
	0095	*Ottelia kunenensis* (Gürke) Dandy	Hydrocharitaceae
	0095	*Ottelia muricata* (C.H.Wright) Dandy	Hydrocharitaceae
	0095	*Ottelia ulvifolia* (Planch.) Walp.	Hydrocharitaceae
	0452	*Lipocarpha hemisphaerica* (Roth) Goetgh.	Cyperaceae
	0452	*Lipocarpha micrantha* (Vahl) G.C.Tucker	Cyperaceae
	0452	*Lipocarpha nana* (A.Rich.) Cherm.	Cyperaceae
	0452	*Lipocarpha rehmannii* (Ridl.) Goetgh.	Cyperaceae
	0452	*Volkiella disticha* Merxm. & Czech	Cyperaceae
	0454	*Ascolepis pusilla* Ridl.	Cyperaceae
	0459	*Alinula paradoxa* (Cherm.) Goetgh. & Vorster	Cyperaceae
	0459	*Cyperus alopecuroides* Rottb.	Cyperaceae
	0459	*Cyperus amabilis* Vahl	Cyperaceae
	0459	*Cyperus articulatus* L.	Cyperaceae
	0459	*Cyperus bellus* Kunth	Cyperaceae
	0459	*Cyperus castaneus* Willd.	Cyperaceae
	0459	*Cyperus compressus* L.	Cyperaceae
	0459	*Cyperus cuspidatus* Kunth	Cyperaceae
	0459	*Cyperus denudatus* L.f.	Cyperaceae
	0459	*Cyperus difformis* L.	Cyperaceae
	0459	*Cyperus digitatus* Roxb. subsp. *auricomus* (Spreng.) Kük.	Cyperaceae
	0459	*Cyperus dives* Delile	Cyperaceae
	0459	*Cyperus esculentus* L.	Cyperaceae
	0459	*Cyperus fastigiatus* Rottb.	Cyperaceae
	0459	*Cyperus foliaceus* C.B. Clarke	Cyperaceae

	0459	*Cyperus fulgens* C.B. Clarke	Cyperaceae
	0459	*Cyperus haspan* L.	Cyperaceae
	0459	*Cyperus imbricatus* Retz.	Cyperaceae
	0459	*Cyperus iria* L.	Cyperaceae
	0459	*Cyperus laevigatus* L.	Cyperaceae
	0459	*Cyperus longus* L. var. *longus*	Cyperaceae
	0459	*Cyperus longus* L. var. *tenuiflorus* (Rottb.) Boeck.	Cyperaceae
	0459	*Cyperus maculatus* Boeck.	Cyperaceae
	0459	*Cyperus margaritaceus* Vahl	Cyperaceae
	0459	*Cyperus marginatus* Thunb.	Cyperaceae
	0459	*Cyperus papyrus* L.	Cyperaceae
	0459	*Cyperus pectinatus* Vahl	Cyperaceae
	0459	*Cyperus platycaulis* Baker	Cyperaceae
	0459	*Cyperus procerus* Rottb.	Cyperaceae
E	0459	*Cyperus rehmii* Merxm.	Cyperaceae
	0459	*Cyperus rotundus* L. subsp. *rotundus*	Cyperaceae
	0459	*Cyperus rubicundus* Vahl	Cyperaceae
	0459	*Cyperus schinzii* Boeck.	Cyperaceae
	0459	*Cyperus sphaerospermus* Schrad.	Cyperaceae
	0459	*Cyperus tenax* Boeck.	Cyperaceae
	0459	*Cyperus tenuispica* Steud.	Cyperaceae
	0459	*Cyperus usititas* Burch	Cyperaceae
	0459	*Mariscus albomarginatus* C.B.Clarke	Cyperaceae
	0459	*Mariscus breviradius* Vorster ined.	Cyperaceae
	0459	*Mariscus chersinus* N.E.Br.	Cyperaceae
	0459	*Mariscus confusus* Vorster ined.	Cyperaceae
	0459	*Mariscus congestus* (Vahl) C.B.Clarke	Cyperaceae
	0459	*Mariscus cylindristachyus* Steud.	Cyperaceae
	0459	*Mariscus deciduus* (Boeck.) C.B.Clarke	Cyperaceae
	0459	*Mariscus dregeanus* Kunth	Cyperaceae
	0459	*Mariscus dubius* (Rottb.) Kük. ex G.E.C. Fischer	Cyperaceae
	0459	*Mariscus hamulosus* (M.Bieb.) Hooper	Cyperaceae
	0459	*Mariscus laxiflorus* Turrill	Cyperaceae
	0459	*Mariscus macropus* (Kunth) C.B.Clarke	Cyperaceae
	0459	*Mariscus namaquensis* (Kük.) Vorster	Cyperaceae
	0459	*Mariscus pseudo-vestitus* C.B.Clarke	Cyperaceae
	0459	*Mariscus rehmannianus* C.B.Clarke	Cyperaceae
	0459	*Mariscus vestitus* (Hochst. ex Krauss) C.B.Clarke	Cyperaceae
	0459	*Monandrus atriceps* (Kük) Vorster ined.	Cyperaceae
	0459	*Monandrus longicarpus* Vorster ined.	Cyperaceae
	0459	*Monandrus squarrosus* (L.) Vorster ined.	Cyperaceae
	0459	*Pycreus betschuanus* (Boeck.) C.B.Clarke	Cyperaceae
	0459	*Pycreus chrysanthus* (Boeck.) C.B.Clarke	Cyperaceae
	0459	*Pycreus flavescens* (L.) P.Beauv. ex Rchb.	Cyperaceae
	0459	*Pycreus macrostachyos* (Lam.) J.Raynal	Cyperaceae
	0459	*Pycreus mundii* Nees	Cyperaceae
	0459	*Pycreus nitidus* (Lam.) J.Raynal	Cyperaceae
	0459	*Pycreus okavangensis* Podlech	Cyperaceae
	0459	*Pycreus pelophilus* (Ridl.) C.B.Clarke	Cyperaceae
	0459	*Pycreus polystachyos* (Rottb.) P.Beauv.	Cyperaceae
	0459	*Pycreus pumilus* (L.) Nees	Cyperaceae
	0459	*Pycreus unioloides* (R.Br.) Urb.	Cyperaceae
	0461	*Courtoisina assimilis* (Steud.) Maquet	Cyperaceae
	0461	*Courtoisina cyperoides* (Roxb.) Soják	Cyperaceae
	0462	*Kyllinga alata* Nees	Cyperaceae
	0462	*Kyllinga alba* Nees	Cyperaceae
	0462	*Kyllinga albiceps* (Ridl.) Rendle	Cyperaceae
	0462	*Kyllinga intricata* Cherm.	Cyperaceae
	0462	*Kyllinga welwitschii* Ridl.	Cyperaceae
	0465	*Ficinia nigrescens* (Schrad.) J.Raynal	Cyperaceae
	0467	*Fuirena angolensis* (C.B.Clarke) Lye	Cyperaceae
	0467	*Fuirena bullifera* J.Raynal & Roessler	Cyperaceae
	0467	*Fuirena ciliaris* (L.) Roxb.	Cyperaceae
	0467	*Fuirena coerulescens* Steud.	Cyperaceae
	0467	*Fuirena leptostachya* Oliv. var. *leptostachya*	Cyperaceae
	0467	*Fuirena obcordata* P.L.Forbes	Cyperaceae
	0467	*Fuirena pubescens* (Poir.) Kunth	Cyperaceae
	0467	*Fuirena stricta* Steud. subsp. *chlorocarpa* (Ridl.) Lye	Cyperaceae
	0467	*Fuirena umbellata* Rottb.	Cyperaceae

0468	*Bolboschoenus glaucus* (Lam.) S.G.Smith	Cyperaceae
0468	*Bolboschoenus maritimus* (L.) Palla	Cyperaceae
0468	*Bolboschoenus nobilis* (Ridl.) Goetgh. & Simpson	Cyperaceae
0468	*Isolepis cernua* (Vahl) Roem. & Schult.	Cyperaceae
0468	*Isolepis costata* Hochst. ex A. Rich.	Cyperaceae
0468	*Isolepis hemiuncialis* (C.B.Clarke) J.Raynal	Cyperaceae
0468	*Isolepis hystrix* (Thunb.) Nees	Cyperaceae
0468	*Isolepis karroica* (C.B.Clarke) J.Raynal	Cyperaceae
0468	*Isolepis setacea* (L.) R.Br.	Cyperaceae
0468	*Isolepis sororia* Kunth	Cyperaceae
0468	*Kyllingiella microcephala* (Steud.) R.W.Haines & Lye	Cyperaceae
0468	*Oxycaryum cubense* (Poepp. & Kunth) Lye	Cyperaceae
0468	*Pseudoschoenus inanis* (Thunb.) Oteng-Yeb.	Cyperaceae
0468	*Schoenoplectus articulatus* (L.) Palla var. *b*	Cyperaceae
0468	*Schoenoplectus confusus* (N.E.Br.) Lye var. *confusus*	Cyperaceae
0468	*Schoenoplectus corymbosus* (Roth ex Roem. & Schult.) J.Raynal var. *corymbosus*	Cyperaceae
0468	*Schoenoplectus erectus* (Poir.) Palla ex J.Raynal	Cyperaceae
0468	*Schoenoplectus lateriflorus* (J.F.Gmel.) Lye	Cyperaceae
0468	*Schoenoplectus leucanthus* (Boeck.) J.Raynal	Cyperaceae
0468	*Schoenoplectus litoralis* (Schrad.) Palla	Cyperaceae
0468	*Schoenoplectus muricinux* (C.B.Clarke) J.Raynal	Cyperaceae
0468	*Schoenoplectus praelongatus* (Poir.) J.Raynal	Cyperaceae
0468	*Schoenoplectus roylei* (Nees) Ovcz. & Czukov.	Cyperaceae
0468	*Schoenoplectus scirpoideus* (Schrad.) J.Browning	Cyperaceae
0468	*Schoenoplectus senegalensis* (Hochst. & Steud.) Palla	Cyperaceae
0468	*Schoenoplectus subulatus* (Vahl) Lye	Cyperaceae
0468	*Schoenoplectus tabernaemontani* (C.C.Gmel.) Palla	Cyperaceae
0468	*Schoenoplectus triqueter* (L.) Palla	Cyperaceae
0468	*Scirpoides dioecus* (Kunth) J.Browning	Cyperaceae
0469	*Eleocharis acutangula* (Roxb.) Schult.	Cyperaceae
0469	*Eleocharis atropurpurea* (Retz.) J.& C.Presl	Cyperaceae
0469	*Eleocharis cubangensis* H.E.Hess	Cyperaceae
0469	*Eleocharis geniculata* (L.) Roem. & Schult.	Cyperaceae
0469	*Eleocharis limosa* (Schrad.) Schult.	Cyperaceae
0469	*Eleocharis onthitensis* H.E.Hess	Cyperaceae
0469	*Eleocharis seydeliana* Podlech	Cyperaceae
0471	*Abildgaardia triflora* (L.) Abeyw.	Cyperaceae
0471	*Bulbostylis burchellii* (Ficalho & Hiern) C.B.Clarke	Cyperaceae
0471	*Bulbostylis contexta* (Nees) M.Bodard	Cyperaceae
0471	*Bulbostylis densa* (Wall.) Hand.-Mazz.	Cyperaceae
0471	*Bulbostylis hispidula* (Vahl) R.W.Haines	Cyperaceae
0471	*Bulbostylis humilis* (Kunth) C.B.Clarke	Cyperaceae
0471	*Bulbostylis mucronata* C.B.Clarke	Cyperaceae
0471	*Bulbostylis schoenoides* (Kunth) C.B.Clarke	Cyperaceae
0471	*Bulbostylis trabeculata* C.B.Clarke	Cyperaceae
0471	*Fimbristylis bisumbellata* (Forssk.) Bubani	Cyperaceae
0471	*Fimbristylis complanata* (Retz.) Link	Cyperaceae
0471	*Fimbristylis dichotoma* (L.) Vahl	Cyperaceae
0471	*Fimbristylis ferruginea* (L.) Vahl subsp. *ferruginea*	Cyperaceae
0471	*Fimbristylis ferruginea* (L.) Vahl subsp. *sieberana* (Kunth) Lye	Cyperaceae
0471	*Fimbristylis microcarya* F.Muell.	Cyperaceae
0471	*Fimbristylis squarrosa* Vahl	Cyperaceae
0492	*Rhynchospora brownii* Roem. & Schult.	Cyperaceae
0492	*Rhynchospora corymbosa* (L.) Britton	Cyperaceae
0492	*Rhynchospora holoschoenoides* (Rich.) Herter	Cyperaceae
0515	*Scleria foliosa* Hochst. ex A.Rich	Cyperaceae
0515	*Scleria longispiculata* Nelmes	Cyperaceae
0515	*Scleria rehmannii* C.B.Clarke	Cyperaceae
0515	*Scleria veseyfitzgeraldii* E.A.Rob.	Cyperaceae
0525	*Carex cognata* Kunth var. *cognata*	Cyperaceae
0528	*Phoenix reclinata* Jacq.	Araceae
0553	*Hyphaene petersiana* Klotzsch	Araceae
0723	*Amorphophallus abyssinicus* (A.Rich.) N.E.Br.	Araceae
0794	*Spirodela punctata* (G.Mey.) C.H.Thomps.	Lemnaceae
0795	*Lemna aequinoctialis* Welw.	Lemnaceae
0826	*Xyris capensis* Thunb.	Xyridaceae
0828	*Eriocaulon abyssinicum* Hochst.	Eriocaulaceae
0828	*Eriocaulon cinereum* R.Br.	Eriocaulaceae
0828	*Eriocaulon transvaalicum* N.E.Br. subsp. *tofieldifolium* (Schinz) S.M. Phillips	Eriocaulaceae

	0828	*Eriocaulon welwitschii* Rendle	Eriocaulaceae
	0896	*Commelina africana* L. var. *africana*	Commelinaceae
	0896	*Commelina africana* L. var. *barberae* (C.B.Clarke) C.B.Clarke	Commelinaceae
	0896	*Commelina africana* L. var. *krebsiana* (Kunth) C.B.Clarke	Commelinaceae
	0896	*Commelina africana* L. var. *lancispatha* C.B.Clarke	Commelinaceae
	0896	*Commelina aspera* Benth.	Commelinaceae
	0896	*Commelina benghalensis* L.	Commelinaceae
	0896	*Commelina diffusa* Burm.f. subsp. *scandens* (Welw. ex C.B.Clarke) Oberm.	Commelinaceae
	0896	*Commelina erecta* L.	Commelinaceae
	0896	*Commelina fluviatilis* Brenan	Commelinaceae
	0896	*Commelina forskaolii* Vahl	Commelinaceae
	0896	*Commelina imberbis* Ehrenb. ex Hassk.	Commelinaceae
	0896	*Commelina livingstonii* C.B.Clarke	Commelinaceae
	0896	*Commelina petersii* Hassk.	Commelinaceae
	0896	*Commelina subulata* Roth	Commelinaceae
	0896	*Commelina zambesica* C.B.Clarke	Commelinaceae
	0899	*Aneilema hockii* De Wild.	Commelinaceae
	0899	*Aneilema nicholsonii* C.B.Clarke	Commelinaceae
	0899	*Murdannia simplex* (Vahl) Brenan	Commelinaceae
	0904	*Cyanotis foecunda* Hochst. ex Hassk.	Commelinaceae
	0904	*Cyanotis lanata* Benth.	Commelinaceae
	0904	*Cyanotis longifolia* Benth.	Commelinaceae
	0908	*Floscopa flavida* C.B.Clarke	Commelinaceae
	0908	*Floscopa glomerata* (Willd. ex Schult. & Schult. f.) Hassk.	Commelinaceae
	0921	*Eichhornia natans* (P.Beauv.) Solms	Pontederiaceae
	0924	*Heteranthera callifolia* Rchb. ex Kunth	Pontederiaceae
	0936	*Juncus exsertus* Buchenau subsp. *exsertus*	Juncaceae
	0936	*Juncus oxycarpus* E.Mey. ex Kunth	Juncaceae
	0936	*Juncus punctorius* L.f.	Juncaceae
	0936	*Juncus rigidus* Desf.	Juncaceae
	0937	*Luzula africana* Drége ex Steud.	Juncaceae
	0963	*Gloriosa sessiliflora* Nordal & Bingham	Colchicaceae
	0963	*Gloriosa superba* L.	Colchicaceae
	0965	*Hexacyrtis dickiana* Dinter	Colchicaceae
	0969	*Androcymbium bellum* Schltr. & K.Krause	Colchicaceae
E	0969	*Androcymbium exiguum* Roessler subsp. *exiguum*	Colchicaceae
	0969	*Androcymbium gramineum* (Cav.) J.F.Macbr.	Colchicaceae
	0969	*Androcymbium guttatum* Schltr. & K.Krause	Colchicaceae
	0969	*Androcymbium melanthioides* Willd.	Colchicaceae
E	0973	*Ornithoglossum calcicola* K.Krause & Dinter	Colchicaceae
	0973	*Ornithoglossum dinteri* K.Krause	Colchicaceae
	0973	*Ornithoglossum parviflorum* B.Nord. var. *parviflorum*	Colchicaceae
	0973	*Ornithoglossum undulatum* Sweet	Colchicaceae
	0973	*Ornithoglossum vulgare* B.Nord.	Colchicaceae
	0975	*Iphigenia bechuanica* Baker	Colchicaceae
	0975A	*Camptorrhiza strumosa* (Baker) Oberm.	Colchicaceae
	0985	*Bulbine capitata* Poelln.	Asphodelaceae
E	0985	*Bulbine caput-medusae* G.Will.	Asphodelaceae
E	0985	*Bulbine francescae* G.Will. & Baijnath	Asphodelaceae
	0985	*Bulbine frutescens* (L.) Willd.	Asphodelaceae
	0985	*Bulbine longifolia* Schinz	Asphodelaceae
E	0985	*Bulbine namaensis* Schinz	Asphodelaceae
E	0985	*Bulbine rhopalophylla* Dinter	Asphodelaceae
E	0985	*Bulbine tetraphylla* Dinter	Asphodelaceae
	0985	*Trachyandra adamsonii* (Compton) Oberm.	Asphodelaceae
	0985	*Trachyandra arvensis* (Schinz) Oberm.	Asphodelaceae
	0985	*Trachyandra bulbinifolia* (Dinter) Oberm.	Asphodelaceae
E	0985	*Trachyandra ensifolia* (Sölch) Roessler	Asphodelaceae
	0985	*Trachyandra falcata* (L.f.) Kunth	Asphodelaceae
E	0985	*Trachyandra glandulosa* (Dinter) Oberm.	Asphodelaceae
	0985	*Trachyandra karrooica* Oberm.	Asphodelaceae
E	0985	*Trachyandra lanata* (Dinter) Oberm.	Asphodelaceae
	0985	*Trachyandra laxa* (N.E.Br.) Oberm. var. *laxa*	Asphodelaceae
	0985	*Trachyandra laxa* (N.E.Br.) Oberm. var. *rigida* (Suess.) Roessler	Asphodelaceae
	0985	*Trachyandra muricata* (L.f.) Kunth	Asphodelaceae
	0985	*Trachyandra patens* Oberm.	Asphodelaceae
E	0985	*Trachyandra peculiaris* (Dinter) Oberm.	Asphodelaceae
	0985	*Trachyandra saltii* (Baker) Oberm. var. *saltii*	Asphodelaceae
	0985	*Trachyandra saltii* (Baker) Oberm. var. *secunda* (K.Krause & Dinter) Oberm.	Asphodelaceae

	0990	*Chlorophytum anceps* (Baker) Kativu	Anthericaceae
	0990	*Chlorophytum brachystachyum* Baker	Anthericaceae
	0990	*Chlorophytum calyptrocarpum* (Baker) Kativu	Anthericaceae
	0990	*Chlorophytum fasciculatum* (Baker) Kativu	Anthericaceae
	0990	*Chlorophytum galpinii* (Baker) Kativu var. *galpini*	Anthericaceae
	0990	*Chlorophytum galpinii* (Baker) Kativu var. *matabelense* (Bak.) Oberm.	Anthericaceae
	0990	*Chlorophytum krauseanum* (Dinter) Kativu	Anthericaceae
	0990	*Chlorophytum papillosum* Rendle	Anthericaceae
	0990	*Chlorophytum psammophilum* Engl. & Gilg	Anthericaceae
	0990	*Chlorophytum rangei* (Engl. & K.Krause) Nordal	Anthericaceae
	0990	*Chlorophytum sphacelatum* (Baker) Kativu subsp. *hockii* (De Wild.) Kativu	Anthericaceae
	0990	*Chlorophytum sphacelatum* (Baker) Kativu subsp. *milanjianum* (Rendle) Kativu	Anthericaceae
	0990	*Chlorophytum viscosum* Kunth	Anthericaceae
	1010	*Schizobasis intricata* (Baker) Baker	Hyacinthaceae
	1011	*Bowiea gariepensis* Van Jaarsv.	Hyacinthaceae
	1012	*Eriospermum abyssinicum* Baker	Eriospermaceae
	1012	*Eriospermum bakerianum* Schinz subsp. *bakerianum*	Eriospermaceae
	1012	*Eriospermum bakerianum* Schinz subsp. *tortuosum* (Dammer) P.L. Perry	Eriospermaceae
E	1012	*Eriospermum buchubergense* Dinter	Eriospermaceae
E	1012	*Eriospermum citrinum* P.L.Perry	Eriospermaceae
	1012	*Eriospermum corymbosum* Baker	Eriospermaceae
E	1012	*Eriospermum flexum* P.L.Perry	Eriospermaceae
E	1012	*Eriospermum graniticolum* Dinter ex Poelln.	Eriospermaceae
E	1012	*Eriospermum halenbergense* Dinter	Eriospermaceae
E	1012	*Eriospermum lavranosii* P.L.Perry	Eriospermaceae
	1012	*Eriospermum mackenii* (Hook.f.) Baker subsp. *galpinii* (Schinz) P.L.Perry	Eriospermaceae
	1012	*Eriospermum namaquanum* Marloth ex P.L.Perry	Eriospermaceae
	1012	*Eriospermum parvifolium* Jacq.	Eriospermaceae
	1012	*Eriospermum rautanenii* Schinz	Eriospermaceae
	1012	*Eriospermum roseum* Schinz	Eriospermaceae
	1012	*Eriospermum schinzii* Conrath ex Baker	Eriospermaceae
E	1012	*Eriospermum volkmanniae* Dinter	Eriospermaceae
E	1026	*Aloe argenticauda* Merxm. & Giess	Asphodelaceae
E	1026	*Aloe asperifolia* A.Berger	Asphodelaceae
	1026	*Aloe buettneri* A.Berger	Asphodelaceae
	1026	*Aloe claviflora* Burch.	Asphodelaceae
E	1026	*Aloe corallina* I.Verd.	Asphodelaceae
E	1026	*Aloe dewinteri* Giess	Asphodelaceae
	1026	*Aloe dichotoma* Masson	Asphodelaceae
E	1026	*Aloe dinteri* A.Berger	Asphodelaceae
E	1026	*Aloe erinacea* D.S.Hardy	Asphodelaceae
	1026	*Aloe esculenta* L.C.Leach	Asphodelaceae
	1026	*Aloe gariepensis* Pillans	Asphodelaceae
	1026	*Aloe hereroensis* Engl. var. *hereroensis*	Asphodelaceae
	1026	*Aloe hereroensis* Engl. var. *lutea* A.Berger	Asphodelaceae
	1026	*Aloe littoralis* Baker	Asphodelaceae
	1026	*Aloe melanacantha* A.Berger	Asphodelaceae
	1026	*Aloe meyeri* Van Jaarsv.	Asphodelaceae
	1026	*Aloe microstigma* Salm-Dyck	Asphodelaceae
E	1026	*Aloe namibensis* Giess	Asphodelaceae
E	1026	*Aloe pachygaster* Dinter	Asphodelaceae
	1026	*Aloe pearsonii* Schönland	Asphodelaceae
	1026	*Aloe pillansii* L.Guthrie	Asphodelaceae
	1026	*Aloe ramosissima* Pillans	Asphodelaceae
E	1026	*Aloe sladeniana* Pole-Evans	Asphodelaceae
	1026	*Aloe striata* Haw. subsp. *karasbergensis* (Pillans) Glen & D.S.Hardy	Asphodelaceae
	1026	*Aloe variegata* L.	Asphodelaceae
E	1026	*Aloe viridiflora* Reynolds	Asphodelaceae
	1026	*Aloe zebrina* Baker	Asphodelaceae
	1026	*Chortolirion angolense* (Baker) A.Berger	Asphodelaceae
	1026	*Gasteria pillansii* Kensit var. *ernesti-ruschii* (Dinter & Poelln.) Van Jaarsv.	Asphodelaceae
	1029	*Haworthia venosa* (Lam.) Haw. subsp. *recurva*	Asphodelaceae
	1029	*Haworthia venosa* (Lam.) Haw. subsp. *tessellata* (Haw.) M.B.Bayer	Asphodelaceae
E	1047	*Tulbaghia calcarea* Engl. & K.Krause	Alliaceae
	1047	*Tulbaghia cameroni* Baker	Alliaceae
	1047	*Tulbaghia tenuior* K.Krause & Dinter	Alliaceae
	1079	*Albuca acuminata* Baker	Hyacinthaceae
	1079	*Albuca altissima* Dryand	Hyacinthaceae
E	1079	*Albuca amboensis* (Schinz) Oberm.	Hyacinthaceae

	1079	*Albuca angolensis* Welw.	Hyacinthaceae
	1079	*Albuca canadensis* (L.) F.M.Leight.	Hyacinthaceae
	1079	*Albuca cooperi* Baker	Hyacinthaceae
E	1079	*Albuca englerana* K.Krause & Dinter	Hyacinthaceae
	1079	*Albuca exuviata* Baker	Hyacinthaceae
	1079	*Albuca fleckii* Schinz	Hyacinthaceae
E	1079	*Albuca hereroensis* Schinz	Hyacinthaceae
E	1079	*Albuca karasbergensis* P.E.Glover	Hyacinthaceae
	1079	*Albuca maxima* Burm.f.	Hyacinthaceae
	1079	*Albuca melleri* Baker	Hyacinthaceae
	1079	*Albuca namaquensis* Baker	Hyacinthaceae
E	1079	*Albuca reflexa* Dinter & K.Krause	Hyacinthaceae
	1079	*Albuca setosa* Jacq.	Hyacinthaceae
	1079	*Albuca viscosa* L.f.	Hyacinthaceae
	1079	*Thuranthos nocturnale* R.A.Dyer	Hyacinthaceae
	1080	*Drimia altissima* (L.f.) Ker Gawl.	Hyacinthaceae
	1080	*Drimia indica* (Roxb. Jessop	Hyacinthaceae
	1080	*Drimia marginata* (Thunb.) Jessop	Hyacinthaceae
	1080	*Drimia physodes* (Jacq.) Jessop	Hyacinthaceae
	1080	*Drimia sanguinea* (Schinz) Jessop	Hyacinthaceae
	1080	*Tenicroa exuviata* (Jacq.) Speta	Hyacinthaceae
	1080	*Tenicroa filifolia* (Jacq.) Oberm.	Hyacinthaceae
	1080	*Tenicroa multifolia* (G.J. Lewis) Oberm.	Hyacinthaceae
	1083	*Rhadamanthus fasciatus* B.Nord.	Hyacinthaceae
E	1083	*Rhadamanthus namibensis* Oberm.	Hyacinthaceae
	1083	*Rhadamanthus platyphyllus* B.Nord.	Hyacinthaceae
E	1083	*Rhadamanthus secundus* B.Nord.	Hyacinthaceae
	1084	*Dipcadi bakerianum* Bolus	Hyacinthaceae
	1084	*Dipcadi brevifolium* (Thunb.) Fourc.	Hyacinthaceae
	1084	*Dipcadi crispum* Baker subsp. *crispo-ciliatum* (Suess.) Bley ined.	Hyacinthaceae
	1084	*Dipcadi crispum* Baker subsp. *crispum*	Hyacinthaceae
	1084	*Dipcadi firmifolium* Baker	Hyacinthaceae
	1084	*Dipcadi glaucum* (Burch. ex Ker. Gawl.) Baker	Hyacinthaceae
	1084	*Dipcadi gracillimum* Baker	Hyacinthaceae
	1084	*Dipcadi involutum* Suess.	Hyacinthaceae
	1084	*Dipcadi longifolium* (Lindl.) Baker	Hyacinthaceae
	1084	*Dipcadi marlothii* Engl.	Hyacinthaceae
	1084	*Dipcadi oligotrichum* Baker	Hyacinthaceae
	1084	*Dipcadi papillatum* Oberm.	Hyacinthaceae
	1084	*Dipcadi platyphyllum* Baker	Hyacinthaceae
	1084	*Dipcadi rigidifolium* Baker	Hyacinthaceae
	1084	*Dipcadi spirale* Baker	Hyacinthaceae
	1084	*Dipcadi vaginatum* Baker	Hyacinthaceae
	1084	*Dipcadi venenatum* Schinz	Hyacinthaceae
	1084	*Dipcadi viride* (L.) Moench	Hyacinthaceae
	1086	*Scilla hispidula* Baker	Hyacinthaceae
	1086	*Scilla nervosa* (Burch.) Jessop	Hyacinthaceae
	1089	*Neopatersonia falcata* G.J.Lewis	Hyacinthaceae
	1089	*Ornithogalum apertum* (I.Verd.) Oberm.	Hyacinthaceae
E	1089	*Ornithogalum candidum* Oberm.	Hyacinthaceae
	1089	*Ornithogalum deltoideum* Baker	Hyacinthaceae
	1089	*Ornithogalum geniculatum* Oberm.	Hyacinthaceae
	1089	*Ornithogalum glandulosum* Oberm.	Hyacinthaceae
	1089	*Ornithogalum hispidum* Hornem. subsp. *hispidum*	Hyacinthaceae
E	1089	*Ornithogalum merxmuelleri* Roessler	Hyacinthaceae
	1089	*Ornithogalum nanodes* F.M. Leight.	Hyacinthaceae
	1089	*Ornithogalum ornithogaloides* (Kunth) Oberm.	Hyacinthaceae
	1089	*Ornithogalum prasinum* Lindl.	Hyacinthaceae
	1089	*Ornithogalum puberulum* Oberm.	Hyacinthaceae
	1089	*Ornithogalum pulchrum* Schinz	Hyacinthaceae
E	1089	*Ornithogalum rautanenii* Schinz	Hyacinthaceae
	1089	*Ornithogalum seineri* (Engl. & K.Krause) Oberm.	Hyacinthaceae
	1089	*Ornithogalum setifolium* Kunth	Hyacinthaceae
E	1089	*Ornithogalum stapffii* Schinz	Hyacinthaceae
	1089	*Ornithogalum suaveolens* Jacq.	Hyacinthaceae
	1089	*Ornithogalum subcoriaceum* L.Bolus	Hyacinthaceae
	1089	*Ornithogalum tenuifolium* F.Delaroche	Hyacinthaceae
	1089	*Ornithogalum toxicarium* C.Archer & R.H.Archer	Hyacinthaceae
E	1089	*Ornithogalum tubiforme* (Oberm.) Oberm.	Hyacinthaceae

	1089	*Ornithogalum unifolium* Retz.	Hyacinthaceae
	1090	*Ledebouria cooperi* (Hook.f.) Jessop	Hyacinthaceae
	1090	*Ledebouria floribunda* (Baker) Jessop	Hyacinthaceae
	1090	*Ledebouria revoluta* (L.f.) Jessop	Hyacinthaceae
E	1090	*Ledebouria scabrida* Jessop	Hyacinthaceae
	1090	*Ledebouria undulata* (Jacq.) Jessop	Hyacinthaceae
	1094	*Pseudogaltonia clavata* (Mast.) E.Phillips	Hyacinthaceae
	1098	*Lachenalia buchubergensis* Dinter	Hyacinthaceae
E	1098	*Lachenalia giessii* W.F.Barker	Hyacinthaceae
E	1098	*Lachenalia klinghardtiana* Dinter	Hyacinthaceae
E	1098	*Lachenalia namibiensis* W.F.Barker	Hyacinthaceae
	1098	*Lachenalia nordenstamii* W.F.Barker	Hyacinthaceae
E	1098	*Lachenalia nutans* G.D.Duncan	Hyacinthaceae
E	1098	*Lachenalia pearsonii* (P.E.Glover) W.F.Barker	Hyacinthaceae
	1100	*Whiteheadia bifolia* (Jacq.) Baker	Hyacinthaceae
	1101	*Massonia echinata* L.f.	Hyacinthaceae
	1110	*Sansevieria aethiopica* Thunb.	Dracaenaceae
	1110	*Sansevieria hyacinthoides* (L.) Druce	Dracaenaceae
	1110	*Sansevieria longiflora* Sims	Dracaenaceae
	1110	*Sansevieria pearsonii* N.E.Br.	Dracaenaceae
	1113	*Asparagus africanus* Lam.	Asparagaceae
	1113	*Asparagus asparagoides* (L.) W.Wight	Asparagaceae
	1113	*Asparagus aspergillus* Jessop	Asparagaceae
	1113	*Asparagus bechuanicus* Baker	Asparagaceae
	1113	*Asparagus buchananii* Baker	Asparagaceae
	1113	*Asparagus capensis* L. var. *capensis*	Asparagaceae
	1113	*Asparagus confertus* K. Krause	Asparagaceae
	1113	*Asparagus cooperi* Baker	Asparagaceae
	1113	*Asparagus declinatus* L.	Asparagaceae
	1113	*Asparagus denudatus* (Kunth) Baker	Asparagaceae
	1113	*Asparagus exuvialis* Burch.	Asparagaceae
	1113	*Asparagus glaucus* Kies	Asparagaceae
	1113	*Asparagus juniperoides* Engl.	Asparagaceae
	1113	*Asparagus laricinus* Burch.	Asparagaceae
	1113	*Asparagus nelsii* Schinz	Asparagaceae
	1113	*Asparagus pearsonii* Kies	Asparagaceae
	1113	*Asparagus racemosus* Willd.	Asparagaceae
	1113	*Asparagus retrofractus* L.	Asparagaceae
	1113	*Asparagus schroederi* Engl.	Asparagaceae
	1113	*Asparagus striatus* (L.f.) Thunb.	Asparagaceae
	1113	*Asparagus suaveolens* Burch.	Asparagaceae
	1113	*Asparagus undulatus* (L.f.) Thunb.	Asparagaceae
	1113	*Asparagus virgatus* Baker	Asparagaceae
	1166	*Hessea speciosa* Snijman	Amaryllidaceae
	1166	*Namaquanula bruce-bayeri* D. & U. Müll.-Doblies	Amaryllidaceae
E	1167	*Haemanthus avasmontanus* Dinter	Amaryllidaceae
	1167	*Haemanthus coccineus* L.	Amaryllidaceae
	1167	*Haemanthus namaquensis* R.A.Dyer	Amaryllidaceae
	1167	*Haemanthus pubescens* L.f. subsp. *arenicola* Snijman	Amaryllidaceae
	1167	*Scadoxus multiflorus* (Martyn) Raf. subsp. *katharinae* (Bak.) Friis & Nordal	Amaryllidaceae
	1167	*Scadoxus multiflorus* (Martyn) Raf. subsp. *multiflorus*	Amaryllidaceae
	1168	*Boophane disticha* (L.f.) Herb.	Amaryllidaceae
	1171	*Strumaria barbarae* Oberm.	Amaryllidaceae
	1171	*Strumaria bidentata* Schinz	Amaryllidaceae
E	1171	*Strumaria hardyana* D.& U. Müll.-Doblies	Amaryllidaceae
E	1171	*Strumaria phonolithica* Dinter	Amaryllidaceae
	1175	*Nerine duparquetiana* (Baill.) Baker	Amaryllidaceae
	1175	*Nerine laticoma* (Ker.-Gawl.) T.Durand & Schinz	Amaryllidaceae
E	1175	*Nerine pusilla* Dinter	Amaryllidaceae
	1177	*Brunsvigia herrei* Leight. ex W.F.Barker	Amaryllidaceae
	1177	*Brunsvigia radula* (Jacq.) Aiton	Amaryllidaceae
	1186	*Gethyllis namaquensis* (Schönland) Oberm.	Amaryllidaceae
	1189	*Crinum baumii* Harms	Amaryllidaceae
	1189	*Crinum buphanoides* Welw. ex Baker	Amaryllidaceae
	1189	*Crinum carolo-schmidtii* Dinter	Amaryllidaceae
	1189	*Crinum crassicaule* Baker	Amaryllidaceae
	1189	*Crinum delagoense* I.Verd.	Amaryllidaceae
	1189	*Crinum euchrophyllum* I.Verd.	Amaryllidaceae
	1189	*Crinum foetidum* I.Verd.	Amaryllidaceae

	1189	*Crinum graminicola* I.Verd.	Amaryllidaceae
	1189	*Crinum harmsii* Baker	Amaryllidaceae
	1189	*Crinum lugardiae* N.E.Br.	Amaryllidaceae
	1189	*Crinum macowanii* Baker	Amaryllidaceae
	1189	*Crinum minimum* Milne-Redh.	Amaryllidaceae
	1189	*Crinum occiduale* R.A. Dyer	Amaryllidaceae
E	1189	*Crinum paludosum* I.Verd.	Amaryllidaceae
	1189	*Crinum parvibulbosum* Dinter ex Overkott	Amaryllidaceae
	1189	*Crinum polyphyllum* Baker	Amaryllidaceae
E	1189	*Crinum rautanenianum* Schinz	Amaryllidaceae
	1189	*Crinum subcernuum* Baker	Amaryllidaceae
	1189	*Crinum trifidum* Nordal	Amaryllidaceae
	1189	*Crinum zeylanicum* (L.) L.	Amaryllidaceae
	1190	*Ammocharis coranica* (Ker. Gawl.) Herb.	Amaryllidaceae
E	1190	*Ammocharis nerinoides* (Baker) Lehmiller	Amaryllidaceae
	1190	*Ammocharis tinneana* (Kotschy & Peyr.) Milne-Redh. & Schweick.	Amaryllidaceae
	1190	*Cybistetes longifolia* (L.) Milne-Redh. & Schweick.	Amaryllidaceae
	1191	*Cyrtanthus herrei* (F.M.Leight.) R.A.Dyer	Amaryllidaceae
	1199	*Cryptostephanus densiflorus* Welw. ex Baker	Amaryllidaceae
	1202	*Pancratium tenuifolium* Hochst. ex A.Rich.	Amaryllidaceae
	1230	*Hypoxis dinteri* Nel	Hypoxidaceae
	1230	*Hypoxis iridifolia* Baker	Hypoxidaceae
	1230	*Hypoxis rigidula* Baker	Hypoxidaceae
	1230	*Spiloxene scullyi* (Baker) Garside	Hypoxidaceae
	1230	*Spiloxene* sp. = Giess 13055	Hypoxidaceae
	1231	*Walleria nutans* Kirk	Tecophilaeaceae
E	1233	*Cyanella amboensis* Schinz	Tecophilaeaceae
	1233	*Cyanella lutea* L.f.	Tecophilaeaceae
	1233	*Cyanella ramosissima* (Engl. & K.Krause) Engl. & K.Krause	Tecophilaeaceae
	1247	*Xerophyta equisetoides* Baker var. *pauciramosa* L.B. Sm. & Ayensu	Velloziaceae
	1247	*Xerophyta humilis* (Baker) T.Durand & Schinz	Velloziaceae
	1247	*Xerophyta schlechteri* (Baker) N.L.Menezes	Velloziaceae
	1247	*Xerophyta squarrosa* Baker	Velloziaceae
	1247	*Xerophyta viscosa* Baker	Velloziaceae
	1252	*Dioscorea asteriscus* Burkill	Dioscoreaceae
	1252	*Dioscorea cochleari-apiculatus* De Wild.	Dioscoreaceae
	1252	*Dioscorea elephantipes* (L'Hér.) Engl.	Dioscoreaceae
	1252	*Dioscorea hemicrypta* Burkill	Dioscoreaceae
	1252	*Dioscorea hirtiflora* Benth. var. *pedicelata* Milne-Redhead	Dioscoreaceae
	1252	*Dioscorea quartiniana* A.Rich.	Dioscoreaceae
	1265	*Moraea britteniae* (L.Bolus) Goldblatt	Iridaceae
	1265	*Moraea carsonii* Baker	Iridaceae
E	1265	*Moraea garipensis* Goldblatt	Iridaceae
E	1265	*Moraea graniticola* Goldblatt	Iridaceae
E	1265	*Moraea hexaglottis* Goldblatt	Iridaceae
E	1265	*Moraea namibensis* Goldblatt	Iridaceae
	1265	*Moraea pallida* (L.Bolus) Goldblatt	Iridaceae
	1265	*Moraea polystachya* (Thunb.) Ker Gawl.	Iridaceae
E	1265	*Moraea rigidifolia* Goldblatt	Iridaceae
	1265	*Moraea venenata* Dinter	Iridaceae
	1272	*Ferraria divaricata* Sweet subsp. *divaricata*	Iridaceae
	1272	*Ferraria glutinosa* (Baker) Rendle	Iridaceae
	1272	*Ferraria schaeferi* Dinter	Iridaceae
	1305	*Melasphaerula ramosa* (L.) N.E.Br.	Iridaceae
	1310	*Babiana falcata* G.J.Lewis	Iridaceae
	1310	*Babiana hypogea* Burch.	Iridaceae
E	1310	*Babiana longicollis* Dinter	Iridaceae
	1310	*Babiana namaquensis* Baker	Iridaceae
	1311	*Gladiolus dalenii* Van Geel	Iridaceae
	1311	*Gladiolus magnificus* (Harms) Goldblatt	Iridaceae
	1311	*Gladiolus orchidiflorus* Andrews	Iridaceae
	1311	*Gladiolus permeabilis* D.Delaroche subsp. *edulis* (Burch. ex Ker Gawl.) Oberm.	Iridaceae
	1311	*Gladiolus saccatus* (Klatt) Goldblatt & M.P.de Vos	Iridaceae
E	1314	*Lapeirousia avasmontana* Dinter	Iridaceae
	1314	*Lapeirousia bainesii* Baker	Iridaceae
	1314	*Lapeirousia barklyi* Baker	Iridaceae
	1314	*Lapeirousia coerulea* Schinz	Iridaceae
	1314	*Lapeirousia dolomitica* Dinter subsp. *dolomitica*	Iridaceae
E	1314	*Lapeirousia gracilis* Vaupel	Iridaceae

1314	*Lapeirousia littoralis* Baker subsp. *caudata* (Schinz) Goldblatt	Iridaceae
1314	*Lapeirousia littoralis* Baker subsp. *littoralis*	Iridaceae
1314	*Lapeirousia odoratissima* Baker	Iridaceae
1314	*Lapeirousia otaviensis* R.C.Foster	Iridaceae
1314	*Lapeirousia plicata* (Jacq.) Diels subsp. *longifolia* Goldblatt	Iridaceae
1314	*Lapeirousia plicata* (Jacq.) Diels subsp. *plicata*	Iridaceae
1314	*Lapeirousia rivularis* Wanntorp	Iridaceae
1314	*Lapeirousia schimperi* (Asch. & Klatt) Milne-Redh.	Iridaceae
1316	*Freesia viridis* (Aiton) Goldblatt & J.C.Manning	Iridaceae
1316	*Xenoscapa fistulosa* (Spreng. ex Klatt) Goldblatt & J.C.Manning	Iridaceae
1346	*Siphonochilus kirkii* (Hook.f.) B.L. Burtt	Zingiberaceae
1408	*Holothrix filicornis* Immelman & Schelpe	Orchidaceae
1408	*Holothrix villosa* Lindl.	Orchidaceae
1416	*Bartholina etheliae* Bolus	Orchidaceae
1422	*Bonatea steudneri* (Rchb. f.) T.Durand & Schinz	Orchidaceae
1422	*Habenaria armatissima* Rchb.f.	Orchidaceae
1422	*Habenaria epipactidea* Rchb.f.	Orchidaceae
1422	*Habenaria rautaneniana* Kraenzl.	Orchidaceae
1422	*Habenaria subarmata* Rchb.f.	Orchidaceae
1568	*Ansellia africana* Lindl.	Orchidaceae
1648	*Eulophia fridericii* (Rchb.f.) A.V.Hall	Orchidaceae
1648	*Eulophia hereroensis* Schltr.	Orchidaceae
1648	*Eulophia leachii* Greatrex ex A.V.Hall	Orchidaceae
1648	*Eulophia livingstoniana* (Rchb.f.) Summerh.	Orchidaceae
1648	*Eulophia schweinfurthii* Kraenzl.	Orchidaceae
1648	*Eulophia speciosa* (R.Br. ex Lindl.) Bolus	Orchidaceae
1648	*Eulophia walleri* Kraenzl.	Orchidaceae
9900100	*Ischaemum afrum* (J.F.Gmel.) Dandy	Poaceae
9900100	*Ischaemum fasciculatum* Brongn.	Poaceae
9900110	*Thelepogon elegans* Roem. & Schult.	Poaceae
9900130	*Sehima ischaemoides* Forssk.	Poaceae
9900160	*Loudetiopsis glabrata* (K.Schum.) Conert	Poaceae
9900160	*Vossia cuspidata* (Roxb.) Griff.	Poaceae
9900170	*Urelytrum agropyroides* (Hack.) Hack	Poaceae
9900210	*Hemarthria altissima* (Poir.) Stapf & C.E.Hubb.	Poaceae
9900280	*Elionurus muticus* (Spreng.) Kunth	Poaceae
9900280	*Elionurus tripsacoides* Willd.	Poaceae
9900310	*Rottboellia cochinchinensis* (Lour.) Clayton	Poaceae
9900340	*Rhytachne robusta* Stapf	Poaceae
9900370	*Imperata cylindrica* (L.) Raeusch.	Poaceae
9900380	*Miscanthus junceus* (Stapf) Pilg.	Poaceae
9900460	*Sorghum bicolor* (L.) Moench subsp. *arundinaceum* (Desv.) De Wet & Harlan	Poaceae
9900460	*Sorghum versicolor* Andersson	Poaceae
9900461	*Sorghastrum friesii* (Pilg.) Pilg.	Poaceae
9900490	*Vetiveria nigritana* (Benth.) Stapf	Poaceae
9900530	*Eulalia aurea* (Bory) Kunth	Poaceae
9900630	*Bothriochloa bladhii* (Retz.) S.T.Blake	Poaceae
9900630	*Bothriochloa insculpta* (A.Rich.) A.Camus	Poaceae
9900630	*Bothriochloa radicans* (Lehm.) A.Camus	Poaceae
9900640	*Dichanthium annulatum* (Forssk.) Stapf var. *papillosum* (A.Rich.) De Wet & Harlan	Poaceae
9900680	*Schizachyrium exile* (Hochst.) Pilg.	Poaceae
9900680	*Schizachyrium jeffreysii* (Hack.) Stapf	Poaceae
9900680	*Schizachyrium sanguineum* (Retz.) Alston	Poaceae
9900680	*Schizachyrium ursulus* Stapf	Poaceae
9900710	*Andropogon brazzae* Franch.	Poaceae
9900710	*Andropogon chinensis* (Nees) Merr.	Poaceae
9900710	*Andropogon eucomus* Nees	Poaceae
9900710	*Andropogon gayanus* Kunth var. *polycladus*	Poaceae
9900710	*Andropogon huillensis* Rendle	Poaceae
9900710	*Andropogon schirensis* A.Rich.	Poaceae
9900720	*Cymbopogon caesius* (Hook. & Arn.) Stapf	Poaceae
9900720	*Cymbopogon dieterlenii* Stapf ex E.Phillips	Poaceae
9900720	*Cymbopogon pospischilii* (K.Schum.) Hubb.	Poaceae
9900730	*Hyparrhenia anamesa* Clayton	Poaceae
9900730	*Hyparrhenia dichroa* (Steud.) Stapf	Poaceae
9900730	*Hyparrhenia dregeana* (Nees) Stapf	Poaceae
9900730	*Hyparrhenia filipendula* (Hochst.) Stapf var. *filipendula*	Poaceae
9900730	*Hyparrhenia filipendula* (Hochst.) Stapf var. *pilosa* (Hochst.) Stapf	Poaceae
9900730	*Hyparrhenia hirta* (L.) Stapf	Poaceae

9900730	*Hyparrhenia poecilotricha* (Hack.) Stapf	Poaceae
9900730	*Hyparrhenia rufa* (Nees) Stapf	Poaceae
9900730	*Hyperthelia dissoluta* (Nees ex Steud.) Clayton	Poaceae
9900750	*Monocymbium ceresiiforme* (Nees) Stapf	Poaceae
9900780	*Trachypogon spicatus* (L.f.) Kuntze	Poaceae
9900800	*Heteropogon contortus* (L.) Roem. & Schult.	Poaceae
9900800	*Heteropogon melanocarpus* (Elliott) Benth.	Poaceae
9900801	*Elymandra grallata* (Stapf) Clayton	Poaceae
9900810	*Diheteropogon amplectens* (Nees) Clayton	Poaceae
9900810	*Diheteropogon filifolius* (Nees) Clayton	Poaceae
9900830	*Themeda triandra* Forrsk.	Poaceae
9900880	*Megaloprotachne albescens* C.E.Hubb.	Poaceae
9900890	*Digitaria acuminatissima* Stapf	Poaceae
9900890	*Digitaria brazzae* (Franch.) Stapf	Poaceae
9900890	*Digitaria comifera* Pilg.	Poaceae
9900890	*Digitaria debilis* (Desf.) Willd.	Poaceae
9900890	*Digitaria diagonalis* (Nees) Stapf	Poaceae
9900890	*Digitaria eriantha* Steud.	Poaceae
9900890	*Digitaria eylesii* C.E.Hubb.	Poaceae
9900890	*Digitaria gayana* (Kunth) Stapf	Poaceae
9900890	*Digitaria gazensis* Rendle	Poaceae
9900890	*Digitaria longiflora* (Retz.) Pers.	Poaceae
9900890	*Digitaria maniculata* Stapf	Poaceae
9900890	*Digitaria milanjiana* (Rendle) Stapf	Poaceae
9900890	*Digitaria monodactyla* (Nees) Stapf	Poaceae
9900890	*Digitaria perrottetii* (Kunth) Stapf	Poaceae
9900890	*Digitaria remotigluma* (De Winter) Clayton	Poaceae
9900890	*Digitaria scalarum* (Schweinf.) Chiov.	Poaceae
9900890	*Digitaria seriata* Stapf	Poaceae
9900890	*Digitaria ternata* (A.Rich) Stapf	Poaceae
9900890	*Digitaria tricholaenoides* Stapf	Poaceae
9900890	*Digitaria velutina* (Forssk.) P.Beauv.	Poaceae
9900890	*Tarigidia aequiglumis* (Gooss.) Stent	Poaceae
9900940	*Alloteropsis cimicina* (L.) Stapf	Poaceae
9901020	*Eriochloa fatmensis* (Hochst. & Steud.) Clayton	Poaceae
9901021	*Entolasia imbricata* Stapf	Poaceae
9901030	*Leucophrys mesocoma* (Nees) Rendle	Poaceae
9901040	*Brachiaria arrecta* (T.Durand & Schinz) Stent	Poaceae
9901040	*Brachiaria brizantha* (A.Rich.) Stapf	Poaceae
9901040	*Brachiaria deflexa* (Schumach.) C.E.Hubb. ex Robyns	Poaceae
9901040	*Brachiaria dictyoneura* (Fig. & De Not.) Stapf	Poaceae
9901040	*Brachiaria dura* Stapf var. *dura*	Poaceae
9901040	*Brachiaria eruciformis* (Sm.) Griseb.	Poaceae
9901040	*Brachiaria glomerata* (Hack.) A.Camus	Poaceae
9901040	*Brachiaria grossa* Stapf	Poaceae
9901040	*Brachiaria humidicola* (Rendle) Schweick.	Poaceae
9901040	*Brachiaria malacodes* (Mez & K.Schum.) Scholz	Poaceae
9901040	*Brachiaria marlothii* (Hack.) Stent	Poaceae
9901040	*Brachiaria nigropedata* (Ficalho & Hiern) Stapf	Poaceae
9901040	*Brachiaria psammophila* (Welw. ex Rendle) Launert	Poaceae
9901040	*Brachiaria schoenfelderi* C.E.Hubb. & Schweick.	Poaceae
9901040	*Brachiaria serrata* (Thunb.) Stapf	Poaceae
9901040	*Brachiaria xantholeuca* (Schinz) Stapf	Poaceae
9901070	*Paspalum distichum* L.	Poaceae
9901070	*Paspalum scrobiculatum* L.	Poaceae
9901070	*Paspalum vaginatum* Sw. subsp. *nanum*	Poaceae
9901080	*Stenotaphrum secundatum* (Walter) Kuntze	Poaceae
9901090	*Paspalidium obtusifolium* (Delile) N.D.Simpson	Poaceae
9901100	*Urochloa brachyura* (Hack.) Stapf	Poaceae
9901100	*Urochloa oligotricha* (Fig. & De Not.) Henr.	Poaceae
9901100	*Urochloa panicoides* Beauv.	Poaceae
9901100	*Urochloa stolonifera* (Goossens) Chippend.	Poaceae
9901100	*Urochloa trichopus* (Hochst.) Stapf	Poaceae
9901120	*Echinochloa colona* (L.) Link	Poaceae
9901120	*Echinochloa holubii* (Stapf) Stapf	Poaceae
9901120	*Echinochloa jubata* Stapf	Poaceae
9901120	*Echinochloa pyramidalis* (Lam.) Hitchc. & Chase	Poaceae
9901120	*Echinochloa stagnina* (Retz.) P.Beauv.	Poaceae
9901121	*Acroceras macrum* Stapf	Poaceae

	9901140	*Oryzidium barnardii* C.E.Hubb. & Schweick.	Poaceae
	9901150	*Oplismenus burmannii* (Retz.) P.Beauv.	Poaceae
	9901160	*Panicum arbusculum* Mez	Poaceae
	9901160	*Panicum arcurameum* Stapf	Poaceae
	9901160	*Panicum bechuanense* Bremek. & Oberm.	Poaceae
	9901160	*Panicum coloratum* L. var. *coloratum*	Poaceae
	9901160	*Panicum fluviicola* Steud.	Poaceae
	9901160	*Panicum gilvum* Launert	Poaceae
	9901160	*Panicum heterostachyum* Hack.	Poaceae
	9901160	*Panicum impeditum* Launert	Poaceae
	9901160	*Panicum kalaharense* Mez	Poaceae
	9901160	*Panicum lanipes* Mez	Poaceae
	9901160	*Panicum maximum* Jacq.	Poaceae
	9901160	*Panicum merkeri* Mez	Poaceae
	9901160	*Panicum novemnerve* Stapf	Poaceae
	9901160	*Panicum pansum* Rendle	Poaceae
E	9901160	*Panicum pearsonii* F.Bolus	Poaceae
	9901160	*Panicum pilgerianum* (Schweick.) Clayton	Poaceae
	9901160	*Panicum repens* L.	Poaceae
	9901160	*Panicum repentellum* Napper	Poaceae
	9901160	*Panicum simulans* Smook	Poaceae
	9901160	*Panicum stapfianum* Fourc.	Poaceae
	9901160	*Panicum subalbidum* Kunth	Poaceae
	9901160	*Panicum trichonode* Launert & Renvoize	Poaceae
	9901240	*Sacciolepis africana* C.E.Hubb. & Snowden	Poaceae
	9901240	*Sacciolepis rigens* (Mez) A.Chev.	Poaceae
	9901240	*Sacciolepis spiciformis* (A.Rich.) Stapf	Poaceae
	9901240	*Sacciolepis typhura* (Stapf) Stapf	Poaceae
	9901280	*Setaria appendiculata* (Hack.) Stapf	Poaceae
E	9901280	*Setaria finita* Launert	Poaceae
	9901280	*Setaria geminata* (Forssk.) Veldkamp	Poaceae
	9901280	*Setaria homonyma* (Steud.) Chiov.	Poaceae
	9901280	*Setaria incrassata* (Hochst.) Hack.	Poaceae
	9901280	*Setaria pumila* (Poir.) Roem. & Schult.	Poaceae
	9901280	*Setaria sagittifolia* (A.Rich.) Walp.	Poaceae
	9901280	*Setaria spacelata* (Schumach.) Moss var. *sericea*	Poaceae
	9901280	*Setaria sphacelata* (Schumach.) Moss var. *sphacelata*	Poaceae
	9901280	*Setaria sphacelata* (Schumach.) Moss var. *torta*	Poaceae
	9901280	*Setaria verticillata* (L.) Beauv.	Poaceae
	9901330	*Tricholaena capensis* (Licht. ex Roem. & Schult.) Nees subsp. *arenaria* (Nees) Zizka	Poaceae
	9901330	*Tricholaena capensis* (Licht. ex Roem. & Schult.) Nees subsp. *capensis*	Poaceae
	9901330	*Tricholaena monachne* (Trin.) Stapf ex C.E.Hubb.	Poaceae
	9901340	*Melinis ambigua* Hack. subsp. *ambigua*	Poaceae
	9901340	*Melinis kallimorpha* (Clayton) Zizka	Poaceae
	9901340	*Melinis longiseta* (A.Rich.) Zizka subsp. *bellespicata* (Rendle) Zizka	Poaceae
	9901340	*Melinis longiseta* (A.Rich.) Zizka subsp. *longiseta*	Poaceae
	9901340	*Melinis nerviglumis* (Franch.) Zizka	Poaceae
	9901340	*Melinis repens* (Willd.) Zizka subsp. *grandiflora* (Hochst.) Zizka	Poaceae
	9901340	*Melinis repens* (Willd.) Zizka subsp. *repens*	Poaceae
	9901340	*Melinis subglabra* Mez	Poaceae
	9901340	*Melinis tenuissima* Stapf	Poaceae
	9901380	*Anthephora argentea* Goossens	Poaceae
	9901380	*Anthephora pubescens* Nees	Poaceae
	9901380	*Anthephora ramosa* Goossens	Poaceae
	9901380	*Anthephora schinzii* Hack.	Poaceae
E	9901390	*Pennisetum foermeranum* Leeke	Poaceae
	9901390	*Pennisetum glaucocladum* Stapf & C.E.Hubb.	Poaceae
	9901390	*Pennisetum mezianum* Leeke	Poaceae
	9901390	*Pennisetum thunbergii* Kunth	Poaceae
	9901400	*Cenchrus biflorus* Roxb.	Poaceae
	9901400	*Cenchrus ciliaris* L.	Poaceae
	9901580	*Oryza longistaminata* A.Chev. & Roehr.	Poaceae
	9901590	*Leersia friesii* Melderis	Poaceae
	9901590	*Leersia hexandra* Sw.	Poaceae
	9901590	*Leersia tisserantii* (A.Chev.) Launert	Poaceae
	9901600	*Ehrharta brevifolia* Schrad. var. *brevifolia*	Poaceae
	9901600	*Ehrharta calycina* Sm.	Poaceae
	9901600	*Ehrharta delicatula* (Nees) Stapf	Poaceae
	9901600	*Ehrharta longiflora* Sm.	Poaceae

	9901600	*Ehrharta pusilla* Nees ex Trin.	Poaceae
	9901600	*Ehrharta thunbergii* Gibbs-Russ.	Poaceae
	9901600	*Ehrharta triandra* Nees ex Trin.	Poaceae
	9901740	*Tristachya biseriata* Hack.	Poaceae
	9901740	*Tristachya lualabaensis* (De Wild.) Phipps	Poaceae
	9901740	*Tristachya nodiglumis* K.Schum.	Poaceae
	9901740	*Tristachya superba* Schweinf. & Asch.	Poaceae
	9901750	*Trichopteryx dregeana* Nees	Poaceae
	9901751	*Loudetia lanata* (Stent & J.M.Rattray) C.E.Hubb.	Poaceae
	9901770	*Danthoniopsis dinteri* (Pilg.) C.E.Hubb.	Poaceae
	9901770	*Danthoniopsis lignosa* C.E.Hubb.	Poaceae
	9901770	*Danthoniopsis ramosa* (Stapf) Clayton	Poaceae
	9902035	*Centropodia glauca* (Nees) Cope	Poaceae
	9902035	*Centropodia mossamedensis* (Rendle) Cope	Poaceae
E	9902043	*Merxmuellera rangei* (Pilg.) Conert	Poaceae
	9902043	*Merxmuellera stricta* (Schrad.) Conert	Poaceae
	9902044	*Karroochloa schismoides* (Stapf & Conert) Conert & Türpe	Poaceae
	9902045	*Dregeochloa pumila* (Nees) Conert	Poaceae
	9902050	*Pentaschistis airoides* (Nees) Stapf subsp. *airoides*	Poaceae
	9902060	*Chaetobromus dregeanus* Nees	Poaceae
	9902060	*Chaetobromus involucratus* (Schrad.) Nees	Poaceae
	9902140	*Phragmites australis* (Cav.) Steud.	Poaceae
	9902140	*Phragmites mauritianus* Kunth	Poaceae
	9902430	*Agrostis lachnantha* Nees var. *lachnantha*	Poaceae
	9902440	*Polypogon griquensis* (Stapf) Gibbs-Russ.	Poaceae
	9902611	*Stipagrostis amabilis* (Schweick.) De Winter	Poaceae
	9902611	*Stipagrostis anomala* De Winter	Poaceae
	9902611	*Stipagrostis brevifolia* (Nees) De Winter	Poaceae
	9902611	*Stipagrostis ciliata* (Desf.) De Winter var. *capensis* (Trin. & Rupr.) De Winter	Poaceae
E	9902611	*Stipagrostis damarensis* (Mez) De Winter	Poaceae
	9902611	*Stipagrostis dinteri* (Hack.) De Winter	Poaceae
	9902611	*Stipagrostis dregeana* Nees	Poaceae
	9902611	*Stipagrostis fastigiata* (Hack.) De Winter	Poaceae
E	9902611	*Stipagrostis garubensis* (Pilg.) De Winter	Poaceae
	9902611	*Stipagrostis geminifolia* Nees	Poaceae
	9902611	*Stipagrostis giessii* Kers	Poaceae
E	9902611	*Stipagrostis gonatostachys* (Pilg.) De Winter	Poaceae
E	9902611	*Stipagrostis hermannii* (Mez) De Winter	Poaceae
	9902611	*Stipagrostis hirtigluma* (Trin. & Rupr.) De Winter subsp. *hirtigluma*	Poaceae
	9902611	*Stipagrostis hirtigluma* (Trin. & Rupr.) De Winter subsp. *patula* (Hack.) De Winter	Poaceae
	9902611	*Stipagrostis hirtigluma* (Trin. & Rupr.) De Winter subsp. *pearsonii* (Henr.) De Winter	Poaceae
	9902611	*Stipagrostis hochstetteriana* (L.C.Beck ex Hack.) De Winter var. *hochstetteriana*	Poaceae
	9902611	*Stipagrostis hochstetteriana* (L.C.Beck ex Hack.) De Winter var. *secalina* (Henr.) De Winter	Poaceae
E	9902611	*Stipagrostis lanipes* (Mez) De Winter	Poaceae
	9902611	*Stipagrostis lutescens* (Nees) De Winter var. *lutescens*	Poaceae
	9902611	*Stipagrostis lutescens* (Nees) De Winter var. *marlothii* (Hack.) De Winter	Poaceae
	9902611	*Stipagrostis namaquensis* (Nees) De Winter	Poaceae
E	9902611	*Stipagrostis namibensis* De Winter	Poaceae
	9902611	*Stipagrostis obtusa* (Delile) Nees	Poaceae
E	9902611	*Stipagrostis pellytronis* De Winter	Poaceae
E	9902611	*Stipagrostis ramulosa* De Winter	Poaceae
E	9902611	*Stipagrostis sabulicola* (Pilg.) De Winter	Poaceae
	9902611	*Stipagrostis schaeferi* (Mez) De Winter	Poaceae
E	9902611	*Stipagrostis seelyae* De Winter	Poaceae
	9902611	*Stipagrostis subacaulis* (Nees) De Winter	Poaceae
	9902611	*Stipagrostis uniplumis* (Licht.) De Winter var. *intermedia* (Schweick.) De Winter	Poaceae
	9902611	*Stipagrostis uniplumis* (Licht.) De Winter var. *uniplumis*	Poaceae
	9902620	*Aristida adscensionis* L.	Poaceae
	9902620	*Aristida congesta* Roem. & Schult. subsp. *congesta*	Poaceae
	9902620	*Aristida dewinteri* Giess	Poaceae
	9902620	*Aristida effusa* Henrard	Poaceae
	9902620	*Aristida engleri* Mez var. *engleri*	Poaceae
	9902620	*Aristida engleri* Mez var. *ramosissima* De Winter	Poaceae
	9902620	*Aristida hordeacea* Kunth	Poaceae
	9902620	*Aristida hubbardiana* Schweick.	Poaceae
	9902620	*Aristida junciformis* Trin. & Rupr. subsp. *junciformis*	Poaceae
	9902620	*Aristida meridionalis* Henrard	Poaceae
	9902620	*Aristida mollissima* Pilg. subsp. *mollissima*	Poaceae
	9902620	*Aristida parvula* (Nees) De Winter	Poaceae

	9902620	*Aristida pilgeri* Henrard	Poaceae
	9902620	*Aristida rhiniochloa* Hochst.	Poaceae
	9902620	*Aristida scabrivalvis* Hack. subsp. *contracta* (De Winter) Melderis	Poaceae
	9902620	*Aristida scabrivalvis* Hack. subsp. *scabrivalvis*	Poaceae
	9902620	*Aristida stipitata* Hack. subsp. *graciliflora* (Pilg.) Melderis	Poaceae
	9902620	*Aristida stipitata* Hack. subsp. *robusta* (Stent & J.M.Rattray) Melderis	Poaceae
	9902620	*Aristida stipitata* Hack. subsp. *spicata* (De Winter) Melderis	Poaceae
	9902620	*Aristida stipitata* Hack. subsp. *stipitata*	Poaceae
	9902620	*Aristida stipoides* Lam.	Poaceae
	9902620	*Aristida vestita* Thunb.	Poaceae
	9902622	*Sartidia angolensis* (C.E.Hubb.) De Winter	Poaceae
	9902622	*Sartidia juncunda* (Schweick.) De Winter	Poaceae
	9902740	*Tragus berteronianus* Schult.	Poaceae
	9902740	*Tragus pedunculatus* Pilg.	Poaceae
	9902740	*Tragus racemosus* (L.) All.	Poaceae
	9902750	*Monelytrum luederitzianum* Hack.	Poaceae
	9902800	*Perotis leptopus* Pilg.	Poaceae
	9902800	*Perotis patens* Gand.	Poaceae
	9902800	*Perotis vaginata* Hack.	Poaceae
	9902830	*Sporobolus acinifolius* Stapf	Poaceae
	9902830	*Sporobolus africanus* (Poir.) Robyns & Tournay	Poaceae
	9902830	*Sporobolus albicans* Nees	Poaceae
	9902830	*Sporobolus conrathii* Chiov.	Poaceae
	9902830	*Sporobolus consimilis* Fresen.	Poaceae
	9902830	*Sporobolus coromandelianus* (Retz.) Kunth	Poaceae
	9902830	*Sporobolus engleri* Pilg.	Poaceae
	9902830	*Sporobolus festivus* A.Rich.	Poaceae
	9902830	*Sporobolus fimbriatus* (Trin.) Nees	Poaceae
	9902830	*Sporobolus ioclados* (Trin.) Nees	Poaceae
	9902830	*Sporobolus kentrophyllus* (K.Schum.) Clayton	Poaceae
	9902830	*Sporobolus macranthelus* Chiov.	Poaceae
	9902830	*Sporobolus natalensis* (Steud.) Durand & Schinz	Poaceae
E	9902830	*Sporobolus nebulosus* Hack.	Poaceae
	9902830	*Sporobolus nervosus* Hochst.	Poaceae
	9902830	*Sporobolus panicoides* A.Rich.	Poaceae
	9902830	*Sporobolus pellucidus* Hochst.	Poaceae
	9902830	*Sporobolus pyramidalis* Beauv.	Poaceae
	9902830	*Sporobolus rangei* Pilg.	Poaceae
	9902830	*Sporobolus salsus* Mez	Poaceae
	9902830	*Sporobolus spicatus* (J.Vahl) Kunth	Poaceae
	9902830	*Sporobolus stapfianus* Gand.	Poaceae
	9902830	*Sporobolus virginicus* (L.) Kunth	Poaceae
	9902830	*Sporobolus welwitschii* Rendle	Poaceae
	9902852	*Diandrochloa namaquensis* (Nees) De Winter	Poaceae
	9902852	*Diandrochloa pusilla* (Hack.) De Winter	Poaceae
	9902860	*Eragrostis annulata* Rendle ex Scott-Elliot	Poaceae
	9902860	*Eragrostis arenicola* C.E.Hubb.	Poaceae
E	9902860	*Eragrostis aristata* De Winter	Poaceae
	9902860	*Eragrostis aspera* (Jacq.) Nees	Poaceae
	9902860	*Eragrostis bergiana* (Kunth) Trin.	Poaceae
	9902860	*Eragrostis bicolor* Nees	Poaceae
	9902860	*Eragrostis biflora* Hack. ex Schinz	Poaceae
	9902860	*Eragrostis brizantha* Nees	Poaceae
	9902860	*Eragrostis chapelieri* (Kunth) Nees	Poaceae
	9902860	*Eragrostis cilianensis* (All.) F.T.Hubb.	Poaceae
	9902860	*Eragrostis cimicina* Launert	Poaceae
	9902860	*Eragrostis crassinervis* Hack.	Poaceae
	9902860	*Eragrostis curvula* (Schrad.) Nees	Poaceae
	9902860	*Eragrostis cylindriflora* Hochst.	Poaceae
	9902860	*Eragrostis dinteri* Stapf	Poaceae
	9902860	*Eragrostis echinochloidea* Stapf	Poaceae
	9902860	*Eragrostis gangetica* (Roxb.) Steud.	Poaceae
	9902860	*Eragrostis glandulosipedata* De Winter	Poaceae
	9902860	*Eragrostis gummifera* Nees	Poaceae
	9902860	*Eragrostis habrantha* Rendle	Poaceae
	9902860	*Eragrostis heteromera* Stapf	Poaceae
	9902860	*Eragrostis homomalla* Nees	Poaceae
	9902860	*Eragrostis inamoena* K.Schum.	Poaceae
	9902860	*Eragrostis jeffreysii* Hack.	Poaceae

E	9902860	*Eragrostis kingesii* De Winter	Poaceae
	9902860	*Eragrostis laevissima* Hack.	Poaceae
	9902860	*Eragrostis lappula* Nees	Poaceae
	9902860	*Eragrostis leersiiformis* Launert	Poaceae
	9902860	*Eragrostis lehmanniana* Nees var. *chaunantha* (Pilg.) De Winter	Poaceae
	9902860	*Eragrostis lehmanniana* Nees var. *lehmanniana*	Poaceae
	9902860	*Eragrostis macrochlamys* Pilg. var. *macrochlamys*	Poaceae
	9902860	*Eragrostis membranacea* Hack. ex Schinz	Poaceae
	9902860	*Eragrostis micrantha* Hack.	Poaceae
	9902860	*Eragrostis nindensis* Ficalho & Hiern	Poaceae
E	9902860	*Eragrostis omahakensis* De Winter	Poaceae
	9902860	*Eragrostis pallens* Hack.	Poaceae
	9902860	*Eragrostis patens* Oliv.	Poaceae
	9902860	*Eragrostis pilgeriana* Dinter ex Pilg.	Poaceae
	9902860	*Eragrostis porosa* Nees	Poaceae
	9902860	*Eragrostis procumbens* Nees	Poaceae
E	9902860	*Eragrostis pygmaea* De Winter	Poaceae
	9902860	*Eragrostis racemosa* (Thunb.) Steud.	Poaceae
	9902860	*Eragrostis rigidior* Pilg.	Poaceae
	9902860	*Eragrostis rogersii* C.E.Hubb.	Poaceae
	9902860	*Eragrostis rotifer* Rendle	Poaceae
E	9902860	*Eragrostis sabinae* Launert	Poaceae
	9902860	*Eragrostis sarmentosa* (Thunb.) Trin.	Poaceae
	9902860	*Eragrostis sclerantha* Nees subsp. *villosipes* (Jedwabn.) Launert	Poaceae
E	9902860	*Eragrostis scopelophila* Pilg.	Poaceae
	9902860	*Eragrostis stapfii* De Winter	Poaceae
E	9902860	*Eragrostis stenothyrsa* Pilg.	Poaceae
	9902860	*Eragrostis superba* Peyr.	Poaceae
	9902860	*Eragrostis trichophora* Coss. & Durieu	Poaceae
	9902860	*Eragrostis truncata* Hack.	Poaceae
	9902860	*Eragrostis vacillans* Rendle	Poaceae
	9902860	*Eragrostis virescens* Presl	Poaceae
	9902860	*Eragrostis viscosa* (Retz.) Trin.	Poaceae
E	9902860	*Eragrostis walteri* Pilg.	Poaceae
	9902865	*Cladoraphis cyperoides* (Thunb.) S.M.Phillips	Poaceae
	9902865	*Cladoraphis spinosa* (L.f.) S.M.Phillips	Poaceae
	9902930	*Spartina maritima* (Curtis) Fernald	Poaceae
	9902940	*Microchloa caffra* Nees	Poaceae
	9902940	*Microchloa indica* (L.f.) P.Beauv.	Poaceae
	9902940	*Microchloa kunthii* Desv.	Poaceae
	9902970	*Brachyachne patentiflora* (Stent & J.M.Rattray) C.E.Hubb.	Poaceae
	9903000	*Enteropogon macrostachyus* (A.Rich.) Benth.	Poaceae
	9903000	*Enteropogon prieurii* (Kunth) Clayton	Poaceae
	9903000	*Enteropogon rupestris* (J.A.Schmidt) A.Chev.	Poaceae
	9903010	*Chloris flabellata* (Hack.) Launert	Poaceae
	9903010	*Chloris gayana* Kunth	Poaceae
	9903010	*Chloris pycnothrix* Trin.	Poaceae
	9903010	*Chloris virgata* Sw.	Poaceae
	9903020	*Eustachys paspaloides* (Vahl) Lanza & Mattei	Poaceae
	9903090	*Craspedorhachis africana* Benth.	Poaceae
	9903090	*Craspedorhachis rhodesiana* Rendle	Poaceae
	9903100	*Willkommia annua* Hack.	Poaceae
	9903100	*Willkommia newtonii* Hack.	Poaceae
	9903100	*Willkommia sarmentosa* Hack.	Poaceae
	9903180	*Tripogon minimus* (A.Rich.) Steud.	Poaceae
	9903200	*Oropetium capense* Stapf	Poaceae
	9903220	*Tetrapogon tenellus* (Roxb.) Chiov.	Poaceae
	9903280	*Entoplocamia aristulata* (Hack. & Rendle) Stapf	Poaceae
	9903300	*Dinebra retroflexa* (Vahl) Panz. var. *condensata* S.M.Phillips	Poaceae
	9903310	*Eleusine coracana* (L.) Gaertn. subsp. *africana* (Kenn.-O'Byrne) Hilu & De Wet	Poaceae
	9903311	*Acrachne racemosa* (Roem. & Schult.) Ohwi	Poaceae
	9903320	*Dactyloctenium aegyptium* (L.) Willd.	Poaceae
	9903320	*Dactyloctenium australe* Steud.	Poaceae
	9903320	*Dactyloctenium giganteum* Fisher & Schweick.	Poaceae
	9903330	*Leptochloa eleusine* (Nees) T.A.Cope & N.Snow	Poaceae
	9903330	*Leptochloa fusca* (L.) Kunth subsp. *fusca*	Poaceae
	9903330	*Leptochloa gigantea* (Launert) T.A.Cope & N.Snow	Poaceae
	9903330	*Leptochloa uniflora* A.Rich.	Poaceae
	9903340	*Pogonarthria fleckii* (Hack.) Hack.	Poaceae

E	9903340	*Pogonarthria leiarthra* Hack.	Poaceae
	9903340	*Pogonarthria squarrosa* (Roem. & Schult.) Pilg.	Poaceae
	9903360	*Coelachyrum yemenicum* (Schweinf.) S.M.Phillips	Poaceae
	9903430	*Leptocarydion vulpiastrum* (De Not.) Stapf	Poaceae
	9903442	*Bewsia biflora* (Hack.) Goossens	Poaceae
	9903451	*Odyssea paucinervis* (Nees) Stapf	Poaceae
	9903500	*Triraphis pumilio* R.Br.	Poaceae
	9903500	*Triraphis purpurea* Hack.	Poaceae
	9903500	*Triraphis ramosissima* Hack.	Poaceae
	9903500	*Triraphis schinzii* Hack.	Poaceae
	9903530	*Trichoneura eleusinoides* (Rendle) E.Ekman	Poaceae
	9903530	*Trichoneura grandiglumis* (Nees) E.Ekman	Poaceae
	9903570	*Enneapogon cenchroides* (Roem. & Schult.) C.E.Hubb.	Poaceae
	9903570	*Enneapogon desvauxii* P.Beauv.	Poaceae
	9903570	*Enneapogon scaber* Lehm. var. *scaber*	Poaceae
	9903570	*Enneapogon scaber* Lehm. var. b = De Winter & Hardy 8051	Poaceae
	9903570	*Enneapogon scoparius* Stapf	Poaceae
	9903610	*Schmidtia kalahariensis* Stent	Poaceae
	9903610	*Schmidtia pappophoroides* Steud.	Poaceae
E	9903611	*Kaokochloa nigrirostris* De Winter	Poaceae
	9903700	*Elytrophorus globularis* Hack.	Poaceae
	9903700	*Elytrophorus spicatus* (Willd.) A.Camus	Poaceae
	9903710	*Fingerhuthia africana* Lehm.	Poaceae
	9903710	*Fingerhuthia sesleriiformis* Nees	Poaceae
	9904021	*Tribolium utriculosum* (Nees) Renvoize	Poaceae
	9904050	*Schismus barbatus* (Loefl. ex L.) Thell.	Poaceae
	9904050	*Schismus inermis* (Stapf) C.E.Hubb.	Poaceae
	9904150	*Puccinellia angusta* (Nees) C.A.Sm. & C..E.Hubb.	Poaceae
	9904280	*Bromus pectinatus* Thunb.	Poaceae

Dicotyledons

Number	Species	Family
1873	*Salix mucronata* Thunb. subsp. *capensis* (Thunb.) Immelman	Salicaceae
1873	*Salix mucronata* Thunb. subsp. *mucronata*	Salicaceae
1874	*Morella serrata* (Lam.) Killick	Myricaceae
1894	*Trema orientalis* (L.) Blume	Ulmaceae
1961	*Ficus capreifolia* Delile	Moraceae
1961	*Ficus cordata* Thunb. subsp. *cordata*	Moraceae
1961	*Ficus fischeri* Warb. ex Mildbr. & Burret	Moraceae
1961	*Ficus glumosa* Delile	Moraceae
1961	*Ficus ilicina* (Sond.) Miq.	Moraceae
1961	*Ficus ingens* (Miq.) Miq.	Moraceae
1961	*Ficus pygmaea* Welw. ex Hiern	Moraceae
1961	*Ficus sycomorus* L.	Moraceae
1961	*Ficus thonningii* Blume	Moraceae
1961	*Ficus verruculosa* Warb.	Moraceae
1979	*Obetia carruthersiana* (Hiern) Rendle	Urticaceae
1992	*Pouzolzia mixta* Solms	Urticaceae
2007	*Parietaria debilis* G. Forst.	Urticaceae
2012	*Forsskaolea candida* L.f.	Urticaceae
2012	*Forsskaolea hereroensis* Schinz	Urticaceae
2012	*Forsskaolea viridis* Ehrenb. ex Webb	Urticaceae
2014	*Didymodoxa caffra* (Thunb.) Friis & Wilmot-Dear	Urticaceae
2014	*Didymodoxa capensis* (L.f.) Friis & Wilmot-Dear var. *capensis*	Urticaceae
2035	*Protea gaguedi* J.F.Gmel.	Proteaceae
E 2074	*Agelanthus discolor* (Schinz) Balle	Loranthaceae
2074	*Agelanthus pungu* (De Wild.) Polhill & Wiens	Loranthaceae
2074	*Agelanthus terminaliae* (Engl. & Gilg) Polhill & Wiens	Loranthaceae
2074	*Erianthemum ngamicum* (Sprague) Danser	Loranthaceae
2074	*Moquinella rubra* (A.Spreng.) Balle	Loranthaceae
2074	*Oncocalyx welwitschii* (Engl.) Polhill & Wiens	Loranthaceae
2074	*Phragmanthera cinerea* (Engl.) Balle	Loranthaceae
2074	*Phragmanthera dombeyae* (K.Krause & Dinter) Polhill & Wiens	Loranthaceae
2074	*Phragmanthera glaucocarpa* (Peyr.) Balle	Loranthaceae
2074	*Phragmanthera guerichii* (Engl.) Balle	Loranthaceae
2074	*Plicosepalus kalachariensis* (Schinz) Danser	Loranthaceae
2074	*Plicosepalus undulatus* (E.Mey. ex Harv.) Tiegh.	Loranthaceae
2074	*Septulina glauca* (Thunb.) Tiegh.	Loranthaceae

	2074	*Septulina ovalis* (E.Mey. ex Harv.) Tiegh.	Loranthaceae
	2074	*Tapinanthus mollissimus* (Engl.) Danser	Loranthaceae
	2074	*Tapinanthus oleifolius* (J.C.Wendl.) Danser	Loranthaceae
	2093	*Viscum capense* L.f.	Viscaceae
	2093	*Viscum dielsianum* Dinter ex Neusser	Viscaceae
	2093	*Viscum menyharthii* Engl. & Schinz	Viscaceae
	2093	*Viscum rotundifolium* L.f.	Viscaceae
	2093	*Viscum schaeferi* Engl. & K.Krause	Viscaceae
	2093	*Viscum tuberculatum* A.Rich.	Viscaceae
	2093	*Viscum verrucosum* Harv.	Viscaceae
	2096	*Osyris lanceolata* Hochst. & Steud.	Santalaceae
	2118	*Thesium equisetoides* Welw. ex Hiern	Santalaceae
	2118	*Thesium lacinulatum* A.W.Hill	Santalaceae
	2118	*Thesium lineatum* L.f.	Santalaceae
	2118	*Thesium megalocarpum* A.W.Hill	Santalaceae
	2118	*Thesium utile* A.W.Hill	Santalaceae
E	2118	*Thesium xerophyticum* A.W.Hill	Santalaceae
	2118	*Thesium zeyheri* A.DC.	Santalaceae
	2122	*Opilia campestris* Engl. var. *campestris*	Opiliaceae
	2131	*Olax dissitiflora* Oliv.	Olacaceae
	2136	*Ximenia americana* L. var. *americana*	Olacaceae
	2136	*Ximenia americana* L. var. *microphylla* Welw. ex Oliv.	Olacaceae
	2136	*Ximenia caffra* Sond. var. *natalensis*	Olacaceae
	2136	*Ximenia caffra* Sond. var. *natalensis* Sond.	Olacaceae
	2182	*Hydnora abyssinica* A.Braun ex Schweinf.	Hydnoraceae
	2182	*Hydnora africana* Thunb.	Hydnoraceae
	2195	*Rumex garipensis* Meisn.	Polygonaceae
	2195	*Rumex lanceolatus* Thunb.	Polygonaceae
	2195	*Rumex lativalvis* Meisn.	Polygonaceae
	2195	*Rumex marschallianus* Rchb.	Polygonaceae
	2195	*Rumex sagittatus* Thunb.	Polygonaceae
	2201	*Persicaria attentuata* (R.Br.) Soják subsp. *africana* K.L.Wilson	Polygonaceae
	2201	*Persicaria attentuata* (R.Br.) Soják subsp. *pulchra* (Blume) K.L. Wilson	Polygonaceae
	2201	*Persicaria senegalensis* (Meisn.) Soják	Polygonaceae
	2201	*Persicaria serrulata* (Lag.) Webb & Moq.	Polygonaceae
	2201	*Persicaria strigosa* (R.Br.) Gross	Polygonaceae
	2201	*Polygonum hystriculum* J.Schust.	Polygonaceae
	2201	*Polygonum plebeium* R.Br.	Polygonaceae
	2204	*Oxygonum acetosella* Welw.	Polygonaceae
	2204	*Oxygonum alatum* Burch. var. *alatum*	Polygonaceae
	2204	*Oxygonum alatum* Burch. var. *longisquamatum* Germish.	Polygonaceae
	2204	*Oxygonum delagoense* Kuntze	Polygonaceae
	2204	*Oxygonum dregeanum* Meisn.	Polygonaceae
	2204	*Oxygonum sinuatum* (Hochst. & Steud. ex Meisn.) Dammer	Polygonaceae
E	2223	*Chenopodium amboanum* (Murr) Aellen	Chenopodiaceae
	2223	*Chenopodium hederiforme* (Murr) Aellen	Chenopodiaceae
	2223	*Chenopodium mucronatum* Thunb.	Chenopodiaceae
	2223	*Chenopodium olukondae* (Murr) Murr	Chenopodiaceae
	2223	*Chenopodium petiolariforme* (Aellen) Aellen	Chenopodiaceae
	2226	*Exomis microphylla* (Thunb.) Aellen var. *microphylla*	Chenopodiaceae
	2229	*Atriplex amboensis* Schinz	Chenopodiaceae
	2229	*Atriplex cinerea* Poir. subsp. *bolusii* (C.H.Wright) Aellen	Chenopodiaceae
	2229	*Atriplex suberecta* I. Verd.	Chenopodiaceae
	2229	*Atriplex vestita* (Thunb.) Aellen	Chenopodiaceae
	2229	*Manochlamys albicans* (Aiton) Aellen	Chenopodiaceae
	2239	*Bassia diffusa* (Thunb.) Kuntze	Chenopodiaceae
	2239	*Bassia dinteri* (Botsch.) A.J.Scott.	Chenopodiaceae
	2255	*Sarcocornia natalensis* (Bunge ex Ung.-Sternb.) A.J.Scott var. *affinis* (Moss) M.O'Callaghan	Chenopodiaceae
	2255	*Sarcocornia perennis* (Mill.) A.J.Scott var. *lignosum* (Woods) O'Callaghan	Chenopodiaceae
	2255	*Sarcocornia pillansii* (Moss) A.J.Scott var. *dunensis* (Moss) M.O'Callaghan	Chenopodiaceae
	2257	*Salicornia pachystachya* Bunge ex Ung.-Sternb.	Chenopodiaceae
	2257	*Salicornia uniflora* Toelken	Chenopodiaceae
E	2261	*Suaeda articulata* Aellen	Chenopodiaceae
	2261	*Suaeda caespitosa* Wolley-Dod	Chenopodiaceae
	2261	*Suaeda inflata* Aellen	Chenopodiaceae
	2261	*Suaeda merxmuelleri* Aellen	Chenopodiaceae
	2261	*Suaeda plumosa* Aellen	Chenopodiaceae
E	2261	*Suaeda salina* B.Nord.	Chenopodiaceae
	2269	*Salsola acocksii* Botsch.	Chenopodiaceae

	2269	*Salsola aellenii* Botsch.	Chenopodiaceae
E	2269	*Salsola albisepala* Aellen	Chenopodiaceae
	2269	*Salsola angolensis* Botsch.	Chenopodiaceae
	2269	*Salsola aphylla* L.f.	Chenopodiaceae
	2269	*Salsola araneosa* Botsch.	Chenopodiaceae
E	2269	*Salsola arborea* C.A.Sm. ex Aellen	Chenopodiaceae
	2269	*Salsola armata* C.A.Sm. ex Aellen	Chenopodiaceae
E	2269	*Salsola aroabica* Botsch.	Chenopodiaceae
	2269	*Salsola barbata* Aellen	Chenopodiaceae
E	2269	*Salsola campyloptera* Botsch.	Chenopodiaceae
E	2269	*Salsola cauliflora* Botsch.	Chenopodiaceae
E	2269	*Salsola columnaris* Botsch.	Chenopodiaceae
	2269	*Salsola contrariifolia* Botsch.	Chenopodiaceae
E	2269	*Salsola cryptoptera* Aellen	Chenopodiaceae
E	2269	*Salsola denudata* Botsch.	Chenopodiaceae
E	2269	*Salsola dinteri* Botsch.	Chenopodiaceae
E	2269	*Salsola dolichostigma* Botsch.	Chenopodiaceae
E	2269	*Salsola etoshensis* Botsch.	Chenopodiaceae
	2269	*Salsola exalata* Botsch.	Chenopodiaceae
E	2269	*Salsola garubica* Botsch.	Chenopodiaceae
E	2269	*Salsola gemmata* Botsch.	Chenopodiaceae
	2269	*Salsola gemmifera* Botsch.	Chenopodiaceae
	2269	*Salsola gemmipara* Botsch.	Chenopodiaceae
E	2269	*Salsola giessii* Botsch.	Chenopodiaceae
	2269	*Salsola glabra* Botsch.	Chenopodiaceae
E	2269	*Salsola hoanibica* Botsch.	Chenopodiaceae
E	2269	*Salsola hottentottica* Botsch.	Chenopodiaceae
E	2269	*Salsola huabica* Botsch.	Chenopodiaceae
	2269	*Salsola inaperta* Botsch.	Chenopodiaceae
E	2269	*Salsola kleinfonteini* Botsch.	Chenopodiaceae
E	2269	*Salsola koichabica* Botsch.	Chenopodiaceae
	2269	*Salsola luederitzensis* Botsch.	Chenopodiaceae
E	2269	*Salsola marginata* Botsch.	Chenopodiaceae
	2269	*Salsola melanantha* Botsch.	Chenopodiaceae
	2269	*Salsola merxmuelleri* Aellen	Chenopodiaceae
E	2269	*Salsola mirabilis* Botsch.	Chenopodiaceae
	2269	*Salsola namaqualandica* Botsch.	Chenopodiaceae
E	2269	*Salsola namibica* Botsch.	Chenopodiaceae
	2269	*Salsola nollothensis* Aellen	Chenopodiaceae
E	2269	*Salsola okaukuejensis* Botsch.	Chenopodiaceae
E	2269	*Salsola omaruruensis* Botsch.	Chenopodiaceae
E	2269	*Salsola parviflora* Botsch.	Chenopodiaceae
	2269	*Salsola pillansii* Botsch.	Chenopodiaceae
E	2269	*Salsola procera* Botsch.	Chenopodiaceae
E	2269	*Salsola ptiloptera* Botsch.	Chenopodiaceae
	2269	*Salsola rabieana* C.A.Sm. ex I.Verd.	Chenopodiaceae
E	2269	*Salsola robinsonii* Botsch.	Chenopodiaceae
	2269	*Salsola ruschii* Aellen	Chenopodiaceae
E	2269	*Salsola schreiberae* Botsch.	Chenopodiaceae
E	2269	*Salsola scopiformis* Botsch.	Chenopodiaceae
E	2269	*Salsola seminuda* Botsch.	Chenopodiaceae
	2269	*Salsola sericata* Botsch.	Chenopodiaceae
E	2269	*Salsola seydelii* Botsch.	Chenopodiaceae
E	2269	*Salsola spenceri* Botsch.	Chenopodiaceae
E	2269	*Salsola swakopmundi* Botsch.	Chenopodiaceae
	2269	*Salsola tuberculata* (Moq.) Fenzl	Chenopodiaceae
	2269	*Salsola tuberculatiformis* Botsch.	Chenopodiaceae
E	2269	*Salsola ugabica* Botsch.	Chenopodiaceae
E	2269	*Salsola unjabica* Botsch.	Chenopodiaceae
	2269	*Salsola warmbadica* Botsch.	Chenopodiaceae
	2269	*Salsola zeyheri* (Moq.) Bunge	Chenopodiaceae
	2287	*Lophiocarpus dinteri* Engl.	Chenopodiaceae
	2287	*Lophiocarpus latifolius* Nowicke	Chenopodiaceae
	2287	*Lophiocarpus polystachyus* Turcz.	Chenopodiaceae
	2287	*Lophiocarpus tenuissimus* Hook.f.	Chenopodiaceae
	2292	*Celosia trigyna* L.	Amaranthaceae
	2293	*Hermbstaedtia angolensis* C.B.Clarke	Amaranthaceae
	2293	*Hermbstaedtia argenteiformis* Schinz	Amaranthaceae
	2293	*Hermbstaedtia fleckii* (Schinz) Baker & C.B.Clarke	Amaranthaceae

	2293	*Hermbstaedtia glauca* (J.C.Wendl.) Rchb. ex Steud.	Amaranthaceae
	2293	*Hermbstaedtia linearis* Schinz	Amaranthaceae
	2293	*Hermbstaedtia odorata* (Burch.) T.Cooke var. *albi-rosea* Suess.	Amaranthaceae
	2293	*Hermbstaedtia odorata* (Burch.) T.Cooke var. *odorata*	Amaranthaceae
	2293	*Hermbstaedtia scabra* Schinz	Amaranthaceae
	2293	*Hermbstaedtia schaeferi* (Schinz) Schinz & Dinter	Amaranthaceae
E	2293	*Hermbstaedtia spathulifolia* (Engl.) Baker	Amaranthaceae
	2299	*Amaranthus dinteri* Schinz subsp. *dinteri* var. *a & b*	Amaranthaceae
	2299	*Amaranthus praetermissus* Brenan	Amaranthaceae
	2299	*Amaranthus schinzianus* Thell.	Amaranthaceae
	2299	*Amaranthus thunbergii* Moq.	Amaranthaceae
	2305	*Sericocoma avolans* Fenzl	Amaranthaceae
	2305	*Sericocoma heterochiton* Lopr.	Amaranthaceae
	2305	*Sericocoma pungens* Fenzl	Amaranthaceae
	2307	*Sericorema remotiflora* (Hook.f.) Lopr.	Amaranthaceae
	2307	*Sericorema sericea* (Schinz) Lopr.	Amaranthaceae
	2308	*Marcelliopsis denudata* (Hook.f.) Schinz	Amaranthaceae
E	2308	*Marcelliopsis splendens* (Schinz) Schinz	Amaranthaceae
	2308	*Marcelliopsis welwitschii* (Hook.f.) Schinz	Amaranthaceae
	2309	*Kyphocarpa angustifolia* (Moq.) Lopr.	Amaranthaceae
	2309	*Nelsia quadrangula* (Engl.) Schinz	Amaranthaceae
	2312	*Cyathula cylindrica* Moq.	Amaranthaceae
	2312	*Cyathula lanceolata* Schinz	Amaranthaceae
	2312	*Cyathula orthacantha* (Hochst. ex Asch.) Schinz	Amaranthaceae
	2312	*Cyathula* sp. = Craven 1406	Amaranthaceae
	2313	*Leucosphaera bainesii* (Hook.f.) Gilg	Amaranthaceae
	2317	*Aerva leucura* Moq.	Amaranthaceae
E	2320	*Arthraerua leubnitziae* (Kuntze) Schinz	Amaranthaceae
	2325	*Calicorema capitata* (Moq.) Hook.f.	Amaranthaceae
E	2325	*Calicorema squarrosa* (Schinz) Schinz	Amaranthaceae
	2328	*Pandiaka carsonii* (Baker) C.B.Clarke var. *carsonii*	Amaranthaceae
E	2347	*Commicarpus decipiens* Meikle	Nyctaginaceae
	2347	*Commicarpus fallacissimus* (Heimerl) Heimerl ex Oberm.	Nyctaginaceae
E	2347	*Commicarpus fruticosus* Pohnert	Nyctaginaceae
	2347	*Commicarpus pentandrus* (Burch.) Heimerl	Nyctaginaceae
	2347	*Commicarpus plumbagineus* (Cav.) Standl.	Nyctaginaceae
	2347	*Commicarpus squarrosus* (Heimerl) Standl.	Nyctaginaceae
E	2349	*Boerhavia deserticola* Codd	Nyctaginaceae
	2349	*Boerhavia hereroensis* Heimerl	Nyctaginaceae
	2349	*Boerhavia repens* L.	Nyctaginaceae
	2351	*Phaeoptilum spinosum* Radlk.	Nyctaginaceae
	2374	*Adenogramma glomerata* (L.f.) Druce	Molluginaceae
	2376	*Limeum aethiopicum* Burm.f. var. *glabrum* Moq.	Molluginaceae
	2376	*Limeum arenicolum* G.Schellenb.	Molluginaceae
	2376	*Limeum argute-carinatum* Wawra & Peyr.	Molluginaceae
	2376	*Limeum deserticolum* Dinter & G.Schellenb.	Molluginaceae
	2376	*Limeum dinteri* G.Schellenb.	Molluginaceae
	2376	*Limeum fenestratum* (Fenzl) Heimerl var. *fenestratum*	Molluginaceae
	2376	*Limeum myosotis* H.Walter	Molluginaceae
	2376	*Limeum pterocarpum* (J.Gay) Heimerl	Molluginaceae
	2376	*Limeum rhombifolium* G.Schellenb.	Molluginaceae
	2376	*Limeum sulcatum* (Klotzsch) Hutch.	Molluginaceae
	2376	*Limeum viscosum* (J.Gay) Fenzl subsp. *nummulifolium* (H.Walter) Friedrich	Molluginaceae
	2376	*Limeum viscosum* (J.Gay) Fenzl subsp. *viscosum*	Molluginaceae
	2382	*Gisekia africana* (Lour.) Kuntze var. *africana*	Viscaceae
	2382	*Gisekia africana* (Lour.) Kuntze var. *pedunculata* (Oliv.) Brenan	Viscaceae
	2382	*Gisekia pharnaceoides* L. var. *pharnacioides* -	Viscaceae
	2387	*Mollugo cerviana* (L.) Ser. ex DC. var. *cerviana*	Molluginaceae
	2387	*Mollugo tenella* Bolus	Molluginaceae
E	2387	*Mollugo walteri* Friedrich	Molluginaceae
	2388	*Glinus bainesii* (Oliv.) Pax	Molluginaceae
	2389	*Pharnaceum albens* L.f.	Molluginaceae
	2389	*Pharnaceum brevicaule* (DC.) Bartl.	Molluginaceae
	2389	*Pharnaceum confertum* (DC.) Eckl. & Zeyh.	Molluginaceae
	2389	*Pharnaceum croceum* E.Mey. ex Fenzl	Molluginaceae
	2389	*Pharnaceum exiguum* Adamson	Molluginaceae
	2389	*Pharnaceum gracile* Fenzl	Molluginaceae
E	2389	*Suessenguthiella caespitosa* Friedrich	Molluginaceae
	2389	*Suessenguthiella scleranthoides* (Sond.) Friedrich	Molluginaceae

	2390	*Hypertelis angrae-pequenae* Friedrich	Molluginaceae
	2390	*Hypertelis bowkeriana* Sond.	Molluginaceae
E	2390	*Hypertelis caespitosa* Friedrich	Molluginaceae
	2390	*Hypertelis salsoloides* (Burch.) Adamson	Molluginaceae
	2390	*Hypertelis spergulacea* E.Mey. ex Fenzl	Molluginaceae
	2391	*Coelanthum grandiflorum* E.Mey. ex Fenzl	Molluginaceae
	2393	*Corbichonia decumbens* (Forssk.) Exell	Molluginaceae
E	2393	*Corbichonia rubriviolacea* (Friedrich) Jeffrey	Molluginaceae
	2394	*Sesuvium hydaspicum* (Edgw.) Gonc.	Aizoaceae
	2394	*Sesuvium mesembrianthemoides* Wawra & Peyr.	Aizoaceae
	2394	*Sesuvium portulacastrum* (L.) L.	Aizoaceae
	2394	*Sesuvium sesuvioides* (Fenzl) Verdc.	Aizoaceae
E	2395	*Trianthema hereroensis* Schinz	Aizoaceae
	2395	*Trianthema parvifolia* E.Mey. ex Sond.	Aizoaceae
	2395	*Trianthema salsoloides* Fenzl ex Oliv. var. *salsoloides*	Aizoaceae
	2395	*Trianthema triquetra* Rottler ex Willd.	Aizoaceae
	2398	*Plinthus cryptocarpus* Fenzl	Aizoaceae
	2398	*Plinthus karooicus* I.Verd.	Aizoaceae
	2398	*Plinthus rehmannii* G.Schellenb.	Aizoaceae
	2398	*Plinthus sericeus* Pax	Aizoaceae
	2399	*Galenia africana* L.	Aizoaceae
	2399	*Galenia crystallina* (Eckl. & Zeyh.) Fenzl	Aizoaceae
	2399	*Galenia dregeana* Fenzl ex Sond.	Aizoaceae
	2399	*Galenia fallax* Pax	Aizoaceae
	2399	*Galenia fruticosa* (L.f.) Sond.	Aizoaceae
	2399	*Galenia hemisphaerica* Adamson	Aizoaceae
	2399	*Galenia meziana* K.Müll.	Aizoaceae
	2399	*Galenia namaensis* Schinz	Aizoaceae
	2399	*Galenia papulosa* (Eckl. & Zeyh.) Sond.	Aizoaceae
	2399	*Galenia pruinosa* Sond.	Aizoaceae
	2399	*Galenia pubescens* (Eckl. & Zeyh.) Druce	Aizoaceae
	2399	*Galenia sarcophylla* Fenzl	Aizoaceae
	2399	*Galenia secunda* (L.f.) Sond.	Aizoaceae
E	2401	*Aizoanthemum dinteri* (Schinz) Friedrich	Aizoaceae
E	2401	*Aizoanthemum galenioides* (Fenzl ex Sond.) Friedrich	Aizoaceae
E	2401	*Aizoanthemum membrum-connectens* Dinter ex Friedrich	Aizoaceae
	2401	*Aizoon asbestinum* Schltr.	Aizoaceae
	2401	*Aizoon canariense* L.	Aizoaceae
E	2401	*Aizoon giessii* Friedrich	Aizoaceae
	2401	*Aizoon schellenbergii* Adamson	Aizoaceae
	2401	*Aizoon virgatum* Welw. ex Oliv.	Aizoaceae
	2403	*Tetragonia arbuscula* Fenzl	Aizoaceae
	2403	*Tetragonia arbusculoides* Engl.	Aizoaceae
	2403	*Tetragonia calycina* Fenzl	Aizoaceae
	2403	*Tetragonia decumbens* Mill.	Aizoaceae
	2403	*Tetragonia macroptera* Pax	Aizoaceae
	2403	*Tetragonia microptera* Fenzl	Aizoaceae
E	2403	*Tetragonia rangeana* Engl.	Aizoaceae
	2403	*Tetragonia reduplicata* Welw.	Aizoaceae
E	2403	*Tetragonia schenckii* (Schinz) Engl.	Aizoaceae
	2403	*Tetragonia spicata* L.f.	Aizoaceae
	2403	*Tetragonia verrucosa* Fenzl	Aizoaceae
	2403	*Tribulocarpus dimorphanthus* (Pax) S.Moore	Aizoaceae
	2405M	*Aptenia geniculiflora* (L.) Bittrich ex Gerbaulet ined.	Mesembryanthemaceae
	2405M	*Brownanthus arenosus* (Schinz) Ihlenf. & Bittrich	Mesembryanthemaceae
	2405M	*Brownanthus ciliatus* (Aiton) Schwantes subsp. *ciliatus*	Mesembryanthemaceae
E	2405M	*Brownanthus ciliatus* (Aiton) Schwantes subsp. *schenckii* (Schinz) Ihlenf. & Bittrich	Mesembryanthemaceae
	2405M	*Brownanthus kuntzei* (Schinz) Ihlenf. & Bittrich	Mesembryanthemaceae
	2405M	*Brownanthus marlothii* (Pax) Schwantes	Mesembryanthemaceae
E	2405M	*Brownanthus namibensis* (Marloth) Bullock	Mesembryanthemaceae
	2405M	*Brownanthus neglectus* Pierce & Gerbaulet	Mesembryanthemaceae
	2405M	*Brownanthus nucifer* (Ihlenf. & Bittrich) Pierce & Gerbaulet	Mesembryanthemaceae
	2405M	*Brownanthus pseudoschlictianus* Pierce & Gerbaulet	Mesembryanthemaceae
E	2405M	*Brownanthus pubescens* (N.E.Br. ex C.A.Maas) Bullock	Mesembryanthemaceae
	2405M	*Mesembryanthemum barklyi* N.E.Br.	Mesembryanthemaceae
	2405M	*Mesembryanthemum cryptanthum* Hook.f.	Mesembryanthemaceae
	2405M	*Mesembryanthemum crystallinum* L.	Mesembryanthemaceae
	2405M	*Mesembryanthemum gariusianum* Dinter	Mesembryanthemaceae
	2405M	*Mesembryanthemum guerichianum* Pax	Mesembryanthemaceae

	2405M	*Mesembryanthemum hypertrophicum* Dinter	Mesembryanthemaceae
	2405M	*Mesembryanthemum inachabense* Engl.	Mesembryanthemaceae
	2405M	*Mesembryanthemum latisepalum* (L.Bolus) L.Bolus	Mesembryanthemaceae
	2405M	*Mesembryanthemum longipapillosum* Dinter	Mesembryanthemaceae
	2405M	*Mesembryanthemum nodiflorum* L.	Mesembryanthemaceae
E	2405M	*Mesembryanthemum pellitum* Friedrich	Mesembryanthemaceae
	2405M	*Mesembryanthemum pingue* L.	Mesembryanthemaceae
	2405M	*Phyllobolus lignescens* (L.Bolus) Gerbaulet	Mesembryanthemaceae
	2405M	*Phyllobolus melanospermus* (Dinter & Schwantes) Gerbaulet	Mesembryanthemaceae
	2405M	*Phyllobolus oculatus* (N.E.Br.) Gerbaulet	Mesembryanthemaceae
	2405M	*Prenia sladeniana* (L.Bolus) L.Bolus	Mesembryanthemaceae
	2405M	*Prenia tetragona* (Thunb.) Gerbaulet	Mesembryanthemaceae
	2405M	*Psilocaulon articulatum* (Thunb.) N.E.Br.	Mesembryanthemaceae
	2405M	*Psilocaulon coriarium* (Burch. ex N.E.Br.) N.E.Br.	Mesembryanthemaceae
	2405M	*Psilocaulon dinteri* (Engl.) Schwantes	Mesembryanthemaceae
E	2405M	*Psilocaulon gessertianum* (Dinter & A.Berger) Dinter & Schwantes	Mesembryanthemaceae
E	2405M	*Psilocaulon salicornioides* (Pax) Schwantes	Mesembryanthemaceae
	2405M	*Psilocaulon subnodosum* (A.Berger) N.E.Br.	Mesembryanthemaceae
E	2405M	*Synaptophyllum juttae* (Dinter & A.Berger) N.E.Br.	Mesembryanthemaceae
	2405R	*Amphibolia obscura* H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Amphibolia rupis-arcutae* (Dinter) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Amphibolia saginata* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima argentea* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima aurasensis* H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima buchubergensis* (Dinter) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima dolomitica* (Dinter) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima eendornensis* (Dinter) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima modesta* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Antimima perforata* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
E	2405R	*Antimima quartzitica* (Dinter) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Aridaria brevicarpa* L. Bolus	Mesembryanthemaceae
	2405R	*Aridaria noctiflora* (L.) Schwantes subsp. *noctiflora*	Mesembryanthemaceae
	2405R	*Aridaria noctiflora* (L.) Schwantes subsp. *straminea* (Haw.) Gerbaulet	Mesembryanthemaceae
	2405R	*Aridaria serotina* L. Bolus	Mesembryanthemaceae
	2405R	*Astridia citrina* (L.Bolus) L.Bolus	Mesembryanthemaceae
E	2405R	*Astridia hallii* L.Bolus	Mesembryanthemaceae
	2405R	*Astridia longifolia* (L.Bolus) L.Bolus	Mesembryanthemaceae
	2405R	*Astridia speciosa* L.Bolus	Mesembryanthemaceae
	2405R	*Astridia velutina* Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Cephalophyllum compressum* L.Bolus	Mesembryanthemaceae
E	2405R	*Cephalophyllum confusum* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Cephalophyllum ebracteatum* (Pax ex Schltr. & Diels) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Cephalophyllum herrei* L.Bolus	Mesembryanthemaceae
	2405R	*Chasmatophyllum musculinum* (Haw.) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Cheiridopsis brownii* Tischer	Mesembryanthemaceae
E	2405R	*Cheiridopsis caroli-schmidtii* (Dinter & A.Berger) N.E.Br.	Mesembryanthemaceae
	2405R	*Cheiridopsis robusta* (Haw.) N.E.Br.	Mesembryanthemaceae
	2405R	*Cheiridopsis verrucosa* L.Bolus var. *verrucosa*	Mesembryanthemaceae
	2405R	*Conophytum angelicae* (Dinter & Schwantes) N.E.Br. subsp. *angelicae*	Mesembryanthemaceae
	2405R	*Conophytum friedrichae* (Dinter) Schwantes	Mesembryanthemaceae
	2405R	*Conophytum gratum* (N.E.Br.) N.E.Br. subsp. *gratum*	Mesembryanthemaceae
E	2405R	*Conophytum halenbergense* (Dinter & Schwantes) N.E.Br.	Mesembryanthemaceae
E	2405R	*Conophytum klinghardtense* Rawe subsp. *baradii* (Rawe) S.A.Hammer	Mesembryanthemaceae
E	2405R	*Conophytum klinghardtense* Rawe subsp. *klinghardtense*	Mesembryanthemaceae
	2405R	*Conophytum loeschianum* Tischer	Mesembryanthemaceae
	2405R	*Conophytum marginatum* Lavis var. *littlewoodii* (L.Bolus) Rawe	Mesembryanthemaceae
	2405R	*Conophytum maughanii* N.E.Br. subsp. *maughanii*	Mesembryanthemaceae
	2405R	*Conophytum pageae* (N.E.Br.) N.E.Br.	Mesembryanthemaceae
E	2405R	*Conophytum quaesitum* (N.E.Br.) N.E.Br. subsp. *densipunctum* (L.Bolus) S.A.Hammer	Mesembryanthemaceae
	2405R	*Conophytum quaesitum* (N.E.Br.) N.E.Br. subsp. *quaesitum* var. *quaesitum*	Mesembryanthemaceae
	2405R	*Conophytum quaesitum* (N.E.Br.) N.E.Br. subsp. *quaesitum* var. *rostratum* (Tischer) S.A.Hammer	
E	2405R	*Conophytum ricardianum* Loesch & Tischer subsp. *ricardianum*	Mesembryanthemaceae
E	2405R	*Conophytum ricardianum* Loesch & Tischer subsp. *rubiflorum* Tischer	Mesembryanthemaceae
	2405R	*Conophytum saxetanum* (N.E.Br.) N.E.Br.	Mesembryanthemaceae
E	2405R	*Conophytum taylorianum* (Dinter & Schwantes) N.E.Br. subsp. *ernianum* (Loesch & Tischer) de Boer ex S.A.Hammer	
E	2405R	*Conophytum taylorianum* (Dinter & Schwantes) N.E.Br. subsp. *taylorianum*	Mesembryanthemaceae
	2405R	*Conophytum wettsteinii* (A.Berger) N.E.Br. subsp. *ruschii* (Schwantes) S.A.Hammer	Mesembryanthemaceae
E	2405R	*Delosperma ausense* L.Bolus	Mesembryanthemaceae
E	2405R	*Delosperma klinghardtianum* Dinter & Schwantes	Mesembryanthemaceae

E	2405R	*Dinteranthus microspermus* (Dinter & Derenb.) Schwantes subsp. *microspermus*	Mesembryanthemaceae
	2405R	*Dinteranthus microspermus* (Dinter & Derenb.) Schwantes subsp. *puberulus* (N.E.Br.) Sauer	
	2405R	*Dinteranthus wilmotianus* L.Bolus subsp. *impunctatus* N. Sauer	Mesembryanthemaceae
	2405R	*Dracophilus dealbatus* (N.E.Br.) Walgate	Mesembryanthemaceae
E	2405R	*Dracophilus delaetianus* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Dracophilus montis-draconis* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Drosanthemum albens* L.Bolus	Mesembryanthemaceae
	2405R	*Drosanthemum curtophyllum* L.Bolus	Mesembryanthemaceae
	2405R	*Drosanthemum hispidum* (L.) Schwantes	Mesembryanthemaceae
	2405R	*Drosanthemum lique* (N.E.Br.) Schwantes	Mesembryanthemaceae
E	2405R	*Drosanthemum littlewoodii* L.Bolus	Mesembryanthemaceae
	2405R	*Drosanthemum luederitzii* (Engl.) Schwantes	Mesembryanthemaceae
E	2405R	*Drosanthemum nordenstamii* L.Bolus	Mesembryanthemaceae
E	2405R	*Drosanthemum pauper* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Drosanthemum paxianum* (Schltr. & Diels) Schwantes	Mesembryanthemaceae
	2405R	*Drosanthemum subcompressum* (Haw.) Schwantes	Mesembryanthemaceae
E	2405R	*Eberlanzia clausa* (Dinter) Schwantes	Mesembryanthemaceae
	2405R	*Eberlanzia cyathiformis* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Eberlanzia ebracteata* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Eberlanzia schneideriana* (A.Berger) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Eberlanzia sedoides* (Dinter & A.Berger) Schwantes	Mesembryanthemaceae
E	2405R	*Ebracteola derenbergiana* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Ebracteola fulleri* (L.Bolus) Glen	Mesembryanthemaceae
E	2405R	*Ebracteola montis-moltkei* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Fenestraria rhopalophylla* (Schltr. & Diels) N.E.Br. subsp. *aurantiaca* (N.E.Br.) H.E.K.Hartmann	
E	2405R	*Fenestraria rhopalophylla* (Schltr. & Diels) N.E.Br. subsp. *rhopalophylla*	Mesembryanthemaceae
	2405R	*Hartmanthus hallii* (L.Bolus) S.A.Hammer	Mesembryanthemaceae
	2405R	*Hartmanthus pergamentaceus* (L.Bolus) S.A.Hammer	Mesembryanthemaceae
	2405R	*Hereroa hesperantha* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Hereroa puttkamerana* (Dinter & A.Berger) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Jensenobotrya lossowiana* A.G.J. Herre	Mesembryanthemaceae
	2405R	*Jordaaniella cuprea* (L.Bolus) H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Juttadinteria albata* L.Bolus	Mesembryanthemaceae
E	2405R	*Juttadinteria attenuata* Walgate	Mesembryanthemaceae
E	2405R	*Juttadinteria ausensis* (L.Bolus) Schwantes	Mesembryanthemaceae
E	2405R	*Juttadinteria deserticola* (Marloth) Schwantes	Mesembryanthemaceae
	2405R	*Juttadinteria elizae* (Dinter & A.Berger) L.Bolus	Mesembryanthemaceae
E	2405R	*Juttadinteria kovismontana* (Dinter) Schwantes	Mesembryanthemaceae
E	2405R	*Juttadinteria simpsonii* (Dinter) Schwantes	Mesembryanthemaceae
E	2405R	*Juttadinteria suavissima* (Dinter) Schwantes	Mesembryanthemaceae
	2405R	*Lampranthus hoerleinianus* (Dinter) Friedrich	Mesembryanthemaceae
	2405R	*Lampranthus otzenianus* (Dinter) Friedrich	Mesembryanthemaceae
	2405R	*Lampranthus uniflorum* (L.Bolus) Friedrich	Mesembryanthemaceae
	2405R	*Lapidaria margaretae* (Schwantes) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Leipoldtia alborosea* (L.Bolus) H.E.K.Hartmann & Stüber	Mesembryanthemaceae
	2405R	*Leipoldtia schultzei* (Schltr. & Diels) Friedrich	Mesembryanthemaceae
	2405R	*Leipoldtia weigangiana* (Dinter) Dinter & Schwantes subsp. *grandifolia* (L.Bolus) H.E.K.Hartmann & S.Rust	
	2405R	*Leipoldtia weigangiana* (Dinter) Dinter & Schwantes subsp. *littlewoodii* (L.Bolus) H.E.K.Hartmann & S.Rust	
	2405R	*Leipoldtia weigangiana* (Dinter) Dinter & Schwantes subsp. *weigangiana*	Mesembryanthemaceae
E	2405R	*Lithops dinteri* Schwantes subsp. *dinteri* var. *dinteri*	Mesembryanthemaceae
E	2405R	*Lithops dinteri* Schwantes subsp. *multipunctata* (de Boer) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops francisci* (Dinter & Schwantes) N.E.Br.	Mesembryanthemaceae
	2405R	*Lithops fulviceps* (N.E.Br.) N.E.Br. var. *fulviceps*	Mesembryanthemaceae
E	2405R	*Lithops fulviceps* (N.E.Br.) N.E.Br. var. *lactinea* D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops gesineae* de Boer var. *annae* (de Boer) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops gesineae* de Boer var. *gesinae*	Mesembryanthemaceae
E	2405R	*Lithops gracilidelineata* Dinter subsp. *brandbergensis* (de Boer) D.T.Cole	Mesembryanthemaceae
	2405R	*Lithops gracilidelineata* Dinter subsp. *gracilidelineata* var. *gracilidelineata*	Mesembryanthemaceae
E	2405R	*Lithops gracilidelineata* Dinter subsp. *waldroniae* de Boer	Mesembryanthemaceae
E	2405R	*Lithops hermetica* D.T.Cole	Mesembryanthemaceae
	2405R	*Lithops herrei* L.Bolus	Mesembryanthemaceae
E	2405R	*Lithops julii* (Dinter & Schwantes) N.E.Br. subsp. *fulleri* (N.E.Br.)Fearn var. *rouxii* (De Beer) D.T.Cole	
E	2405R	*Lithops julii* (Dinter & Schwantes) N.E.Br. subsp. *julii*	Mesembryanthemaceae
E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *bella* (N.E.Br.) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *eberlanzii* (Dinter & Schwantes) D.T.Cole	
E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *karasmontana* var. *aiaisensis* (de Boer) D.T.Cole	
E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *karasmontana* var. *karasmontana*	
E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *karasmontana* var. *lericheana* (Dinter & Schwantes) D.T.Cole	Mesembryanthemaceae

E	2405R	*Lithops karasmontana* (Dinter & Schwantes) N.E.Br. subsp. *karasmontana* var. *tischeri* D.T.Cole	
E	2405R	*Lithops optica* (Marloth) N.E.Br.	Mesembryanthemaceae
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *archerae* (de Boer) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *dentritica* (Nel) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *groendrayensis* (H.Jacobsen) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *pseudotruncatella* (A.Berger) N.E.Br. var. *elisabethiae* (Dinter) de Boer & Boom	Mesembryanthemaceae
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *pseudotruncatella* (A.Berger) N.E.Br. var. *riehmerae* D.T.Cole	
E	2405R	*Lithops pseudotruncatella* (A.Berger) N.E.Br. subsp. *volkii* (Schwantes ex de Boer & Boom) D.T.Cole	
E	2405R	*Lithops ruschiorum* (Dinter & Schwantes) N.E.Br. var. *lineata* (Nel) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops ruschiorum* (Dinter & Schwantes) N.E.Br. var. *ruschiorum*	Mesembryanthemaceae
E	2405R	*Lithops schwantesii* Dinter subsp. *gebseri* (de Boer) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops schwantesii* Dinter subsp. *schwantesii* var. *marthae* (Loesch & Tischer) D.T.Cole	Mesembryanthemaceae
E	2405R	*Lithops schwantesii* Dinter subsp. *schwantesii* var. *rugosa* (Dinter) de Boer & Boom	Mesembryanthemaceae
E	2405R	*Lithops schwantesii* Dinter subsp. *schwantesii* var. *schwantesii*	Mesembryanthemaceae
E	2405R	*Lithops schwantesii* Dinter subsp. *schwantesii* var. *urikosensis* (Dinter) de Boer & Boom	Mesembryanthemaceae
E	2405R	*Lithops vallis-mariae* (Dinter & Schwantes) N.E.Br.	Mesembryanthemaceae
E	2405R	*Lithops werneri* Schwantes ex H.Jacobsen	Mesembryanthemaceae
	2405R	*Malephora crocea* (Jacq.) Schwantes var. *purpureo-crocea* (Haw.) H.Jacobsen & Schwantes	Mesembryanthemaceae
	2405R	*Malephora engleriana* (Dinter & A.Berger) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Mestoklema arboriforme* (Burch.) N.E.Br. ex Glen	Mesembryanthemaceae
E	2405R	*Namibia cinerea* (Marloth) Schwantes	Mesembryanthemaceae
E	2405R	*Namibia pomonae* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Namibia ponderosa* (Dinter & Schwantes) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Nananthus aliodes* (Haw.) Schwantes	Mesembryanthemaceae
	2405R	*Nananthus margaritiferus* L.Bolus	Mesembryanthemaceae
	2405R	*Psammophora longifolia* L.Bolus	Mesembryanthemaceae
	2405R	*Psammophora modesta* (Dinter & A.Berger) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Psammophora nissenii* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Psammophora saxicola* H.E.K.Hartmann	Mesembryanthemaceae
	2405R	*Ruschia abbreviata* L.Bolus	Mesembryanthemaceae
	2405R	*Ruschia axthelmiana* (Dinter) Schwantes	Mesembryanthemaceae
	2405R	*Ruschia barnardii* L.Bolus	Mesembryanthemaceae
E	2405R	*Ruschia deminuta* L.Bolus	Mesembryanthemaceae
	2405R	*Ruschia divaricata* L.Bolus	Mesembryanthemaceae
	2405R	*Ruschia muricata* L.Bolus	Mesembryanthemaceae
E	2405R	*Ruschia namusmontana* Friedrich	Mesembryanthemaceae
E	2405R	*Ruschia odontocalyx* (Schltr. & Diels) Schwantes	Mesembryanthemaceae
E	2405R	*Ruschia pollardii* Friedrich	Mesembryanthemaceae
	2405R	*Ruschia rupicola* (Engler) Schwantes non L.Bolus	Mesembryanthemaceae
E	2405R	*Ruschia ruschiana* (Dinter) Dinter & Schwantes	Mesembryanthemaceae
	2405R	*Ruschia sabulicola* Dinter	Mesembryanthemaceae
	2405R	*Ruschia spinosa* (L.) Dehn	Mesembryanthemaceae
	2405R	*Ruschia tumidula* (Haw.) Schwantes	Mesembryanthemaceae
	2405R	*Ruschia uncinata* (L.) Schwantes	Mesembryanthemaceae
E	2405R	*Ruschia vulvaria* (Dinter) Schwantes	Mesembryanthemaceae
	2405R	*Ruschianthemum gigas* (Dinter) Friedrich	Mesembryanthemaceae
E	2405R	*Ruschianthus falcatus* L.Bolus	Mesembryanthemaceae
E	2405R	*Schwantesia constanceae* N.Zimm.	Mesembryanthemaceae
	2405R	*Schwantesia herrei* L.Bolus var. *herrei forma herrei*	Mesembryanthemaceae
	2405R	*Schwantesia ruedebuschii* Dinter	Mesembryanthemaceae
E	2405R	*Schwantesia succumbens* (Dinter) Dinter	Mesembryanthemaceae
	2405R	*Stoeberia arborea* Van Jaarsv.	Mesembryanthemaceae
	2405R	*Stoeberia beetzii* (Dinter) Dinter & Schwantes var. *beetzii*	Mesembryanthemaceae
	2405R	*Stoeberia carpii* Friedrich	Mesembryanthemaceae
	2405R	*Stoeberia frutescens* (L.Bolus) Van Jaarsv.	Mesembryanthemaceae
	2405R	*Stoeberia utilis* (L.Bolus) Van Jaarsv.	Mesembryanthemaceae
	2405R	*Titanopsis hugo-schlechteri* (Tischer) Dinter & Schwantes	Mesembryanthemaceae
E	2405R	*Titanopsis luederitzii* Tischer	Mesembryanthemaceae
	2405R	*Titanopsis schwantesii* (Schwantes) Schwantes	Mesembryanthemaceae
	2405R	*Trichodiadema barbatum* (L.) Schwantes	Mesembryanthemaceae
E	2405R	*Trichodiadema littlewoodii* L.Bolus	Mesembryanthemaceae
	2405R	*Trichodiadema pomeridianum* L.Bolus	Mesembryanthemaceae
	2406	*Talinum arnotii* Hook.f.	Portulacaceae
	2406	*Talinum caffrum* (Thunb.) Eckl. & Zeyh.	Portulacaceae
	2406	*Talinum crispatulum* Dinter	Portulacaceae
	2406	*Talinum tenuissimum* Dinter	Portulacaceae
	2412	*Anacampseros albissima* Marloth	Portulacaceae
	2412	*Anacampseros baeseckei* Dinter	Portulacaceae

	2412	*Anacampseros bayeriana* S.A.Hammer	Portulacaceae
E	2412	*Anacampseros dinteri* Schinz	Portulacaceae
E	2412	*Anacampseros filamentosa* (Haw.) Sims subsp. *tomentosa* (A.Berger) Gerbaulet	Portulacaceae
	2412	*Anacampseros karasmontana* Dinter	Portulacaceae
	2412	*Anacampseros namaquensis* H.Pearson & Stephens	Portulacaceae
	2412	*Anacampseros papyracea* E.Mey. ex Fenzl subsp. *namaensis* Gerbaulet	Portulacaceae
	2412	*Anacampseros quinaria* E.Mey. ex Fenzl	Portulacaceae
	2412	*Anacampseros retusa* Poelln.	Portulacaceae
	2412	*Anacampseros ruschii* Dinter & Poelln.	Portulacaceae
	2419	*Ceraria carrissonana* Exell & Mendonca	Portulacaceae
	2419	*Ceraria fruticulosa* H.Pearson & Stephens	Portulacaceae
E	2419	*Ceraria longipedunculata* Merxm. & Podlech	Portulacaceae
	2419	*Ceraria namaquensis* (Sond.) H.Pearson & Stephens	Portulacaceae
	2419	*Portulacaria armiana* Van Jaarsv.	Portulacaceae
	2419	*Portulacaria pygmaea* Pillans	Portulacaceae
	2421	*Portulaca foliosa* Ker Gawl.	Portulacaceae
	2421	*Portulaca hereroensis* Schinz	Portulacaceae
	2421	*Portulaca kermesina* N.E.Br.	Portulacaceae
	2421	*Portulaca wightiana* Wall. ex Wight & Arn.	Portulacaceae
	2453	*Polycarpon prostratum* (Forssk.) Asch. & Schweinf.	Caryophyllaceae
	2455	*Polycarpaea eriantha* Hochst. ex A.Rich. var. *eriantha*	Caryophyllaceae
	2467	*Pollichia campestris* Aiton	Illecebraceae
	2469	*Corrigiola litoralis* L. subsp. *litoralis*	Illecebraceae
	2476	*Herniaria erckertii* Herm. subsp. *erckertii*	Illecebraceae
	2490	*Silene burchellii* Otth	Caryophyllaceae
	2502	*Dianthus namaensis* Schinz var. *dinteri* (Schinz) Hooper	Caryophyllaceae
	2513	*Nymphaea lotus* L.	Nymphaeaceae
	2513	*Nymphaea nouchali* Burm.f. var. *caerulea* (Savigny) Verdc.	Nymphaeaceae
	2513	*Nymphaea nouchali* Burm.f. var. *ovalifolia* (Conard.) Verdc.	Nymphaeaceae
	2513	*Nymphaea nouchali* Burm.f. var. *petersiana* (Klotzsch) Verdc.	Nymphaeaceae
	2516	*Ceratophyllum demersum* L. var. *demersum*	Ceratophyllaceae
	2542	*Clematis brachiata* Thunb.	Ranunculaceae
	2542	*Clematis commutata* Kuntze	Ranunculaceae
	2542	*Clematis oweniae* Harv.	Ranunculaceae
	2542	*Clematis villosa* DC. subsp. *stanleyi* (Hook.) Kuntze	Ranunculaceae
	2546	*Ranunculus multifidus* Forssk.	Ranunculaceae
	2573	*Antizoma angustifolia* (Burch.) Miers ex Harv.	Menispermaceae
	2573	*Antizoma miersiana* Harv.	Menispermaceae
	2573	*Cissampelos capensis* L.f.	Menispermaceae
	2573	*Cissampelos mucronata* A.Rich.	Menispermaceae
	2583	*Tinospora fragosa* (I.Verd.) I.Verd. & Troupin	Menispermaceae
	2691	*Friesodielsia obovata* (Benth.) Verdc.	Annonaceae
	2716	*Hexalobus monopetalus* (A.Rich.) Engl. & Diels var. *monopetalus*	Annonaceae
	2717	*Xylopia odoratissima* Welw. ex Oliv.	Annonaceae
	2717	*Xylopia tomentosa* Exell	Annonaceae
	2729	*Annona stenophylla* Engl. & Diels subsp. *nana* (Exell) N.Robson	Annonaceae
	2830	*Gyrocarpus americanus* Jacq. subsp. *africanus* Kubitzki	Hernandiaceae
	2853	*Papaver aculeatum* Thunb.	Papaveraceae
	2858	*Cysticapnos vesicaria* (L.) Fedde	Fumariaceae
	2875	*Heliophila carnosa* (Thunb.) Steud.	Brassicaceae
	2875	*Heliophila cornuta* Sond. var. *squamata* (Schltr.) Marais	Brassicaceae
	2875	*Heliophila coronopifolia* L.	Brassicaceae
	2875	*Heliophila crithmifolia* Willd.	Brassicaceae
	2875	*Heliophila deserticola* Schltr. var. *deserticola*	Brassicaceae
	2875	*Heliophila deserticola* Schltr. var. *micrantha* A.Schreib.	Brassicaceae
	2875	*Heliophila eximia* Marais	Brassicaceae
	2875	*Heliophila lactea* Schltr.	Brassicaceae
	2875	*Heliophila latisiliqua* E.Mey. ex Sond. var. *macrostylis* (E.Mey. ex Sond.) Marais	Brassicaceae
	2875	*Heliophila minima* (Stephens) Marais	Brassicaceae
E	2875	*Heliophila obibensis* Marais	Brassicaceae
	2875	*Heliophila seselifolia* Burch. ex DC. var. *seselifolia*	Brassicaceae
	2875	*Heliophila trifurca* Burch. ex DC.	Brassicaceae
	2875	*Heliophila variabilis* Burch. ex DC.	Brassicaceae
	2883	*Lepidium africanum* (Burm.f.) DC. subsp. *divaricatum* (Aiton) Jonsell	Brassicaceae
	2883	*Lepidium desertorum* Eckl. & Zeyh.	Brassicaceae
	2917	*Sisymbrium burchellii* DC. var. *burchellii*	Brassicaceae
	2917	*Sisymbrium burchellii* DC. var. *dinteri* (O.E.Schulz) Marais	Brassicaceae
	2917	*Sisymbrium dissitiflorum* O.E.Schulz	Brassicaceae
	2947	*Erucastrum arabicum* Fisch. & C.A.Mey.	Brassicaceae

	2947	*Erucastrum griquense* (N.E.Br.) O.E.Schulz	Brassicaceae
	2965	*Rorippa fluviatilis* (E.Mey. ex Sond.) Thell.	Brassicaceae
	2965	*Rorippa humifusa* (Guill. & Perr.) Hiern	Brassicaceae
	2965	*Rorippa nudiuscula* (E.Mey. ex Sond.) Thell.	Brassicaceae
	3082	*Cleome angustifolia* Forssk. subsp. *diandra* (Burch.) Kers	Capparaceae
	3082	*Cleome angustifolia* Forssk. subsp. *petersiana* (Klotzsch ex Sond.) Kers	Capparaceae
E	3082	*Cleome carnosa* (Pax) Gilg & Benedict	Capparaceae
	3082	*Cleome elegantissima* Briq.	Capparaceae
	3082	*Cleome foliosa* Hook.f. var. *foliosa*	Capparaceae
	3082	*Cleome foliosa* Hook.f. var. *lutea* (Sond.) Codd & Kers	Capparaceae
E	3082	*Cleome foliosa* Hook.f. var. *namibensis* (Kers) Codd	Capparaceae
	3082	*Cleome gynandra* L.	Capparaceae
	3082	*Cleome hirta* (Klotzsch) Oliv.	Capparaceae
	3082	*Cleome iberidella* Welw. ex Oliv.	Capparaceae
	3082	*Cleome kalachariensis* (Schinz) Gilg & Benedict	Capparaceae
E	3082	*Cleome laburnifolia* Roessler	Capparaceae
	3082	*Cleome monophylla* L.	Capparaceae
	3082	*Cleome oxyphylla* Burch. var. *oxyphylla*	Capparaceae
	3082	*Cleome paxii* (Schinz) Gilg & Benedict	Capparaceae
	3082	*Cleome rubella* Burch.	Capparaceae
	3082	*Cleome semitetrandra* Sond.	Capparaceae
E	3082	*Cleome suffruticosa* Schinz	Capparaceae
	3101	*Capparis hereroensis* Schinz	Capparaceae
	3101	*Capparis tomentosa* Lam.	Capparaceae
	3106	*Boscia albitrunca* (Burch.) Gilg & Benedict	Capparaceae
	3106	*Boscia angustifolia* A.Rich. var. *corymbosa* (Gilg) DeWolf	Capparaceae
	3106	*Boscia foetida* Schinz subsp. *foetida*	Capparaceae
	3106	*Boscia microphylla* Oliv.	Capparaceae
	3106	*Boscia mossambicensis* Klotzsch	Capparaceae
	3106	*Boscia tomentosa* Toelken	Capparaceae
	3109	*Cadaba aphylla* (Thunb.) Wild	Capparaceae
	3109	*Cadaba schroeppelii* Suess.	Capparaceae
	3109	*Cadaba termitaria* N.E.Br.	Capparaceae
	3112	*Maerua angolensis* DC.	Capparaceae
	3112	*Maerua gilgii* Schinz	Capparaceae
	3112	*Maerua juncea* Pax subsp. *juncea*	Capparaceae
	3112	*Maerua parvifolia* Pax	Capparaceae
	3112	*Maerua schinzii* Pax	Capparaceae
	3126	*Oligomeris dipetala* (Aiton) Turcz. var. *dipetala*	Resedaceae
	3126	*Oligomeris dipetala* (Aiton) Turcz. var. *spathulata* (E.Mey. ex Turcz.) Abdallah	Resedaceae
	3126	*Oligomeris linifolia* (Vahl) J.F.Macbr.	Resedaceae
	3128	*Moringa ovalifolia* Dinter & A.Berger	Moringaceae
	3136	*Drosera burkeana* Planch.	Droseraceae
	3136	*Drosera indica* L.	Droseraceae
	3140	*Tristicha trifaria* (Bory ex Willd.) Spreng. subsp. *trifaria*	Podostemaceae
	3151	*Ledermanniella tenax* (C.H.Wright) C.Cusset	Podostemaceae
	3151	*Ledermanniella warmingiana* (Gilg) C.Cusset	Podostemaceae
	3152	*Letestuella tisserantii* G. Taylor	Podostemaceae
	3160	*Hydrostachys polymorpha* Klotzsch ex A.Braun	Hydrostachyaceae
	3164	*Cotyledon orbiculata* L. var. *orbiculata*	Crassulaceae
	3164	*Cotyledon papillaris* L.f.	Crassulaceae
E	3164	*Tylecodon aridimontanus* G.Will.	Crassulaceae
E	3164	*Tylecodon aurusbergensis* G.Will. & Van Jaarsv.	Crassulaceae
	3164	*Tylecodon bleckiae* G.Will.	Crassulaceae
	3164	*Tylecodon buchholzianus* (Schuldt & Stephens) Toelken	Crassulaceae
	3164	*Tylecodon hallii* (Toelken) Toelken	Crassulaceae
	3164	*Tylecodon paniculatus* (L.f.) Toelken	Crassulaceae
	3164	*Tylecodon pearsonii* (Schönland) Toelken	Crassulaceae
	3164	*Tylecodon racemosus* (Harv.) Toelken	Crassulaceae
	3164	*Tylecodon reticulatus* (L.f.) Toelken subsp. *phyllopodium* Toelken	Crassulaceae
	3164	*Tylecodon reticulatus* (L.f.) Toelken subsp. *reticulatus*	Crassulaceae
	3164	*Tylecodon rubrovenosus* (Dinter) Toelken	Crassulaceae
	3164	*Tylecodon schaeferianus* (Dinter) Toelken	Crassulaceae
	3164	*Tylecodon similis* (Toelken) Toelken	Crassulaceae
	3164	*Tylecodon singularis* (R.A.Dyer) Toelken	Crassulaceae
	3164	*Tylecodon wallichii* (Harv.) Toelken subsp. *ecklonianus*	Crassulaceae
	3166	*Kalanchoe brachyloba* Welw. ex Britten	Crassulaceae
	3166	*Kalanchoe laciniata* (L.) DC.	Crassulaceae
	3166	*Kalanchoe lanceolata* (Forssk.) Pers.	Crassulaceae

	3166	*Kalanchoe rotundifolia* (Haw.) Haw.	Crassulaceae
	3168	*Crassula atropurpurea* (Haw.) D.Dietr. var. *cultiformis* (Friedrich) Toelken	Crassulaceae
E	3168	*Crassula aurusbergensis* G.Will.	Crassulaceae
E	3168	*Crassula ausensis* Hutchison subsp. *ausensis*	Crassulaceae
E	3168	*Crassula ausensis* P.Hutchison subsp. *giessii* (Friedrich) Toelken	Crassulaceae
E	3168	*Crassula ausensis* Hutchison subsp. *titanopsis* Pavelka	Crassulaceae
	3168	*Crassula brevifolia* Harv. subsp. *brevifolia*	Crassulaceae
	3168	*Crassula campestris* (Eckl. & Zeyh.) Endl. ex Walp.	Crassulaceae
	3168	*Crassula capitella* Thunb. subsp. *nodulosa* (Schönland) Toelken	Crassulaceae
	3168	*Crassula capitella* Thunb. subsp. *thyrsiflora* (Thunb.) Toelken	Crassulaceae
	3168	*Crassula columnaris* Thunb. subsp. *prolifera* Friedrich	Crassulaceae
	3168	*Crassula corallina* Thunb. subsp. *corallina*	Crassulaceae
	3168	*Crassula corallina* Thunb. subsp. *macrorrhiza* Toelken	Crassulaceae
	3168	*Crassula cotyledonis* Thunb.	Crassulaceae
	3168	*Crassula deceptor* Schönland & Baker f.	Crassulaceae
	3168	*Crassula deltoidea* Thunb.	Crassulaceae
	3168	*Crassula dependens* Bolus	Crassulaceae
	3168	*Crassula elegans* Schönland & Baker f. subsp. *elegans*	Crassulaceae
E	3168	*Crassula elegans* Schönland & Baker f. subsp. *namibensis* (Friedrich) Toelken	Crassulaceae
	3168	*Crassula exilis* Harv. subsp. *sedifolia* (N.E.Br.) Toelken	Crassulaceae
	3168	*Crassula expansa* Dryand. subsp. *pyrifolia* (Compton) Toelken	Crassulaceae
	3168	*Crassula fusca* A.G.J. Herre	Crassulaceae
	3168	*Crassula garibina* Marloth & Schönland subsp. *garibina*	Crassulaceae
	3168	*Crassula grisea* Schönland	Crassulaceae
	3168	*Crassula lanceolata* (Eckl. & Zeyh.) Endl. ex Walp. subsp. *transvaalensis* (Kuntze) Toelken	Crassulaceae
E	3168	*Crassula luederitzii* Schönland	Crassulaceae
	3168	*Crassula macowaniana* Schönland & Baker f.	Crassulaceae
	3168	*Crassula mesembrianthemopsis* Dinter	Crassulaceae
	3168	*Crassula muscosa* L. var. *muscosa*	Crassulaceae
	3168	*Crassula namaquensis* Schönland & Baker f. subsp. *lutea* (Schönland) Toelken	Crassulaceae
	3168	*Crassula namaquensis* Schönland & Baker f. subsp. *namaquensis*	Crassulaceae
	3168	*Crassula nemorosa* (Eckl. & Zeyh.) Endl. ex Walp.	Crassulaceae
E	3168	*Crassula numaisensis* Friedrich	Crassulaceae
	3168	*Crassula oblanceolata* Schönland & Baker f.	Crassulaceae
	3168	*Crassula pallens* Schönland & Baker f.	Crassulaceae
	3168	*Crassula plegmatoides* Friedrich	Crassulaceae
	3168	*Crassula pseudohemisphaerica* Friedrich	Crassulaceae
	3168	*Crassula rhodesica* (Merxm.) Wickens & Bywater	Crassulaceae
	3168	*Crassula rudolfii* Schönland & Baker f.	Crassulaceae
	3168	*Crassula rupestris* Thunb. subsp. *commutata* (Friedrich) Tolken	Crassulaceae
	3168	*Crassula sericea* Schönland var. *hottentotta* (Marloth & Schönland) Toelken	Crassulaceae
	3168	*Crassula sericea* Schönland var. *sericea*	Crassulaceae
	3168	*Crassula sericea* Schönland var. *velutina* (Friedrich) Toelken	Crassulaceae
	3168	*Crassula sladenii* Schönland	Crassulaceae
	3168	*Crassula subacaulis* Schönland & Baker f. subsp. *erosula* (N.E.Br.) Toelken	Crassulaceae
	3168	*Crassula subaphylla* (Eckl. & Zeyh.) Harv. var. *subaphylla*	Crassulaceae
	3168	*Crassula tabularis* Dinter	Crassulaceae
	3168	*Crassula tenuipedicellata* Schönland & Baker f.	Crassulaceae
	3168	*Crassula thunbergiana* Schult. subsp. *minutiflora* (Schönland & Baker f.) Toelken	Crassulaceae
	3168	*Crassula tomentosa* Thunb. var. *glabrifolia* (Harv.) Toelken	Crassulaceae
	3168	*Crassula tomentosa* Thunb. var. *tomentosa*	Crassulaceae
	3168	*Crassula verticillaris* L.	Crassulaceae
	3168	*Crassula whiteheadii* Harv.	Crassulaceae
	3175	*Adromischus alstonii* (Schönland & Baker f.) C.A.Sm.	Crassulaceae
	3175	*Adromischus filicaulis* (Eckl. & Zeyh.) C.A.Sm. subsp. *filicaulis*	Crassulaceae
	3175	*Adromischus marianiae* (Marloth) A.Berger var. *hallii* (Hutchison) Toelken	Crassulaceae
	3175	*Adromischus marianiae* (Marloth) A.Berger var. *kubusensis* (Uitewaal) Toelken	Crassulaceae
	3175	*Adromischus montium-klinghardtii* (Dinter) A.Berger	Crassulaceae
E	3175	*Adromischus schuldtianus* (Poelln.) Poelln. subsp. *juttae* (Poelln.) Toelken	Crassulaceae
E	3175	*Adromischus schuldtianus* (Poelln.) Poelln. subsp. *schuldtianus*	Crassulaceae
	3201	*Vahlia capensis* (L.f.) Thunb. subsp. *capensis*	Vahliaceae
	3201	*Vahlia capensis* (L.f.) Thunb. subsp. *vulgaris* Bridson	Vahliaceae
	3238	*Montinia caryophyllacea* Thunb.	Montiniaceae
	3282	*Myrothamnus flabellifolius* Welw.	Myrothamnaceae
	3356	*Potentilla supina* L.	Rosaceae
	3390	*Neuradopsis austroafricana* (Schinz) Bremek. & Oberm.	Neuradaceae
	3391	*Grielum humifusum* Thunb.	Neuradaceae
	3391	*Grielum sinuatum* Licht. ex Burch.	Neuradaceae
	3405	*Parinari capensis* Harv. subsp. *capensis*	Chrysobalanaceae

	3405	*Parinari curatellifolia* Planch. ex Benth.	Chrysobalanaceae
	3421	*Rourea orientalis* Baill.	Connaraceae
	3443	*Albizia anthelmintica* (A.Rich.) Brongn.	Fabaceae
	3443	*Albizia antunesiana* Harms	Fabaceae
	3443	*Albizia brevifolia* Schinz	Fabaceae
	3443	*Albizia harveyi* E.Fourn.	Fabaceae
	3443	*Albizia tanganyicensis* Baker f. subsp. *tanganyicensis*	Fabaceae
	3443	*Albizia versicolor* Welw. ex Oliv.	Fabaceae
	3446	*Acacia arenaria* Schinz	Fabaceae
	3446	*Acacia ataxacantha* DC.	Fabaceae
	3446	*Acacia erioloba* E.Mey.	Fabaceae
	3446	*Acacia erubescens* Welw. ex Oliv.	Fabaceae
	3446	*Acacia fleckii* Schinz	Fabaceae
	3446	*Acacia galpinii* Burtt Davy	Fabaceae
	3446	*Acacia haematoxylon* Willd.	Fabaceae
	3446	*Acacia hebeclada* DC. subsp. *chobiensis* (O.B.Mill.) A.Schreib.	Fabaceae
	3446	*Acacia hebeclada* DC. subsp. *hebeclada*	Fabaceae
	3446	*Acacia hebeclada* DC. subsp. *tristis* A.Schreib.	Fabaceae
	3446	*Acacia hereroensis* Engl.	Fabaceae
	3446	*Acacia karroo* Hayne	Fabaceae
	3446	*Acacia kirkii* Oliv. subsp. *kirkii*	Fabaceae
	3446	*Acacia luederitzii* Engl. var. *luederitzii*	Fabaceae
	3446	*Acacia mellifera* (Vahl) Benth subsp. *detinens* (Burch.) Brenan	Fabaceae
	3446	*Acacia mellifera* (Vahl) Benth subsp. *mellifera*	Fabaceae
E	3446	*Acacia montis-usti* Merxm. & A.Schreib.	Fabaceae
	3446	*Acacia nebrownii* Burtt Davy	Fabaceae
	3446	*Acacia nigrescens* Oliv.	Fabaceae
	3446	*Acacia nilotica* (L.) Willd. ex Delile subsp. *kraussiana* (Benth.) Brenan	Fabaceae
	3446	*Acacia polyacantha* Willd. subsp. *campylacantha* (Hochst. ex A.Rich.) Brenan	Fabaceae
	3446	*Acacia reficiens* Wawra subsp. *reficiens*	Fabaceae
	3446	*Acacia robusta* Burch. subsp. *clavigera* (E.Mey.) Brenan	Fabaceae
	3446	*Acacia robynsiana* Merxm. & A.Schreib.	Fabaceae
	3446	*Acacia senegal* (L.) Willd. var. *rostrata* Brenan	Fabaceae
	3446	*Acacia sieberiana* DC. var. *woodii* (Burtt Davy) Keay & Brenan	Fabaceae
	3446	*Acacia tortilis* (Forssk.) Hayne subsp. *heteracantha* (Burch.) Brenan	Fabaceae
	3446	*Acacia tortilis* (Forssk.) Hayne subsp. *spirocarpa* (Hochst. ex A.Rich.) Brenan	Fabaceae
	3446	*Faidherbia albida* (Delile) A.Chev.	Fabaceae
	3449	*Mimosa pigra* L.	Fabaceae
	3451	*Neptunia oleracea* Lour.	Fabaceae
	3452	*Dichrostachys cinerea* (L.) Wight & Arn. subsp. *africana* Brenan & Brummitt var. *africana*	Fabaceae
	3452	var. *setulosa* (Welw. ex Oliv.) Brenan & Brummitt	Fabaceae
	3453	*Xerocladia viridiramis* (Burch.) Taub.	Fabaceae
	3458	*Amblygonocarpus andongensis* (Welw. ex Oliv.) Exell & Torre	Fabaceae
	3467	*Elephantorrhiza elephantina* (Burch.) Skeels	Fabaceae
	3467	*Elephantorrhiza goetzei* (Harms) Harms subsp. *goetzei*	Fabaceae
E	3467	*Elephantorrhiza rangei* Harms	Fabaceae
E	3467	*Elephantorrhiza schinziana* Dinter	Fabaceae
	3467	*Elephantorrhiza suffruticosa* Schinz	Fabaceae
	3468	*Entada arenaria* Schinz subsp. *arenaria*	Fabaceae
	3471	*Erythrophleum africanum* (Welw. ex Benth.) Harms	Fabaceae
	3474	*Burkea africana* Hook.	Fabaceae
	3490	*Colophospermum mopane* (J.Kirk ex Benth.) J.Kirk ex J.Léonard	Fabaceae
	3490	*Guibourtia coleosperma* (Benth.) J.Léonard	Fabaceae
	3506	*Schotia afra* (L.) Thunb. var. *angustifolia* (E.Mey.) Harv.	Fabaceae
	3507	*Baikiaea plurijuga* Harms	Fabaceae
	3509	*Afzelia quanzensis* Welw.	Fabaceae
	3516	*Julbernardia globiflora* (Benth.) Troupin	Fabaceae
	3528	*Adenolobus garipensis* (E.Mey.) Torre & Hillc.	Fabaceae
	3528	*Adenolobus pechuelii* (Kuntze) Torre & Hillc. subsp. *mossamedensis* (Torre & Hillc.) Brummitt & J.H.Ross	Fabaceae
	3528	*Adenolobus pechuelii* (Kuntze) Torre & Hillc. subsp. *pechuelii*	Fabaceae
	3528	*Bauhinia petersiana* Bolle subsp. *macrantha* (Oliv.) Brummitt & J.H.Ross	Fabaceae
	3528	*Bauhinia petersiana* Bolle subsp. *petersiana*	Fabaceae
	3528	*Bauhinia urbaniana* Schinz	Fabaceae
	3528	*Piliostigma thonningii* (Schumach.) Milne-Redh.	Fabaceae
	3528	*Tylosema esculentum* (Burch.) A.Schreib.	Fabaceae
	3528	*Tylosema fassoglense* (Schweinf.) Torre & Hillc.	Fabaceae
	3530	*Dialium engleranum* Henriq.	Fabaceae
	3536	*Cassia abbreviata* Oliv. subsp. *beareana* (Holmes) Brenan	Fabaceae
	3536	*Chamaecrista absus* (L.) Irwin & Barneby	Fabaceae

	3536	*Chamaecrista biensis* (Steyaert) Lock	Fabaceae
	3536	*Chamaecrista capensis* (Thunb.) E.Mey. var. *flavescens* (Thunb.) E.Mey.	Fabaceae
	3536	*Chamaecrista falcinella* (Oliv.) Lock var. *parviflora* (Steyaert) Lock	Fabaceae
	3536	*Chamaecrista mimosoides* (L.) Greene	Fabaceae
	3536	*Senna italica* Mill. subsp. *arachoides* (Burch.) Lock	Fabaceae
	3536	*Senna italica* Mill. subsp. *micrantha* (Brenan) Lock	Fabaceae
	3536	*Senna singueana* (Delile) Lock	Fabaceae
	3551	*Parkinsonia africana* Sond.	Fabaceae
E	3552	*Haematoxylum dinteri* (Harms) Harms	Fabaceae
	3557	*Hoffmannseggia burchellii* (DC.) Benth. ex Oliv.	Fabaceae
	3557	*Hoffmannseggia lactea* (Schinz) Schinz	Fabaceae
E	3559	*Caesalpinia merxmeullerana* A.Schreib.	Fabaceae
E	3559	*Caesalpinia pearsonii* L.Bolus	Fabaceae
	3559	*Caesalpinia rubra* (Engl.) Brenan	Fabaceae
	3561	*Peltophorum africanum* Sond.	Fabaceae
	3574	*Bobgunnia madagascariensis* (Desv.) J.H. Kirkbr. & Wiersema	Fabaceae
	3598	*Pericopsis angolensis* (Baker) Van Meeuwen	Fabaceae
	3607	*Calpurnia aurea* (Aiton) Benth. subsp. *aurea*	Fabaceae
	3607	*Calpurnia villosa* Harv. var. *intrusa* (R.Br. ex Ait.f.) E.Mey.	Fabaceae
	3612	*Baphia massaiensis* Taub. subsp. *obovata* (Schinz) Brummitt var. *obovata*	Fabaceae
	3657	*Lotononis bainesii* Baker	Fabaceae
	3657	*Lotononis brachyantha* Harms	Fabaceae
E	3657	*Lotononis bracteosa* B.-E. van Wyk	Fabaceae
	3657	*Lotononis calycina* (E.Mey.) Benth.	Fabaceae
	3657	*Lotononis crumanina* Burch. ex Benth.	Fabaceae
	3657	*Lotononis curtii* Harms	Fabaceae
	3657	*Lotononis falcata* (E.Mey.) Benth.	Fabaceae
	3657	*Lotononis furcata* (Merxm. & A.Schreib.) A.Schreib.	Fabaceae
	3657	*Lotononis linearifolia* B.-E. van Wyk	Fabaceae
	3657	*Lotononis listii* Polhill	Fabaceae
	3657	*Lotononis maculata* Dummer	Fabaceae
	3657	*Lotononis marlothii* Engl.	Fabaceae
E	3657	*Lotononis mirabilis* Dinter	Fabaceae
E	3657	*Lotononis pachycarpa* Dinter ex B.-E. van Wyk	Fabaceae
E	3657	*Lotononis pallidirosea* Dinter & Harms	Fabaceae
	3657	*Lotononis platycarpa* (Viv.) Pic.Serm.	Fabaceae
	3657	*Lotononis rabenaviana* Dinter & Harms	Fabaceae
	3657	*Lotononis schoenfelderi* (Dinter ex Merxm. & A.Schreib.) A.Schreib.	Fabaceae
E	3657	*Lotononis schreiberi* B.-E. van Wyk	Fabaceae
	3657	*Lotononis sparsiflora* (E.Mey.) B.-E. van Wyk	Fabaceae
	3657	*Lotononis strigillosa* (Merxm. & A.Schreib.) A.Schreib.	Fabaceae
	3657	*Lotononis tenuis* Baker	Fabaceae
	3659	*Rothia hirsuta* (Guill. & Perr.) Baker	Fabaceae
	3660	*Lebeckia acanthoclada* Dinter	Fabaceae
	3660	*Lebeckia cinerea* E.Mey.	Fabaceae
E	3660	*Lebeckia dinteri* Harms	Fabaceae
	3660	*Lebeckia halenbergensis* Merxm. & A.Schreib.	Fabaceae
	3660	*Lebeckia linearifolia* E.Mey.	Fabaceae
	3660	*Lebeckia multiflora* E.Mey.	Fabaceae
E	3660	*Lebeckia obovata* Schinz	Fabaceae
	3660	*Lebeckia parvifolia* (Schinz) Harms	Fabaceae
	3660	*Lebeckia spinescens* Harv.	Fabaceae
	3664	*Dichilus lebeckioides* DC.	Fabaceae
	3665	*Melolobium adenodes* Eckl. & Zeyh.	Fabaceae
	3665	*Melolobium candicans* (E.Mey.) Eckl. & Zeyh.	Fabaceae
	3665	*Melolobium decumbens* (E.Mey.) Burtt Davy	Fabaceae
	3665	*Melolobium karasbergense* L.Bolus	Fabaceae
	3665	*Melolobium macrocalyx* Dummer	Fabaceae
	3665	*Melolobium microphyllum* (L.f.) Eckl. & Zeyh.	Fabaceae
	3665	*Melolobium villosum* Harms	Fabaceae
	3669	*Crotalaria argyraea* Welw. ex Baker	Fabaceae
E	3669	*Crotalaria aurea* Dinter ex Baker f.	Fabaceae
	3669	*Crotalaria barkae* Schweinf. subsp. *barkae*	Fabaceae
	3669	*Crotalaria barkae* Schweinf. subsp. *cordisepala* Polhill	Fabaceae
	3669	*Crotalaria barnabassii* Dinter ex Baker f.	Fabaceae
E	3669	*Crotalaria colorata* Schinz subsp. *colorata*	Fabaceae
	3669	*Crotalaria colorata* Schinz subsp. *erecta* (Schinz) Polhill	Fabaceae
	3669	*Crotalaria damarensis* Engl.	Fabaceae
	3669	*Crotalaria dinteri* Schinz	Fabaceae

	3669	*Crotalaria distans* Benth. subsp. *distans*	Fabaceae
	3669	*Crotalaria eremicola* Baker f. subsp. *eremicola*	Fabaceae
	3669	*Crotalaria flavicarinata* Baker f.	Fabaceae
	3669	*Crotalaria heidmannii* Schinz	Fabaceae
	3669	*Crotalaria incompta* N.E.Br.	Fabaceae
E	3669	*Crotalaria kurtii* Schinz	Fabaceae
	3669	*Crotalaria laburnifolia* L. subsp. *australis* (Baker f.) Polhill	Fabaceae
	3669	*Crotalaria leubnitziana* Schinz	Fabaceae
	3669	*Crotalaria meyeriana* Steud.	Fabaceae
	3669	*Crotalaria orientalis* Burtt Davy ex I.Verd. subsp. *allenii* (I.Verd.) Polhill & A.Schreib.	Fabaceae
	3669	*Crotalaria pearsonii* Baker f.	Fabaceae
	3669	*Crotalaria pisicarpa* Welw. ex Baker	Fabaceae
	3669	*Crotalaria platysepala* Harv.	Fabaceae
	3669	*Crotalaria podocarpa* DC.	Fabaceae
	3669	*Crotalaria sericifolia* Harms	Fabaceae
	3669	*Crotalaria spartioides* DC.	Fabaceae
	3669	*Crotalaria sphaerocarpa* Perr. ex DC. subsp. *sphaerocarpa*	Fabaceae
	3669	*Crotalaria steudneri* Schweinf.	Fabaceae
	3669	*Crotalaria teixeirae* Torre	Fabaceae
	3669	*Crotalaria ulbrichiana* Harms	Fabaceae
	3669	*Crotalaria virgultalis* Burch. ex DC.	Fabaceae
	3687	*Trigonella anguina* Delile	Fabaceae
	3688	*Medicago polymorpha* L.	Fabaceae
	3690	*Trifolium burchelianum* Ser.	Fabaceae
	3700	*Cyamopsis senegalensis* Guill. & Perr.	Fabaceae
	3700	*Cyamopsis serrata* Schinz	Fabaceae
	3702	*Indigastrum argyraeum* (Eckl. & Zeyh.) Schrire	Fabaceae
	3702	*Indigastrum argyroides* (E.Mey.) Schrire	Fabaceae
	3702	*Indigastrum burkeanum* (Benth. ex Harv.) Schrire	Fabaceae
	3702	*Indigastrum candidissimum* (Dinter) Schrire	Fabaceae
	3702	*Indigastrum costatum* (Guill. & Perr.) Schrire subsp. *macrum* (E.Mey.) Schrire	Fabaceae
	3702	*Indigastrum guerranum* (Torre) Schrire	Fabaceae
	3702	*Indigastrum parviflorum* (B.Heyne ex Wight & Arn.) Schrire subsp. *occidentalis* (J.B.Gillett) Schrire	Fabaceae
	3702	*Indigastrum parviflorum* (B.Heyne ex Wight & Arn.) Schrire subsp. *parviflorum*	Fabaceae
E	3702	*Indigofera acanthoclada* Dinter	Fabaceae
	3702	*Indigofera adenocarpa* E.Mey.	Fabaceae
	3702	*Indigofera adenoides* Baker f.	Fabaceae
	3702	*Indigofera alternans* DC.	Fabaceae
	3702	*Indigofera amorphoides* Jaub. & Spach	Fabaceae
E	3702	*Indigofera anabibensis* A.Schreib.	Fabaceae
	3702	*Indigofera aquae-nitentis* Bremek.	Fabaceae
	3702	*Indigofera arenophila* Schinz	Fabaceae
	3702	*Indigofera astragalina* DC.	Fabaceae
	3702	*Indigofera auricoma* E.Mey.	Fabaceae
	3702	*Indigofera bainesii* Baker	Fabaceae
	3702	*Indigofera baumiana* Harms	Fabaceae
	3702	*Indigofera charlieriana* Schinz var. *charlieriana*	Fabaceae
	3702	*Indigofera charlieriana* Schinz var. *lata* J.B.Gillett	Fabaceae
	3702	*Indigofera charlieriana* Schinz var. *scaberrima* (Schinz) J.B.Gillett	Fabaceae
	3702	*Indigofera colutea* (Burm.f.) Merr. var. *colutea*	Fabaceae
	3702	*Indigofera cryptantha* Benth. ex Harv. var. *cryptantha*	Fabaceae
	3702	*Indigofera cryptantha* Benth. ex Harv. var. *occidentalis* Baker f.	Fabaceae
	3702	*Indigofera cunenensis* Torre	Fabaceae
	3702	*Indigofera daleoides* Benth. ex Harv. var. *daleoides*	Fabaceae
	3702	*Indigofera daleoides* Benth. ex Harv. var. *gossweileri* Baker f.	Fabaceae
	3702	*Indigofera damarana* Merxm. & A.Schreib.	Fabaceae
	3702	*Indigofera demissa* Taub.	Fabaceae
	3702	*Indigofera dolichothyrsa* Baker f.	Fabaceae
	3702	*Indigofera filipes* Benth. ex Harv.	Fabaceae
	3702	*Indigofera flavicans* Baker var. *flavicans*	Fabaceae
	3702	*Indigofera gairdneriae* Hutch. ex Baker f.	Fabaceae
E	3702	*Indigofera giessii* A.Schreib.	Fabaceae
	3702	*Indigofera heterotricha* DC.	Fabaceae
E	3702	*Indigofera hochstetteri* Baker subsp. *streyana* (Merxm.) A.Schreib.	Fabaceae
	3702	*Indigofera hofmanniana* Schinz	Fabaceae
	3702	*Indigofera hololeuca* Benth. ex Harv.	Fabaceae
	3702	*Indigofera holubii* N.E.Br.	Fabaceae
	3702	*Indigofera inhambanensis* Klotzsch	Fabaceae
	3702	*Indigofera maritima* Baker	Fabaceae

E	3702	*Indigofera merxmuelleri* A.Schreib.	Fabaceae
	3702	*Indigofera nudicaulis* E.Mey.	Fabaceae
	3702	*Indigofera nummulariifolia* (L.) Liv. ex Alston	Fabaceae
	3702	*Indigofera ormocarpoides* Baker	Fabaceae
	3702	*Indigofera pearsonii* Baker f.	Fabaceae
E	3702	*Indigofera pechuelii* Kuntze	Fabaceae
	3702	*Indigofera pungens* E.Mey.	Fabaceae
E	3702	*Indigofera rautanenii* Baker f.	Fabaceae
	3702	*Indigofera rhytidocarpa* Benth. ex Harv. subsp. *rhytidocarpa*	Fabaceae
	3702	*Indigofera schimperi* Jaub. & Spach var. *baukeana* (Vatke) J.B.Gillett	Fabaceae
	3702	*Indigofera schimperi* Jaub. & Spach var. *schimperi*	Fabaceae
	3702	*Indigofera sessilifolia* DC.	Fabaceae
	3702	*Indigofera suffruticosa* Mill.	Fabaceae
	3702	*Indigofera teixeirae* Torre	Fabaceae
	3702	*Indigofera torulosa* E.Mey. var. *torulosa*	Fabaceae
	3702	*Indigofera trigonelloides* Jaub. & Spach	Fabaceae
	3702	*Indigofera trita* L.f. subsp. *subulata* (Vahl ex Poir.) Ali	Fabaceae
	3702	*Indigofera vicioides* Jaub. & Spach var. *rogersii* (R.E.Fr.) J.B.Gillett	Fabaceae
	3702	*Indigofera vicioides* Jaub. & Spach var. *vicioides*	Fabaceae
	3702	*Microcharis annua* (Milne-Redh.) Schrire	Fabaceae
	3702	*Microcharis disjuncta* (J.B.Gillett) Schrire var. *disjuncta*	Fabaceae
	3703	*Cullen biflora* (Harv.) C.H.Stirt.	Fabaceae
	3703	*Cullen obtusifolia* (DC.) C.H.Stirt.	Fabaceae
	3717	*Ptycholobium biflorum* (E.Mey.) Brummitt subsp. *angolensis* (Baker) Brummitt	Fabaceae
	3717	*Ptycholobium biflorum* (E.Mey.) Brummitt subsp. *biflorum*	Fabaceae
	3718	*Requienia pseudosphaerosperma* (Schinz) Brummitt	Fabaceae
	3718	*Requienia sphaerosperma* DC.	Fabaceae
	3718	*Tephrosia acaciaefolia* Welw. ex Baker	Fabaceae
	3718	*Tephrosia burchellii* Burtt Davy	Fabaceae
	3718	*Tephrosia caerulea* Baker f. subsp. *otaviensis* (Dinter) A.Schreib. & Brummitt	Fabaceae
	3718	*Tephrosia cephalantha* Welw. ex Baker var. *decumbens* Welw. ex Baker	Fabaceae
	3718	*Tephrosia disperma* Welw. ex Baker	Fabaceae
	3718	*Tephrosia dregeana* E.Mey. var. *dregeana*	Fabaceae
	3718	*Tephrosia elegans* Schumach.	Fabaceae
E	3718	*Tephrosia griseola* H.M.L.Forbes	Fabaceae
	3718	*Tephrosia lupinifolia* DC.	Fabaceae
E	3718	*Tephrosia monophylla* Schinz	Fabaceae
	3718	*Tephrosia oxygona* Welw. ex Baker subsp. *lactea* (Schinz) A.Schreib.	Fabaceae
	3718	*Tephrosia oxygona* Welw. ex Baker subsp. *oxygona*	Fabaceae
E	3718	*Tephrosia pallida* H.M.L.Forbes	Fabaceae
	3718	*Tephrosia purpurea* (L.) Pers. subsp. *leptostachya* (DC.) Brummitt var. *pubescens* Baker	Fabaceae
	3718	*Tephrosia radicans* Welw. ex Baker	Fabaceae
	3718	*Tephrosia rhodesica* Baker f. var. *rhodesica*	Fabaceae
	3718	*Tephrosia uniflora* Pers. subsp. *uniflora*	Fabaceae
	3718	*Tephrosia villosa* (L.) Pers. subsp. *ehrenbergiana* (Schweinf.) Brummitt var. *daviesii* Brummitt	Fabaceae
	3718	*Tephrosia villosa* (L.) Pers. subsp. *ehrenbergiana* (Schweinf.) Brummitt var. *ehrenbergiana*	Fabaceae
	3719	*Mundulea sericea* (Willd.) A.Chev.	Fabaceae
E	3732	*Bolusia amboensis* (Schinz) Harms	Fabaceae
	3747	*Sesbania cinerascens* Welw. ex Baker	Fabaceae
	3747	*Sesbania coerulescens* Harms	Fabaceae
	3747	*Sesbania macowaniana* Schinz	Fabaceae
	3747	*Sesbania microphylla* Harms ex E.Phillips & Hutch.	Fabaceae
E	3747	*Sesbania pachycarpa* DC. subsp. *dinterana* J.B.Gillett	Fabaceae
	3747	*Sesbania pachycarpa* DC. subsp. *pachycarpa*	Fabaceae
	3747	*Sesbania rostrata* Bremek. & Oberm.	Fabaceae
	3747	*Sesbania sesban* (L.) Merr. subsp. *sesban* var. *nubica* Chiov.	Fabaceae
	3747	*Sesbania sesban* (L.) Merr. subsp. *sesban* var. *zambesiaca* J.B.Gillett	Fabaceae
	3747	*Sesbania sphaerosperma* Welw.	Fabaceae
	3754	*Sutherlandia frutescens* (L.) R.Br.	Fabaceae
E	3756	*Lessertia acanthorhachis* (Dinter) Dinter	Fabaceae
	3756	*Lessertia annularis* Burch.	Fabaceae
	3756	*Lessertia benguellensis* Baker f.	Fabaceae
	3756	*Lessertia candida* E.Mey.	Fabaceae
E	3756	*Lessertia cryptantha* Dinter	Fabaceae
E	3756	*Lessertia eremicola* Dinter	Fabaceae
	3756	*Lessertia falciformis* DC.	Fabaceae
	3756	*Lessertia incana* Schinz	Fabaceae
	3756	*Lessertia macrostachya* DC.	Fabaceae
	3756	*Lessertia pauciflora* Harv. var. *pauciflora*	Fabaceae

	3792	*Ormocarpum kirkii* S.Moore	Fabaceae
	3793	*Aeschynomene fluitans* Peter	Fabaceae
	3793	*Aeschynomene indica* L.	Fabaceae
	3793	*Aeschynomene nilotica* Taub.	Fabaceae
	3802	*Stylosanthes fruticosa* (Retz.) Mohlenbr.	Fabaceae
	3804	*Zornia glochidiata* Rchb. ex DC.	Fabaceae
	3804	*Zornia milneana* Mohlenbr.	Fabaceae
	3807	*Desmodium barbatum* (L.) Benth. var. *argyreum* (Welw. ex Baker) Schub.	Fabaceae
	3807	*Desmodium salicifolium* (Poir.) DC. var. *salicifolium*	Fabaceae
	3810	*Alysicarpus rugosus* (Willd.) DC. subsp. *rugosus*	Fabaceae
	3821	*Dalbergia martinii* F.White	Fabaceae
	3821	*Dalbergia melanoxylon* Guill. & Perr.	Fabaceae
	3821	*Dalbergia nitidula* Wwlw. ex Baker	Fabaceae
	3828	*Pterocarpus angolensis* DC.	Fabaceae
	3828	*Pterocarpus lucens* Guill. & Perr. subsp. *antunesii* (Taub.) Rojo	Fabaceae
	3828	*Pterocarpus rotundifolius* (Sond.) Druce subsp. *martinii* (Dunkley) Lock var. *martinii* (Dunkley) Mendonça & E.P.Sousa	Fabaceae
	3828	*Pterocarpus rotundifolius* (Sond.) Druce subsp. *rotundifolius*	Fabaceae
	3833	*Philenoptera nelsii* (Schinz) Schrire	Fabaceae
	3833	*Philenoptera violacea* (Klotzsch) Schrire	Fabaceae
	3838	*Xeroderris stuhlmannii* (Taub.) Mendonça & E.C.Sousa	Fabaceae
	3856	*Abrus precatorius* L. subsp. *africanus* Verdc.	Fabaceae
	3864	*Neonotonia wightii* (Arn.) Lackey	Fabaceae
	3865	*Neorautanenia amboensis* Schinz	Fabaceae
	3865	*Neorautanenia mitis* (A. Rich.) Verdc.	Fabaceae
E	3870	*Erythrina decora* Harms	Fabaceae
	3870	*Erythrina mendesii* Torre	Fabaceae
	3891	*Canavalia cathartica* Thouars	Fabaceae
	3897	*Rhynchosia candida* (Welw. ex Hiern) Torre	Fabaceae
	3897	*Rhynchosia caribaea* (Jacq.) DC.	Fabaceae
	3897	*Rhynchosia confusa* Burtt Davy	Fabaceae
	3897	*Rhynchosia densiflora* (Roth) DC. subsp. *chrysadenia* (Taub.) Verdc.	Fabaceae
	3897	*Rhynchosia fleckii* Schinz	Fabaceae
	3897	*Rhynchosia holosericea* Schinz	Fabaceae
	3897	*Rhynchosia minima* (L.) DC. var. *minima*	Fabaceae
	3897	*Rhynchosia minima* (L.) DC. var. *prostrata* (Harv.) Meikle	Fabaceae
	3897	*Rhynchosia namaensis* Schinz	Fabaceae
	3897	*Rhynchosia resinosa* (A.Rich.) Baker	Fabaceae
	3897	*Rhynchosia sublobata* (Schumach.) Meikle	Fabaceae
	3897	*Rhynchosia totta* (Thunb.) DC. var. *fenchelii* Schinz	Fabaceae
	3897	*Rhynchosia totta* (Thunb.) DC. var. *totta*	Fabaceae
	3897	*Rhynchosia venulosa* (Hiern) K.Schum.	Fabaceae
E	3898	*Eriosema harmsiana* Dinter	Fabaceae
	3898	*Eriosema pauciflorum* Klotzsch	Fabaceae
	3905	*Vigna frutescens* A.Rich. subsp. *frutescens* var. *frutescens*	Fabaceae
	3905	*Vigna kokii* B.J.Pienaar	Fabaceae
	3905	*Vigna lobatifolia* Baker var. *lobatifolia* (Baker) Pasquet	Fabaceae
	3905	*Vigna oblongifolia* A.Rich. var. *oblongifolia*	Fabaceae
	3905	*Vigna oblongifolia* A.Rich. var. *parviflora* (Baker) Verdc.	Fabaceae
	3905	*Vigna unguiculata* (L.) Walp. subsp. *dekindtiana* (Harms) Verdc. var. *dekindtiana*	Fabaceae
	3905	*Vigna unguiculata* (L.) Walp. subsp. *dekindtiana* (Harms) Verdc. var. *huillensis* (Welw. ex Baker) B.J.Pienaar	
	3905	*Vigna unguiculata* (L.) Walp. subsp. *dekindtiana* (Harms) Verdc. var. *kgalagadiensis* Mithen	Fabaceae
	3905	*Vigna unguiculata* (L.) Walp. subsp. *stenophylla* (Harv.) Maréchal	Fabaceae
	3906	*Otoptera burchellii* DC.	Fabaceae
	3909	*Lablab purpureus* (L.) Sweet subsp. *uncinatus* Verdc. var. *rhomboideus* (Schinz) Verdc.	Fabaceae
	3909	*Lablab purpureus* (L.) Sweet subsp. *uncinatus* Verdc. var. *uncinatus*	Fabaceae
E	3910	*Decorsea dinteri* (Harms) Verdc.	Fabaceae
	3910	*Dolichos angustissimus* E. Mey.	Fabaceae
	3910	*Dolichos junodii* (Harms) Verdc.	Fabaceae
	3910	*Dolichos linearis* E.Mey.	Fabaceae
	3910	*Dolichos pseudodebilis* Harms	Fabaceae
	3910	*Dolichos trilobus* L. subsp. *transvaalicus* Verdc.	Fabaceae
	3910	*Macrotyloma axillare* (E.Mey.) Verdc. var. *axillare*	Fabaceae
	3910	*Macrotyloma daltonii* (Webb) Verdc.	Fabaceae
	3910	*Macrotyloma rupestre* (Welw. ex Baker) Verdc.	Fabaceae
	3925	*Monsonia angustifolia* E.Mey. ex A.Rich.	Geraniaceae
	3925	*Monsonia burkeana* Planch. ex Harv.	Geraniaceae
E	3925	*Monsonia deserticola* Dinter ex R.Knuth	Geraniaceae
E	3925	*Monsonia drudeana* Schinz	Geraniaceae

	3925	*Monsonia glauca* R.Knuth	Geraniaceae
E	3925	*Monsonia ignorata* Merxm. & A.Schreib.	Geraniaceae
	3925	*Monsonia luederitziana* Focke & Schinz	Geraniaceae
	3925	*Monsonia parvifolia* Schinz	Geraniaceae
	3925	*Monsonia senegalensis* Guill. & Perr.	Geraniaceae
E	3925	*Monsonia trilobata* Kers	Geraniaceae
	3925	*Monsonia umbellata* Harv.	Geraniaceae
	3926	*Sarcocaulon crassicaule* Rehm	Geraniaceae
	3926	*Sarcocaulon flavescens* Rehm	Geraniaceae
E	3926	*Sarcocaulon inerme* Rehm	Geraniaceae
E	3926	*Sarcocaulon marlothii* Engl.	Geraniaceae
	3926	*Sarcocaulon mossamedense* (Welw. ex Oliv.) Hiern	Geraniaceae
	3926	*Sarcocaulon multifidum* E.Mey. ex R.Knuth	Geraniaceae
	3926	*Sarcocaulon patersonii* (DC.) G.Don	Geraniaceae
E	3926	*Sarcocaulon peniculinum* Moffett	Geraniaceae
	3926	*Sarcocaulon salmoniflorum* Moffett	Geraniaceae
	3928	*Pelargonium antidysentericum* (Eckl. & Zeyh.) Kostel. subsp. *antidysentericum*	Geraniaceae
	3928	*Pelargonium articulatum* (Cav.) Willd.	Geraniaceae
	3928	*Pelargonium bubonifolium* (Andrews) Pers	Geraniaceae
	3928	*Pelargonium carnosum* (L.) L'Hér.	Geraniaceae
	3928	*Pelargonium ceratophyllum* L'Hér.	Geraniaceae
E	3928	*Pelargonium cortusifolium* L'Hér.	Geraniaceae
	3928	*Pelargonium crassicaule* L'Hér.	Geraniaceae
	3928	*Pelargonium crithmifolium* J.E.Sm.	Geraniaceae
	3928	*Pelargonium desertorum* Vorster	Geraniaceae
	3928	*Pelargonium dolomiticum* R.Knuth ex Engl.	Geraniaceae
	3928	*Pelargonium grandicalcaratum* R.Knuth	Geraniaceae
	3928	*Pelargonium klinghardtense* R.Knuth	Geraniaceae
	3928	*Pelargonium minimum* (Cav.) Willd.	Geraniaceae
E	3928	*Pelargonium mirabile* Dinter	Geraniaceae
	3928	*Pelargonium nanum* L'Hér.	Geraniaceae
E	3928	*Pelargonium otaviense* R.Knuth	Geraniaceae
E	3928	*Pelargonium paniculatum* Jacq.	Geraniaceae
	3928	*Pelargonium polycephalum* (E.Mey. ex Harv.) R.Knuth	Geraniaceae
	3928	*Pelargonium redactum* Vorster	Geraniaceae
	3928	*Pelargonium sibthorpiifolium* Harv.	Geraniaceae
	3928	*Pelargonium spinosum* Willd.	Geraniaceae
	3928	*Pelargonium tenuicaule* R.Knuth	Geraniaceae
	3928	*Pelargonium xerophyton* Schltr. ex R.Knuth	Geraniaceae
E	3936	*Oxalis ausensis* R.Knuth	Oxalidaceae
	3936	*Oxalis beneprotecta* Dinter ex R.Knuth	Oxalidaceae
	3936	*Oxalis copiosa* F.Bolus	Oxalidaceae
	3936	*Oxalis depressa* Eckl. & Zeyh.	Oxalidaceae
	3936	*Oxalis extensa* Salter	Oxalidaceae
E	3936	*Oxalis hunsbergensis* ined	Oxalidaceae
	3936	*Oxalis lawsonii* F.Bolus	Oxalidaceae
	3936	*Oxalis laxicaulis* R.Knuth	Oxalidaceae
E	3936	*Oxalis luederitzii* Schinz	Oxalidaceae
	3936	*Oxalis obtusa* Jacq.	Oxalidaceae
E	3936	*Oxalis pseudo-cernua* R.Knuth	Oxalidaceae
	3936	*Oxalis purpurascens* Salter	Oxalidaceae
E	3936	*Oxalis schaeferi* R.Knuth	Oxalidaceae
	3937	*Biophytum abyssinicum* Steud. ex A.Rich.	Oxalidaceae
	3956	*Erythroxylum zambesiacum* N.Robson	Erythroxylaceae
	3963	*Fagonia capensis* Hadidi	Zygophyllaceae
	3963	*Fagonia isotricha* Murb. var. *isotricha*	Zygophyllaceae
	3963	*Fagonia isotricha* Murb. var. *spinescens* (Schwartz) Hadidi	Zygophyllaceae
	3963	*Fagonia sinaica* Boiss. var. *minutistipula* (Engl.) Hadidi	Zygophyllaceae
E	3965	*Zygophyllum applanatum* Van Zyl	Zygophyllaceae
	3965	*Zygophyllum chrysopteron* Retief	Zygophyllaceae
	3965	*Zygophyllum clavatum* Schltr. & Diels	Zygophyllaceae
	3965	*Zygophyllum cordifolium* L.f.	Zygophyllaceae
	3965	*Zygophyllum cretaceum* Van Zyl ined.	Zygophyllaceae
E	3965	*Zygophyllum cylindrifolium* Schinz	Zygophyllaceae
	3965	*Zygophyllum decumbens* Delile var. *decumbens* Delile	Zygophyllaceae
	3965	*Zygophyllum foetidum* Schrad. & Wendl.	Zygophyllaceae
E	3965	*Zygophyllum giessii* Merxm. A.Schreib.	Zygophyllaceae
E	3965	*Zygophyllum hirticaule* Van Zyl	Zygophyllaceae
	3965	*Zygophyllum inflatum* Van Zyl	Zygophyllaceae

	3965	*Zygophyllum leptopetalum* E.Mey.ex Sond.	Zygophyllaceae
	3965	*Zygophyllum leucocladum* Schltr. & Diels	Zygophyllaceae
	3965	*Zygophyllum longicapsulare* Schinz	Zygophyllaceae
E	3965	*Zygophyllum longistipulatum* Schinz	Zygophyllaceae
	3965	*Zygophyllum macrocarpon* Retief	Zygophyllaceae
	3965	*Zygophyllum microcarpum* Cham.	Zygophyllaceae
	3965	*Zygophyllum morgsana* L.	Zygophyllaceae
	3965	*Zygophyllum patenticaule* Van Zyl ined.	Zygophyllaceae
	3965	*Zygophyllum prismatocarpum* E.Mey. ex Sond.	Zygophyllaceae
	3965	*Zygophyllum pterocaule* Van Zyl	Zygophyllaceae
	3965	*Zygophyllum pubescens* Schinz	Zygophyllaceae
	3965	*Zygophyllum retrofractum* Thunb.	Zygophyllaceae
	3965	*Zygophyllum rigidum* Schinz	Zygophyllaceae
	3965	*Zygophyllum schreiberianum* Merxm. & Giess	Zygophyllaceae
	3965	*Zygophyllum segmentatum* Van Zyl ined.	Zygophyllaceae
	3965	*Zygophyllum simplex* L.	Zygophyllaceae
	3965	*Zygophyllum spongiosum* Van Zyl ined.	Zygophyllaceae
E	3965	*Zygophyllum stapffii* Schinz	Zygophyllaceae
	3965	*Zygophyllum tenue* P.E.Glover	Zygophyllaceae
	3967	*Augea capensis* Thunb.	Zygophyllaceae
E	3975	*Neoluederitzia sericeocarpa* Schinz	Zygophyllaceae
	3976	*Sisyndite spartea* E.Mey. ex Sond.	Zygophyllaceae
	3978	*Tribulus cistoides* L.	Zygophyllaceae
	3978	*Tribulus cristatus* Presl	Zygophyllaceae
	3978	*Tribulus excrucians* Wawra	Zygophyllaceae
	3978	*Tribulus pterophorus* Presl	Zygophyllaceae
	3978	*Tribulus terrestris* L.	Zygophyllaceae
	3978	*Tribulus zeyheri* Sond. subsp. *zeyheri*	Zygophyllaceae
	3980	*Balanites aegyptiaca* (L.) Del.	Balanitaceae
	3980	*Balanites angolensis* (Welw.) Welw. ex Mildbr. & Schltr. var. *welwitschii* (Tiegh.) Sands	Balanitaceae
	3991	*Zanthoxylum ovatifoliolatum* (Engl.) Finkelstein	Rutaceae
	4014	*Thamnosma africana* Engl.	Rutaceae
	4076	*Vepris termitaria* Mendonça	Rutaceae
	4092	*Citropsis daweana* Swingle	Rutaceae
	4128	*Kirkia acuminata* Oliv.	Kirkiaceae
E	4128	*Kirkia dewinteri* Merxm. & Heine	Kirkiaceae
	4151	*Commiphora africana* (A.Rich.) Engl.	Burseraceae
	4151	*Commiphora anacardiifolia* Dinter & Engl.	Burseraceae
	4151	*Commiphora angolensis* Engl.	Burseraceae
	4151	*Commiphora capensis* (Sond.) Engl.	Burseraceae
	4151	*Commiphora cervifolia* J.J.A.van der Walt	Burseraceae
	4151	*Commiphora crenato-serrata* Engl.	Burseraceae
E	4151	*Commiphora dinteri* Engl.	Burseraceae
	4151	*Commiphora discolor* Mendes	Burseraceae
	4151	*Commiphora edulis* (Klotzsch) Engl.	Burseraceae
E	4151	*Commiphora giessii* J.J.A.van der Walt	Burseraceae
	4151	*Commiphora glandulosa* Schinz	Burseraceae
	4151	*Commiphora glaucescens* Engl.	Burseraceae
	4151	*Commiphora gracilifrondosa* Dinter ex J.J.A.van der Walt	Burseraceae
	4151	*Commiphora karibensis* Wild	Burseraceae
E	4151	*Commiphora krauseliana* Heine	Burseraceae
	4151	*Commiphora mollis* (Oliv.) Engl.	Burseraceae
	4151	*Commiphora mossambicensis* (Oliv.) Engl.	Burseraceae
	4151	*Commiphora multijuga* (Hiern) K.Schum.	Burseraceae
	4151	*Commiphora namaensis* Schinz	Burseraceae
	4151	*Commiphora oblanceolata* Schinz	Burseraceae
	4151	*Commiphora pyracanthoides* Engl.	Burseraceae
E	4151	*Commiphora saxicola* Engl.	Burseraceae
	4151	*Commiphora tenuipetiolata* Engl.	Burseraceae
	4151	*Commiphora viminea* Burtt Davy	Burseraceae
E	4151	*Commiphora virgata* Engl.	Burseraceae
	4151	*Commiphora wildii* Merxm.	Burseraceae
	4157	*Ptaeroxylon obliquum* (Thunb.) Radlk.	Ptaeroxylaceae
	4163	*Entandrophragma caudatum* (Sprague) Sprague	Meliaceae
	4163	*Entandrophragma spicatum* (C.DC.) Sprague	Meliaceae
	4168	*Nymania capensis* (Thunb.) Lindb.	Meliaceae
	4171	*Turraea zambesica* Sprague & Hutch.	Meliaceae
	4193	*Ekebergia capensis* Sparrm.	Meliaceae
	4195	*Trichilia emetica* Vahl	Meliaceae

	4206	*Triaspis hypericoides* (DC.) Burch. subsp. *nelsonii* (Oliv.) Immelman	Malpighiaceae
	4219	*Sphedamnocarpus pruriens* (A.Juss.) Szyszyl. subsp. *pruriens*	Malpighiaceae
	4273	*Polygala affinis* DC.	Polygalaceae
	4273	*Polygala africana* Chodat	Polygalaceae
	4273	*Polygala albida* Schinz var. *albida*	Polygalaceae
	4273	*Polygala empetrifolia* Houtt.	Polygalaceae
	4273	*Polygala erioptera* DC.	Polygalaceae
E	4273	*Polygala guerichiana* Engl.	Polygalaceae
	4273	*Polygala hottentotta* Presl	Polygalaceae
	4273	*Polygala kalaxariensis* Schinz	Polygalaceae
	4273	*Polygala lasiosepala* Levyns	Polygalaceae
	4273	*Polygala leptophylla* Burch.	Polygalaceae
	4273	*Polygala mossii* Exell	Polygalaceae
	4273	*Polygala pallida* E.Mey.	Polygalaceae
	4273	*Polygala pygmaea* Gürke	Polygalaceae
	4273	*Polygala reflexa* Schinz	Polygalaceae
	4273	*Polygala schinziana* Chodat	Polygalaceae
	4273	*Polygala seminuda* Harv.	Polygalaceae
	4273	*Polygala teretifolia* L.f.	Polygalaceae
	4273	*Polygala uncinata* E.Mey. ex Meissn.	Polygalaceae
	4273	*Polygala virgata* Thunb. var. *decora* (Sond.) Harv.	Polygalaceae
	4273	*Polygala westii* Exell	Polygalaceae
	4275	*Securidaca longepedunculata* Fresen.	Polygalaceae
	4283	*Dichapetalum cymosum* (Hook.) Engl.	Dichapetalaceae
	4283	*Dichapetalum rhodesicum* Sprague & Hutch.	Dichapetalaceae
	4295	*Pseudolachnostylis maprouneifolia* Pax var. *dekindtii* (Pax) Radcl.-Sm.	Euphorbiaceae
	4295	*Pseudolachnostylis maprouneifolia* Pax var. *glabra* (Pax) Brenan	Euphorbiaceae
	4298	*Flueggea virosa* (Roxb. ex Willd.) Voigt subsp. *virosa*	Euphorbiaceae
	4299	*Margaritaria discoidea* (Baill.) Webster var. *fagifolia* (PaxP Radcl.-Sm.	Euphorbiaceae
	4299	*Margaritaria discoidea* (Baill.) Webster var. *nitida* (Pax) Radcl.-Sm.	Euphorbiaceae
E	4299	*Phyllanthus dinteri* Pax	Euphorbiaceae
	4299	*Phyllanthus fraternus* Webster	Euphorbiaceae
	4299	*Phyllanthus incurvus* Thunb.	Euphorbiaceae
	4299	*Phyllanthus loandensis* Welw. ex Müll.-Arg.	Euphorbiaceae
	4299	*Phyllanthus maderaspatensis* L.	Euphorbiaceae
	4299	*Phyllanthus mendesii* Jean F.Brunel ex Radcl.-Sm.	Euphorbiaceae
	4299	*Phyllanthus omahekensis* Dinter & Pax	Euphorbiaceae
	4299	*Phyllanthus parvulus* Sond. var. *garipensis* (E.Mey. ex Drége) Radcl.-Sm.	Euphorbiaceae
	4299	*Phyllanthus pentandrus* Schumach. & Thonn.	Euphorbiaceae
	4299	*Phyllanthus purpureus* Müll.Arg.	Euphorbiaceae
	4299	*Phyllanthus reticulatus* Poir. var. *reticulatus*	Euphorbiaceae
	4325	*Hymenocardia acida* Tul.	Euphorbiaceae
	4327	*Antidesma rufescens* Tul.	Euphorbiaceae
	4327	*Antidesma venosum* E.Mey. ex Tul.	Euphorbiaceae
	4345	*Bridelia cathartica* G.Bertol. subsp. *melanthesoides* Baill.) J.Leonard var. *lingelsheimii* (Gehrm.) Radcl.-Sm.	
	4345	*Bridelia cathartica* G.Bertol. subsp. *melanthesoides* (Baill.) J.Leonard var. *melanthesoides*	Euphorbiaceae
	4345	*Bridelia mollis* Hutch.	Euphorbiaceae
	4345	*Bridelia tenuifolia* Müll.Arg.	Euphorbiaceae
	4348	*Croton benthamii* Hiern	Euphorbiaceae
	4348	*Croton gratissimus* Burch. var. *gratissimus*	Euphorbiaceae
	4348	*Croton gratissimus* Burch. var. *subgratissimus* (Prain) Burtt Davy	Euphorbiaceae
	4348	*Croton leuconeurus* Pax *subsp.* leuconeurus	Euphorbiaceae
	4348	*Croton longipedicellatus* J.Léonard *longipedicellatus*	Euphorbiaceae
	4348	*Croton megalobotrys* Müll.Arg.	Euphorbiaceae
	4348	*Croton menyhartii* Pax	Euphorbiaceae
	4348	*Croton pseudopulchellus* Pax	Euphorbiaceae
	4361	*Caperonia fistulosa* Beille	Euphorbiaceae
	4368	*Erythrococca menyharthii* (Pax) Prain	Euphorbiaceae
	4373	*Seidelia firmula* (Prain) Pax & K.Hoffm.	Euphorbiaceae
	4373	*Seidelia triandra* (E.Mey.) Pax	Euphorbiaceae
	4407	*Acalypha ambigua* Pax	Euphorbiaceae
	4407	*Acalypha ciliata* Forssk.	Euphorbiaceae
	4407	*Acalypha fimbriata* Schumach. & Thonn.	Euphorbiaceae
	4407	*Acalypha fruticosa* Forssk.	Euphorbiaceae
	4407	*Acalypha indica* L.	Euphorbiaceae
	4407	*Acalypha ornata* Hochst. ex A.Rich.	Euphorbiaceae
	4407	*Acalypha segetalis* Müll.Arg.	Euphorbiaceae
	4407	*Acalypha villicaulis* Hochst.	Euphorbiaceae
E	4416	*Tragia dinteri* Pax	Euphorbiaceae

	4416	*Tragia dioica* Sond.	Euphorbiaceae
	4416	*Tragia glabrata* (Müll. Arg.) Pax & K.Hoffm.	Euphorbiaceae
E	4416	*Tragia lancifolia* Dinter ex Pax & K.Hoffm.	Euphorbiaceae
	4416	*Tragia meyeriana* Müll.Arg.	Euphorbiaceae
	4416	*Tragia okanyua* Pax	Euphorbiaceae
	4416	*Tragia physocarpa* Prain	Euphorbiaceae
	4421	*Plukenetia africanus* Sond.	Euphorbiaceae
	4422	*Dalechampia scandens* L. var. *cordofana* (Hochst. ex Webb) Müll.Arg.	Euphorbiaceae
E	4433	*Jatropha decumbens* Pax & K.Hoffm.	Euphorbiaceae
	4433	*Jatropha erythropoda* Pax & K.Hoffm.	Euphorbiaceae
	4433	*Jatropha orangeana* Dinter ex P.G.Mey.	Euphorbiaceae
	4433	*Jatropha pseudoglandulifera* Pax	Euphorbiaceae
	4433	*Jatropha seineri* Pax	Euphorbiaceae
	4439	*Cephalocroton mollis* Klotzsch	Euphorbiaceae
	4448	*Clutia thunbergii* Sond.	Euphorbiaceae
	4463	*Schinziophyton rautanenii* (Schinz) Radcl.-Sm.	Euphorbiaceae
	4478	*Excoecaria bussei* (Pax) Pax	Euphorbiaceae
	4478	*Spirostachys africana* Sond.	Euphorbiaceae
	4485	*Maprounea africana* Müll.Arg.	Euphorbiaceae
	4498	*Euphorbia aequoris* N.E.Br.	Euphorbiaceae
E	4498	*Euphorbia angrae* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia avasmontana* Dinter	Euphorbiaceae
E	4498	*Euphorbia baliola* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia benthamii* Hiern	Euphorbiaceae
	4498	*Euphorbia berotica* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia brachiata* E.Mey. ex Boiss.	Euphorbiaceae
	4498	*Euphorbia burmannii* E.Mey. ex Boiss.	Euphorbiaceae
E	4498	*Euphorbia caperonioides* R.A.Dyer & P.G.Mey.	Euphorbiaceae
E	4498	*Euphorbia chamaesycoides* B.Nord.	Euphorbiaceae
	4498	*Euphorbia chersina* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia cibdela* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia congestiflora* L.C. Leach	Euphorbiaceae
	4498	*Euphorbia crotonoides* Boiss.	Euphorbiaceae
E	4498	*Euphorbia damarana* L.C.Leach	Euphorbiaceae
	4498	*Euphorbia decussata* E.Mey. ex Boiss.	Euphorbiaceae
	4498	*Euphorbia dregeana* E.Mey. ex Boiss.	Euphorbiaceae
	4498	*Euphorbia eduardoi* L.C.Leach	Euphorbiaceae
E	4498	*Euphorbia ephedroides* E.Mey ex Boiss. var. *debilis* L.C.Leach	Euphorbiaceae
	4498	*Euphorbia ephedroides* E.Mey ex Boiss. var. *ephedroides*	Euphorbiaceae
	4498	*Euphorbia ephedroides* E.Mey ex Boiss. var. *imminuta* L.C.Leach & G.Will.	Euphorbiaceae
	4498	*Euphorbia espinosa* Pax	Euphorbiaceae
	4498	*Euphorbia forskalii* J.Gay, Webb. & Berthel.	Euphorbiaceae
E	4498	*Euphorbia friedrichiae* Dinter	Euphorbiaceae
	4498	*Euphorbia fusca* Marloth	Euphorbiaceae
	4498	*Euphorbia gariepina* Boiss. subsp. *balsamea* (Welw. ex Hiern) L.C.Leach	Euphorbiaceae
	4498	*Euphorbia gariepina* Boiss. subsp. *gariepina*	Euphorbiaceae
E	4498	*Euphorbia giessii* L.C.Leach	Euphorbiaceae
	4498	*Euphorbia glanduligera* Pax	Euphorbiaceae
	4498	*Euphorbia gregaria* Marloth	Euphorbiaceae
	4498	*Euphorbia guerichiana* Pax	Euphorbiaceae
	4498	*Euphorbia gummifera* Boiss.	Euphorbiaceae
	4498	*Euphorbia hamata* (Haw.) Sweet	Euphorbiaceae
	4498	*Euphorbia herrei* A.C.White, R.A.Dyer & B.Sloane	Euphorbiaceae
	4498	*Euphorbia hottentota* Marloth	Euphorbiaceae
	4498	*Euphorbia inaequilatera* Sond.	Euphorbiaceae
	4498	*Euphorbia ingens* E. Mey. ex Boiss.	Euphorbiaceae
E	4498	*Euphorbia insarmentosa* P.G.Mey.	Euphorbiaceae
E	4498	*Euphorbia juttae* Dinter	Euphorbiaceae
E	4498	*Euphorbia kaokoensis* (A.C.White, R.A.Dyer & B.Sloane) L.C.Leach	Euphorbiaceae
	4498	*Euphorbia karroensis* (Boiss) N.E. Br.	Euphorbiaceae
E	4498	*Euphorbia lavrani* L.C.Leach	Euphorbiaceae
E	4498	*Euphorbia leistneri* R.H.Archer	Euphorbiaceae
	4498	*Euphorbia lignosa* Marloth	Euphorbiaceae
	4498	*Euphorbia matabelensis* Pax	Euphorbiaceae
	4498	*Euphorbia mauritanica* L. var. *corallothamnus* Dinter ex A.C.White, R.A.Dyer & B.Sloane	Euphorbiaceae
E	4498	*Euphorbia mauritanica* L. var. *foetens* Dinter ex A.C.White, R.A.Dyer & B.Sloane	Euphorbiaceae
	4498	*Euphorbia mauritanica* L. var. *lignosa* A.C.White, R.A.Dyer & B.Sloane	Euphorbiaceae
	4498	*Euphorbia mauritanica* L. var. *mauritanica*	Euphorbiaceae
	4498	*Euphorbia mauritanica* L. var. *namaquensis* N.E.Br.	Euphorbiaceae

	4498	*Euphorbia melanohydrata* Nel	Euphorbiaceae
E	4498	*Euphorbia monteiroi* Hook.f. subsp. *brandbergensis* B.Nord.	Euphorbiaceae
	4498	*Euphorbia monteiroi* Hook.f. subsp. *monteiroi*	Euphorbiaceae
E	4498	*Euphorbia namibensis* Marloth	Euphorbiaceae
E	4498	*Euphorbia namuskluftensis* L.C.Leach	Euphorbiaceae
	4498	*Euphorbia neopolycnemoides* Pax & K. Hoffm.	Euphorbiaceae
E	4498	*Euphorbia otjipembana* L.C.Leach	Euphorbiaceae
E	4498	*Euphorbia pergracilis* P.G. Mey.	Euphorbiaceae
	4498	*Euphorbia phylloclada* Boiss.	Euphorbiaceae
E	4498	*Euphorbia pseudoduseimata* A.C.White, R.A.Dyer & B.Sloane	Euphorbiaceae
E	4498	*Euphorbia rudis* N.E.Br.	Euphorbiaceae
E	4498	*Euphorbia siliciicola* Dinter	Euphorbiaceae
E	4498	*Euphorbia spartaria* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia spinea* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia stapelioides* Boiss.	Euphorbiaceae
	4498	*Euphorbia subsalsa* Hiern subsp. *fluvialis* L.C.Leach	Euphorbiaceae
	4498	*Euphorbia transvaalensis* Schltr.	Euphorbiaceae
E	4498	*Euphorbia venenata* Marloth	Euphorbiaceae
E	4498	*Euphorbia verruculosa* N.E.Br.	Euphorbiaceae
	4498	*Euphorbia virosa* Willd.	Euphorbiaceae
E	4498	*Euphorbia volkmanniae* Dinter	Euphorbiaceae
	4558	*Sclerocarya birrea* (A.Rich.) Hochst. subsp. *birrea*	Anacardiaceae
	4558	*Sclerocarya birrea* (A.Rich.) Hochst. subsp. *caffra* (Sond.) Kokwaro	Anacardiaceae
	4563	*Lannea discolor* (Sond.) Engl.	Anacardiaceae
	4563	*Lannea edulis* (Sond.) Engl. var. *edulis*	Anacardiaceae
	4563	*Lannea gossweileri* Exell & Mendonça subsp. *gossweileri*	Anacardiaceae
	4563	*Lannea schweinfurthii* (Engl.) Engl. var. *stuhlmannii* (Engl.) Kokwaro	Anacardiaceae
	4563	*Lannea schweinfurthii* (Engl.) Engl. var. *tomentosa* (Dunkley) Kokwaro	Anacardiaceae
	4563	*Lannea zastrowiana* Engl. & Brehmer	Anacardiaceae
	4589	*Ozoroa concolor* (C.Presl. ex Sond.) De Winter	Anacardiaceae
	4589	*Ozoroa crassinervia* (Engl.) R.R. & A.Fern.	Anacardiaceae
	4589	*Ozoroa dispar* (C.Presl.) R.R. & A.Fern.	Anacardiaceae
	4589	*Ozoroa hereroensis* (Schinz) R.R. & A. Fern.	Anacardiaceae
	4589	*Ozoroa insignis* Delile subsp. *latifolia* (Engl.) R.Fern.	Anacardiaceae
	4589	*Ozoroa insignis* Delile subsp. *reticulata* (Baker f.) J.B.Gillet	Anacardiaceae
	4589	*Ozoroa longipes* (Engl. & Gilg) R.R. & A.Fern.	Anacardiaceae
	4589	*Ozoroa namaensis* (Schinz & Dinter) R.Fern.	Anacardiaceae
	4589	*Ozoroa namaquensis* (Sprague) Von Teichman & A.E. van Wyk	Anacardiaceae
	4589	*Ozoroa okavangensis* R.R.& A.Fern.	Anacardiaceae
	4589	*Ozoroa paniculosa* (Sond.) R.& A.Fern.	Anacardiaceae
	4589	*Ozoroa schinzii* (Engl.) R.R. & A.Fern.	Anacardiaceae
	4594	*Rhus burchellii* Sond. ex Engl.	Anacardiaceae
	4594	*Rhus ciliata* Licht. ex Roem & Schult.	Anacardiaceae
	4594	*Rhus kirkii* Oliv.	Anacardiaceae
	4594	*Rhus lancea* L.f.	Anacardiaceae
	4594	*Rhus leptodictya* Diels	Anacardiaceae
	4594	*Rhus marlothii* Engl.	Anacardiaceae
	4594	*Rhus pendulina* Jacq.	Anacardiaceae
	4594	*Rhus populifolia* E.Mey. ex Sond.	Anacardiaceae
E	4594	*Rhus problematoides* Merxm. & Roessler	Anacardiaceae
	4594	*Rhus pyroides* Burch. var. *dinteri* (Engl.) Moffet	Anacardiaceae
	4594	*Rhus pyroides* Burch. var. *pyroides*	Anacardiaceae
	4594	*Rhus quartiniana* A.Rich.	Anacardiaceae
	4594	*Rhus tenuinervis* Engl.	Anacardiaceae
	4594	*Rhus undulata* Jacq.	Anacardiaceae
E	4594	*Rhus volkii* Suess.	Anacardiaceae
	4627	*Gymnosporia buxifolia* (L.) Szyszyl.	Celastraceae
	4627	*Gymnosporia gariepensis* M. Jordaan ined.	Celastraceae
	4627	*Gymnosporia linearis* (L.f.) Loes. subsp. *lanceolata* (E.Mey. ex Sond.) M.Jordaan ined.	Celastraceae
	4627	*Gymnosporia maranguensis* (Loes.) Loes.	Celastraceae
	4627	*Gymnosporia senegalensis* (Lam.) Loes.	Celastraceae
	4627	*Gymnosporia syzyszylowiczii* (Kuntze) M.Jordaan subsp. *namibensis* M.Jordaan ined.	Celastraceae
	4640	*Elaeodendron transvaalense* (Burtt Davy) R.H.Archer	Celastraceae
	4642	*Mystroxylon aethiopicum* (Thunb.) Loes.	Celastraceae
	4661	*Hippocratea africana* Willd. var. *richardiana* (Cambess.) N.K.B.Robson	Celastraceae
	4661	*Hippocratea buchananii* Loes.	Celastraceae
	4661	*Hippocratea indica* Willd.	Celastraceae
	4661	*Hippocratea parviflora* N.E.Br.	Celastraceae
	4661	*Hippocratea parvifolia* Oliv.	Celastraceae

	4662	*Salacia luebbertii* Loes.	Celastraceae
	4726	*Cardiospermum corindum* L.	Sapindaceae
	4726	*Cardiospermum halicacabum* L.	Sapindaceae
	4726	*Cardiospermum pechuelii* Kuntze	Sapindaceae
	4734	*Allophylus africanus* P.Beauv.	Sapindaceae
	4734	*Allophylus welwitschii* Gilg	Sapindaceae
	4784	*Pappea capensis* Eckl. & Zeyh.	Sapindaceae
	4826	*Erythrophysa alata* (Eckl. & Zeyh.) Hutch.	Sapindaceae
	4854	*Melianthus comosus* Vahl	Melianthaceae
	4854	*Melianthus pectinatus* Harv. subsp. *gariepinus* (Merxm. & Roessler) Tansley	Melianthaceae
	4861	*Ziziphus mucronata* Willd.	Rhamnaceae
	4868	*Berchemia discolor* (Klotzsch) Hemsl.	Rhamnaceae
	4905	*Helinus integrifolius* (Lam.) Kuntze	Rhamnaceae
	4905	*Helinus spartioides* (Engl.) Schinz ex Engl.	Rhamnaceae
	4910	*Ampelocissus africana* (Lour.) Merr.	Vitaceae
	4910	*Ampelocissus obtusata* (Welw. ex Baker) Planch. subsp. *kirkiana* (Planch.) Wild & R.B.Drumm.	Vitaceae
	4918	*Cissus integrifolia* (Baker) Planch.	Vitaceae
	4918	*Cissus nymphaeifolia* (Welw. ex Baker) Planch.	Vitaceae
	4918	*Cissus quadrangularis* L.	Vitaceae
E	4918	*Cyphostemma bainesii* (Hook.f) Desc.	Vitaceae
	4918	*Cyphostemma bororense* (Klotzsch) Desc. ex Wild & R.B.Drumm.	Vitaceae
	4918	*Cyphostemma cirrhosum* (Thunb.) Desc. ex Wild & R.B.Drumm. subsp. *transvaalense* (Szyszyl.) C.A.Sm.	Vitaceae
	4918	*Cyphostemma congestum* (Baker) Desc. ex Wild & R.B.Drumm.	Vitaceae
	4918	*Cyphostemma currorii* (Hook.f) Desc.	Vitaceae
	4918	*Cyphostemma hereroense* (Schinz) Desc. ex Wild & R.B.Drumm.	Vitaceae
E	4918	*Cyphostemma juttae* (Dinter & Gilg) Desc.	Vitaceae
E	4918	*Cyphostemma omburense* (Gilg & M.Brandt) Desc.	Vitaceae
	4918	*Cyphostemma puberulum* (C.A.Sm.) Wild & R.B.Drumm.	Vitaceae
	4918	*Cyphostemma ruacanense* (Exell & Mendonça) Desc.	Vitaceae
	4918	*Cyphostemma sandersonii* (Harv.) Desc.	Vitaceae
	4918	*Cyphostemma uter* (Exell & Mendonça) Desc.	Vitaceae
	4953	*Corchorus angolensis* Exell & Mendonça	Tiliaceae
	4953	*Corchorus asplenifolius* Burch.	Tiliaceae
E	4953	*Corchorus merxmuelleri* Wild	Tiliaceae
	4953	*Corchorus schimperi* Cufod.	Tiliaceae
	4966	*Grewia avellana* Hiern	Tiliaceae
	4966	*Grewia bicolor* Juss.	Tiliaceae
	4966	*Grewia falcistipula* K.Schum.	Tiliaceae
	4966	*Grewia flava* DC.	Tiliaceae
	4966	*Grewia flavescens* Juss. var. *flavescens*	Tiliaceae
	4966	*Grewia flavescens* Juss. var. *olukondae* (Schinz) Wild	Tiliaceae
	4966	*Grewia inaequilatera* Garcke	Tiliaceae
	4966	*Grewia monticola* Sond.	Tiliaceae
	4966	*Grewia pachycalyx* K.Schum.	Tiliaceae
	4966	*Grewia retinervis* Burret	Tiliaceae
	4966	*Grewia schinzii* K.Schum.	Tiliaceae
	4966	*Grewia subspathulata* N.E.Br.	Tiliaceae
	4966	*Grewia tenax* (Forssk.) Fiori	Tiliaceae
	4966	*Grewia villosa* Willd.	Tiliaceae
	4975	*Triumfetta angolensis* Sprague & Hutch.	Tiliaceae
	4975	*Triumfetta annua* L.	Tiliaceae
	4975	*Triumfetta benguelensis* Wawra & Peyr.	Tiliaceae
	4975	*Triumfetta delicatula* Sprague & Hutch.	Tiliaceae
	4975	*Triumfetta pentandra* A.Rich.	Tiliaceae
	4975	*Triumfetta rhomboidea* Jacq.	Tiliaceae
	4975	*Triumfetta tomentosa* Bojer	Tiliaceae
	4983	*Abutilon angulatum* (Guill. & Perr.) Mast. var. *angulatum*	Malvaceae
	4983	*Abutilon angulatum* (Guill. & Perr.) Mast. var. *macrophyllum* (Baker f.) Hochr.	Malvaceae
	4983	*Abutilon austro-africanum* Hochr.	Malvaceae
	4983	*Abutilon dinteri* Ulbr.	Malvaceae
	4983	*Abutilon englerianum* Ulbr.	Malvaceae
	4983	*Abutilon fruticosum* Guill. & Perr.	Malvaceae
	4983	*Abutilon hirtum* (Lam.) Sweet	Malvaceae
	4983	*Abutilon pycnodon* Hochr.	Malvaceae
	4983	*Abutilon ramosum* (Cav.) Guill. & Perr.	Malvaceae
	4983	*Abutilon rehmannii* Baker f.	Malvaceae
	4985	*Wissadula rostrata* (Schumach. & Thonn.) Hook.f.	Malvaceae
	4991	*Althaea ludwigii* L.	Malvaceae
	4998	*Sida acuta* Burm.f.	Malvaceae

	4998	*Sida alba* L.	Malvaceae
	4998	*Sida chrysantha* Ulbr.	Malvaceae
	4998	*Sida cordifolia* L.	Malvaceae
	4998	*Sida hoepfneri* Gürke	Malvaceae
	4998	*Sida ovata* Forssk.	Malvaceae
	5007	*Pavonia burchellii* (DC.) R.A.Dyer	Malvaceae
	5007	*Pavonia clathrata* Mast.	Malvaceae
	5007	*Pavonia gossweileri* Exell	Malvaceae
E	5007	*Pavonia rehmannii* Szyszyl.	Malvaceae
	5007	*Pavonia senegalensis* (Cav.) Leistner	Malvaceae
	5013	*Hibiscus allenii* Sprague & Hutch.	Malvaceae
	5013	*Hibiscus articulatus* Hochst. ex A.Rich.	Malvaceae
	5013	*Hibiscus caesius* Garcke	Malvaceae
	5013	*Hibiscus calyphyllus* Cav.	Malvaceae
	5013	*Hibiscus castroi* Baker f. & Exell	Malvaceae
E	5013	*Hibiscus dinteri* Hochr.	Malvaceae
E	5013	*Hibiscus discophorus* Hochr.	Malvaceae
	5013	*Hibiscus diversifolius* Jacq. subsp. *rivularis* (Bremek. & Oberm.) Exell	Malvaceae
	5013	*Hibiscus dongolensis* Delile	Malvaceae
	5013	*Hibiscus elliottiae* Harv.	Malvaceae
	5013	*Hibiscus engleri* K.Schum.	Malvaceae
E	5013	*Hibiscus fleckii* Gürke	Malvaceae
	5013	*Hibiscus lobatus* (Murray) Kuntze	Malvaceae
	5013	*Hibiscus mastersianus* Hiern	Malvaceae
	5013	*Hibiscus mechowii* Garcke	Malvaceae
	5013	*Hibiscus meeusei* Exell	Malvaceae
E	5013	*Hibiscus merxmuelleri* Roessler	Malvaceae
	5013	*Hibiscus micranthus* L.f.	Malvaceae
	5013	*Hibiscus mutatus* N.E.Br.	Malvaceae
	5013	*Hibiscus okavangensis* Exell	Malvaceae
	5013	*Hibiscus palmatus* Forssk.	Malvaceae
	5013	*Hibiscus praeteritus* R.A.Dyer	Malvaceae
	5013	*Hibiscus pusillus* Thunb.	Malvaceae
	5013	*Hibiscus rhabdotospermus* Garcke	Malvaceae
	5013	*Hibiscus schinzii* Gürke	Malvaceae
	5013	*Hibiscus seineri* Ulbr. ex Engl.	Malvaceae
	5013	*Hibiscus sidiformis* Baill.	Malvaceae
E	5013	*Hibiscus sulfuranthus* Ulbr.	Malvaceae
	5013	*Hibiscus trionum* L.	Malvaceae
	5013	*Hibiscus upingtoniae* Gürke	Malvaceae
	5013	*Hibiscus vitifolius* L.	Malvaceae
	5013	*Radyera urens* (L.f.) Bullock	Malvaceae
	5015	*Kosteletzkya buettneri* Gürke	Malvaceae
	5018	*Azanza garckeana* (F.Hoffm.) Exell & Hillc.	Malvaceae
	5019	*Cienfuegosia digitata* Cav.	Malvaceae
	5020	*Gossypium anomalum* Wawra ex Wawra & Peyr. subsp. *anomalum*	Malvaceae
	5020	*Gossypium herbaceum* L. subsp. *africanum* (D.Watt) Vollesen	Malvaceae
	5020	*Gossypium triphyllum* (Harv.) Hochr.	Malvaceae
	5023	*Adansonia digitata* L.	Bombacaceae
	5047	*Melhania acuminata* Mast. var. *acuminata*	Sterculiaceae
	5047	*Melhania burchellii* DC.	Sterculiaceae
	5047	*Melhania damarana* Harv.	Sterculiaceae
	5047	*Melhania forbesii* Planch. ex Mast	Sterculiaceae
	5047	*Melhania rehmannii* Szyszyl.	Sterculiaceae
	5047	*Melhania virescens* (K.Schum.) K.Schum.	Sterculiaceae
	5053	*Dombeya rotundifolia* (Hochst.) Planch. var. *rotundifolia*	Sterculiaceae
E	5053	*Dombeya rotundifolia* (Hochst.) Planch. var. *velutina* I.Verd.	Sterculiaceae
	5056	*Hermannia abrotanoides* Schrad.	Sterculiaceae
	5056	*Hermannia affinis* K.Schum.	Sterculiaceae
E	5056	*Hermannia amabilis* Marloth ex K.Schum.	Sterculiaceae
	5056	*Hermannia amoena* Dinter ex Friedr.-Holzh.	Sterculiaceae
	5056	*Hermannia argillicola* Dinter ex Friedr.-Holzh.	Sterculiaceae
	5056	*Hermannia bicolor* Engl. & Dinter	Sterculiaceae
	5056	*Hermannia boraginiflora* Hook.	Sterculiaceae
	5056	*Hermannia burchellii* (Sweet) I.Verd.	Sterculiaceae
	5056	*Hermannia comosa* Burch. ex DC.	Sterculiaceae
E	5056	*Hermannia complicata* Engl.	Sterculiaceae
	5056	*Hermannia damarana* Baker f.	Sterculiaceae
	5056	*Hermannia depressa* N.E.Br.	Sterculiaceae

	5056	*Hermannia desertorum* Eckl. & Zeyh.	Sterculiaceae
	5056	*Hermannia disermifolia* Jacq.	Sterculiaceae
	5056	*Hermannia eenii* Baker f.	Sterculiaceae
E	5056	*Hermannia elliottiana* (Harv.) K.Schum.	Sterculiaceae
E	5056	*Hermannia engleri* Schinz	Sterculiaceae
	5056	*Hermannia erodioides* (Burch. ex DC.) Kuntze	Sterculiaceae
	5056	*Hermannia fruticulosa* K.Schum.	Sterculiaceae
	5056	*Hermannia gariepina* Eckl. & Zeyh.	Sterculiaceae
	5056	*Hermannia glanduligera* K.Schum.	Sterculiaceae
E	5056	*Hermannia glandulosissima* Engl.	Sterculiaceae
	5056	*Hermannia grandiflora* Aiton	Sterculiaceae
	5056	*Hermannia guerkeana* K.Schum.	Sterculiaceae
	5056	*Hermannia helianthemum* K.Schum.	Sterculiaceae
	5056	*Hermannia jacobeifolia* (Turcz.) R.A.Dyer	Sterculiaceae
E	5056	*Hermannia juttae* Dinter & Engl.	Sterculiaceae
	5056	*Hermannia leucantha* Schltd.	Sterculiaceae
	5056	*Hermannia macra* Schltr.	Sterculiaceae
E	5056	*Hermannia merxmuelleri* Friedr.-Holzh.	Sterculiaceae
E	5056	*Hermannia minimifolia* Friedr.-Holzh.	Sterculiaceae
	5056	*Hermannia minutiflora* Engl.	Sterculiaceae
	5056	*Hermannia modesta* (Ehrenb.) Mast.	Sterculiaceae
	5056	*Hermannia paucifolia* Turcz.	Sterculiaceae
	5056	*Hermannia pfeilii* K.Schum.	Sterculiaceae
	5056	*Hermannia picta* De Winter ined	Sterculiaceae
	5056	*Hermannia pulchella* L.f.	Sterculiaceae
	5056	*Hermannia quartiniana* A.Rich. subsp. *stellulata* (K.Schum.) De Winter	Sterculiaceae
	5056	*Hermannia rautanenii* Schinz ex K.Schum.	Sterculiaceae
	5056	*Hermannia seineri* Engl.	Sterculiaceae
E	5056	*Hermannia solaniflora* K.Schum.	Sterculiaceae
	5056	*Hermannia spinosa* E.Mey. ex Harv.	Sterculiaceae
	5056	*Hermannia stricta* (E.Mey. ex Turcz.) Harv.	Sterculiaceae
	5056	*Hermannia tigrensis* Hochst. ex A.Rich.	Sterculiaceae
	5056	*Hermannia tomentosa* (Turcz.) Schinz ex Engl.	Sterculiaceae
	5056	*Hermannia trifurca* L.	Sterculiaceae
	5056	*Hermannia vestita* Thunb.	Sterculiaceae
	5056	*Hermannia viscosa* Hiern	Sterculiaceae
	5059	*Waltheria indica* L.	Sterculiaceae
	5083	*Sterculia africana* (Lour.) Fiori	Sterculiaceae
	5083	*Sterculia quinqueloba* (Garcke) K.Schum.	Sterculiaceae
	5112	*Ochna cinnabarina* Engl. & Gilg	Ochnaceae
	5112	*Ochna pulchra* Hook.	Ochnaceae
	5114	*Brackenridgea arenaria* (De Wild. & Durand) N.Robson	Ochnaceae
	5168	*Hypericum lalandii* Choisy	Clusiaceae
	5168	*Hypericum oligandrum* Milne-Redh.	Clusiaceae
	5199	*Garcinia livingstonei* T.Anderson	Clusiaceae
	5230	*Bergia ammannioides* B.Heyne ex Roth	Elatinaceae
	5230	*Bergia anagalloides* E.Mey. ex Fenzl	Elatinaceae
	5230	*Bergia capensis* L.	Elatinaceae
	5230	*Bergia glutinosa* Dinter & Schulze-Menz	Elatinaceae
	5230	*Bergia pentherana* Keissl.	Elatinaceae
	5230	*Bergia polyantha* Sond.	Elatinaceae
	5230	*Bergia spathulata* Schinz	Elatinaceae
	5231	*Elatine triandra* Schkuhr	Elatinaceae
E	5233	*Frankenia pomonensis* Pohnert	Frankeniaceae
	5233	*Frankenia pulverulenta* L.	Frankeniaceae
	5239	*Tamarix usneoides* E.Mey. ex Bunge	Tamaricaceae
	5271	*Hybanthus densifolius* Engl.	Violaceae
	5284	*Oncoba spinosa* Forssk.	Flacourtiaceae
	5313	*Homalium abdessammadii* Asch. & Schweinf.	Flacourtiaceae
	5327	*Flacourtia indica* (Burm.f.) Merr.	Flacourtiaceae
	5355	*Tricliceras glanduliferum* (Klotzsch) R.R.Fern.	Turneraceae
	5355	*Tricliceras lobatum* (Urb.) R.R.Fern.	Turneraceae
	5355	*Tricliceras longipedunculatum* (Mast.) R.R.Fern. var. *longipedunculatum*	Turneraceae
	5355	*Tricliceras schinzii* (Urb.) R.R.Fern. subsp. *schinzii* var. *juttae* (Dinter & Urb.) R.R.Fern.	Turneraceae
	5356	*Streptopetalum serratum* Hochst.	Turneraceae
	5360	*Turnera oculata* Story var. *oculata*	Turneraceae
E	5360	*Turnera oculata* Story var. *paucipilosa* Oberm.	Turneraceae
	5369	*Basananthe heterophylla* Schinz	Passifloraceae
	5369	*Basananthe pedata* (Baker f.) De Wilde	Passifloraceae

	5369	*Basananthe triloba* (Bolus) De Wilde	Passifloraceae
	5369	*Paropsia brazzeana* Baill.	Passifloraceae
E	5370	*Adenia pechuelii* (Engl.) Harms	Passifloraceae
	5370	*Adenia repanda* (Burch.) Engl.	Passifloraceae
	5388	*Kissenia capensis* Endl.	Loasaceae
	5435	*Gnidia kraussiana* Meisn. var. *kraussiana*	Thymelaeaceae
	5435	*Gnidia polycephala* (C.A.Mey.) Gilg	Thymelaeaceae
	5435	*Gnidia suavissima* Dinter	Thymelaeaceae
	5461	*Passerina montana* Thoday	Thymelaeaceae
	5473	*Rotala dinteri* Koehne	Lythraceae
	5473	*Rotala elatinoides* (DC.) Hiern	Lythraceae
	5473	*Rotala filiformis* (Bellardi) Hiern	Lythraceae
	5473	*Rotala fluitans* Pohnert	Lythraceae
	5473	*Rotala mexicana* Cham. & Schltdl.	Lythraceae
	5473	*Rotala tenella* (Guill. & Perr.) Hiern	Lythraceae
	5474	*Ammannia auriculata* Willd.	Lythraceae
	5474	*Ammannia baccifera* L.	Lythraceae
	5474	*Ammannia prieuriana* Guill. & Perr.	Lythraceae
	5474	*Ammannia senegalensis* Lam. ex Poir. var. *ondongana* (Koehne) Verdc.	Lythraceae
	5474	*Ammannia wormskioldii* Fisch. & C.A. Mey.	Lythraceae
	5486	*Nesaea anagalloides* (Sond.) Koehne	Lythraceae
	5486	*Nesaea aspera* (Guill. & Perr.) Koehne	Lythraceae
	5486	*Nesaea cordata* Hiern	Lythraceae
	5486	*Nesaea crassicaulis* (Guill. & Perr.) Koehne	Lythraceae
	5486	*Nesaea cymosa* Immelman	Lythraceae
	5486	*Nesaea dinteri* Koehne subsp. *dinteri*	Lythraceae
	5486	*Nesaea drummondii* A.Fern.	Lythraceae
E	5486	*Nesaea luederitzii* Koehne var. *hereroensis* Koehne	Lythraceae
	5486	*Nesaea luederitzii* Koehne var. *luederitzii*	Lythraceae
	5486	*Nesaea radicans* Guill. & Perr. var. *floribunda* (Sond.) A.Fern.	Lythraceae
	5486	*Nesaea rautanenii* Koehne	Lythraceae
	5486	*Nesaea rigidula* (Sond.) Koehne	Lythraceae
	5486	*Nesaea saluta* Immelman	Lythraceae
	5486	*Nesaea sarcophylla* (Welw. ex Hiern) Koehne	Lythraceae
	5486	*Nesaea schinzii* Koehne	Lythraceae
	5486	*Nesaea schlechteri* A.Fern.	Lythraceae
	5486	*Nesaea teixeirae* A.Fern.	Lythraceae
	5538	*Combretum albopunctatum* Suess.	Combretaceae
	5538	*Combretum apiculatum* Sond. subsp. *apiculatum*	Combretaceae
	5538	*Combretum apiculatum* Sond. subsp. *leutweinii* (Schinz) Exell	Combretaceae
	5538	*Combretum celastroides* Welw. ex M.A.Lawson subsp. *celastroides*	Combretaceae
	5538	*Combretum collinum* Fresen. subsp. *gazenze* (Swynn. & Baker f.) Okafor	Combretaceae
	5538	*Combretum collinum* Fresen. subsp. *ondongense* (Engl. & Diels) Okafor	Combretaceae
	5538	*Combretum collinum* Fresen. subsp. *suluense* (Engl. & Diels) Okafor	Combretaceae
	5538	*Combretum elaeagnoides* Klotzsch	Combretaceae
	5538	*Combretum engleri* Schinz	Combretaceae
	5538	*Combretum hereroense* Schinz subsp. *hereroense*	Combretaceae
	5538	*Combretum imberbe* Wawra	Combretaceae
	5538	*Combretum mossambicense* (Klotzsch) Engl.	Combretaceae
	5538	*Combretum oxystachyum* Welw. ex M.A.Lawson	Combretaceae
	5538	*Combretum platypetalum* Welw. ex M.A.Lawson subsp. *baumii* (Engl. & Gilg) Exell	Combretaceae
	5538	*Combretum platypetalum* Welw. ex M.A.Lawson subsp. *platypetalum*	Combretaceae
	5538	*Combretum psidioides* Welw. subsp. *dinteri* (Schinz) Exell	Combretaceae
	5538	*Combretum psidioides* Welw. subsp. *psidioides*	Combretaceae
	5538	*Combretum schumannii* Engl.	Combretaceae
	5538	*Combretum wattii* Exell	Combretaceae
	5538	*Combretum zeyheri* Sond.	Combretaceae
	5539	*Pteleopsis myrtifolia* (M.A.Lawson) Engl. & Diels	Combretaceae
	5544	*Terminalia brachystemma* Welw. ex Hiern subsp. *brachystemma*	Combretaceae
	5544	*Terminalia prunioides* M.A.Lawson	Combretaceae
	5544	*Terminalia sericea* Burch. ex DC.	Combretaceae
	5544	*Terminalia stuhlmannii* Engl.	Combretaceae
	5544	*Terminalia trichopoda* Diels	Combretaceae
	5583	*Syzygium cordatum* Hochst. ex O.Krauss	Myrtaceae
	5583	*Syzygium guineense* (Willd.) DC. subsp. *barotsense* F.White	Myrtaceae
	5659	*Dissotis debilis* (Sond.) Triana var. *debilis*	Melastomataceae
	5659	*Dissotis debilis* (Sond.) Triana var. *lanceolata* (Cogn.) A.& R.R.Fern.	Melastomataceae
	5659	*Dissotis princeps* (Kunth) Triana	Melastomataceae
	5659	*Dissotis pulchra* A.& R.R.Fern.	Melastomataceae

	5659	*Melastomastrum segregatum* (Benth.) A. & R.R.Fern.	Melastomataceae
	5793	*Ludwigia abyssinica* A.Rich.	Onagraceae
	5793	*Ludwigia leptocarpa* (Nutt.) Hara	Onagraceae
	5793	*Ludwigia octovalvis* (Jacq.) P.H. Raven	Onagraceae
	5793	*Ludwigia palustris* (L.) Elliott	Onagraceae
	5793	*Ludwigia senegalensis* (DC.) Troch.	Onagraceae
	5795	*Epilobium hirsutum* L.	Onagraceae
	5829	*Trapa natans* L. var. *bispinosa* (Roxb.) Makino	Trapaceae
	5833	*Laurembergia tetrandra* (A.J.Scott) Kanitz subsp. *brachypoda* (Welw. ex Hiern) A.Raynal	Haloragaceae
	5834	*Myriophyllum spicatum* L.	Haloragaceae
	5893	*Hydrocotyle verticillata* Thunb.	Araliaceae
	5894	*Centella coriacea* Nannfd.	Araliaceae
E	5970	*Phlyctidocarpa flava* Cannon & Theobald	Apiaceae
	5992	*Heteromorpha arborescens* (Spreng.) Cham. & Schltdl. var. *frutescens* P.J.D.Winter	Apiaceae
E	5992	*Heteromorpha papillosa* C.C.Towns.	Apiaceae
	5992	*Heteromorpha stenophylla* Welw. ex Schinz var. *stenophylla*	Apiaceae
E	5994	*Anginon streyi* (Merxm.) Allison & B.-E.van Wyk	Rutaceae
	5994	*Anginon verticillatum* (Sond.) B.L.Burtt	Rutaceae
E	5996	*Marlothiella gummifera* H.Wolff	Apiaceae
	6013	*Deverra burchellii* (DC.) Eckl. & Zeyh.	Apiaceae
	6013	*Deverra denudata* (Viv.) Pfisterer & Podlech subsp. *aphylla* (Cham. & Schltdt.) Pfisterer & Podlech	Apiaceae
	6038	*Berula erecta* (Huds.) Coville	Apiaceae
E	6045	*Polemanniopsis* sp. = Merxmuller & Giess 32010	Apiaceae
	6116	*Lefebvrea grantii* (Hiern) Droop	Rutaceae
	6116	*Peucedanum upingtoniae* (Schinz) Drude	Apiaceae
	6116	*Steganotaenia araliacea* Hochst.	Apiaceae
	6310	*Embelia schimperi* Vatke	Myrsinaceae
	6328	*Samolus valerandi* L.	Primulaceae
E	6343	*Plumbago pearsonii* L.Bolus	Plumbaginaceae
E	6343	*Plumbago wissii* Friedrich	Plumbaginaceae
	6343	*Plumbago zeylanica* L.	Plumbaginaceae
	6345	*Dyerophytum africanum* (Lam.) Kuntze	Plumbaginaceae
	6351	*Limonium dregeanum* (C.Presl) Kuntze	Plumbaginaceae
E	6351	*Limonium dyeri* Lincz.	Plumbaginaceae
	6351	*Limonium scabrum* (Thunb.) Kuntze var. *scabrum*	Plumbaginaceae
	6386	*Manilkara mochisia* (Baker) Dubard	Sapotaceae
E	6404	*Euclea asperrima* Friedr.-Holzh.	Ebenaceae
	6404	*Euclea divinorum* Hiern	Ebenaceae
	6404	*Euclea pseudebenus* E.Mey. ex A.DC.	Ebenaceae
	6404	*Euclea undulata* Thunb. var. *myrtina* (Burch.) Hiern	Ebenaceae
	6406	*Diospyros acocksii* (De Winter) De Winter	Ebenaceae
	6406	*Diospyros batocana* Hiern	Ebenaceae
	6406	*Diospyros chamaethamnus* Dinter ex Mildbr.	Ebenaceae
	6406	*Diospyros lycioides* Desf. subsp. *lycioides*	Ebenaceae
	6406	*Diospyros lycioides* Desf. subsp. *sericea* (Bernh.) De Winter	Ebenaceae
	6406	*Diospyros mespiliformis* Hochst. ex A.DC.	Ebenaceae
	6406	*Diospyros ramulosa* (E.Mey. ex A.DC.) De Winter	Ebenaceae
	6406	*Diospyros virgata* (Gürke) Brenan	Ebenaceae
	6422	*Schrebera trichoclada* Welw.	Oleaceae
	6434	*Olea europaea* L. subsp. *africana* (Mill.) P.S.Green	Oleaceae
	6440	*Jasminum fluminense* Velloso	Oleaceae
	6444	*Azima tetracantha* Lam.	Salvadoraceae
	6446	*Salvadora persica* L.	Salvadoraceae
	6460	*Strychnos cocculoides* Baker	Strychnaceae
	6460	*Strychnos potatorum* L.f.	Strychnaceae
	6460	*Strychnos pungens* Soler.	Strychnaceae
	6460	*Strychnos spinosa* Lam.	Strychnaceae
	6466	*Anthocleista grandiflora* Gilg	Gentiaceae
	6469	*Nuxia oppositifolia* (Hochst.) Benth.	Loganiaceae
	6470	*Gomphostigma virgatum* (L.f.) Baill.	Loganiaceae
	6479	*Exacum oldenlandioides* (S.Moore) Klack	Gentianaceae
	6481	*Sebaea debilis* (Welw.) Schinz	Gentianaceae
	6481	*Sebaea exigua* (Oliv.) Schinz	Gentianaceae
	6481	*Sebaea grandis* (E.Mey.) Steud.	Gentianaceae
	6481	*Sebaea pentandra* E.Mey. var. *burchellii* (Gilg) Marais	Gentianaceae
	6484	*Enicostema axillare* (Lam.) A.Raynal subsp. *axillare*	Gentianaceae
	6503	*Chironia palustris* Burch. subsp. *transvaalensis* (Gilg) I.Verd.	Gentianaceae
	6545	*Nymphoides brevipedicellata* (Vatke) A.Raynal	Menyanthaceae
	6545	*Nymphoides indica* (L.) Kuntze subsp. *occidentalis* A.Raynal	Menyanthaceae

	6545	*Nymphoides rautanenii* (N.E.Br.) A.Raynal	Menyanthaceae
	6559	*Carissa bispinosa* (L.) Desf. ex Brenan subsp. *bispinosa*	Apocynaceae
	6559	*Carissa edulis* Vahl subsp. *edulis*	Apocynaceae
	6559	*Carissa haematocarpa* (Eckl.) A.DC.	Apocynaceae
	6589	*Diplorhynchus condylocarpon* (Müll. Arg.) Pichon	Apocynaceae
	6663	*Baissea wulfhorstii* Schinz	Apocynaceae
	6680	*Adenium boehmianum* Schinz	Apocynaceae
	6680	*Adenium oleifolium* Stapf	Apocynaceae
	6681	*Pachypodium lealii* Welw.	Apocynaceae
	6681	*Pachypodium namaquanum* (Wyley ex Harv.) Welw.	Apocynaceae
	6688	*Strophanthus amboensis* (Schinz) Engl. & Pax	Apocynaceae
	6688	*Strophanthus kombe* Oliv.	Apocynaceae
	6730	*Tacazzea apiculata* Oliv.	Apocynaceae
E	6735	*Ectadium latifolium* (Schinz) N.E.Br.	Apocynaceae
E	6735	*Ectadium rotundifolium* (H.Huber) Venter & Kotze	Apocynaceae
	6735	*Ectadium virgatum* E.Mey.	Apocynaceae
	6740	*Cryptolepis decidua* (Planch. ex Hook.f. & Benth.) N.E.Br.	Apocynaceae
	6740	*Cryptolepis oblongifolia* (Meisn.) Schltr.	Apocynaceae
E	6747	*Raphionacme haeneliae* Venter & R.L.Verh.	Apocynaceae
	6747	*Raphionacme inconspicua* H.E.Huber	Apocynaceae
	6747	*Raphionacme lanceolata* Schinz	Apocynaceae
	6747	*Raphionacme monteiroae* (Oliv.) N.E.Br.	Apocynaceae
E	6747	*Raphionacme namibiana* Venter & R.L.Verh.	Apocynaceae
	6747	*Raphionacme velutina* Schltr.	Apocynaceae
	6752	*Microloma armatum* (Thunb.) Schltr. var. *armatum*	Apocynaceae
	6752	*Microloma armatum* (Thunb.) Schltr. var. *burchellii*	Apocynaceae
	6752	*Microloma calycinum* E.Mey. subsp. *calycinum*	Apocynaceae
E	6752	*Microloma hereroense* Wanntorp	Apocynaceae
	6752	*Microloma incanum* Decne.	Apocynaceae
	6752	*Microloma longitubum* Schltr.	Apocynaceae
E	6752	*Microloma penicillatum* Schltr.	Apocynaceae
	6752	*Microloma poicilanthum* H.E.Huber	Apocynaceae
	6777	*Xysmalobium undulatum* (L.) Aiton f.	Apocynaceae
	6778	*Aspidoglossum biflorum* E.Mey.	Apocynaceae
	6778	*Aspidoglossum carinatum* (Schltr.) Kupicha	Apocynaceae
	6778	*Aspidoglossum masaicum* (N.E.Br.) Kupicha	Apocynaceae
	6778	*Schizoglossum saccatum* Bruyns	Apocynaceae
	6783	*Periglossum mossambicense* Schltr.	Apocynaceae
	6787	*Gomphocarpus angolensis* Hiern	Apocynaceae
	6787	*Gomphocarpus cancellatus* (Burm.f.) Bruyns	Apocynaceae
	6787	*Gomphocarpus filiformis* (E.Mey.) Dietr.	Apocynaceae
	6787	*Gomphocarpus fruticosus* (L.) Aiton f.	Apocynaceae
	6787	*Gomphocarpus glaucophyllus* Schltr.	Apocynaceae
	6787	*Gomphocarpus rostratus* (N.E.Br.) Bullock	Apocynaceae
	6787	*Gomphocarpus tomentosus* Burch.	Apocynaceae
	6787	*Pachycarpus lineolatus* (Decne.) Bullock	Apocynaceae
	6789	*Stenostelma capense* Schltr.	Apocynaceae
	6791	*Asclepias aurea* (Schltr.) Schltr.	Apocynaceae
	6791	*Asclepias randii* S.Moore	Apocynaceae
	6810	*Pentarrhinum abyssinicum* Decne. subsp. *abyssinicum*	Apocynaceae
	6810	*Pentarrhinum abyssinicum* Decne. subsp. *angolense* (N.E.Br.) Liede & Nicholas	Apocynaceae
	6810	*Pentarrhinum insipidum* E.Mey.	Apocynaceae
	6834	*Cynanchum gerrardii* (Harvey) Liede	Apocynaceae
E	6834	*Cynanchum meyeri* (Decne.) Schltr.	Apocynaceae
	6834	*Cynanchum orangeanum* (Schltr.) N.E.Br.	Apocynaceae
	6834	*Cynanchum schistoglossum* Schltr.	Apocynaceae
	6849	*Sarcostemma pearsonii* N.E.Br.	Apocynaceae
	6849	*Sarcostemma viminale* (L.) R.Br. subsp. *thunbergii* (Don) Liede & Meve	Apocynaceae
	6849	*Sarcostemma viminale* (L.) R.Br. subsp. *viminale*	Apocynaceae
	6860	*Secamone punctulata* Decne.	Apocynaceae
	6862	*Orthanthera albida* Schinz	Apocynaceae
	6862	*Orthanthera jasminiflora* (Decne.) Schinz	Apocynaceae
	6870	*Brachystelma arnotii* Baker	Apocynaceae
E	6870	*Brachystelma blepharanthera* H.E.Huber	Apocynaceae
	6870	*Brachystelma circinatum* E.Mey.	Apocynaceae
E	6870	*Brachystelma codonanthum* Bruyns	Apocynaceae
	6870	*Brachystelma cupulatum* R.A.Dyer	Apocynaceae
	6870	*Brachystelma dinteri* Schltr.	Apocynaceae
	6870	*Brachystelma gymnopodum* (Schltr.) Bruyns	Apocynaceae

E	6870	*Brachystelma recurvatum* Bruyns	Apocynaceae
E	6870	*Brachystelma schinzii* (K.Schum.) N.E.Br.	Apocynaceae
E	6870	*Brachystelma schultzei* (Schltr.) Bruyns	Apocynaceae
	6870	*Brachystelma stenophyllum* (Schltr.) R.A.Dyer	Apocynaceae
	6874	*Ceropegia bonafouxii* K.Schum.	Apocynaceae
	6874	*Ceropegia crassifolia* Schltr.	Apocynaceae
E	6874	*Ceropegia dinteri* Schltr.	Apocynaceae
	6874	*Ceropegia filiformis* (Burch.) Schltr.	Apocynaceae
	6874	*Ceropegia floribunda* N.E.Br.	Apocynaceae
	6874	*Ceropegia lugardiae* N.E.Br.	Apocynaceae
	6874	*Ceropegia mafekingensis* (N.E.Br.) R.A.Dyer	Apocynaceae
	6874	*Ceropegia meyeri* Decne.	Apocynaceae
	6874	*Ceropegia multiflora* Baker subsp. *tentaculata* (N.E.Br.) H.E.Huber	Apocynaceae
	6874	*Ceropegia nilotica* Kotschy	Apocynaceae
	6874	*Ceropegia occidentalis* R.A.Dyer	Apocynaceae
	6874	*Ceropegia pachystelma* Schltr.	Apocynaceae
	6874	*Ceropegia paricyma* N.E.Br.	Apocynaceae
	6874	*Ceropegia purpurascens* K.Schum.	Apocynaceae
	6874	*Ceropegia racemosa* N.E.Br. subsp. *setifera* (Schltr.)H.E.Huber	Apocynaceae
	6874	*Ceropegia stenantha* K.Schum.	Apocynaceae
	6874	*Ceropegia stenoloba* Hochst. ex Chiov.	Apocynaceae
	6878	*Hoodia alstonii* (N.E.Br.) Plowes	Apocynaceae
	6878	*Hoodia currorii* (Hook.) Decne. subsp. *currorii*	Apocynaceae
	6878	*Hoodia flava* (N.E.Br.) Plowes	Apocynaceae
	6878	*Hoodia gordonii* (Masson) Sweet ex Decne.	Apocynaceae
E	6878	*Hoodia juttae* Dinter	Apocynaceae
E	6878	*Hoodia officinalis* (N.E.Br.) Plowes subsp. *delaetiana* (Dinter) Bruyns	Apocynaceae
	6878	*Hoodia officinalis* (N.E.Br.) Plowes subsp. *officinalis*	Apocynaceae
	6878	*Hoodia parviflora* N.E.Br.	Apocynaceae
	6878	*Hoodia pedicellata* (Schinz) Plowes	Apocynaceae
E	6878	*Hoodia ruschii* Dinter	Apocynaceae
E	6878	*Hoodia triebneri* (Nel) Bruyns	Apocynaceae
E	6879	*Lavrania haagnerae* Plowes	Apocynaceae
	6879	*Lavrania marlothii* (N.E.Br.) Bruyns	Apocynaceae
	6879	*Lavrania perlata* (Dinter) Bruyns	Apocynaceae
E	6879	*Lavrania picta* (N.E.Br.) Bruyns subsp. *parvipunctata* Bruyns	Apocynaceae
	6879	*Lavrania picta* (N.E.Br.) Bruyns subsp. *picta*	Apocynaceae
	6880	*Tavaresia barklyi* (Dyer) N.E.Br.	Apocynaceae
	6881	*Piaranthus decipiens* (N.E.Br.) Bruyns	Apocynaceae
	6881	*Piaranthus decorus* (Masson) N.E.Br. subsp. *cornutus* (N.E.Br.) Meve	Apocynaceae
	6883	*Duvalia caespitosa* (Masson) Haw. var. *s*	Apocynaceae
	6883	*Duvalia maculata* N.E.Br.	Apocynaceae
	6883	*Duvalia polita* N.E.Br.	Apocynaceae
	6883	*Duvalia pubescens* N.E.Br. var.	Apocynaceae
E	6884	*Caralluma peschii* Nel	Apocynaceae
	6884	*Quaqua acutiloba* (N.E.Br.) Bruyns	Apocynaceae
	6884	*Quaqua incarnata* (L.f.) Bruyns subsp. *hottentotorum* (N.E.Br.) Bruyns	Apocynaceae
	6884	*Quaqua mammillaris* (L.) Bruyns	Apocynaceae
	6884	*Quaqua pruinosa* (Masson) Bruyns	Apocynaceae
E	6884?	*Baynesia lophophora* Bruyns	Apocynaceae
E	6885	*Orbea albocastanea* (Marloth) Bruyns	Apocynaceae
	6885	*Orbea caudata* (L.C.Leach.) Bruyns subsp. *rhodesiaca* (L.C.Leach.) Bruyns ined.	Apocynaceae
	6885	*Orbea huillensis* (Hiern) Bruyns subsp. *flava* Bruyns	Apocynaceae
	6885	*Orbea lugardii* (N.E.Br.) Bruyns	Apocynaceae
	6885	*Orbea lutea* (N.E.Br.) Bruyns subsp. *vaga* (N.E.Br.) Bruyns	Apocynaceae
	6885	*Orbea maculata* (N.E.Br.) L.C.Leach subsp. *kaokoensis* Bruyns	Apocynaceae
E	6885	*Orbea maculata* (N.E.Br.) L.C.Leach subsp. *rangeana* (Dinter & A.Berger) Bruyns	Apocynaceae
	6885	*Orbea schweinfurthii* (A.Berger) Bruyns	Apocynaceae
	6885	*Orbea valida* (N.E.Br.) Bruyns subsp. *occidentalis* Bruyns	Apocynaceae
	6885	*Stapelia flavopurpurea* Marloth	Apocynaceae
	6885	*Stapelia gariepensis* Pillans	Apocynaceae
	6885	*Stapelia hirsuta* L.	Apocynaceae
	6885	*Stapelia kwebensis* N.E.Br.	Apocynaceae
E	6885	*Stapelia longipedicellata* (A.Berger) N.E.Br.	Apocynaceae
E	6885	*Stapelia pearsonii* N.E.Br.	Apocynaceae
	6885	*Stapelia schinzii* A.Berger & Schltr. var. *angolensis* Kers	Apocynaceae
E	6885	*Stapelia schinzii* A.Berger & Schltr. var. *bergeriana* (Dinter) L.C.Leach	Apocynaceae
E	6885	*Stapelia schinzii* A.Berger & Schltr. var. *schinzii*	Apocynaceae
	6885	*Stapelia similis* N.E.Br.	Apocynaceae

	6885	*Stapeliopsis neronis* Pillans	Apocynaceae
	6885	*Stapeliopsis urniflora* Lavranos	Apocynaceae
	6885	*Tridentea jucunda* (N.E.Br.) L.C.Leach	Apocynaceae
E	6885	*Tridentea marientalensis* (Nel) L.C.Leach subsp. *albipilosa* (Giess) L.C.Leach	Apocynaceae
	6885	*Tridentea marientalensis* (Nel) L.C.Leach subsp. *marientalensis*	Apocynaceae
E	6885	*Tridentea pachyrrhiza* (Dinter) L.C.Leach	Apocynaceae
	6885	*Tridentea virescens* (N.E.Br.) L.C.Leach	Apocynaceae
	6885	*Tromotriche aperta* (Masson) Bruyns	Apocynaceae
	6885	*Tromotriche longipes* (C.A.Lückh.) Bruyns	Apocynaceae
	6885	*Tromotriche pedunculata* (Masson) Bruyns	Apocynaceae
E	6885	*Tromotriche ruschiana* (Dinter) Bruyns	Apocynaceae
	6885	*Tromotriche umdausensis* (Nel) Bruyns	Apocynaceae
E	6887	*Huernia hallii* E. & B.M.Lamb	Apocynaceae
	6887	*Huernia levyi* Oberm.	Apocynaceae
	6887	*Huernia namaquensis* Pillans	Apocynaceae
	6887	*Huernia oculata* Hook.f	Apocynaceae
E	6887	*Huernia plowesii* L.C.Leach	Apocynaceae
	6887	*Huernia thuretii* Cels	Apocynaceae
	6887	*Huernia urceolata* L.C.Leach	Apocynaceae
	6887	*Huernia verekeri* Stent. var. *verekeri*	Apocynaceae
	6887	*Huernia zebrina* N.E.Br. subsp. *magniflora* (Phillips) L.C.Leach	Apocynaceae
	6890	*Rhyssolobium dumosum* E.Mey.	Apocynaceae
	6896	*Sphaerocodon melananthus* N.E.Br.	Apocynaceae
E	6899	*Tylophora fleckii* (Schltr.) N.E.Br.	Apocynaceae
E	6911	*Stigmatorhynchus hereroensis* Schltr.	Apocynaceae
	6914	*Marsdenia macrantha* (Klotzsch) Schltr.	Apocynaceae
	6914	*Marsdenia sylvestris* (Retz.) P.I.Forst.	Apocynaceae
	6917	*Pergularia daemia* (Forssk.) Chiov. var. *daemia*	Apocynaceae
	6917	*Pergularia daemia* (Forssk.) Chiov. var. *leiocarpa* (K.Schum.) H.E.Huber	Apocynaceae
	6924	*Fockea angustifolia* K.Schum.	Apocynaceae
	6924	*Fockea comaru* (E.Mey.) N.E.Br.	Apocynaceae
	6924	*Fockea edulis* (Thunb.) K.Schum.	Apocynaceae
	6924	*Fockea multiflora* K.Schum.	Apocynaceae
	6924	*Fockea sinuata* (E.Mey.) Druce	Apocynaceae
	6968	*Cuscuta filiformis* L.	Convolvulaceae
	6968	*Cuscuta hyalina* Heyne ex Roth	Convolvulaceae
	6968	*Cuscuta planiflora* Ten. var. *planiflora*	Convolvulaceae
	6972	*Falkia oblonga* Bernh. ex Krauss	Convolvulaceae
	6973	*Evolvulus alsinoides* (L.) L.	Convolvulaceae
	6978	*Seddera schizantha* Hallier f.	Convolvulaceae
	6978	*Seddera suffruticosa* (Schinz) Hallier f.	Convolvulaceae
	6991	*Jacquemontia tamnifolia* (L.) Griseb.	Convolvulaceae
E	6993	*Convolvulus argillicola* Pilg.	Convolvulaceae
	6993	*Convolvulus ocellatus* Hook.	Convolvulaceae
	6993	*Convolvulus sagittatus* Thunb.	Convolvulaceae
E	6997	*Merremia bipinnatipartita* (Engl.) Hallier f.	Convolvulaceae
E	6997	*Merremia guerichii* A.Meeuse	Convolvulaceae
	6997	*Merremia multisecta* Hallier f.	Convolvulaceae
	6997	*Merremia palmata* Hallier f.	Convolvulaceae
	6997	*Merremia pinnata* (Hochst. ex Choisy) Hallier f.	Convolvulaceae
	6997	*Merremia verecunda* Rendle	Convolvulaceae
	6997	*Xenostegia tridentata* (L.) D.F. Austin & Staples subsp. *angustifolia* (Jacq.) A.Meeuse var. *angustifolia*	
	7000	*Astripomoea lachnosperma* (Choisy) A.Meeuse	Convolvulaceae
	7000	*Astripomoea rotundata* (Pilg.) A.Meeuse	Convolvulaceae
	7003	*Ipomoea adenioides* Schinz	Convolvulaceae
	7003	*Ipomoea aquatica* Forssk.	Convolvulaceae
	7003	*Ipomoea bolusiana* Schinz	Convolvulaceae
	7003	*Ipomoea chloroneura* Hallier f.	Convolvulaceae
	7003	*Ipomoea coptica* (L.) Roth ex Roem. & Schult.	Convolvulaceae
	7003	*Ipomoea coscinosperma* Hochst. ex Choisy	Convolvulaceae
	7003	*Ipomoea crassipes* Hook. Verdc.	Convolvulaceae
	7003	*Ipomoea dichroa* Choisy	Convolvulaceae
	7003	*Ipomoea fulvicaulis* (Hochst. ex Choisy) Boiss. ex Hallier.f. var. *fulvicaulis*	Convolvulaceae
	7003	*Ipomoea hackeliana* (Schinz) Hallier f.	Convolvulaceae
	7003	*Ipomoea hochstetteri* House	Convolvulaceae
	7003	*Ipomoea holubii* Baker	Convolvulaceae
	7003	*Ipomoea lapathifolia* Hallier f.	Convolvulaceae
	7003	*Ipomoea leucanthemum* (Klotzsch) Hallier f.	Convolvulaceae
	7003	*Ipomoea magnusiana* Schinz	Convolvulaceae

	7003	*Ipomoea oblongata* E.Mey. ex Choisy	Convolvulaceae
	7003	*Ipomoea obscura* (L.) Ker Gawl. var. *obscura*	Convolvulaceae
	7003	*Ipomoea oenotherae* (Vatke) Hallier f.	Convolvulaceae
	7003	*Ipomoea oenotheroides* (L.f.) Raf ex Hallier f.	Convolvulaceae
	7003	*Ipomoea pes-tigridis* L. var. *pes-tigridis*	Convolvulaceae
	7003	*Ipomoea pileata* Roxb.	Convolvulaceae
	7003	*Ipomoea plebeia* R.Br. subsp. *africana* A.Meeuse	Convolvulaceae
	7003	*Ipomoea rubens* Choisy	Convolvulaceae
	7003	*Ipomoea shirambensis* Baker	Convolvulaceae
	7003	*Ipomoea sinensis* (Desr.) Choisy subsp. *blepharosepala* (Hochst. ex A.Rich.) Verdc. ex A.Meeuse	Convolvulaceae
	7003	*Ipomoea suffruticosa* Burch.	Convolvulaceae
	7003	*Ipomoea tenuipes* Verdc.	Convolvulaceae
	7003	*Ipomoea tuberculata* Ker Gawl. var. *tuberculata*	Convolvulaceae
	7003	*Ipomoea verbascoidea* Choisy	Convolvulaceae
	7003	*Ipomoea welwitschii* Vatke ex Hallier f.	Convolvulaceae
	7032	*Codon royenii* L.	Hydrophyllaceae
	7032	*Codon schenckii* Schinz	Hydrophyllaceae
	7038	*Cordia grandicalyx* Oberm.	Boraginaceae
	7038	*Cordia monoica* Roxb.	Boraginaceae
	7038	*Cordia pilosissima* Baker	Boraginaceae
	7038	*Cordia sinensis* Lam.	Boraginaceae
	7043	*Ehretia alba* Retief & A.E. van Wyk	Boraginaceae
	7043	*Ehretia coerulea* Gürke	Boraginaceae
E	7043	*Ehretia namibensis* Retief & A.E. van Wyk subsp. *kaokoensis* Retief & A.E. van Wyk	Boraginaceae
	7043	*Ehretia namibensis* Retief & A.E. van Wyk subsp. *namibensis*	Boraginaceae
E	7052	*Heliotropium albiflorum* Engl.	Boraginaceae
	7052	*Heliotropium ciliatum* Kaplan	Boraginaceae
	7052	*Heliotropium giessii* Friedr.-Holzh.	Boraginaceae
	7052	*Heliotropium lineare* (A.DC.) Gürke	Boraginaceae
	7052	*Heliotropium marifolium* Retz.	Boraginaceae
	7052	*Heliotropium oliveranum* Schinz	Boraginaceae
	7052	*Heliotropium ovalifolium* Forssk.	Boraginaceae
	7052	*Heliotropium rariflorum* Stocks subsp. *hereroense* (Schinz) Verdc.	Boraginaceae
	7052	*Heliotropium steudneri* Vatke	Boraginaceae
	7052	*Heliotropium supinum* L.	Boraginaceae
	7052	*Heliotropium tubulosum* E.Mey. ex DC.	Boraginaceae
	7052	*Heliotropium zeylanicum* (Burm.f.) Lam.	Boraginaceae
	7052	*Schleidenia* sp.	Boraginaceae
	7056	*Trichodesma africanum* (L.) Lehm.	Boraginaceae
	7056	*Trichodesma ambacense* Welw. subsp. *hockii* (De Wild.) Brummitt	Boraginaceae
	7056	*Trichodesma angustifolium* Harv.	Boraginaceae
	7056	*Trichodesma arenicola* Gürke	Boraginaceae
	7073	*Lappula capensis* (DC.) Gürke	Boraginaceae
	7093	*Anchusa capensis* Thunb.	Boraginaceae
	7109	*Lithospermum cinereum* DC.	Boraginaceae
	7131	*Wellstedia dinteri* Pilg.	Boraginaceae
	7144	*Lantana angolensis* Moldenke	Verbenaceae
	7144	*Lantana dinteri* Moldenke	Verbenaceae
	7144	*Lantana rugosa* Thunb.	Verbenaceae
	7145	*Lippia pearsonii* Moldenke	Verbenaceae
	7145	*Lippia rehmannii* H.Pearson	Verbenaceae
	7148	*Chascanum garipense* E.Mey.	Verbenaceae
	7148	*Chascanum namaquanum* Bolus ex H.Pearson	Verbenaceae
	7148	*Chascanum pinnatifidum* (L.f.) E.Mey.	Verbenaceae
	7148	*Chascanum pumilum* E.Mey.	Verbenaceae
E	7153	*Priva auricoccea* A.Meeuse	Verbenaceae
	7185	*Premna senensis* Klotzsch	Verbenaceae
	7186	*Vitex angolensis* Gürke	Verbenaceae
	7186	*Vitex ferruginea* Schumach. & Thonn.	Verbenaceae
	7186	*Vitex mombassae* Vatke	Verbenaceae
	7191	*Clerodendrum dekindtii* Gürke	Verbenaceae
	7191	*Clerodendrum glabrum* E.Mey.	Verbenaceae
	7191	*Clerodendrum ternatum* Schinz	Verbenaceae
	7191	*Clerodendrum uncinatum* Schinz	Verbenaceae
	7213	*Tinnea eriocalyx* Welw.	Lamiaceae
	7213	*Tinnea rhodesiana* S.Moore	Lamiaceae
	7236	*Acrotome angustifolia* G.Taylor	Lamiaceae
E	7236	*Acrotome fleckii* (Gürke) Launert	Lamiaceae
	7236	*Acrotome inflata* Benth.	Lamiaceae

	7236	*Acrotome pallescens* Benth.	Lamiaceae
	7264	*Leonotis nepetifolia* (L.) R.Br.	Lamiaceae
	7264	*Leonotis ocymifolia* (Burm.f.) Iwarsson var. *raineriana* (Vis.) Iwarsson	Lamiaceae
	7264	*Leonotis ocymifolia* (Burm.f.) Iwarsson var. *schinzii* (Gürke) Iwarsson	Lamiaceae
	7268	*Leucas capensis* (Benth.) Engl.	Lamiaceae
	7268	*Leucas ebracteata* Peyr. var. *kaokoveldensis* Sebald	Lamiaceae
	7268	*Leucas glabrata* (Vahl) Sm. var. *glabrata*	Lamiaceae
	7268	*Leucas neuflizeana* Courbon	Lamiaceae
	7268	*Leucas pechuelii* (Kuntze) Gürke	Lamiaceae
	7279	*Ballota africana* (L.) Benth.	Lamiaceae
	7281	*Stachys burchelliana* Launert	Lamiaceae
E	7281	*Stachys dinteri* Launert	Lamiaceae
	7281	*Stachys rugosa* Aiton	Lamiaceae
	7281	*Stachys spathulata* Burch. ex Benth.	Lamiaceae
	7290	*Salvia disermas* L.	Lamiaceae
	7290	*Salvia garipensis* E.Mey. ex Benth.	Lamiaceae
	7290	*Salvia namaensis* Schinz	Lamiaceae
	7290	*Salvia stenophylla* Burch. ex Benth.	Lamiaceae
	7290	*Salvia verbenaca* L.	Lamiaceae
	7328	*Mentha longifolia* (L.) L. subsp. *capensis* (Thunb.) Briq.	Lamiaceae
	7328	*Mentha longifolia* (L.) L. subsp. *wissii* (Launert) Codd	Lamiaceae
	7339	*Tetradenia riparia* (Hochst.) Codd	Lamiaceae
	7345	*Aeollanthus buchnerianus* Briq.	Lamiaceae
E	7345	*Aeollanthus namibensis* Ryding	Lamiaceae
	7345	*Aeollanthus neglectus* (Dinter) Launert	Lamiaceae
	7345	*Aeollanthus rehmannii* Gürke	Lamiaceae
	7345a	*Endostemon tenuiflorus* (Benth.) M.Ashby	Lamiaceae
	7345a	*Endostemon tereticaulis* (Poir.) M.Ashby	Lamiaceae
	7350	*Plectranthus candelabriformis* Launert	Lamiaceae
	7350	*Plectranthus caninus* Roth	Lamiaceae
	7350	*Plectranthus cylindraceus* Hochst. ex Benth.	Lamiaceae
E	7350	*Plectranthus dinteri* Briq.	Lamiaceae
	7350	*Plectranthus esculentus* N.E.Br.	Lamiaceae
	7350	*Plectranthus hereroensis* Engl.	Lamiaceae
	7350	*Plectranthus mirabilis* (Briq.) Launert	Lamiaceae
	7350	*Plectranthus neochilus* Schltr.	Lamiaceae
	7350	*Plectranthus tetensis* (Baker) Agnew	Lamiaceae
	7350	*Plectranthus tetragonus* Gürke	Lamiaceae
E	7350	*Plectranthus unguentarius* Codd	Lamiaceae
	7353	*Englerastrum schweinfurthii* Briq.	Lamiaceae
	7357	*Hoslundia opposita* Vahl	Lamiaceae
	7362	*Haumaniastrum sericeum* (Briq.) A.J.Paton	Lamiaceae
	7365	*Hemizygia bracteosa* (Benth.) Briq.	Lamiaceae
E	7365	*Hemizygia floccosa* Launert	Lamiaceae
	7365	*Hemizygia linearis* (Benth.) Briq.	Lamiaceae
	7365	*Hemizygia petrensis* (Hiern) M.Ashby	Lamiaceae
	7366	*Ocimum americanum* L. var. *americanum*	Lamiaceae
	7366	*Ocimum filamentosum* Forssk.	Lamiaceae
	7366	*Ocimum gratissimum* L. subsp. *gratissimum* var. *gratissimum*	Lamiaceae
	7379	*Lycium boscifolium* Schinz	Solanaceae
	7379	*Lycium cinereum* Thunb. sensu lato	Solanaceae
	7379	*Lycium decumbens* Welw. ex Hiern	Solanaceae
	7379	*Lycium eenii* S.Moore	Solanaceae
E	7379	*Lycium grandicalyx* Joubert & Venter	Solanaceae
	7379	*Lycium hirsutum* Dunal	Solanaceae
	7379	*Lycium oxycarpum* Dunal	Solanaceae
	7379	*Lycium pilifolium* C.H.Wright	Solanaceae
	7379	*Lycium prunus-spinosa* Dunal	Solanaceae
	7379	*Lycium* sp. = Merxmuller & Giess 3447 of FSWA	Solanaceae
	7379	*Lycium villosum* Schinz	Solanaceae
	7407	*Solanum burchellii* Dunal	Solanaceae
	7407	*Solanum capense* L.	Solanaceae
	7407	*Solanum catombelense* Peyr.	Solanaceae
E	7407	*Solanum damarense* Bitter	Solanaceae
	7407	*Solanum delagoense* Dammer	Solanaceae
E	7407	*Solanum dinteri* Bitter	Solanaceae
	7407	*Solanum multiglandulosum* Bitter	Solanaceae
	7407	*Solanum namaquense* Dammer	Solanaceae
	7407	*Solanum panduriforme* E.Mey.	Solanaceae

	7407	*Solanum retroflexum* Dunal	Solanaceae
	7407	*Solanum rigescens* Jacq.	Solanaceae
E	7407	*Solanum rigescentoides* Hutch.	Solanaceae
	7407	*Solanum supinum* Dunal	Solanaceae
	7407	*Solanum tettense* Klotzsch var. *renschii* (Vatke) A.E.Gonç.	Solanaceae
	7407	*Solanum tomentosum* L. var. *coccineum* (Jacq.) Willd.	Solanaceae
E	7434	*Nicotiana africana* Merxm.	Solanaceae
	7466	*Anticharis aschersoniana* Schinz	Scrophulariaceae
E	7466	*Anticharis ebracteata* Schinz	Scrophulariaceae
E	7466	*Anticharis imbricata* Schinz	Scrophulariaceae
E	7466	*Anticharis inflata* Marloth & Engl.	Scrophulariaceae
	7466	*Anticharis juncea* L.Bolus	Scrophulariaceae
	7466	*Anticharis scoparia* (E.Mey. ex Benth.) Hiern ex Schinz	Scrophulariaceae
	7466	*Anticharis senegalensis* (Walp.) Bhandari	Scrophulariaceae
	7467	*Aptosimum albomarginatum* Marloth & Engl.	Scrophulariaceae
	7467	*Aptosimum angustifolium* Weber & Schinz	Scrophulariaceae
E	7467	*Aptosimum arenarium* Engl.	Scrophulariaceae
	7467	*Aptosimum decumbens* Schinz	Scrophulariaceae
	7467	*Aptosimum elongatum* Engl.	Scrophulariaceae
	7467	*Aptosimum eriocephalum* E.Mey. ex Benth.	Scrophulariaceae
	7467	*Aptosimum glandulosum* Weber & Schinz	Scrophulariaceae
	7467	*Aptosimum junceum* (Hiern) Philcox	Scrophulariaceae
	7467	*Aptosimum lineare* Marloth & Engl.	Scrophulariaceae
	7467	*Aptosimum lugardiae* (N.E.Br.) E.Phillips	Scrophulariaceae
	7467	*Aptosimum marlothii* (Engl.) Hiern	Scrophulariaceae
	7467	*Aptosimum spinescens* (Thunb.) Weber	Scrophulariaceae
E	7467	*Aptosimum suberosum* Weber	Scrophulariaceae
	7467	*Aptosimum tragacanthoides* E.Mey. ex Benth.	Scrophulariaceae
	7467	*Aptosimum viscosum* Benth.	Scrophulariaceae
	7468	*Peliostomum leucorrhizum* E.Mey. ex Benth.	Scrophulariaceae
	7468	*Peliostomum viscosum* E.Mey. ex Benth.	Scrophulariaceae
	7471	*Diascia ausana* Dinter	Scrophulariaceae
	7471	*Diascia engleri* Diels	Scrophulariaceae
	7471	*Diascia minutiflora* Hiern	Scrophulariaceae
	7471	*Diascia runcinata* E.Mey. ex Benth.	Scrophulariaceae
	7476	*Nemesia anisocarpa* E.Mey ex Benth.	Scrophulariaceae
	7476	*Nemesia fleckii* Thell.	Scrophulariaceae
	7476	*Nemesia fruticans* (Thunb.) Benth.	Scrophulariaceae
	7476	*Nemesia gracilis* Benth.	Scrophulariaceae
E	7476	*Nemesia karasbergensis* L.Bolus	Scrophulariaceae
	7476	*Nemesia lilacina* N.E.Br.	Scrophulariaceae
	7476	*Nemesia linearis* Vent.	Scrophulariaceae
E	7476	*Nemesia violiflora* Roessler	Scrophulariaceae
	7476	*Nemesia viscosa* E.Mey. ex Benth.	Scrophulariaceae
	7477	*Diclis petiolaris* Benth.	Scrophulariaceae
E	7477	*Diclis tenuissima* Pilg.	Scrophulariaceae
	7497	*Antherothamnus pearsonii* N.E.Br	Scrophulariaceae
E	7497	*Manuleopsis dinteri* Thell.	Scrophulariaceae
	7517	*Manulea androsacea* E.Mey. ex Benth	Scrophulariaceae
	7517	*Manulea aridicola* Hilliard	Scrophulariaceae
	7517	*Manulea burchellii* Hiern	Scrophulariaceae
	7517	*Manulea conferta* Pilg.	Scrophulariaceae
E	7517	*Manulea dubia* (Skan) Overkott ex Roessler	Scrophulariaceae
	7517	*Manulea gariepina* Benth.	Scrophulariaceae
	7517	*Manulea minuscula* Hilliard	Scrophulariaceae
E	7517	*Manulea namibensis* (Roessler) Hilliard	Scrophulariaceae
	7517	*Manulea robusta* Pilg.	Scrophulariaceae
	7517	*Manulea schaeferi* Pilg.	Scrophulariaceae
E	7517	*Manulea tenella* Hilliard	Scrophulariaceae
	7519	*Camptoloma rotundifolium* Benth.	Scrophulariaceae
E	7519	*Jamesbrittenia acutiloba* (Pilg.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia adpressa* (Dinter) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia aridicola* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia atropurpurea* (Benth.) Hilliard subsp. *pubescens* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia aurantiaca* (Burch.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia barbata* Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia bicolor* (Dinter) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia canescens* (Benth.) Hilliard var. *canescens*	Scrophulariaceae
	7519	*Jamesbrittenia canescens* (Benth.) Hilliard var. *laevior* (Dinter) Hilliard	Scrophulariaceae

	7519	*Jamesbrittenia canescens* (Benth.) Hilliard var. *seineri* (Pilg.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia chenopodioides* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia concinna* (Hiern) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia dolomitica* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia elegantissima* (Schinz) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia fimbriata* Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia fleckii* (Thell.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia fragilis* (Pilg.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia fruticosa* (Benth.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia giessii* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia glutinosa* (Benth.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia hereroensis* (Engl.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia heucherifolia* (Diels) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia huillana* (Diels) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia integerrima* (Benth.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia hyperioides* (Engl.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia major* (Pilg.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia maxii* (Hiern) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia megadenia* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia megaphylla* Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia merxmuelleri* (Roessler) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia pallida* (Pilg.) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia pilgeriana* (Dinter) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia primuliflora* (Thell.) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia ramosissima* (Hiern) Hilliard	Scrophulariaceae
E	7519	*Jamesbrittenia sessilifolia* (Diels) Hilliard	Scrophulariaceae
	7519	*Jamesbrittenia tenella* (Hiern) Hilliard	Scrophulariaceae
	7519	*Lyperia tristis* (L.f.) Benth.	Scrophulariaceae
	7519	*Sutera halimifolia* (Benth.) Kuntze	Scrophulariaceae
	7519	*Sutera patriotica* Hiern	Scrophulariaceae
	7521	*Phyllopodium collinum* (Hiern) Hilliard	Scrophulariaceae
	7521	*Phyllopodium hispidulum* (Thell.) Hilliard	Scrophulariaceae
	7521	*Phyllopodium maxii* (Hiern) Hilliard	Scrophulariaceae
	7521	*Phyllopodium namaense* (Thell.) Hilliard	Scrophulariaceae
	7522	*Melanospermum foliosum* (Benth.) Hilliard	Scrophulariaceae
	7523	*Zaluzianskya benthamiana* Walp.	Scrophulariaceae
	7523	*Zaluzianskya diandra* Diels	Scrophulariaceae
	7523	*Zaluzianskya peduncularis* (Benth.) Walp.	Scrophulariaceae
	7524	*Mimulus gracilis* R.Br.	Scrophulariaceae
	7532	*Limnophila ceratophylloides* (Hiern) Skan	Scrophulariaceae
	7532	*Limnophila indica* (L.) Druce	Scrophulariaceae
	7546	*Bacopa floribunda* (R.Br.) Wettst.	Scrophulariaceae
E	7551	*Dintera pterocaulis* Stapf	Scrophulariaceae
	7558	*Limosella africana* Glück	Scrophulariaceae
	7558	*Limosella australis* R.Br.	Scrophulariaceae
	7558	*Limosella grandiflora* Benth.	Scrophulariaceae
	7558	*Limosella maior* Diels	Scrophulariaceae
	7560	*Craterostigma plantagineum* Hochst.	Scrophulariaceae
	7560	*Crepidorhopalon spicatus* (Engl.) Fischer	Scrophulariaceae
	7562	*Lindernia nana* (Engl.) Roessler	Scrophulariaceae
	7562	*Lindernia parviflora* (Roxb.) Haines	Scrophulariaceae
E	7564	*Chamaegigas intrepidus* Dinter	Scrophulariaceae
	7566	*Hebenstretia cordata* L.	Selaginaceae
	7566	*Hebenstretia holubii* Rolfe	Selaginaceae
	7566	*Hebenstretia integrifolia* L.	Selaginaceae
	7566	*Hebenstretia minutiflora* Rolfe	Selaginaceae
	7566	*Hebenstretia namaquensis* Roessler	Selaginaceae
	7566	*Hebenstretia parviflora* E.Mey.	Selaginaceae
	7567	*Dischisma spicatum* (Thunb.) Choisy	Selaginaceae
	7568	*Cromidon minutum* (Rolfe) Hilliard	Selaginaceae
E	7568	*Cromidon pusillum* (Roessler) Hilliard	Selaginaceae
	7568	*Selago albomarginata* Hilliard	Selaginaceae
	7568	*Selago alopecuroides* Rolfe	Selaginaceae
E	7568	*Selago amboensis* Rolfe	Selaginaceae
	7568	*Selago angolensis* Rolfe	Selaginaceae
	7568	*Selago angustibractea* Hilliard	Selaginaceae
	7568	*Selago centralis* Hilliard	Selaginaceae
	7568	*Selago dinteri* Rolfe subsp. *dinteri*	Selaginaceae
	7568	*Selago dinteri* Rolfe subsp. *pseudodinteri* Hilliard	Selaginaceae

	7568	*Selago divaricata* L.f.	Selaginaceae
	7568	*Selago kurtdinteri* Hilliard	Selaginaceae
E	7568	*Selago lepida* Hilliard	Selaginaceae
E	7568	*Selago nachtigalii* Rolfe	Selaginaceae
	7568	*Selago welwitschii* Rolfe var. *australis* Hilliard	Selaginaceae
	7568	*Selago welwitschii* Rolfe var. *holubii* (Rolfe) Brenan	Selaginaceae
	7597	*Alectra aurantiaca* Hemsl.	Scrophulariaceae
	7597	*Alectra lancifolia* Hemsl.	Scrophulariaceae
	7597	*Alectra orobranchoides* Benth.	Scrophulariaceae
E	7597	*Alectra pseudobarleriae* (Dinter) Dinter	Scrophulariaceae
E	7597	*Alectra schoenfelderi* Dinter & Melch.	Scrophulariaceae
	7597	*Alectra sessiliflora* (Vahl) Kuntze var. *senegalensis* (Benth.) Hepper	Scrophulariaceae
	7597	*Alectra vogelii* Benth.	Scrophulariaceae
	7615	*Hiernia angolensis* S.Moore	Scrophulariaceae
	7616	*Sopubia mannii* Skan var. *tenuifolia* (Engl. & Gilg) Hepper	Scrophulariaceae
	7622	*Buchnera henriquesii* Engl.	Scrophulariaceae
	7622	*Buchnera hispida* Buch.-Ham. ex D.Don	Scrophulariaceae
	7622	*Buchnera longespicata* Schinz	Scrophulariaceae
	7623	*Cycnium filicalyx* (E.A.Bruce) Hansen	Scrophulariaceae
	7623	*Cycnium tubulosum* (L.f.) Engl. subsp. *tubulosum*	Scrophulariaceae
	7624	*Rhamphicarpa brevipedicellata* Hansen	Scrophulariaceae
	7625	*Striga asiatica* (L.) Kuntze	Scrophulariaceae
	7625	*Striga bilabiata* (Thunb.) Kuntze	Scrophulariaceae
	7625	*Striga elegans* Benth.	Scrophulariaceae
	7625	*Striga forbesii* Benth.	Scrophulariaceae
	7625	*Striga gesnerioides* (Willd.) Vatke ex Engl.	Scrophulariaceae
	7625	*Striga hermonthica* (Delile) Benth.	Scrophulariaceae
	7629	*Hyobanche barklyi* N.E.Br.	Scrophulariaceae
	7722	*Rhigozum brevispinosum* Kuntze	Bignoniaceae
	7722	*Rhigozum obovatum* Burch.	Bignoniaceae
	7722	*Rhigozum trichotomum* Burch.	Bignoniaceae
	7722	*Rhigozum virgatum* Merxm. & A.Schreib.	Bignoniaceae
	7723	*Catophractes alexandri* D.Don	Bignoniaceae
	7744	*Markhamia obtusifolia* (Baker) Sprague	Bignoniaceae
	7744	*Markhamia zanzibarica* (Bojer ex DC.) K.Schum.	Bignoniaceae
	7761	*Kigelia africana* (Lam.) Benth.	Bignoniaceae
	7769	*Pterodiscus aurantiacus* Welw.	Pedaliaceae
	7769	*Pterodiscus namibensis* Ihlenf. ined.	Pedaliaceae
	7769	*Pterodiscus ngamicus* N.E.Br. ex Stapf	Pedaliaceae
	7771	*Harpagophytum procumbens* (Burch.) DC. ex Meisn. subsp. *procumbens*	Pedaliaceae
	7771	*Harpagophytum zeyheri* Decne. subsp. *sublobatum* (Engl.) Ihlenf. & H.E.K.Hartmann	Pedaliaceae
	7774	*Sesamothamnus benguellensis* Welw.	Pedaliaceae
	7774	*Sesamothamnus guerichii* (Engl.) E.A.Bruce	Pedaliaceae
E	7774	*Sesamothamnus leistneri* ined. = De Winter & Leistner 5504	Pedaliaceae
	7776	*Rogeria adenophylla* J.Gay ex Delile subsp. *adenophylla*	Pedaliaceae
	7776	*Rogeria adenophylla* J.Gay ex Delile subsp. *aurantianca* (Schinz) Ihlenf. ined.	Pedaliaceae
E	7776	*Rogeria bigibbosa* Engl.	Pedaliaceae
	7776	*Rogeria longiflora* (Royen) J.Gay ex DC.	Pedaliaceae
	7776	*Rogeria petrophila* De Winter	Pedaliaceae
E	7777	*Sesamum abbreviatum* Merxm.	Pedaliaceae
	7777	*Sesamum alatum* Thonn.	Pedaliaceae
	7777	*Sesamum angolense* Welw.	Pedaliaceae
	7777	*Sesamum angustifolium* (Oliv.) Engl.	Pedaliaceae
	7777	*Sesamum calycinum* Welw. subsp. *baumii* (Stapf) Seidenst.	Pedaliaceae
	7777	*Sesamum capense* Burm.f.	Pedaliaceae
E	7777	*Sesamum marlothii* Engl.	Pedaliaceae
	7777	*Sesamum pedalioides* Welw.	Pedaliaceae
	7777	*Sesamum rigidum* Peyr. subsp. *merenskyanum* Ihlenf. & Seidenst.	Pedaliaceae
	7777	*Sesamum rigidum* Peyr. subsp. *rigidum*	Pedaliaceae
	7777	*Sesamum schinzianum* Asch.	Pedaliaceae
	7777	*Sesamum triphyllum* Welw. ex Asch. subsp. *cochlearatum*	Pedaliaceae
	7777	*Sesamum triphyllum* Welw. ex Asch. subsp. *triphyllum*	Pedaliaceae
	7778	*Ceratotheca integribracteata* Engl. subsp. *elliptica* (Schinz) Ihlenf.	Pedaliaceae
	7778	*Ceratotheca sesamoides* Endl.	Pedaliaceae
	7780	*Dicerocaryum eriocarpum* (Decne.) Abels	Pedaliaceae
	7901	*Utricularia arenaria* A.DC.	Lentibulariaceae
	7901	*Utricularia benjaminiana* Oliv.	Lentibulariaceae
	7901	*Utricularia bisquamata* Schrank	Lentibulariaceae
	7901	*Utricularia foliosa* L.	Lentibulariaceae

	7901	*Utricularia gibba* L.	Lentibulariaceae
	7901	*Utricularia inflexa* Forssk. var. *inflexa*	Lentibulariaceae
	7901	*Utricularia reflexa* Oliv. var. *reflexa*	Lentibulariaceae
	7901	*Utricularia stellaris* L.f.	Lentibulariaceae
	7901	*Utricularia subulata* L.	Lentibulariaceae
	7901	*Utricularia tortilis* Welw. ex Oliv.	Lentibulariaceae
	7909	*Nelsonia canescens* (Lam.) Sprenger	Acanthaceae
	7914	*Thunbergia aurea* N.E.Br.	Acanthaceae
	7926	*Hygrophila abyssinica* (Hochst. ex Nees) T. Anderson	Acanthaceae
	7926	*Hygrophila acinos* (S.Moore) Heine	Acanthaceae
	7926	*Hygrophila angolensis* (S.Moore) Heine	Acanthaceae
	7926	*Hygrophila auriculata* (Schumach.) Heine	Acanthaceae
E	7926	*Hygrophila gracillima* (Schinz) Burkill	Acanthaceae
	7926	*Hygrophila okavangensis* P.G.Mey.	Acanthaceae
	7926	*Hygrophila pilosa* Burkill	Acanthaceae
	7926	*Hygrophila prunelloides* (S.Moore) Heine	Acanthaceae
	7932	*Phaulopsis semiconica* P.G.Mey.	Acanthaceae
	7934	*Petalidium angustitubum* P.G.Mey.	Acanthaceae
	7934	*Petalidium bracteatum* Oberm.	Acanthaceae
E	7934	*Petalidium canescens* (Engl.) C.B.Clarke	Acanthaceae
	7934	*Petalidium cirrhiferum* S.Moore	Acanthaceae
	7934	*Petalidium coccineum* S.Moore	Acanthaceae
	7934	*Petalidium crispum* A.Meeuse ex P.G.Mey.	Acanthaceae
E	7934	*Petalidium cymbiforme* Schinz	Acanthaceae
	7934	*Petalidium engleranum* (Schinz) C.B.Clarke	Acanthaceae
E	7934	*Petalidium giessii* P.G.Mey.	Acanthaceae
	7934	*Petalidium halimoides* (Nees) S.Moore	Acanthaceae
	7934	*Petalidium lanatum* (Engl.) C.B.Clarke	Acanthaceae
E	7934	*Petalidium linifolium* T.Anderson	Acanthaceae
	7934	*Petalidium lucens* Oberm.	Acanthaceae
E	7934	*Petalidium luteo-album* A.Meeuse	Acanthaceae
E	7934	*Petalidium ohopohense* P.G.Mey.	Acanthaceae
	7934	*Petalidium parvifolium* C.B.Clarke ex Schinz	Acanthaceae
	7934	*Petalidium physaloides* S.Moore	Acanthaceae
E	7934	*Petalidium pilosi-bracteolatum* Merxm. & Hainz	Acanthaceae
E	7934	*Petalidium ramulosum* Schinz	Acanthaceae
E	7934	*Petalidium rautanenii* Schinz	Acanthaceae
	7934	*Petalidium rossmannianum* P.G.Mey.	Acanthaceae
	7934	*Petalidium setosum* C.B.Clarke ex Schinz	Acanthaceae
	7934	*Petalidium spiniferum* C.B.Clarke	Acanthaceae
E	7934	*Petalidium subcrispum* P.G.Mey.	Acanthaceae
	7934	*Petalidium variabile* (Engl.) C.B.Clarke	Acanthaceae
	7934	*Petalidium welwitschii* S.Moore	Acanthaceae
	7939	*Dyschoriste pseuderecta* Mildbr.	Acanthaceae
	7940	*Duosperma crenatum* (Lindau) P.G.Mey.	Acanthaceae
	7946	*Ruelliopsis damarensis* S.Moore	Acanthaceae
	7946	*Ruelliopsis setosa* (Nees) C.B.Clarke	Acanthaceae
E	7965	*Ruellia aspera* (Schinz) Phillips	Acanthaceae
E	7965	*Ruellia bignoniiflora* S.Moore	Acanthaceae
E	7965	*Ruellia brandbergensis* Kers	Acanthaceae
	7965	*Ruellia currorii* T.Anderson	Acanthaceae
	7965	*Ruellia diversifolia* S.Moore	Acanthaceae
	7965	*Ruellia otaviensis* P.G.Mey.	Acanthaceae
	7965	*Ruellia* sp. = aff. R.diversifolia Craven 2368	Acanthaceae
	7965	*Ruellia* sp. nova 1 M.-J.Cadman	Acanthaceae
	7971	*Lepidagathis scariosa* Nees	Acanthaceae
	7972	*Crabbea velutina* S.Moore	Acanthaceae
	7973	*Barleria albi-pilosa* Hainz	Acanthaceae
	7973	*Barleria cyanea* S.Moore	Acanthaceae
E	7973	*Barleria damarensis* T.Anderson	Acanthaceae
E	7973	*Barleria dinteri* Oberm.	Acanthaceae
	7973	*Barleria elegans* S.Moore	Acanthaceae
	7973	*Barleria galpinii* C.B.Clarke	Acanthaceae
E	7973	*Barleria jubata* S.Moore	Acanthaceae
E	7973	*Barleria kaloxytona* Lindau	Acanthaceae
E	7973	*Barleria lanceolata* (Schinz) Oberm.	Acanthaceae
	7973	*Barleria lancifolia* T.Anderson	Acanthaceae
	7973	*Barleria lichtensteiniana* Nees	Acanthaceae
	7973	*Barleria lugardii* C.B.Clarke	Acanthaceae

E	8094	*Monechma grandiflorum* Schinz	Acanthaceae
	8094	*Monechma incanum* (Nees) C.B.Clarke	Acanthaceae
E	8094	*Monechma leucoderme* (Schinz) C.B.Clarke	Acanthaceae
	8094	*Monechma mollissimum* (Nees) P.G.Mey.	Acanthaceae
	8094	*Monechma salsola* (S.Moore) C.B.Clarke	Acanthaceae
E	8094	*Monechma serotinum* P.G.Mey.	Acanthaceae
	8094	*Monechma spartioides* (T.Anderson) C.B.Clarke	Acanthaceae
E	8094	*Monechma tonsum* P.G.Mey.	Acanthaceae
	8116	*Plantago cafra* Decne.	Plantaginaceae
	8136	*Amphiasma benguellense* (Hiern) Bremek.	Rubiaceae
E	8136	*Amphiasma divaricatum* (Engl.) Bremek.	Rubiaceae
E	8136	*Amphiasma merenskyanum* Bremek.	Rubiaceae
E	8136	*Kohautia amboensis* (Schinz) Bremek.	Rubiaceae
	8136	*Kohautia angolensis* Bremek.	Rubiaceae
	8136	*Kohautia aspera* (B.Heyne ex Roth) Bremek.	Rubiaceae
E	8136	*Kohautia azurea* (Dinter & K.Krause) Bremek.	Rubiaceae
	8136	*Kohautia caespitosa* Schnizl. subsp. *brachyloba* (Sond.) D.Mantell	Rubiaceae
	8136	*Kohautia cicendioides* (K.Schum.) Bremek.	Rubiaceae
	8136	*Kohautia cuspidata* (K.Schum.) Bremek.	Rubiaceae
	8136	*Kohautia cynanchica* DC.	Rubiaceae
	8136	*Kohautia microflora* D.Mantell	Rubiaceae
	8136	*Kohautia ramosissima* Bremek.	Rubiaceae
	8136	*Kohautia subverticillata* (K.Schum.) D.Mantell subsp. *subverticillata*	Rubiaceae
	8136	*Kohautia virgata* (Willd.) Bremek.	Rubiaceae
	8136	*Oldenlandia capensis* L.f. var. *capensis*	Rubiaceae
	8136	*Oldenlandia herbacea* (L.) Roxb. var. *flaccida* Bremek.	Rubiaceae
	8136	*Oldenlandia herbacea* (L.) Roxb. var. *herbacea*	Rubiaceae
	8136	*Pentodon pentandrus* (Schumach. & Thonn.) Vatke var. *pentandrus*	Rubiaceae
	8157	*Carphalea pubescens* (Klotzsch) Verdc.	Rubiaceae
	8212	*Crossopteryx febrifuga* (Afzel. ex G.Don) Benth.	Rubiaceae
	8278	*Tarenna luteola* (Stapf) Bremek.	Rubiaceae
	8283	*Catunaregam spinosa* (Thunb.) Tirveng. subsp. *spinosa*	Rubiaceae
	8285	*Gardenia brachythamnus* (K.Schum.) Launert	Rubiaceae
	8285	*Gardenia resiniflua* Hiern subsp. *resiniflua*	Rubiaceae
	8285	*Gardenia ternifolia* Schumach. & Thonn. subsp. *jovis-tonantis* (Welw.) Verdc. var. *jovis-tonatis* (Welw.) Aubrév.	
	8285	*Gardenia volkensii* K.Schum. subsp. *spatulifolia* (Stapf & Hutch.) Verdc.	Rubiaceae
	8299	*Feretia aeruginescens* Stapf	Rubiaceae
	8308	*Tricalysia cacondensis* Hiern	Rubiaceae
	8308	*Tricalysia junodi* (Schinz) Brenan var. *kirkii* (Hook.f.) Robbrecht	Rubiaceae
	8351	*Pygmaeothamnus zeyheri* (Sond.) Robyns var. *zeyheri*	Rubiaceae
	8351	*Rytigynia umbellulata* (Hiern) Robyns	Rubiaceae
	8351	*Vangueria cyanescens* Robyns	Rubiaceae
	8351	*Vangueria esculenta* S.Moore	Rubiaceae
	8351	*Vangueria infausta* Burch. subsp. *infausta*	Rubiaceae
	8351	*Vangueria lasioclados* K.Schum.	Rubiaceae
	8351	*Vangueria parvifolia* Sond.	Rubiaceae
	8351	*Vangueria proschii* Briq.	Rubiaceae
	8351	*Vangueriopsis lanciflora* (Hiern) Robyns	Rubiaceae
	8352	*Canthium glaucum* Hiern subsp. *frangula* (S.Moore) Bridson var. *frangula*	Rubiaceae
	8352	*Psydrax livida* (Hiern) Bridson	Rubiaceae
	8359	*Fadogia thamnus* K.Schum.	Rubiaceae
	8359	*Fadogia tomentosa* De Wild. var. *calvescens* (Verdc.) Verdc.	Rubiaceae
	8360	*Ancylanthos rubiginosus* Desf.	Rubiaceae
	8383	*Pavetta cataractarum* S.Moore	Rubiaceae
	8383	*Pavetta gardeniifolia* A.Rich. var. *gardeniifolia*	Rubiaceae
	8383	*Pavetta gardeniifolia* A.Rich. var. *subtomentosa* K.Schum.	Rubiaceae
	8383	*Pavetta harborii* S.Moore	Rubiaceae
	8383	*Pavetta schumanniana* F.Hoffm. ex K.Schum.	Rubiaceae
	8383	*Pavetta zeyheri* Sond.	Rubiaceae
	8438	*Anthospermum dregei* Sond. subsp. *dregei*	Rubiaceae
	8438	*Anthospermum rigidum* Eckl. & Zeyh. subsp. *pumilum* (Sond.) Puff	Rubiaceae
	8438	*Anthospermum spathulatum* Spreng. subsp. *spathulatum*	Rubiaceae
	8439	*Nenax cinerea* (Thunb.) Puff	Rubiaceae
	8469	*Gaillonia crocyllis* (Sond.) Thulin	Rubiaceae
	8475	*Spermacoce quadrisulcata* (Bremek.) Verdc.	Rubiaceae
	8475	*Spermacoce senensis* (Klotzsch) Hiern	Rubiaceae
	8475	*Spermacoce subvulgata* (K.Schum.) Garcia var. *subvulgata*	Rubiaceae
	8486	*Galium tomentosum* Thunb.	Rubiaceae
	8489	*Rubia horrida* (Thunb.) Puff	Rubiaceae

	7973	*Barleria mackenii* Hook.f.	Acanthaceae
	7973	*Barleria macrostegia* Nees	Acanthaceae
E	7973	*Barleria meeuseana* P.G.Mey.	Acanthaceae
	7973	*Barleria megalosiphon* Mildbr.	Acanthaceae
E	7973	*Barleria merxmuelleri* P.G.Mey.	Acanthaceae
	7973	*Barleria papillosa* T.Anderson	Acanthaceae
	7973	*Barleria prionitis* L. subsp. *ameliae* (A.Meeuse) Brummitt & Wood	Acanthaceae
	7973	*Barleria prionitis* L. subsp. *prionitoides* (Engl.) Brummitt & Wood	Acanthaceae
	7973	*Barleria rigida* Willd. ex Nees	Acanthaceae
	7973	*Barleria senensis* Klotzsch	Acanthaceae
E	7973	*Barleria solitaria* P.G.Mey.	Acanthaceae
	7973	*Barleria taitensis* S.Moore	Acanthaceae
	7973	*Barleria violacea* Hainz	Acanthaceae
	7980	*Blepharis diversispina* (Nees) C.B.Clarke	Acanthaceae
E	7980	*Blepharis ferox* P.G.Mey.	Acanthaceae
E	7980	*Blepharis fleckii* P.G.Mey.	Acanthaceae
	7980	*Blepharis furcata* (L.f.) Pers.	Acanthaceae
E	7980	*Blepharis gigantea* Oberm.	Acanthaceae
	7980	*Blepharis grossa* (Nees) T.Anderson	Acanthaceae
	7980	*Blepharis integrifolia* (L.f.) E.Mey. ex Schinz var. *integrifolia*	Acanthaceae
	7980	*Blepharis leendertziae* Oberm.	Acanthaceae
	7980	*Blepharis macra* (Nees) Vollesen	Acanthaceae
	7980	*Blepharis maderaspatensis* (L.) Heyne ex Roth	Acanthaceae
E	7980	*Blepharis meyeri* Vollesen	Acanthaceae
	7980	*Blepharis mitrata* C.B.Clarke	Acanthaceae
	7980	*Blepharis obmitrata* C.B.Clarke	Acanthaceae
E	7980	*Blepharis pruinosa* Engl.	Acanthaceae
E	7980	*Blepharis spinifex* Merxm.	Acanthaceae
	7980	*Blepharis tenuiramea* S.Moore	Acanthaceae
	7982	*Acanthopsis disperma* Nees	Acanthaceae
	7982	*Acanthopsis hoffmannseggiana* (Nees) C.B.Clarke	Acanthaceae
	8007	*Asystasia gangetica* (L.) T.Anderson subsp. *micrantha* (Nees) Ensermu	Acanthaceae
	8007	*Asystasia schimperi* T.Anderson	Acanthaceae
	8007	*Asystasia welwitschii* S.Moore	Acanthaceae
E	8026	*Peristrophe grandibracteata* Lindau	Acanthaceae
E	8026	*Peristrophe hereroensis* (Schinz) K.Balkwill	Acanthaceae
E	8026	*Peristrophe namibensis* K.Balkwill subsp. *brandbergensis* K.Balkwill	Acanthaceae
E	8026	*Peristrophe namibensis* K.Balkwill subsp. *namibensis*	Acanthaceae
	8026	*Peristrophe paniculata* (Forssk.) Brummitt	Acanthaceae
	8031	*Dicliptera eenii* S.Moore	Acanthaceae
	8031	*Dicliptera spinulosa* Hochst. ex K.Balkwill	Acanthaceae
	8032	*Hypoestes forskaolii* (Vahl) R.Br.	Acanthaceae
	8048	*Echolium clarkei* Hiern var. *clarkei*	Acanthaceae
	8048	*Echolium clarkei* Hiern var. *puberulum* Vollesen	Acanthaceae
E	8054	*Rhinacanthus kaokoensis* K.Balkwill & S.Williamson	Acanthaceae
	8061	*Megalochlamys marlothii* (Engl.) Lindau	Acanthaceae
	8061	*Megalochlamys revoluta* (Lindau) Vollesen subsp. *cognata* (N.E.Br.) Vollensen	Acanthaceae
	8094	*Justicia anselliana* (Nees) T.Anderson	Acanthaceae
	8094	*Justicia baumii* S.Moore	Acanthaceae
	8094	*Justicia betonica* L.	Acanthaceae
E	8094	*Justicia cuneata* Vahl subsp. *hoerleiniana* (P.G.Mey.) Immelman	Acanthaceae
	8094	*Justicia exigua* S.Moore	Acanthaceae
E	8094	*Justicia guerkeana* Schinz	Acanthaceae
	8094	*Justicia heterocarpa* T.Anderson subsp. *dinteri* (S.Moore) Hedrén	Acanthaceae
	8094	*Justicia linarioides* S.Moore	Acanthaceae
	8094	*Justicia odora* (Forssk.) Vahl	Acanthaceae
	8094	*Justicia orchioides* L.f.	Acanthaceae
E	8094	*Justicia platysepala* (S.Moore) P.G.Mey.	Acanthaceae
	8094	*Justicia protracta* (Nees) T.Anderson subsp. *rhodesiana* (S.Moore) Immelman	Acanthaceae
E	8094	*Monechma calcaratum* Schinz	Acanthaceae
E	8094	*Monechma callothamnum* Munday	Acanthaceae
	8094	*Monechma cleomoides* (S.Moore) C.B.Clarke	Acanthaceae
E	8094	*Monechma crassiusculum* P.G.Mey.	Acanthaceae
	8094	*Monechma debile* (Forssk.) Nees	Acanthaceae
E	8094	*Monechma desertorum* (Engl.) C.B.Clarke	Acanthaceae
	8094	*Monechma distichotrichum* (Lindau) P.G.Mey.	Acanthaceae
	8094	*Monechma divaricatum* (Nees) C.B.Clarke	Acanthaceae
	8094	*Monechma genistifolium* (Engl.) C.B.Clarke subsp. *australe* (P.G.Mey.) Munday	Acanthaceae
	8094	*Monechma genistifolium* (Engl.) C.B.Clarke subsp. *genistifolium*	Acanthaceae

	8489	*Rubia petiolaris* DC.	Rubiaceae
	8546	*Scabiosa columbaria* L.	Dipsacaceae
	8563	*Dactyliandra welwitschii* Hook.f.	Cucurbitaceae
	8564	*Ctenolepis cerasiformis* (Stocks) Hook.f.	Cucurbitaceae
	8564	*Zehneria marlothii* (Cogn.) R.R. & A.Fern.	Cucurbitaceae
	8568	*Kedrostis africana* (L.) Cogn.	Cucurbitaceae
	8568	*Kedrostis capensis* (Sond.) A.Meeuse	Cucurbitaceae
	8568	*Kedrostis crassirostrata* Bremek.	Cucurbitaceae
	8568	*Kedrostis foetidissima* (Jacq.) Cogn.	Cucurbitaceae
	8568	*Kedrostis hirtella* (Naudin) Cogn.	Cucurbitaceae
	8569	*Corallocarpus bainesii* (Hook.f.) A.Meeuse	Cucurbitaceae
	8569	*Corallocarpus boehmii* (Cogn.) C.Jeffrey	Cucurbitaceae
	8569	*Corallocarpus dissectus* Cogn.	Cucurbitaceae
	8569	*Corallocarpus schinzii* Cogn.	Cucurbitaceae
	8569	*Corallocarpus triangularis* Cogn.	Cucurbitaceae
	8569	*Corallocarpus welwitschii* (Naudin) Hook.f. ex Welw.	Cucurbitaceae
	8590	*Acanthosicyos horridus* Welw. ex Hook.f.	Cucurbitaceae
	8590	*Acanthosicyos naudinianus* (Sond.) C.Jeffrey	Cucurbitaceae
	8591	*Momordica balsamina* L.	Cucurbitaceae
	8591	*Momordica boivinii* Baill.	Cucurbitaceae
	8591	*Momordica humilis* (Cogn.) C.Jeffrey	Cucurbitaceae
	8591	*Momordica kirkii* (Hook.f.) C.Jeffrey	Cucurbitaceae
	8591	*Momordica welwitschii* Hook.f.	Cucurbitaceae
	8598	*Citrullus ecirrhosus* Cogn.	Cucurbitaceae
	8598	*Citrullus lanatus* (Thunb.) Matsum. & Nakai	Cucurbitaceae
E	8598	*Citrullus rehmii* De Winter	Cucurbitaceae
	8599	*Cucumella aspera* (Cogn.) C.Jeffrey	Cucurbitaceae
	8599	*Cucumella cinerea* (Cogn.) C.Jeffrey	Cucurbitaceae
E	8599	*Cucumella clavipetiolata* J.H.Kirkbr.	Cucurbitaceae
	8599	*Cucumis africanus* L.f.	Cucurbitaceae
	8599	*Cucumis anguria* L. var. *longaculeatus* J.H.Kirkbr.	Cucurbitaceae
	8599	*Cucumis humifructus* Stent	Cucurbitaceae
	8599	*Cucumis kalahariensis* A.Meeuse	Cucurbitaceae
	8599	*Cucumis meeusei* C.Jeffrey	Cucurbitaceae
	8599	*Cucumis metuliferus* E.Mey. ex Naudin	Cucurbitaceae
	8599	*Cucumis rigidus* E.Mey. ex Sond.	Cucurbitaceae
	8599	*Cucumis sagittatus* Peyr.	Cucurbitaceae
	8608	*Trochomeria debilis* (Sond.) Hook.f.	Cucurbitaceae
	8608	*Trochomeria macrocarpa* (Sond.) Hook.f. subsp. *vitifolia* (Hook.f.) R. & A.Fern	Cucurbitaceae
	8628	*Coccinia adoensis* (A.Rich.) Cogn.	Cucurbitaceae
	8628	*Coccinia rehmannii* Cogn.	Cucurbitaceae
	8628	*Coccinia sessilifolia* (Sond.) Cogn.	Cucurbitaceae
	8641	*Cyclantheropsis parviflora* (Cogn.) Harms	Cucurbitaceae
	8663	*Gunillaea rhodesica* (Adamson) Thulin	Campanulaceae
E	8663	*Namacodon schinzianum* (Markgr.) Thulin	Campanulaceae
	8668	*Wahlenbergia androsacea* A.DC.	Campanulaceae
	8668	*Wahlenbergia annularis* A.DC.	Campanulaceae
	8668	*Wahlenbergia banksiana* A.DC.	Campanulaceae
	8668	*Wahlenbergia campanuloides* (Delile) Vatke	Campanulaceae
	8668	*Wahlenbergia densicaulis* Brehmer	Campanulaceae
	8668	*Wahlenbergia denticulata* (Burch.) A.DC.	Campanulaceae
E	8668	*Wahlenbergia erophiloides* Markgr.	Campanulaceae
	8668	*Wahlenbergia hirsuta* (Edgew.) Tuyn	Campanulaceae
	8668	*Wahlenbergia nana* Brehmer	Campanulaceae
	8668	*Wahlenbergia napiformis* (A.DC.) Thulin	Campanulaceae
	8668	*Wahlenbergia oxyphylla* A.DC.	Campanulaceae
	8668	*Wahlenbergia paniculata* (Thunb.) A.DC.	Campanulaceae
	8668	*Wahlenbergia patula* A.DC.	Campanulaceae
	8668	*Wahlenbergia prostrata* A.DC.	Campanulaceae
	8668	*Wahlenbergia ramosissima* (Hemsl.) Thulin subsp. *lateralis* (Brehmer) Thulin	Campanulaceae
	8668	*Wahlenbergia subrosulata* Brehmer	Campanulaceae
E	8668	*Wahlenbergia subumbellata* Markgr.	Campanulaceae
	8668	*Wahlenbergia thunbergiana* (H.Buek) Lammers	Campanulaceae
	8668	*Wahlenbergia undulata* (L.f.) A.DC.	Campanulaceae
	8668	*Wahlenbergia upingtoniae* Dinter	Campanulaceae
	8680	*Sphenoclea zeylanica* Gaertn.	Sphenocleaceae
	8681	*Cyphia dentariifolia* Presl. var. *dentariifolia*	Lobeliaceae
	8694	*Lobelia angolensis* Engl. & Diels	Lobeliaceae
	8694	*Lobelia dregeana* (Presl) A.DC.	Lobeliaceae

	8694	*Lobelia erinus* L.	Lobeliaceae
	8694	*Lobelia flaccida* (Presl) A.DC. subsp. *flaccida*	Lobeliaceae
E	8694	*Lobelia hereroensis* Schinz	Lobeliaceae
	8694	*Lobelia thermalis* Thunb.	Lobeliaceae
	8695	*Monopsis zeyheri* (Sond.) Thulin	Lobeliaceae
	8734	*Ethulia conyzoides* L.f. subsp. *conyzoides*	Asteraceae
	8740	*Erlangea misera* (Oliv. & Hiern) S.Moore	Asteraceae
	8751	*Baccharoides anthelmintica* (L.) Moench	Asteraceae
	8751	*Distephanus angolensis* (O.Hoffman) H.Rob. & B.Kahn	Asteraceae
	8751	*Distephanus divaricatus* (Steetz) H.Rob. & B.Kahn	Asteraceae
	8751	*Vernonia cinerascens* Sch. Bip.	Asteraceae
	8751	*Vernonia fastigiata* Oliv. & Hiern	Asteraceae
	8751	*Vernonia gerberiformis* Oliv. & Hiern subsp. *macrocyanus* (O.Hoffm.) C. Jeffrey	Asteraceae
	8751	*Vernonia glabra* (Steetz) Vatke var. *glabra*	Asteraceae
	8751	*Vernonia glabra* (Steetz) Vatke var. *laxa* (Steetz) Brenan	Asteraceae
	8751	*Vernonia glabra* (Steetz) Vatke var. *ondongensis* (Klatt) Merxm.	Asteraceae
E	8751	*Vernonia obionifolia* O.Hoffm. subsp. *dentata* Merxm.	Asteraceae
E	8751	*Vernonia obionifolia* O.Hoffm. subsp. *obionifolia*	Asteraceae
	8751	*Vernonia oligocephala* (DC.) Sch. Bip. ex Walp.	Asteraceae
	8751	*Vernonia petersii* Oliv. & Hiern ex Oliv.	Asteraceae
	8751	*Vernonia poskeana* Vatke & Hildebr. subsp. *botswanica* G.V.Pope	Asteraceae
	8751	*Vernonia potamophila* Klatt	Asteraceae
	8751	*Vernonia steetziana* Oliv. & Hiern	Asteraceae
	8751	*Vernonia vallicola* S.Moore	Asteraceae
	8785	*Adenostemma caffrum* DC.	Asteraceae
	8818	*Mikania sagittifera* B.L.Rob.	Asteraceae
	8861	*Engleria africana* O.Hoffm.	Asteraceae
	8861	*Engleria decumbens* (Welw. ex Hiern) Hiern	Asteraceae
	8862	*Pteronia acuminata* DC.	Asteraceae
	8862	*Pteronia acuta* Muschl.	Asteraceae
	8862	*Pteronia anisata* B.Nord	Asteraceae
	8862	*Pteronia ciliata* Thunb.	Asteraceae
	8862	*Pteronia cylindracea* DC.	Asteraceae
	8862	*Pteronia divaricata* (A.Berger) Less.	Asteraceae
E	8862	*Pteronia eenii* S.Moore	Asteraceae
	8862	*Pteronia glabrata* L.f.	Asteraceae
	8862	*Pteronia glauca* Thunb.	Asteraceae
	8862	*Pteronia inflexa* Thunb. ex L.f.	Asteraceae
	8862	*Pteronia leucoclada* Turcz.	Asteraceae
	8862	*Pteronia lucilioides* DC.	Asteraceae
	8862	*Pteronia mucronata* DC.	Asteraceae
	8862	*Pteronia onobromoides* DC.	Asteraceae
	8862	*Pteronia paniculata* Thunb.	Asteraceae
E	8862	*Pteronia polygalifolia* O.Hoffm.	Asteraceae
E	8862	*Pteronia pomonae* Merxm.	Asteraceae
E	8862	*Pteronia rangei* Muschl.	Asteraceae
	8862	*Pteronia scariosa* L.f.	Asteraceae
	8862	*Pteronia sordida* N.E.Br.	Asteraceae
E	8862	*Pteronia spinulosa* E.Phillips	Asteraceae
	8862	*Pteronia unguiculata* S.Moore	Asteraceae
	8862	*Pteronia viscosa* Thunb.	Asteraceae
	8865	*Grangea anthemoides* O.Hoffm.	Asteraceae
	8865	*Grangea maderaspatana* (L.) Poir.	Asteraceae
	8887	*Amellus epaleaceus* O.Hoffm.	Asteraceae
	8887	*Amellus flosculosus* DC.	Asteraceae
	8887	*Amellus nanus* DC.	Asteraceae
	8887	*Amellus reductus* Rommel	Asteraceae
	8887	*Amellus tridactylus* DC. subsp. *arenarius* (S.Moore) Rommel	Asteraceae
E	8919	*Felicia alba* Grau	Asteraceae
	8919	*Felicia anthemidodes* (Hiern) Mendonça	Asteraceae
	8919	*Felicia brevifolia* (DC.) Grau	Asteraceae
	8919	*Felicia burkei* (Harv.) L.Bolus	Asteraceae
	8919	*Felicia clavipilosa* Grau subsp. *clavipilosa*	Asteraceae
	8919	*Felicia filifolia* (Vent.) Burtt Davy subsp. *schaeferi* (Dinter) Grau	Asteraceae
E	8919	*Felicia gunillae* B.Nord.	Asteraceae
	8919	*Felicia hirsuta* DC.	Asteraceae
	8919	*Felicia microsperma* DC.	Asteraceae
	8919	*Felicia muricata* (Thunb.) Nees subsp. *cinerascens* Grau	Asteraceae
	8919	*Felicia muricata* (Thunb.) Nees subsp. *muricata*	Asteraceae

	8919	*Felicia namaquana* (Harv.) Merxm.	Asteraceae
E	8919	*Felicia smaragdina* (S.Moore) Merxm.	Asteraceae
	8923	*Psiadia punctulata* (DC.) Vatke	Asteraceae
	8925	*Nidorella auriculata* DC. subsp. *auriculata*	Asteraceae
E	8925	*Nidorella nordenstamii* Wild	Asteraceae
	8925	*Nidorella resedifolia* DC. subsp. *frutescens* Merxm.	Asteraceae
	8925	*Nidorella resedifolia* DC. subsp. *resedifolia*	Asteraceae
	8926	*Conyza aegyptica* (L.) Aiton	Asteraceae
	8926	*Conyza scabrida* DC.	Asteraceae
	8929	*Nolletia arenosa* O.Hoffm.	Asteraceae
	8929	*Nolletia ciliaris* (DC.) Steetz	Asteraceae
	8929	*Nolletia ericoides* Merxm.	Asteraceae
	8929	*Nolletia gariepina* (DC.) Mattf.	Asteraceae
E	8929	*Nolletia tenuifolia* Mattf.	Asteraceae
	8929	*Nolletia zambesica* R.E.Fr.	Asteraceae
	8930	*Chrysocoma ciliata* L.	Asteraceae
	8930	*Chrysocoma microphylla* Thunb.	Asteraceae
	8930	*Chrysocoma obtusata* (Thunb.) Ehr.Bayer	Asteraceae
	8930	*Chrysocoma puberula* Merxm.	Asteraceae
	8937	*Tarchonanthus camphoratus* L.	Asteraceae
	8939	*Blumea dregeanoides* Sch.Bip. ex A.Rich.	Asteraceae
	8939	*Doellia cafra* (DC.) Anderb.	Asteraceae
	8939	*Laggera crispata* (Vahl) Hepper & J.R.I.Wood	Asteraceae
	8939	*Laggera decurrens* (Vahl) Hepper & J.R.I.Wood	Asteraceae
	8940	*Pseudoconyza viscosa* (Mill.) D'Arcy	Asteraceae
	8941	*Pluchea dioscoridis* (L.) DC.	Asteraceae
	8941	*Pluchea lycioides* (Hiern) Merxm.	Asteraceae
	8941	*Pluchea ovalis* (Pers.) DC.	Asteraceae
	8943	*Pechuel-Loeschea leubnitziae* (Kuntze) O.Hoffm.	Asteraceae
	8949	*Denekia capensis* Thunb.	Asteraceae
	8951	*Nicolasia costata* (Klatt) Thell.	Asteraceae
	8951	*Nicolasia felicioides* (Hiern) S.Moore	Asteraceae
E	8951	*Nicolasia heterophylla* S.Moore subsp. *affinis* (S.Moore) Merxm.	Asteraceae
E	8951	*Nicolasia heterophylla* S.Moore subsp. *heterophylla*	Asteraceae
	8951	*Nicolasia nitens* (O.Hoffm.) Eyles	Asteraceae
	8951	*Nicolasia pedunculata* S.Moore	Asteraceae
	8951	*Nicolasia stenoptera* (O.Hoffm.) Merxm. subsp. *makarikariensis* (Bremer & Oberm.) Merxm.	Asteraceae
	8951	*Nicolasia stenoptera* (O.Hoffm.) Merxm. subsp. *stenoptera*	Asteraceae
	8953	*Litogyne gariepina* (DC.) Anderb.	Asteraceae
	8955	*Sphaeranthus epigaeus* Schinz	Asteraceae
	8955	*Sphaeranthus flexuosus* O.Hoffm.	Asteraceae
	8955	*Sphaeranthus peduncularis* DC. subsp. *peduncularis*	Asteraceae
	8955	*Sphaeranthus peduncularis* DC. subsp. *rogersii* (N.E.Br.) Wild	Asteraceae
E	8955	*Sphaeranthus wattii* Giess ex Merxm.	Asteraceae
	8967	*Ifloga glomerata* (Harv.) Schltr.	Asteraceae
	8967	*Ifloga molluginoides* (DC.) Hilliard	Asteraceae
	8967	*Trichogyne paronychioides* DC.	Asteraceae
	8973	*Artemisiopsis villosa* (O.Hoffm.) Schweick.	Asteraceae
	8987	*Galeomma stenolepis* (S.Moore) Hilliard	Asteraceae
	8987	*Lasiopogon glomerulatus* (Harv.) Hilliard	Asteraceae
	8987	*Lasiopogon micropoides* DC.	Asteraceae
	8987	*Lasiopogon muscoides* (Desf.) DC.	Asteraceae
E	8987	*Lasiopogon ponticulus* Hilliard	Asteraceae
E	8987	*Lasiopogon volkii* (B.Nord.) Hilliard	Asteraceae
	8992	*Gnaphalium confine* Harv.	Asteraceae
	8992	*Gnaphalium filagopsis* Hilliard & B.L.Burtt	Asteraceae
	8992	*Pseudognaphalium oligandrum* (DC.) Hilliard & B.L.Burtt	Asteraceae
	8992	*Pseudognaphalium undulatum* (L.) Hilliard & B.L.Burtt	Asteraceae
	8992b	*Troglophyton capillaceum* (Thunb.) Hilliard & B.L.Burtt subsp. *capillaceum*	Asteraceae
	8992b	*Troglophyton parvulum* (Harv.) Hilliard & B.L.Burtt	Asteraceae
	9006	*Helichrysum alsinoides* DC.	Asteraceae
E	9006	*Helichrysum amboense* Schinz	Asteraceae
	9006	*Helichrysum arenicola* M.D.Hend.	Asteraceae
	9006	*Helichrysum argyrosphaerum* DC.	Asteraceae
	9006	*Helichrysum asperum* (Thunb.) Hilliard & B.L.Burtt var. *albidulum* (DC.) Hilliard	Asteraceae
	9006	*Helichrysum candolleanum* H.Buek	Asteraceae
	9006	*Helichrysum cerastioides* DC. var. *aurosicum* Merxm. & A.Schreib.	Asteraceae
	9006	*Helichrysum cerastioides* DC. var. *cerastioides*	Asteraceae
E	9006	*Helichrysum deserticola* Hilliard	Asteraceae

	9006	*Helichrysum dregeanum* Sond. & Harv.	Asteraceae
E	9006	*Helichrysum erubescens* Hilliard	Asteraceae
	9006	*Helichrysum fleckii* S.Moore subsp. *fleckii*	Asteraceae
	9006	*Helichrysum fleckii* S.Moore subsp. *viscidissimum* (Hutch.) Merxm.	Asteraceae
	9006	*Helichrysum fleckii* S.Moore subsp. *volkii* (Merxm.) Merxm.	Asteraceae
	9006	*Helichrysum gariepinum* DC.	Asteraceae
	9006	*Helichrysum herniarioides* DC.	Asteraceae
	9006	*Helichrysum leontonyx* DC.	Asteraceae
	9006	*Helichrysum lineare* DC.	Asteraceae
	9006	*Helichrysum lucilioides* Less.	Asteraceae
E	9006	*Helichrysum marlothianum* O.Hoffm.	Asteraceae
	9006	*Helichrysum micropoides* DC.	Asteraceae
	9006	*Helichrysum obtusum* (S.Moore) Moeser	Asteraceae
	9006	*Helichrysum oxybelium* DC.	Asteraceae
	9006	*Helichrysum revolutum* (Thunb.) Less.	Asteraceae
	9006	*Helichrysum roseo-niveum* Marloth & O.Hoffm.	Asteraceae
	9006	*Helichrysum spiciforme* DC.	Asteraceae
	9006	*Helichrysum subglomeratum* Less.	Asteraceae
	9006	*Helichrysum tomentosulum* (Klatt) Merxm. subsp. *aromaticum* (Dinter) Merxm.	Asteraceae
	9006	*Helichrysum tomentosulum* (Klatt) Merxm. subsp. *tomentosulum*	Asteraceae
	9006	*Helichrysum zeyheri* Less.	Asteraceae
	9037	*Stoebe plumosa* (L.) Thunb.	Asteraceae
E	9046	*Amphiglossa thuja* (Merxm.) Koekemoer	Asteraceae
	9046	*Amphiglossa tomentosa* (Thunb.) Harv.	Asteraceae
	9046	*Amphiglossa triflora* DC.	Asteraceae
	9050	*Relhania fruticosa* (L.) K.Bremer	Asteraceae
	9051	*Rosenia humilis* (Less.) K.Bremer	Asteraceae
	9052	*Leysera gnaphalodes* (L.) L.	Asteraceae
	9052	*Leysera tenella* DC.	Asteraceae
E	9061	*Pentatrichia avasmontana* Merxm.	Asteraceae
	9061	*Pentatrichia petrosa* Klatt	Asteraceae
E	9061	*Pentatrichia rehmii* (Merxm.) Merxm.	Asteraceae
E	9065	*Antiphiona fragrans* (Merxm.) Merxm.	Asteraceae
E	9065	*Antiphiona pinnatisecta* (S.Moore) Merxm.	Asteraceae
	9069	*Calostephane divaricata* Benth.	Asteraceae
E	9069	*Calostephane marlothiana* O.Hoffm.	Asteraceae
	9073	*Pegolettia gariepina* Anderb.	Asteraceae
	9073	*Pegolettia oxyodonta* DC.	Asteraceae
E	9073	*Pegolettia pinnatilobata* (Klatt) O.Hoffm. ex Dinter	Asteraceae
E	9073	*Pegolettia plumosa* M.D.Hend.	Asteraceae
	9073	*Pegolettia retrofracta* (Thunb.) Kies	Asteraceae
	9073	*Pegolettia senegalensis* Cass.	Asteraceae
	9078	*Pulicaria scabra* (Thunb.) Druce	Asteraceae
	9083	*Philyrophyllum schinzii* O.Hoffm.	Asteraceae
E	9089	*Ondetia linearis* Benth.	Asteraceae
	9090	*Geigeria acaulis* Benth. & Hook.f. ex Oliv. & Hiern	Asteraceae
	9090	*Geigeria alata* (DC.) Benth. & Hook.f. ex Oliv. & Hiern	Asteraceae
	9090	*Geigeria brachycephala* Muschl.	Asteraceae
	9090	*Geigeria brevifolia* (DC.) Harv.	Asteraceae
E	9090	*Geigeria englerana* Muschl.	Asteraceae
	9090	*Geigeria nianganensis* Dinter ex Merxm.	Asteraceae
	9090	*Geigeria obtusifolia* L.Bolus	Asteraceae
E	9090	*Geigeria odontoptera* O.Hoffm.	Asteraceae
	9090	*Geigeria ornativa* O.Hoffm.	Asteraceae
E	9090	*Geigeria otaviensis* (Merxm.) Merxm.	Asteraceae
	9090	*Geigeria pectidea* (DC.) Harv.	Asteraceae
E	9090	*Geigeria pilifera* Hutch.	Asteraceae
E	9090	*Geigeria plumosa* Muschl.	Asteraceae
E	9090	*Geigeria rigida* O.Hoffm.	Asteraceae
	9090	*Geigeria schinzii* O.Hoffm. subsp. *karakowisae* Merxm.	Asteraceae
	9090	*Geigeria schinzii* O.Hoffm. subsp. *rhodesiana* (S.Moore) Merxm.	Asteraceae
	9090	*Geigeria schinzii* O.Hoffm. subsp. *schinzii*	Asteraceae
	9090	*Geigeria spinosa* O.Hoffm.	Asteraceae
	9090	*Geigeria vigintisquamea* O.Hoffm.	Asteraceae
E	9096	*Anisopappus pinnatifidus* (Klatt) O.Hoffm. ex Hutch.	Asteraceae
E	9096	*Anisopappus pseudopinnatifidus* S.Ortiz & Paiva	Asteraceae
E	9195	*Aspilia eenii* S.Moore	Asteraceae
	9195	*Aspilia mossambicensis* (Oliv.) Wild	Asteraceae
	9204	*Melanthera albinervia* O.Hoffm. subsp. *albinervia*	Asteraceae

	9204	*Melanthera marlothiana* O.Hoffm.	Asteraceae
	9204	*Melanthera scandens* (Schumach. & Thonn.) Roberty subsp. *madagascariensis* (Baker) Wild	Asteraceae
	9237	*Bidens schimperi* Sch.Bip. ex Walp.	Asteraceae
	9320	*Eriocephalus ambiguus* (DC.) M.A.N. Müller	Asteraceae
E	9320	*Eriocephalus dinteri* S.Moore	Asteraceae
	9320	*Eriocephalus ericoides* (L.f.) Druce *ericoides*	Asteraceae
E	9320	*Eriocephalus giessii* M.A.N. Müller	Asteraceae
E	9320	*Eriocephalus kingesii* Merxm. & Eberle	Asteraceae
E	9320	*Eriocephalus klinghardtensis* M.A.N. Müller	Asteraceae
	9320	*Eriocephalus luederitzianus* O.Hoffm.	Asteraceae
	9320	*Eriocephalus merxmuelleri* M.A.N. Müller	Asteraceae
	9320	*Eriocephalus pauperrimus* Merxm. & Eberle	Asteraceae
E	9320	*Eriocephalus pinnatus* O.Hoffm.	Asteraceae
	9320	*Eriocephalus scariosus* DC.	Asteraceae
	9321	*Lasiospermum brachyglossum* DC.	Asteraceae
	9326	*Athanasia minuta* (L.f.) Källersjö subsp. *minuta*	Asteraceae
	9336	*Phymaspermum aciculare* (E.Mey. ex Harv.) Benth. ex B.D.Jack.	Asteraceae
	9351	*Cotula anthemoides* L.	Asteraceae
	9351	*Cotula coronopifolia* L.	Asteraceae
	9351	*Cotula tenella* E.Mey. ex DC.	Asteraceae
	9358	*Artemisia afra* Jacq. ex Willd.	Asteraceae
	9366	*Foveolina albida* (DC.) Källersjö	Asteraceae
	9366	*Foveolina schinziana* (Thell.) Källersjö	Asteraceae
	9366	*Myxopappus acutilobus* (DC.) Källersjö	Asteraceae
E	9366	*Myxopappus hereroensis* (O.Hoffm.) Källersjö	Asteraceae
	9366	*Oncosiphon grandiflorum* (Thunb.) Källersjö	Asteraceae
	9366	*Oncosiphon piluliferum* (L.f.) Källersjö	Asteraceae
	9366	*Oncosiphon suffruticosum* (L.) Källersjö	Asteraceae
	9366	*Pentzia argentea* Hutch.	Asteraceae
	9366	*Pentzia calcarea* Kies	Asteraceae
	9366	*Pentzia calva* S.Moore	Asteraceae
	9366	*Pentzia incana* (Thunb.) Kuntze	Asteraceae
	9366	*Pentzia lanata* Hutch.	Asteraceae
	9366	*Pentzia monocephala* S.Moore	Asteraceae
	9366	*Pentzia pinnatisecta* Hutch.	Asteraceae
	9366	*Pentzia sphaerocephala* DC.	Asteraceae
	9366	*Pentzia spinescens* Less.	Asteraceae
E	9366	*Pentzia tomentosa* B.Nord.	Asteraceae
E	9366	*Rennera eenii* (S.Moore) Källersjö	Asteraceae
	9366	*Rennera limnophila* Merxm.	Asteraceae
E	9373	*Eremothamnus marlothianus* O.Hoffm.	Asteraceae
	9377	*Hertia ciliata* (Harv.) Kuntze	Asteraceae
	9377	*Hertia pallens* (DC.) Kuntze	Asteraceae
	9401	*Lopholaena cneorifolia* (DC.) S.Moore	Asteraceae
E	9405	*Crassocephalum coeruleum* (O.Hoffm.) R.E.Fr.	Asteraceae
	9405	*Crassocephalum picridifolium* (DC.) S.Moore	Asteraceae
	9406	*Cineraria alchemilloides* DC.	Asteraceae
	9406	*Cineraria canescens* Wendl. ex Link	Asteraceae
	9406	*Cineraria vallis-pacis* Dinter ex Merxm.	Asteraceae
	9411	*Emilia ambifaria* (S.Moore) C.Jeffrey	Asteraceae
	9411	*Emilia marlothiana* (O.Hoffm.) C.Jeffrey	Asteraceae
	9411	*Emilia protracta* S.Moore	Asteraceae
	9411	*Kleinia acaulis* (L.f.) DC.	Asteraceae
	9411	*Kleinia cephalophora* Compton	Asteraceae
	9411	*Kleinia longiflora* DC.	Asteraceae
	9411	*Kleinia pinguifolia* DC.	Asteraceae
	9411	*Kleinia pusilla* (Dinter) Merxm.	Asteraceae
	9411	*Kleinia radicans* (L.f.) Harv.	Asteraceae
E	9411	*Senecio alliariifolius* O.Hoffm.	Asteraceae
	9411	*Senecio aloides* DC.	Asteraceae
	9411	*Senecio apiifolius* (DC.) Benth. & Hook.f. ex O.Hoffm.	Asteraceae
	9411	*Senecio arenarius* Thunb.	Asteraceae
	9411	*Senecio bulbinifolius* DC.	Asteraceae
	9411	*Senecio cakilefolius* DC.	Asteraceae
	9411	*Senecio cinerascens* Aiton	Asteraceae
	9411	*Senecio consanguineus* DC.	Asteraceae
	9411	*Senecio corymbiferus* DC.	Asteraceae
	9411	*Senecio cryphiactis* O.Hoffm.	Asteraceae
	9411	*Senecio eenii* (S.Moore) Merxm.	Asteraceae

E	9411	*Senecio engleranus* O.Hoffm.	Asteraceae
	9411	*Senecio flavus* (Decne.) Sch. Bip.	Asteraceae
E	9411	*Senecio giessii* Merxm.	Asteraceae
	9411	*Senecio hastatus* L.	Asteraceae
E	9411	*Senecio hermannii* B.Nord.	Asteraceae
	9411	*Senecio hieracioides* DC.	Asteraceae
	9411	*Senecio inaequidens* DC.	Asteraceae
	9411	*Senecio linifolius* L.	Asteraceae
	9411	*Senecio maydae* Merxm.	Asteraceae
	9411	*Senecio niveus* (Thunb.) Willd.	Asteraceae
	9411	*Senecio piptocoma* O.Hoffm.	Asteraceae
	9411	*Senecio pleistocephalus* S.Moore	Asteraceae
	9411	*Senecio sisymbriifolius* DC.	Asteraceae
	9411	*Senecio strictifolius* Hiern	Asteraceae
E	9411	*Senecio windhoekensis* Merxm.	Asteraceae
	9417	*Euryops asparagoides* (Licht. ex Less.) DC.	Asteraceae
	9417	*Euryops dregeanus* Sch.Bip.	Asteraceae
	9417	*Euryops lateriflorus* (L.f.) DC.	Asteraceae
E	9417	*Euryops mucosus* B.Nord.	Asteraceae
	9417	*Euryops multifidus* (Thunb.) DC.	Asteraceae
	9417	*Euryops namibensis* (Merxm.) B.Nord.	Asteraceae
	9417	*Euryops subcarnosus* DC. subsp. *subcarnosus*	Asteraceae
	9417	*Euryops subcarnosus* DC. subsp. *vulgaris* B.Nord.	Asteraceae
E	9417	*Euryops walterorum* Merxm.	Asteraceae
	9420	*Othonna arbuscula* (Thunb.) Sch.Bip.	Asteraceae
E	9420	*Othonna brandbergensis* B.Nord.	Asteraceae
E	9420	*Othonna clavifolia* Marloth	Asteraceae
	9420	*Othonna cyclophylla* Merxm.	Asteraceae
	9420	*Othonna cylindrica* (Lam.) DC.	Asteraceae
	9420	*Othonna filicaulis* Jacq.	Asteraceae
	9420	*Othonna furcata* (Lindl.) Druce	Asteraceae
	9420	*Othonna graveolens* O.Hoffm.	Asteraceae
	9420	*Othonna lasiocarpa* (DC.) Sch.Bip.	Asteraceae
	9420	*Othonna opima* Merxm.	Asteraceae
	9420	*Othonna protecta* Dinter	Asteraceae
	9420	*Othonna sedifolia* DC.	Asteraceae
	9420	*Othonna sparsiflora* (S.Moore) B.Nord.	Asteraceae
	9425	*Dimorphotheca cuneata* (Thunb.) Less.	Asteraceae
	9425	*Dimorphotheca pluvialis* (L.) Moench	Asteraceae
	9425	*Dimorphotheca polyptera* DC.	Asteraceae
	9425	*Dimorphotheca sinuata* DC.	Asteraceae
E	9426	*Garuleum schinzii* O.Hoffm. subsp. *crinitum* (Dinter) Merxm.	Asteraceae
	9426	*Garuleum schinzii* O.Hoffm. subsp. *schinzii*	Asteraceae
	9427	*Chrysanthemoides incana* (Burm.f.) Norl.	Asteraceae
	9427	*Osteospermum armatum* T.Norl.	Asteraceae
	9427	*Osteospermum clandestinum* (Less.) T.Norl.	Asteraceae
E	9427	*Osteospermum montanum* Klatt	Asteraceae
	9427	*Osteospermum muricatum* E.Mey. ex DC. subsp. *longiradiatum* T.Norl.	Asteraceae
	9427	*Osteospermum muricatum* E.Mey. ex DC. subsp. *muricatum*	Asteraceae
	9427	*Osteospermum pinnatum* (Thunb.) T.Norl.	Asteraceae
	9427	*Osteospermum scariosum* DC. var. *scariosum*	Asteraceae
	9427	*Osteospermum spinescens* Thunb.	Asteraceae
	9427	*Tripteris angolensis* (T.Norl.) B.Nord.	Asteraceae
	9427	*Tripteris breviradiata* (T.Norl.) B.Nord.	Asteraceae
	9427	*Tripteris crassifolia* O.Hoffm.	Asteraceae
	9427	*Tripteris karroica* H.Bolus	Asteraceae
	9427	*Tripteris microcarpa* Harv. subsp. *microcarpa*	Asteraceae
	9427	*Tripteris microcarpa* Harv. subsp. *septentrionalis* (T.Norl.) B.Nord.	Asteraceae
E	9427	*Tripteris nervosa* Hutch.	Asteraceae
	9427	*Tripteris polycephala* DC.	Asteraceae
	9427	*Tripteris sinuata* DC. var. *sinuata*	Asteraceae
	9431	*Ursinia anthemoides* (L.) Poir. subsp. *versicolor* (DC.) Prassler	Asteraceae
E	9431	*Ursinia frutescens* Dinter	Asteraceae
	9431	*Ursinia nana* DC. subsp. *nana*	Asteraceae
	9431	*Ursinia speciosa* DC.	Asteraceae
	9432	*Arctotheca prostrata* (Salisb.) Britten	Asteraceae
	9432	*Arctotis arctotoides* (L.f.) O.Hoffm.	Asteraceae
	9432	*Arctotis fastuosa* Jacq.	Asteraceae
E	9432	*Arctotis frutescens* T.Norl.	Asteraceae

	9432	*Arctotis leiocarpa* Harv.	Asteraceae
	9432	*Arctotis venusta* T.Norl.	Asteraceae
	9433	*Gorteria corymbosa* DC.	Asteraceae
E	9433	*Gorteria diffusa* Thunb. subsp. *parviligulata* Roessler	Asteraceae
	9434	*Gazania jurineifolia* DC. subsp. *scabra* (DC.) Roessler	Asteraceae
	9434	*Gazania krebsiana* Less. subsp. *serrulata* (DC.) Roessler	Asteraceae
	9434	*Gazania lichtensteinii* Less.	Asteraceae
	9434	*Gazania schenckii* O.Hoffm.	Asteraceae
	9434	*Gazania tenuifolia* Less.	Asteraceae
E	9434	*Gazania thermalis* Dinter	Asteraceae
	9435	*Hirpicium alienatum* (Thunb.) Druce	Asteraceae
	9435	*Hirpicium echinus* Less.	Asteraceae
	9435	*Hirpicium gazanioides* (Harv.) Roessler	Asteraceae
	9435	*Hirpicium gorterioides* (Oliv. & Hiern) Roessler subsp. *gorterioides*	Asteraceae
	9435	*Hirpicium gorterioides* (Oliv. & Hiern) Roessler subsp. *schinzii* (O.Hoffm) Rössler	Asteraceae
	9438	*Berkheya annectens* Harv.	Asteraceae
	9438	*Berkheya canescens* DC.	Asteraceae
	9438	*Berkheya chamaepeuce* (S.Moore) Roessler	Asteraceae
	9438	*Berkheya ferox* O.Hoffm.	Asteraceae
E	9438	*Berkheya schinzii* O.Hoffm.	Asteraceae
	9438	*Berkheya spinosissima* (Thunb.) Willd. subsp. *spinosissima*	Asteraceae
	9439	*Didelta carnosa* (L.f.) Aiton var. *carnosa*	Asteraceae
	9439	*Didelta carnosa* (L.f.) Aiton var. *tomentosa* (Less.) Roessler	Asteraceae
	9439	*Didelta spinosa* (L.f.) Aiton	Asteraceae
	9441	*Platycarpha carlinoides* Oliv. & Hiern	Asteraceae
	9499	*Pleiotaxis antunesii* O.Hoffm.	Asteraceae
	9501	*Dicoma anomala* Sond. subsp. *gerrardii* (Harv. ex F.C.Wilson) S.Ortiz & Rodr. Oubiná	Asteraceae
	9501	*Dicoma capensis* Less.	Asteraceae
	9501	*Dicoma cuneneensis* Wild	Asteraceae
E	9501	*Dicoma dinteri* S.Moore	Asteraceae
	9501	*Dicoma macrocephala* DC.	Asteraceae
	9501	*Dicoma nachtigallii* O.Hoffm.	Asteraceae
	9501	*Dicoma picta* (Thunb.) Druce	Asteraceae
	9501	*Dicoma schinzii* O.Hoffm.	Asteraceae
	9501	*Dicoma sessiliflora* Harv. subsp. *sessiliflora* var. *membranacea* (S.Moore) S.Ortiz & Rodr. Oubiná	Asteraceae
	9501	*Dicoma tomentosa* Cass.	Asteraceae
	9593	*Launaea intybacea* (Jacq.) P.Beauv.	Asteraceae
	9596	*Lactuca inermis* Forssk.	Asteraceae
	9596	*Lactuca petrensis* Hiern	Asteraceae

APPENDIX 4

Genera with endemic Namibian species

Monocotyledons

Albuca	1079
Aloe	1026
Ammocharis	1190
Androcymbium	0969
Aponogeton	0065
Babiana	1310
Bulbine	0985
Crinum	1189
Cyanella	1233
Cyperus	0459
Eragrostis	9902860
Eriospermum	1012
Haemanthus	1167
Kaokochloa	9903611
Lachenalia	1098
Lapeirousia	1314
Ledebouria	1090
Merxmuellera	9902043
Moraea	1265
Nerine	1175
Ornithogalum	1089
Ornithoglossum	0973
Panicum	9901160
Pennisetum	9901390
Pogonarthria	9903340
Rhadamanthus	1083
Setaria	9901280
Sporobolus	9902830
Stipagrostis	9902611
Strumaria	1171
Trachyandra	0985
Tulbaghia	1047

Dicotyledons

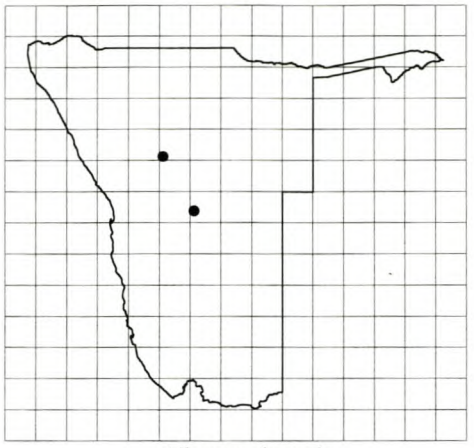
Acacia	3446
Acrotome	7236
Adenia	5370
Adromischus	3175
Aeollanthus	7345
Agelanthus	2074
Aizoanthemum	2401
Aizoon	2401
Alectra	7597
Amphiasma	8136
Amphibolia	2405R
Amphiglossa	9046
Anacampseros	2412
Anginon	5994
Anisopappus	9096
Anticharis	7466
Antimima	2405R
Antiphiona	9065
Aptosimum	7467
Arctotis	9432
Arthraerua	2320
Aspilia	9195
Astridia	2405R
Barleria	7973
Baynesia	6884?
Berkheya	9438
Blepharis	7980
Boerhavia	2349
Bolusia	3732
Brachystelma	6870
Brownanthus	2405M
Caesalpinia	3559
Calicorema	2325
Calostephane	9069
Caralluma	6884
Cephalophyllum	2405R
Ceraria	2419
Ceropegia	6874
Chamaegigas	7564
Cheiridopsis	2405R
Chenopodium	2223
Citrullus	8598
Cleome	3082
Commicarpus	2347
Commiphora	4151
Conophytum	2405R
Convolvulus	6993
Corbichonia	2393
Corchorus	4953
Crassocephalum	9405
Crassula	3168
Cromidon	7568
Crotalaria	3669
Cucumella	8599
Cynanchum	6834
Cyphostemma	4918
Decorsea	3910
Delosperma	2405R
Diclis	7477
Dicoma	9501
Dintera	7551
Dinteranthus	2405R
Dombeya	5053
Dracophilus	2405R
Drosanthemum	2405R
Eberlanzia	2405R
Ebracteola	2405R
Ectadium	6735
Ehretia	7043
Elephantorrhiza	3467
Eremothamnus	9373
Eriocephalus	9320
Eriosema	3898
Erythrina	3870
Euclea	6404
Euphorbia	4498
Euryops	9417
Felicia	8919
Fenestraria	2405R
Frankenia	5233
Garuleum	9426
Gazania	9434
Geigeria	9090
Gorteria	9433
Haematoxylum	3552
Helichrysum	9006
Heliophila	2875
Heliotropium	7052
Hemizygia	7365
Hermannia	5056
Hermbstaedtia	2293
Heteromorpha	5992
Hibiscus	5013
Hoodia	6878
Huernia	6887

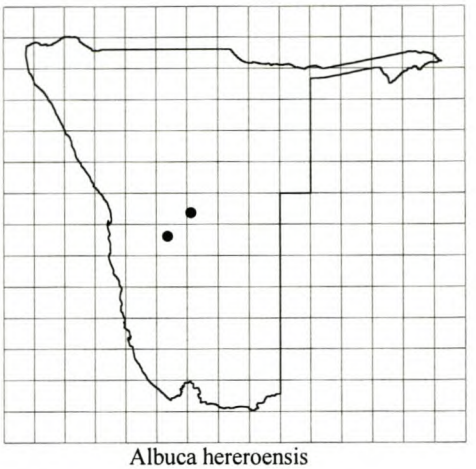
Hygrophila	7926
Hypertelis	2390
Indigofera	3702
Jamesbrittenia	7519
Jatropha	4433
Jensenobotrya	2405R
Justicia	8094
Juttadinteria	2405R
Kirkia	4128
Kohautia	8136
Lasiopogon	8987
Lavrania	6879
Lebeckia	3660
Lessertia	3756
Limonium	6351
Lithops	2405R
Lobelia	8694
Lotononis	3657
Lycium	7379
Manulea	7517
Manuleopsis	7497
Marcelliopsis	2308
Marlothiella	5996
Merremia	6997
Mesembryanthemum	2405M
Microloma	6752
Mollugo	2387
Monechma	8094
Monsonia	3925
Myxopappus	9366
Namacodon	8663
Namibia	2405R
Nemesia	7476
Neoluederitzia	3975
Nesaea	5486
Nicolasia	8951
Nicotiana	7434
Nidorella	8925
Nolletia	8929
Ondetia	9089
Orbea	6885
Osteospermum	9427
Othonna	9420
Oxalis	3936
Pavonia	5007
Pegolettia	9073
Pelargonium	3928
Pentatrichia	9061
Pentzia	9366
Peristrophe	8026
Petalidium	7934
Phlyctidocarpa	5970
Phyllanthus	4299
Plectranthus	7350
Plumbago	6343
Polemanniopsis	6045
Polygala	4273
Priva	7153
Psammophora	2405R
Psilocaulon	2405M
Pteronia	8862
Raphionacme	6747
Rennera	9366
Rhinacanthus	8054
Rhus	4594
Rogeria	7776
Ruellia	7965
Ruschia	2405R
Ruschianthus	2405R
Salsola	2269
Sarcocaulon	3926
Schwantesia	2405R
Selago	7568
Senecio	9411
Sesamothamnus	7774
Sesamum	7777
Sesbania	3747
Solanum	7407
Sphaeranthus	8955
Stachys	7281
Stapelia	6885
Stigmatorhynchus	6911
Suaeda	2261
Suessenguthiella	2389
Synaptophyllum	2405M
Tephrosia	3718
Tetragonia	2403
Thesium	2118
Titanopsis	2405R
Tragia	4416
Trianthema	2395
Trichodiadema	2405R
Tridentea	6885
Tripteris	9427
Tromotriche	6885
Turnera	5360
Tylecodon	3164
Tylophora	6899
Ursinia	9431
Vernonia	8751
Wahlenbergia	8668
Zygophyllum	3965

APPENDIX 5

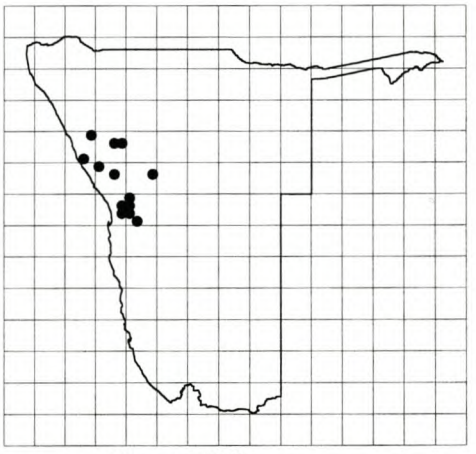
Distribution maps of endemic Namibian species

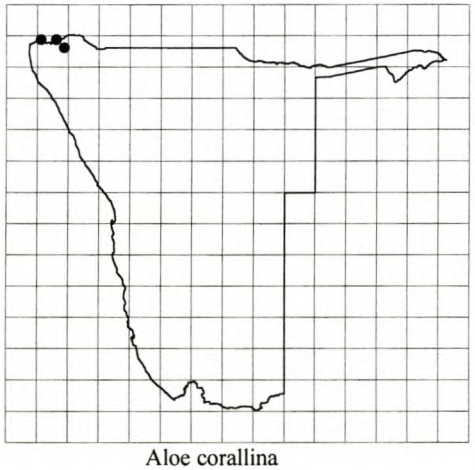
Species are separated into Monocotyledons and Dicotyledons and arranged alphabetically

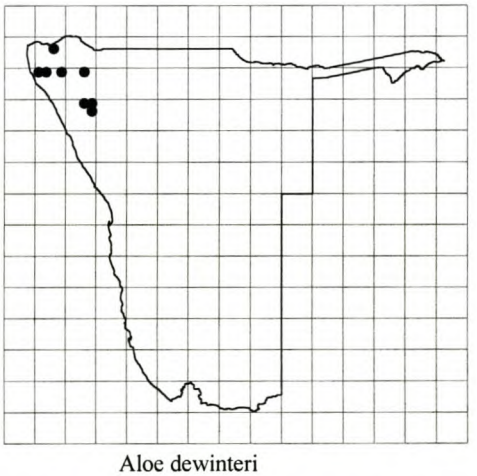

Albuca amboensis

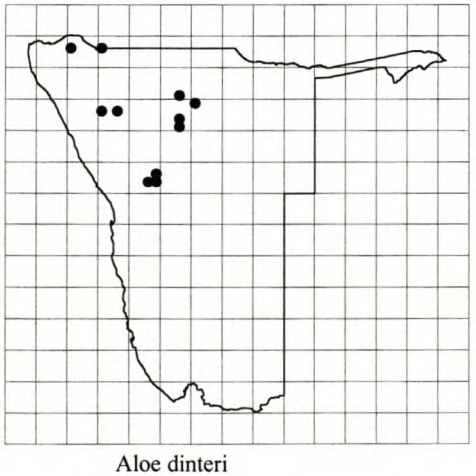

Albuca hereroensis

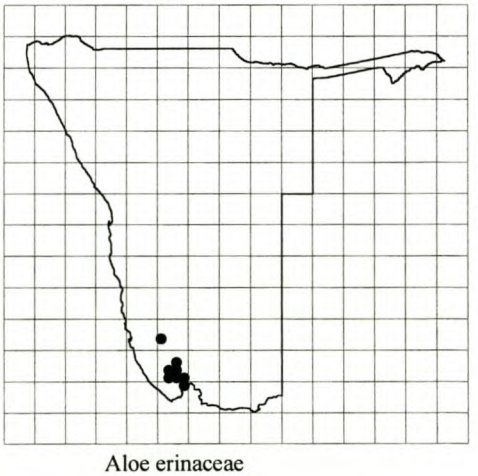

Aloe argenticauda

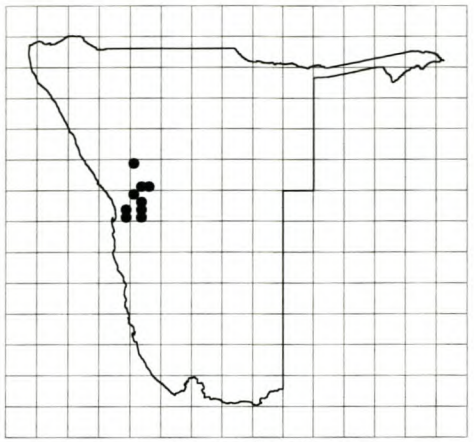

Aloe asperifolia

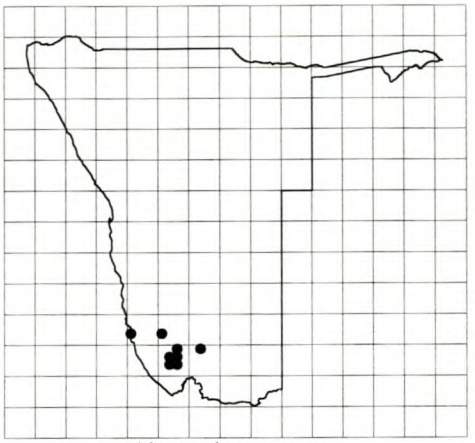

Aloe corallina

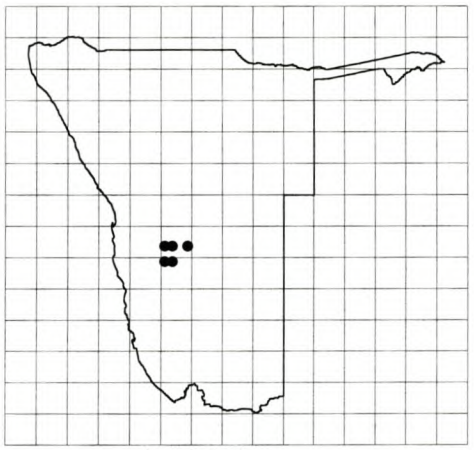

Aloe dewinteri

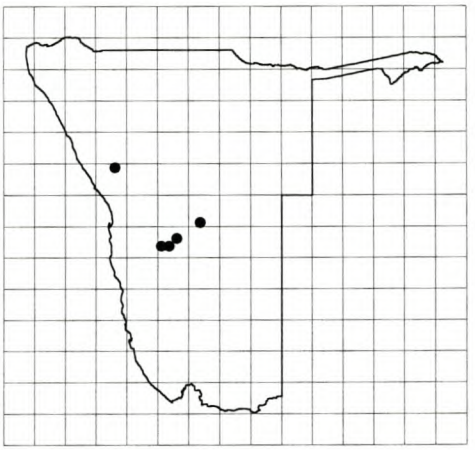

Aloe dinteri

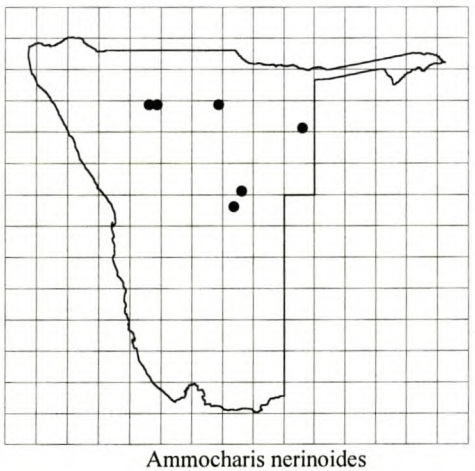

Aloe erinaceae

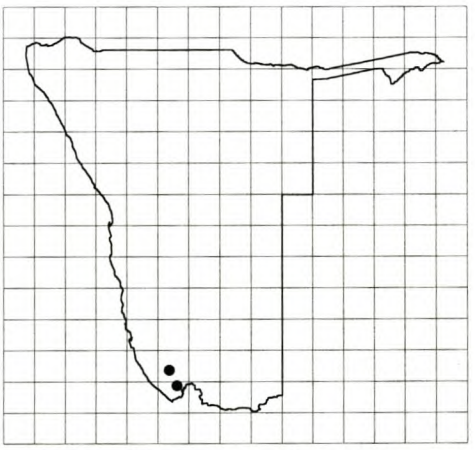

Aloe namibensis

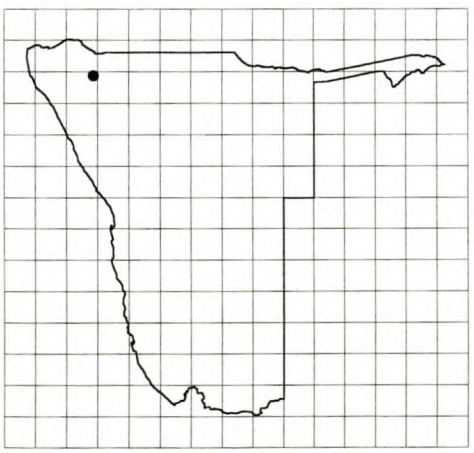

Aloe pachygaster

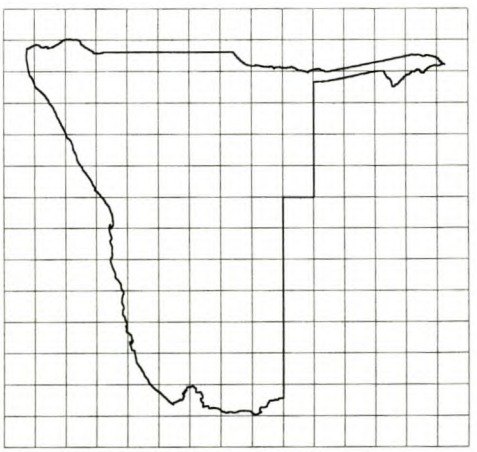

Aloe sladeniana

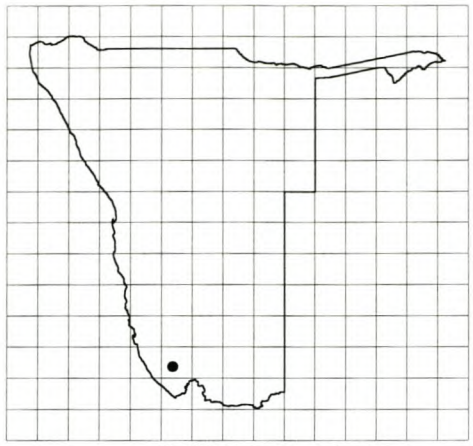

Aloe viridiflora

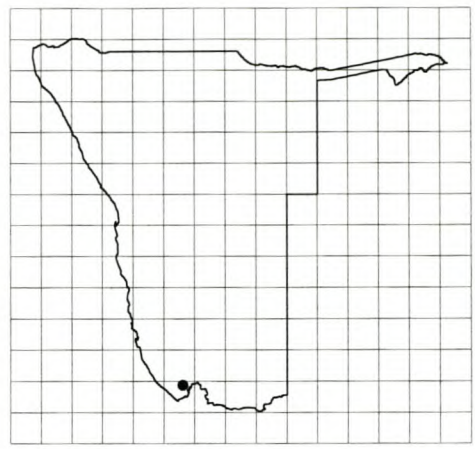

Ammocharis nerinoides

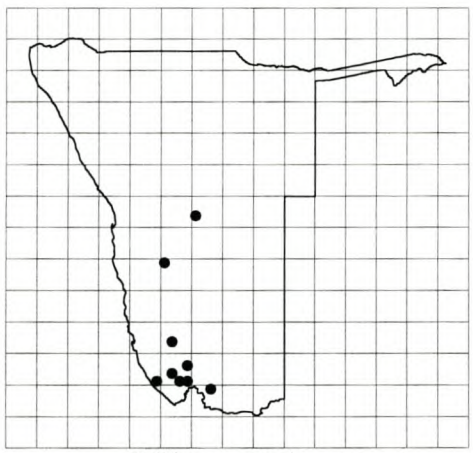

Androcymbium exiguum subsp. exiguum

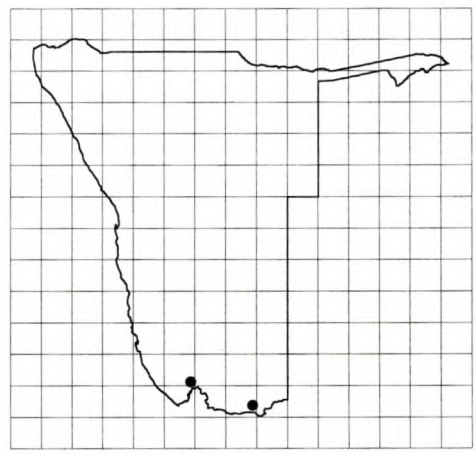

Aponogeton azureus

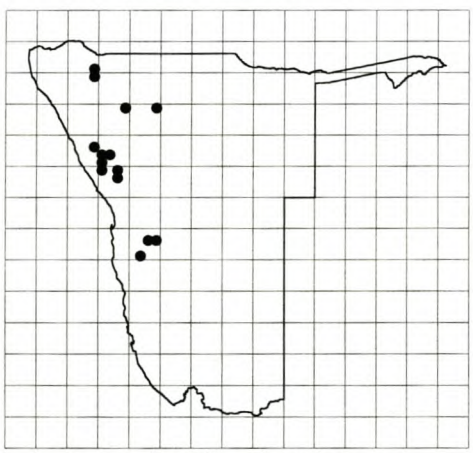

Babiana longicollia

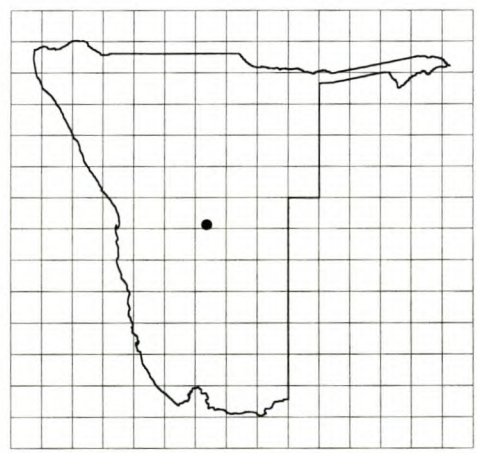

Bulbine caput-medusae

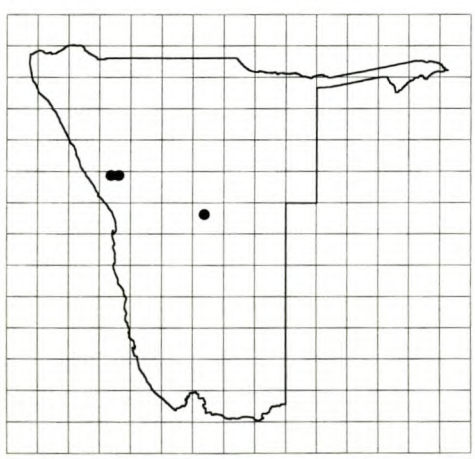

Bulbine francescae

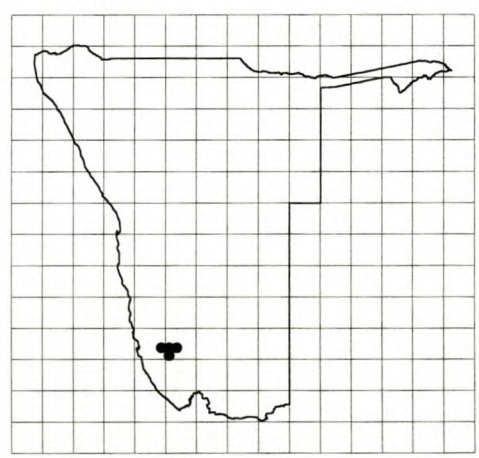

Bulbine namaensis

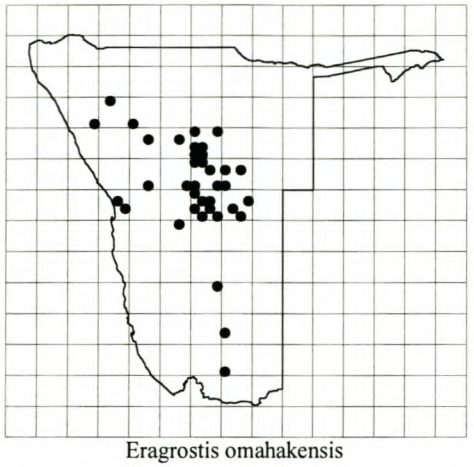

Bulbine tetraphylla

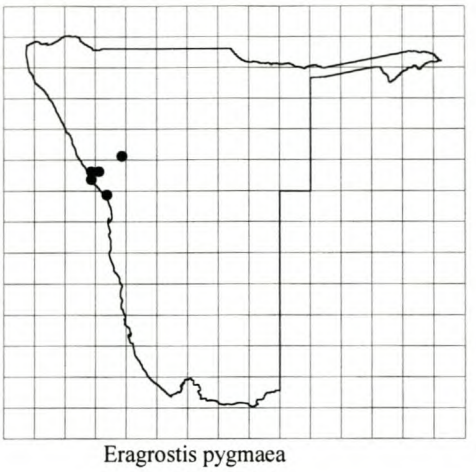

Cyanella amboensis

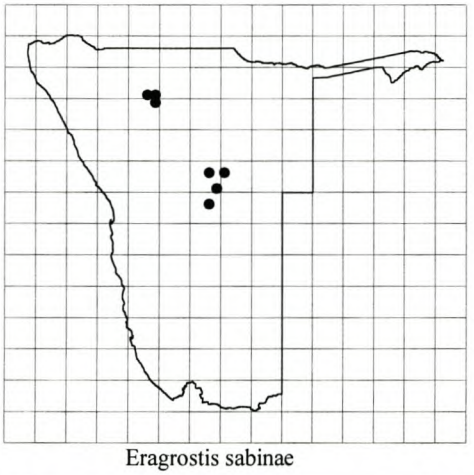

Cyperus rehmii

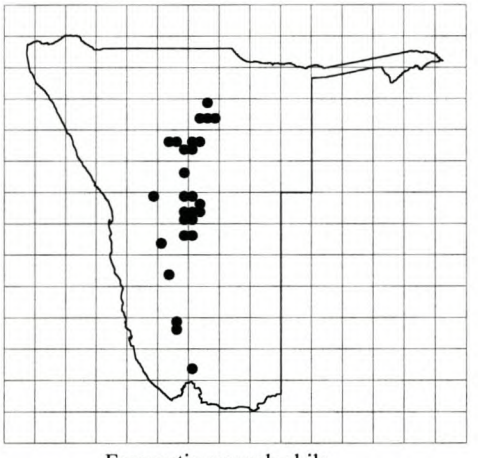

Eragrostis aristata

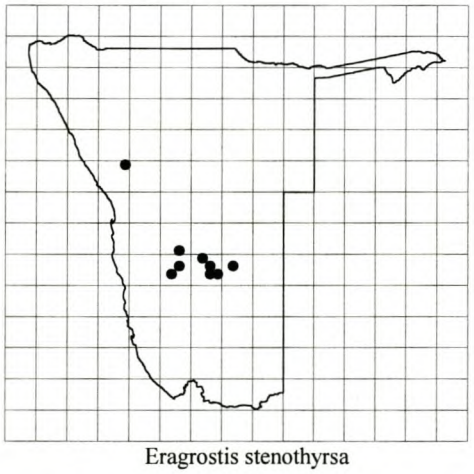

Eragrostis kingesii

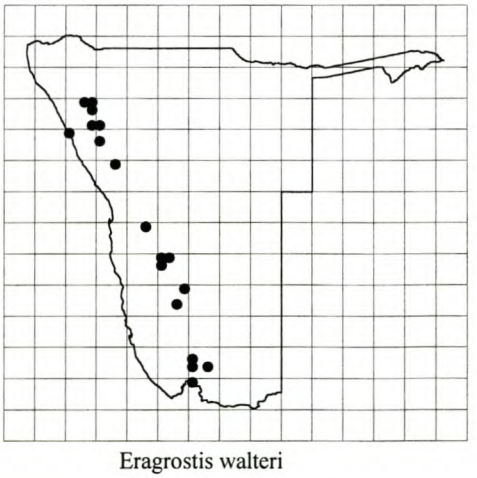

Eragrostis omahakensis

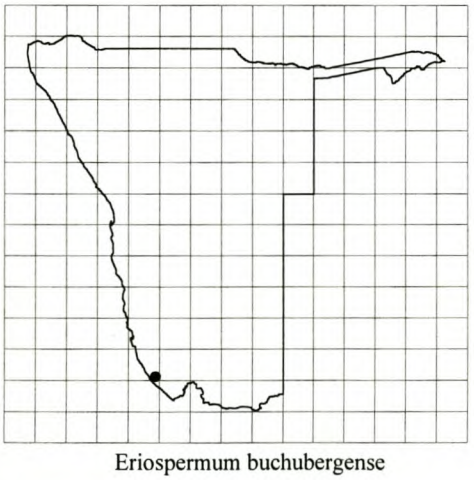

Eragrostis pygmaea

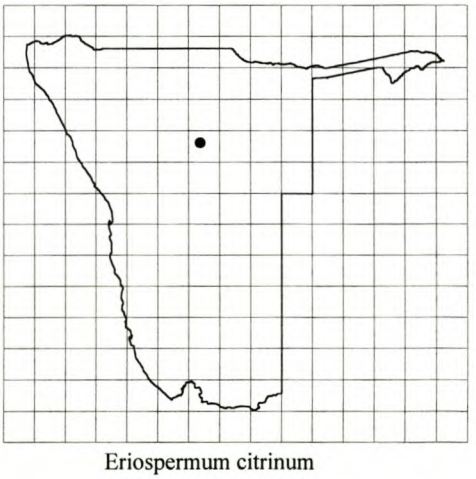

Eragrostis sabinae

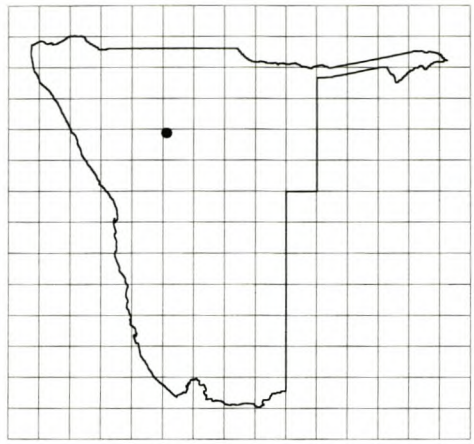

Eragrostis scropelophila

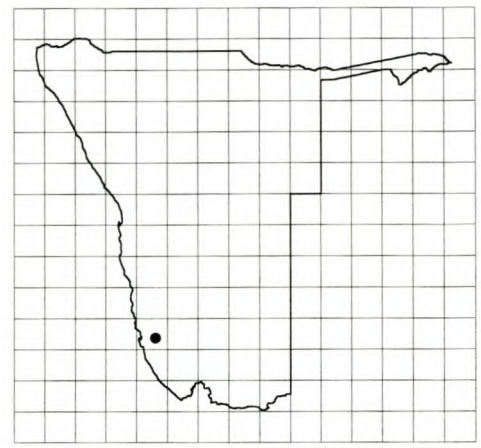

Eragrostis stenothyrsa

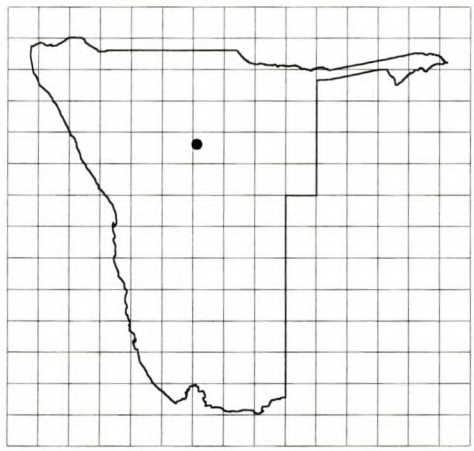

Eragrostis walteri

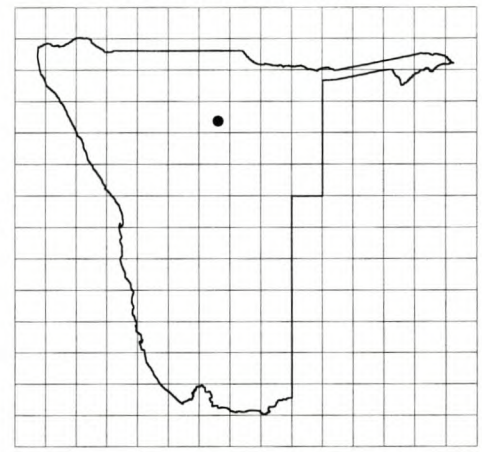

Eriospermum buchubergense

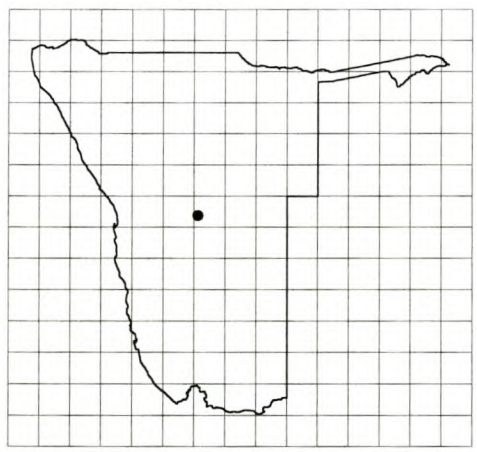

Eriospermum citrinum

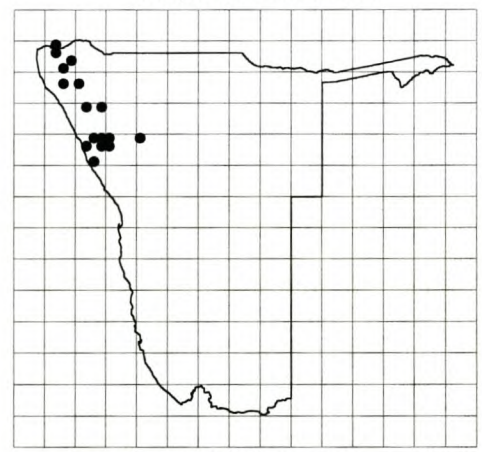

Eriospermum flexum

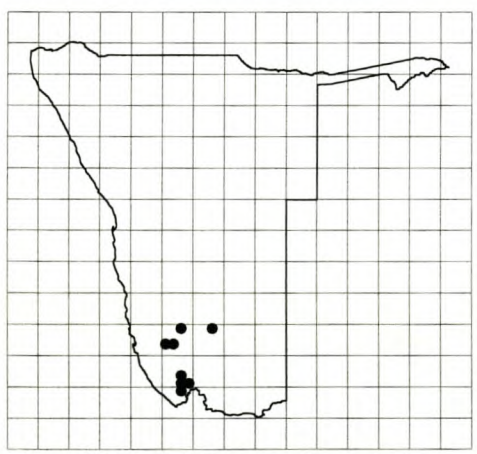

Eriospermum halenbergense

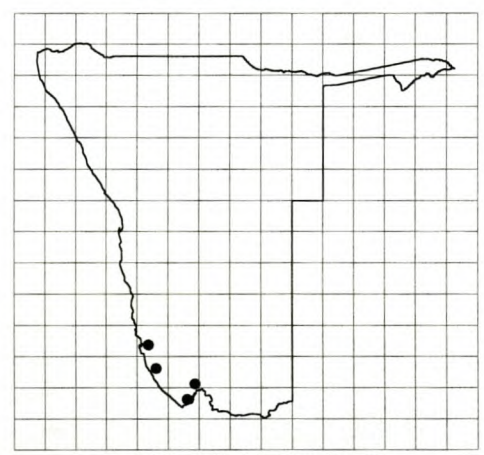

Eriospermum lavranosii

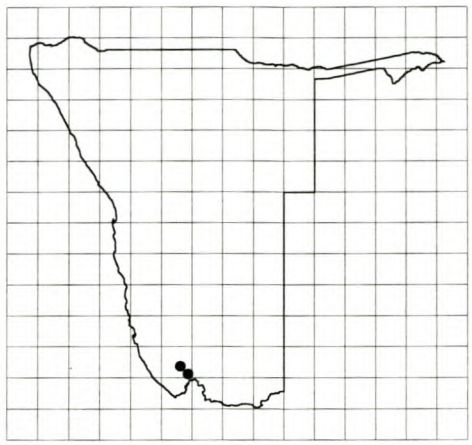

Eriospermum volkmanniae


Haemanthus avasmontanus

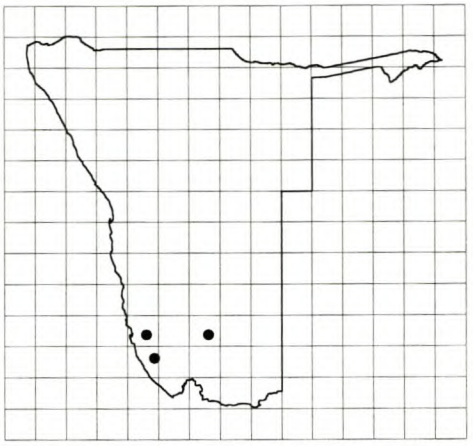

Kaokochloa nigrirostris


Lachenalia giessii

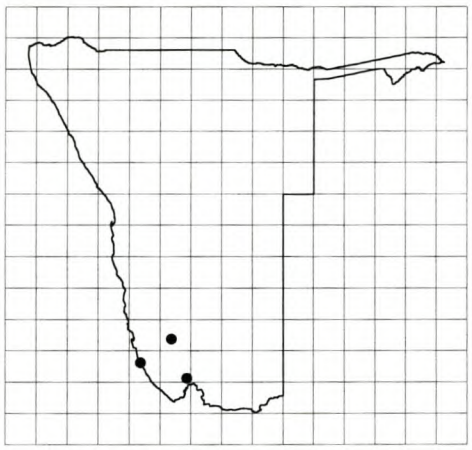

Lachenalia klinghardtiana



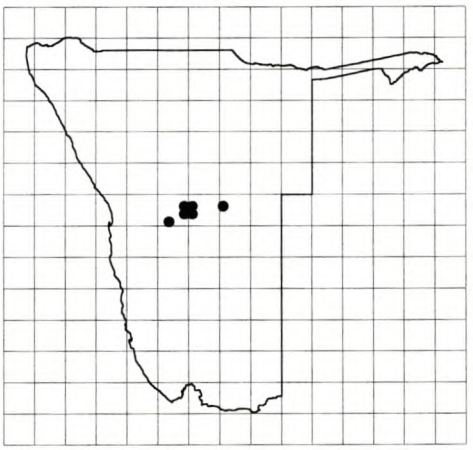
Lachenalia namibiensis



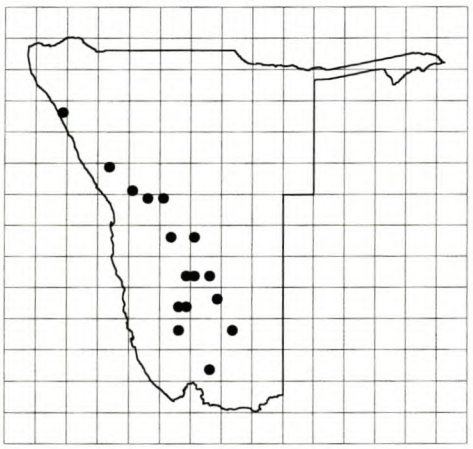
Lachenalia nutans



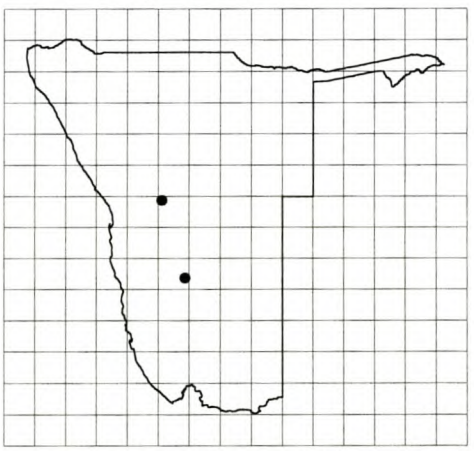
Lachenalia pearsonii



Lapeirousia avasmontana

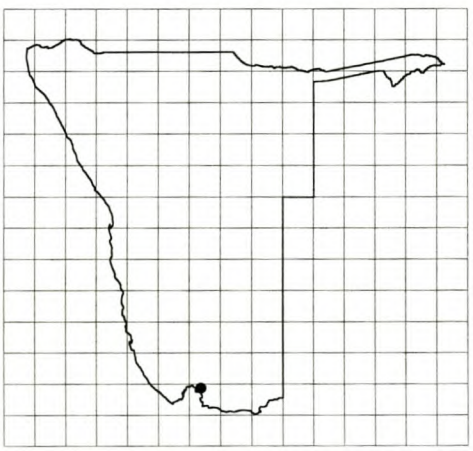


Lapeirousia gracilis

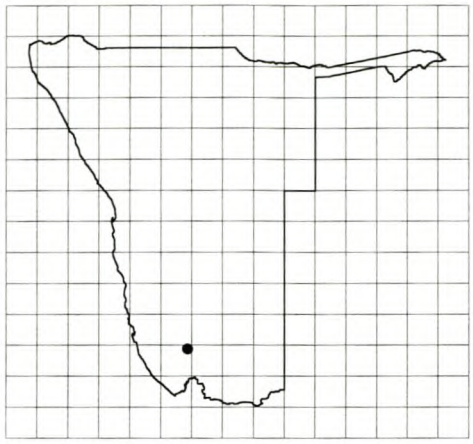


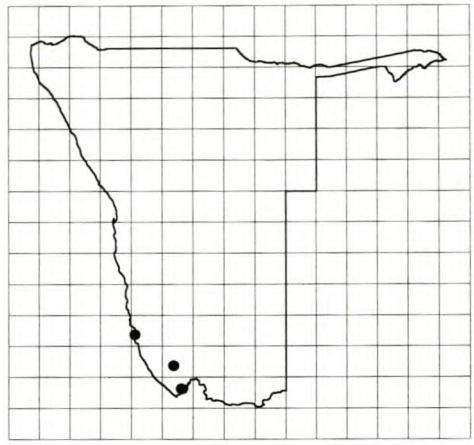
Ledebouria scabrida

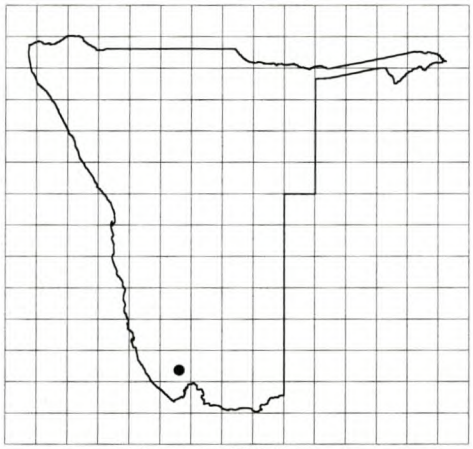
Merxmuellera rangei

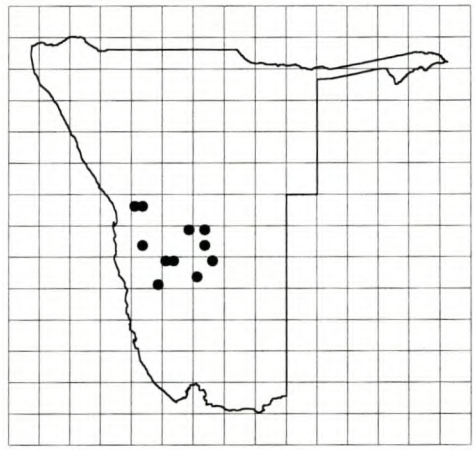


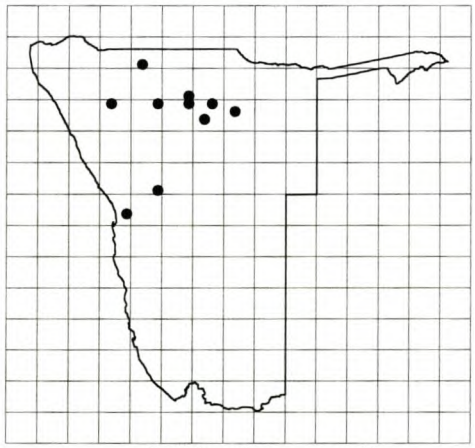
Moraea garipensis

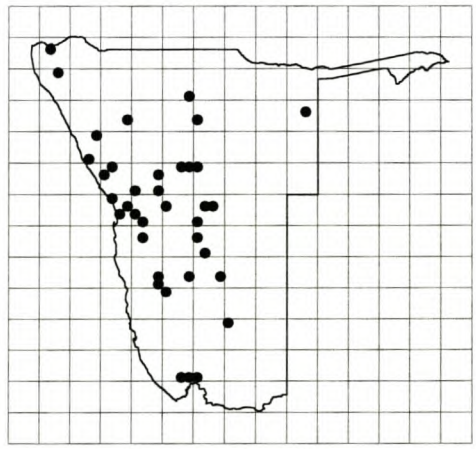

Moraea hexaglottis

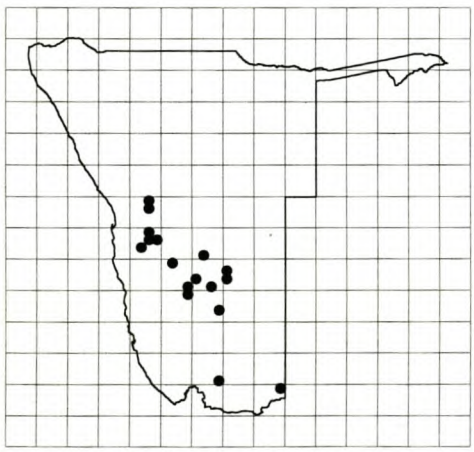

Moraea namibensis


Moraea rigidifolia


Ornithogalum candidum


Ornithogalum rautanenii


Ornithogalum stapffii


Ornithogalum tubiforme

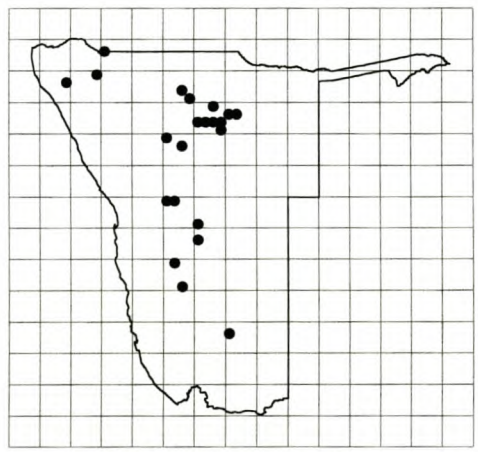
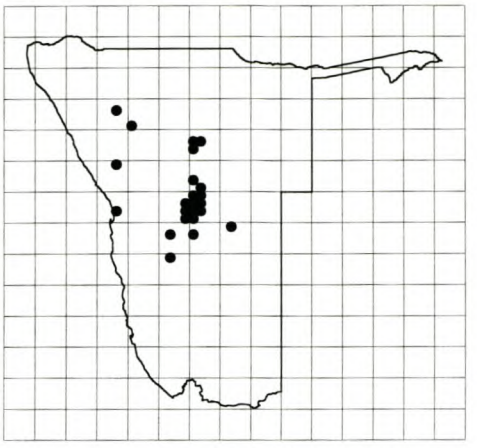
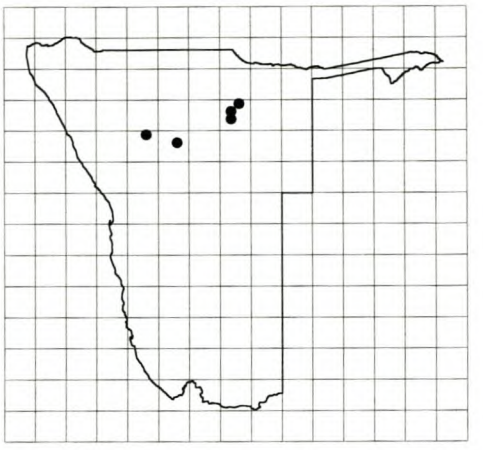

Ornithoglossum calcicola

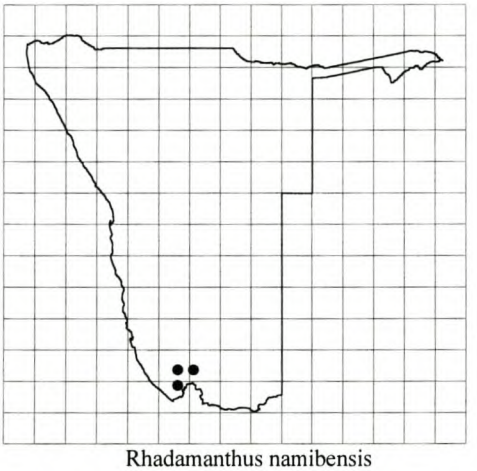
Plate 8



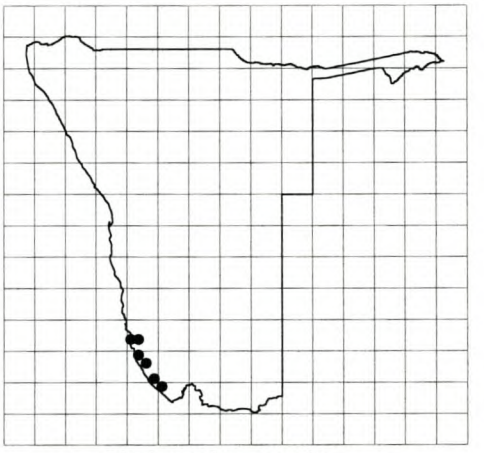
Pennisetum foermeranum



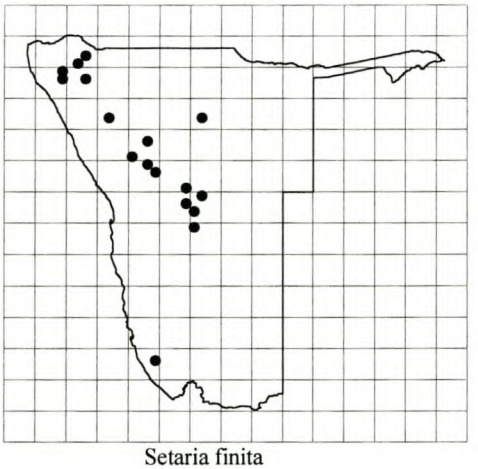
Pogonarthria leiarthra



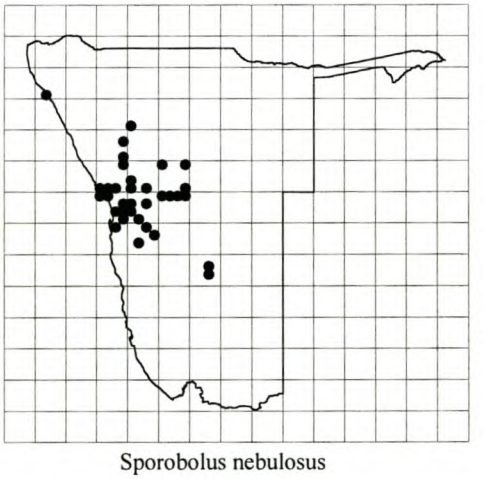
Rhadamanthus namibensis



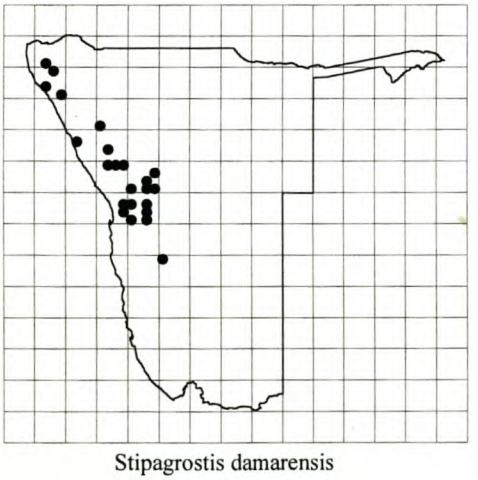
Rhadamanthus secundus



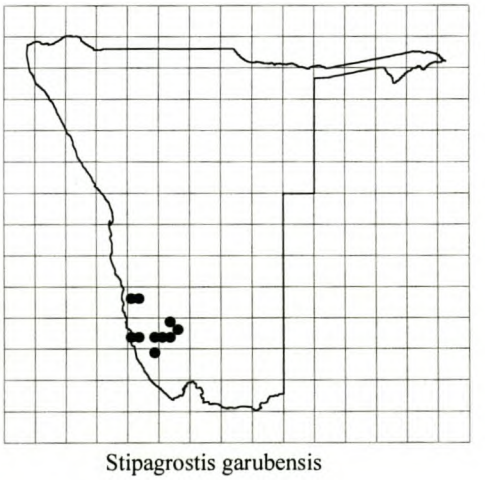
Setaria finita



Sporobolus nebulosus

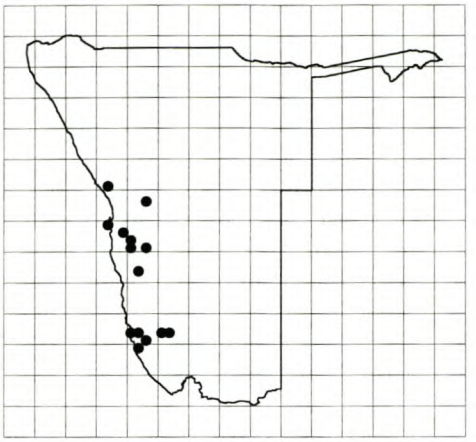


Stipagrostis damarensis

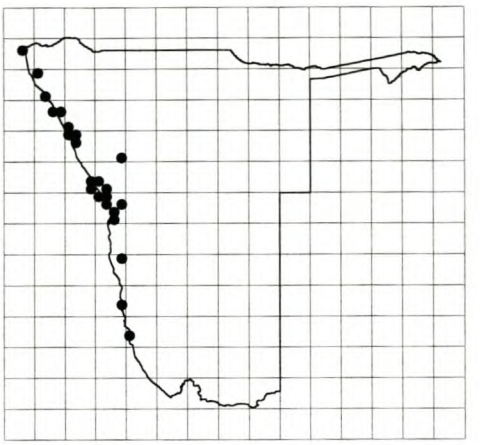


Stipagrostis garubensis

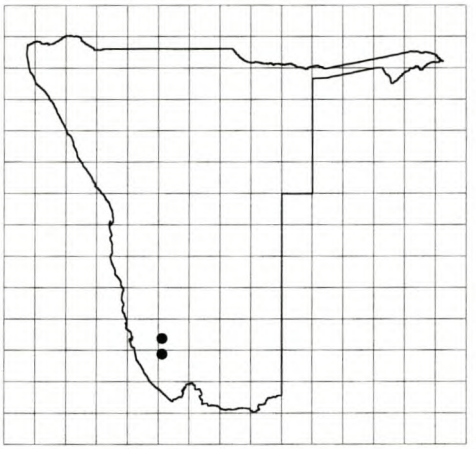
Plate 9



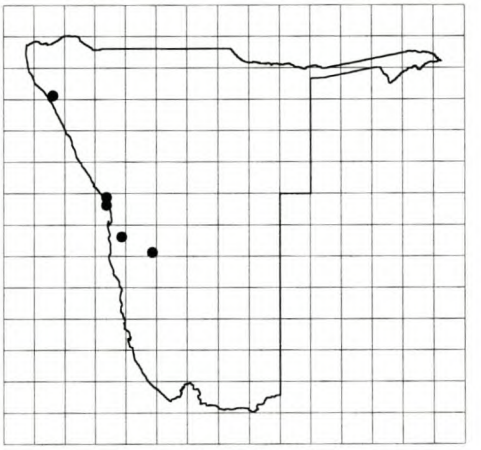
Stipagrostis gonatostachys



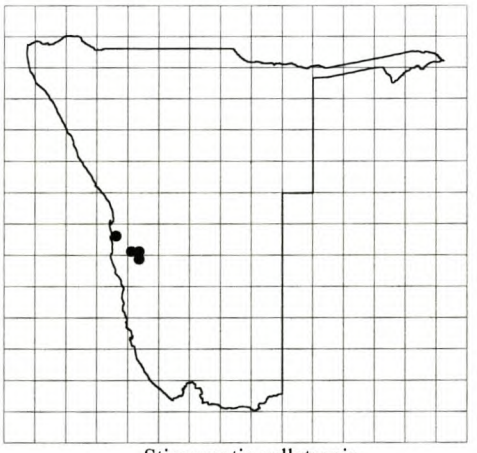
Stipagrostis hermannii



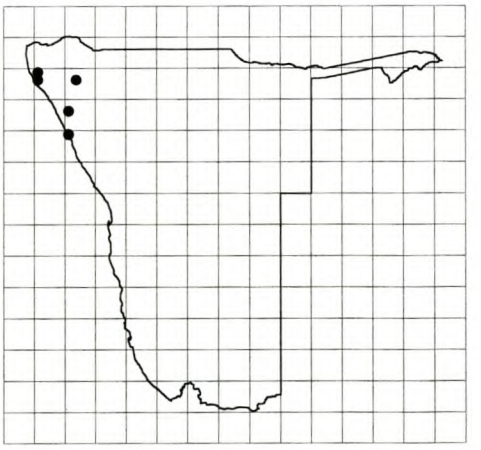
Stipagrostis lanipes



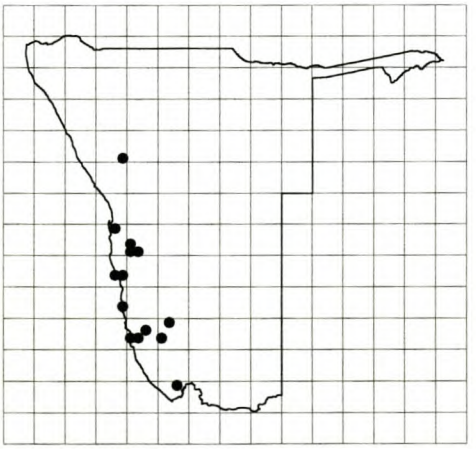
Stipagrostis namibensis



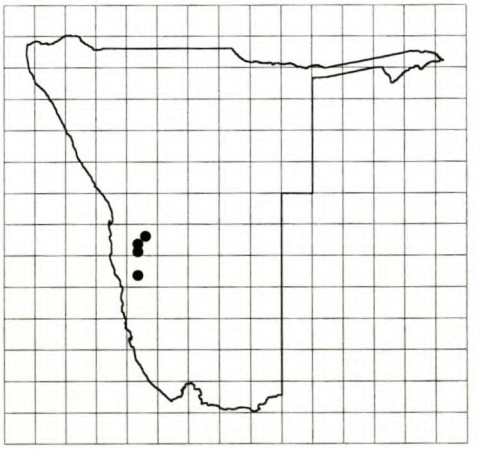
Stipagrostis pellytronis



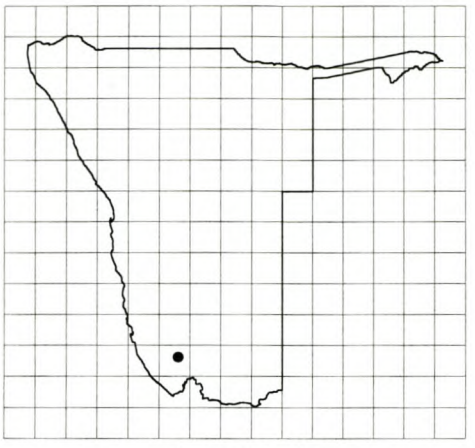
Stipagrostis ramulosa



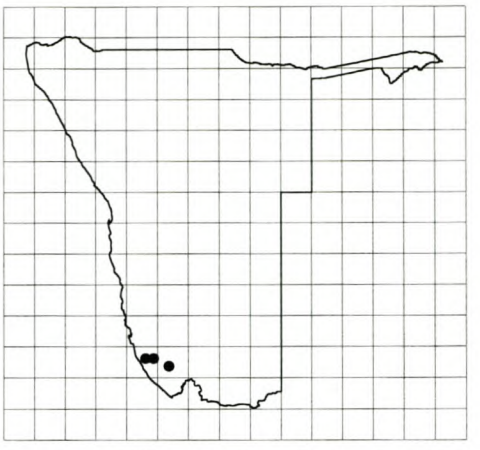
Stipagrostis sabulicola



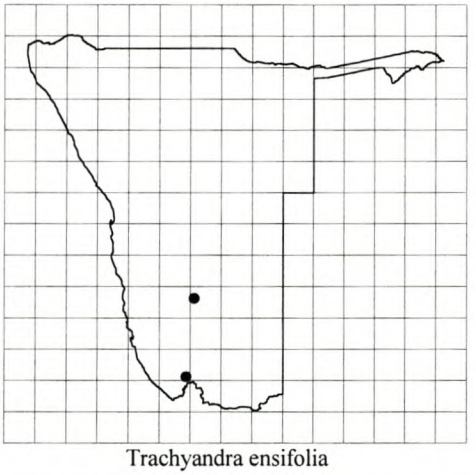
Stipagrostis seelyae



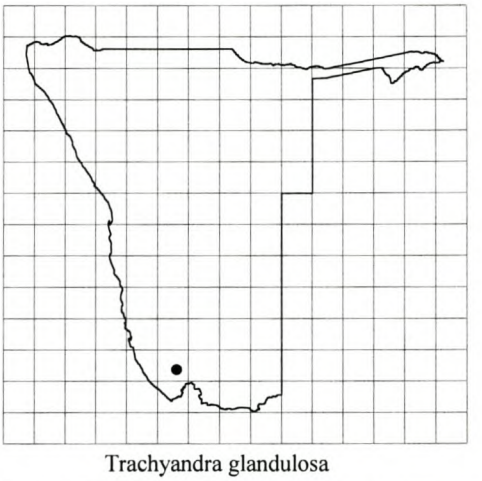
Strumaria hardyana



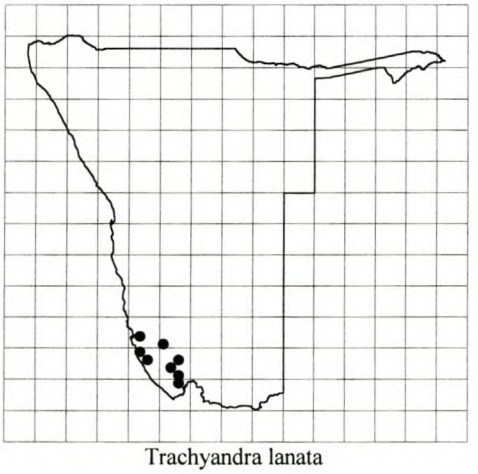
Strumaria phonolithica



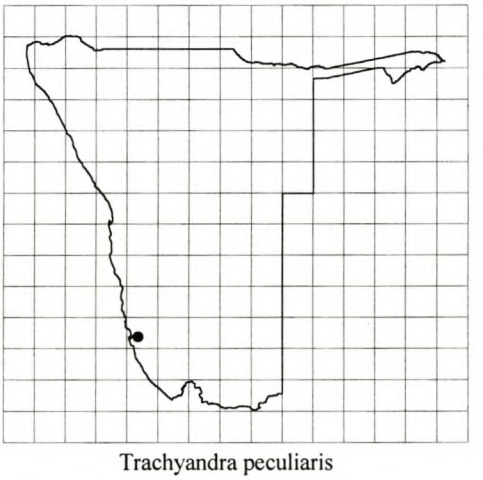
Trachyandra ensifolia



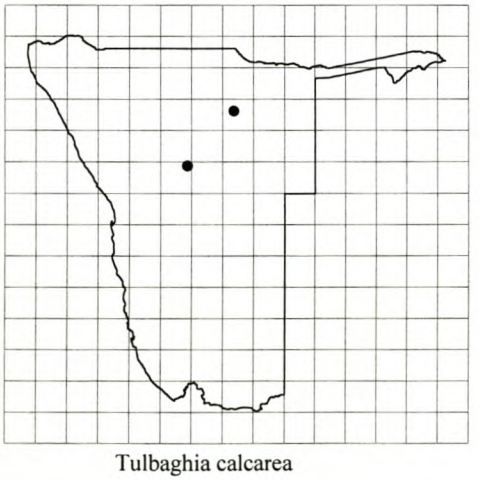
Trachyandra glandulosa



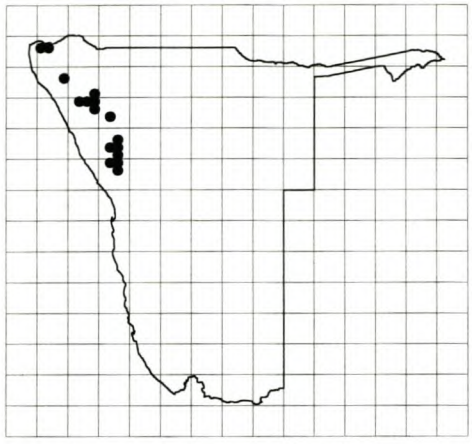
Trachyandra lanata



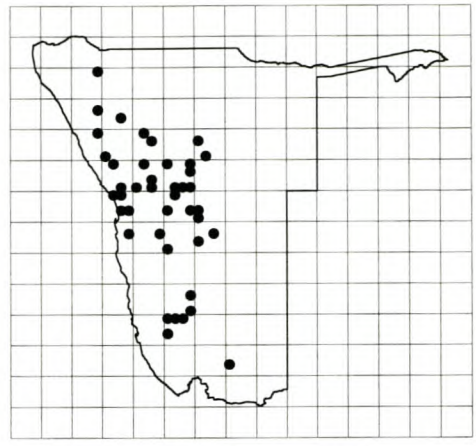
Trachyandra peculiaris



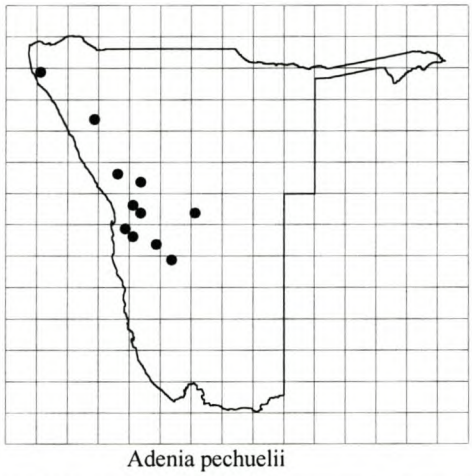
Tulbaghia calcarea



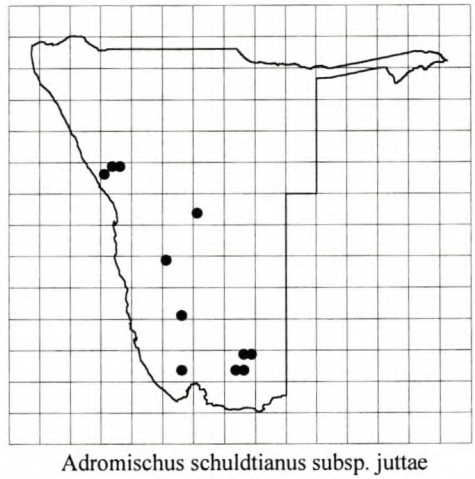
Acacia montis-usti



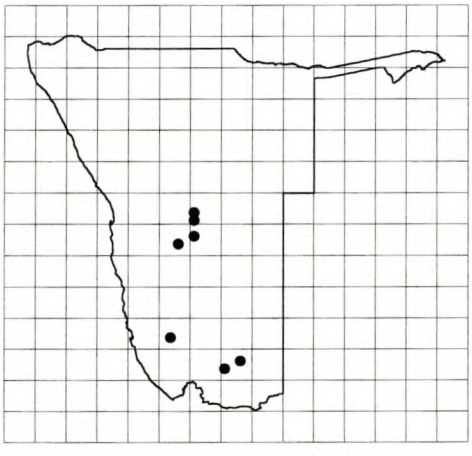
Acrotome fleckii



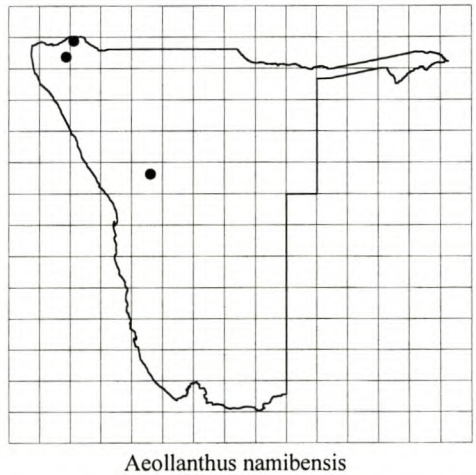
Adenia pechuelii



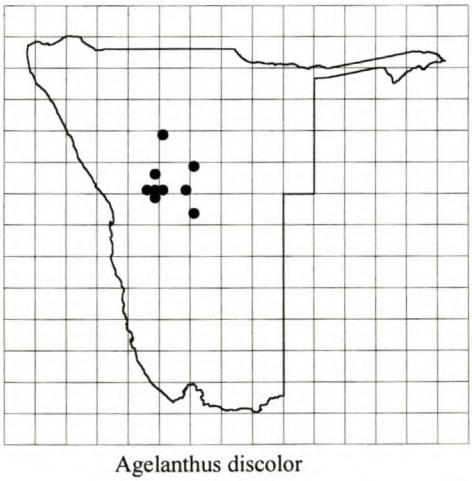
Adromischus schuldtianus subsp. juttae



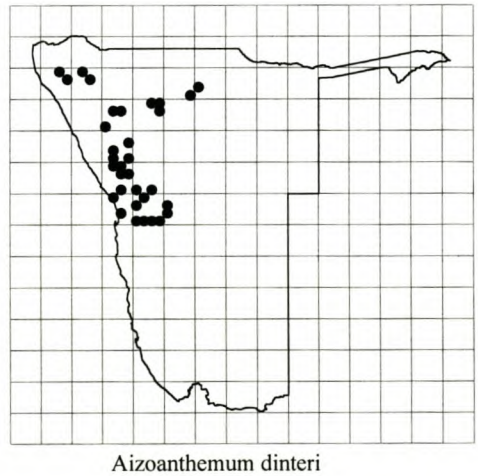
Adromischus schuldtianus subsp. schuldtianus



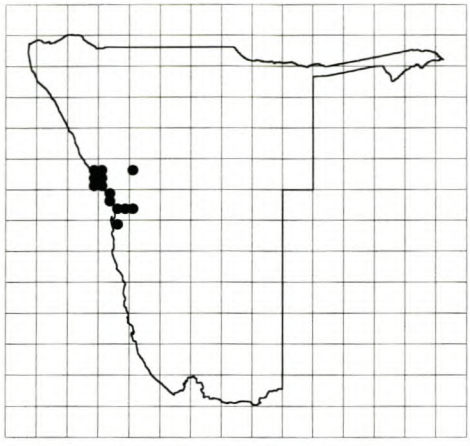
Aeollanthus namibensis



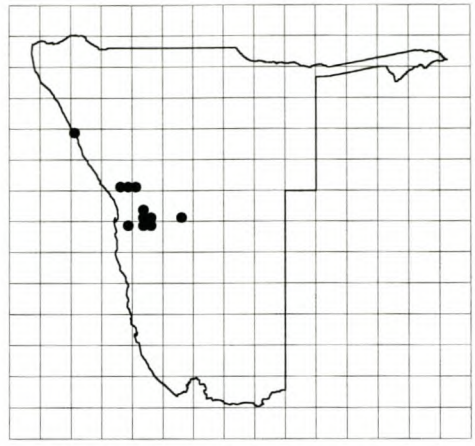
Agelanthus discolor



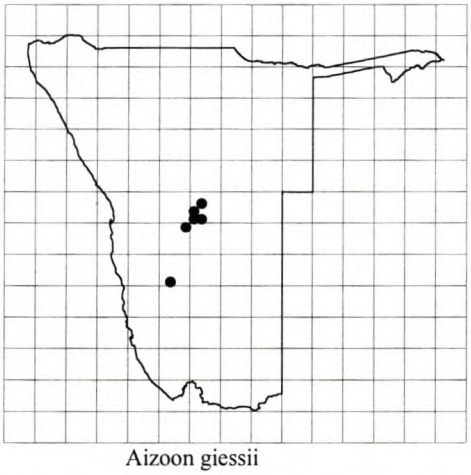
Aizoanthemum dinteri



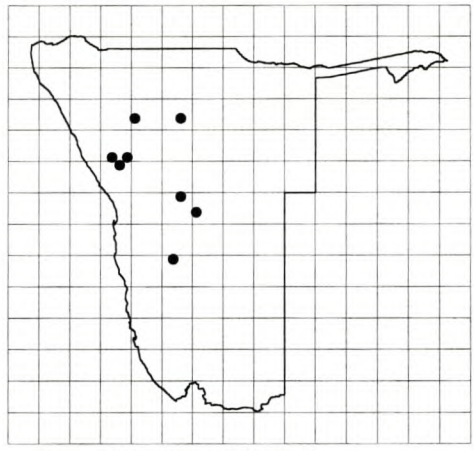
Aizoanthemum galenioides



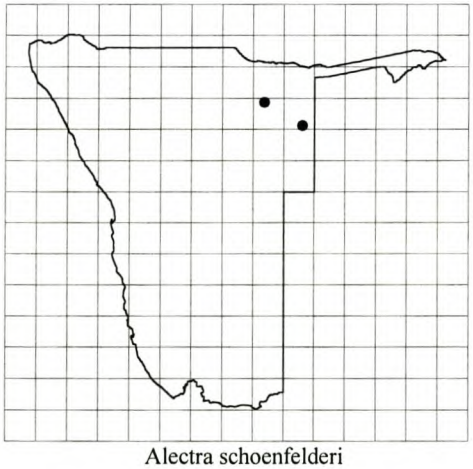
Aizoanthemum membrumconnectens



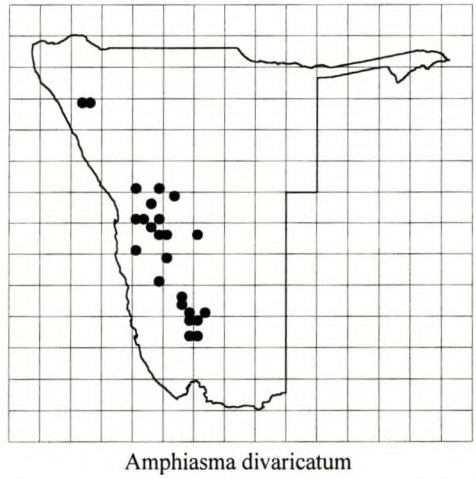
Aizoon giessii



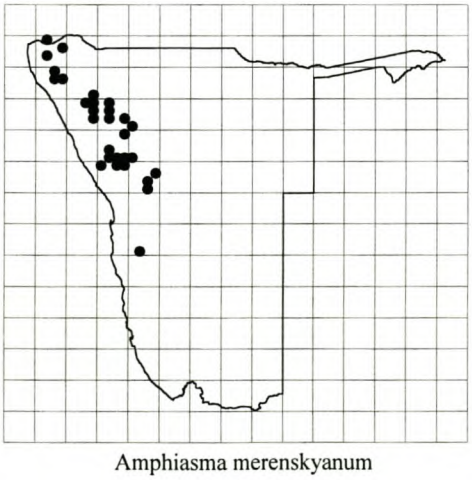
Alectra pseudobarleriae



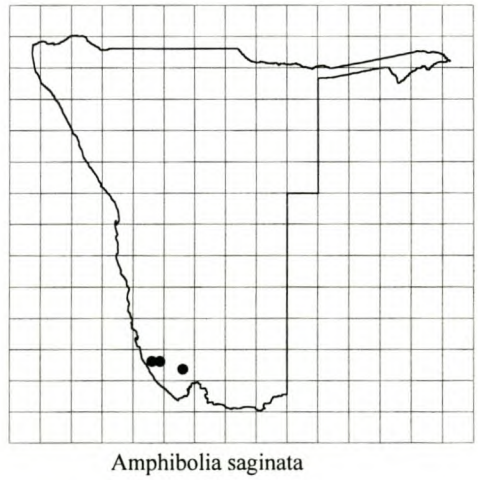
Alectra schoenfelderi



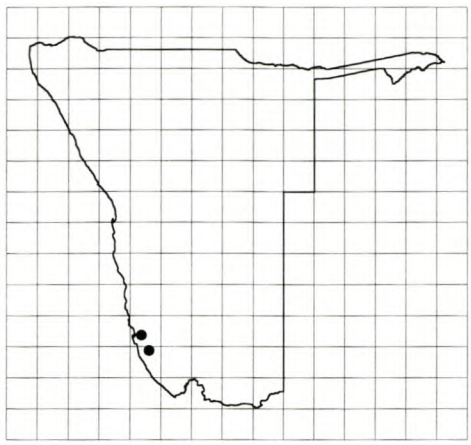
Amphiasma divaricatum



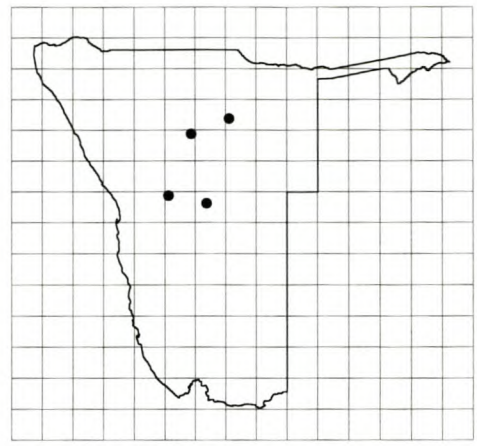
Amphiasma merenskyanum



Amphibolia saginata

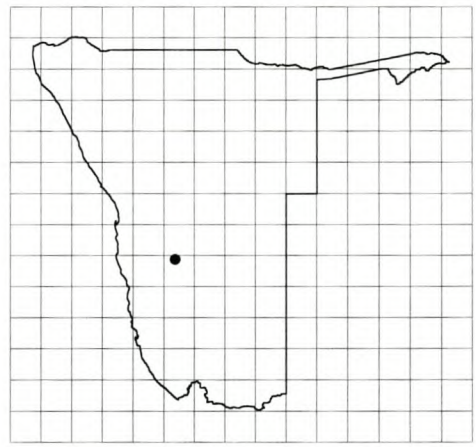


Amphiglossa thuja

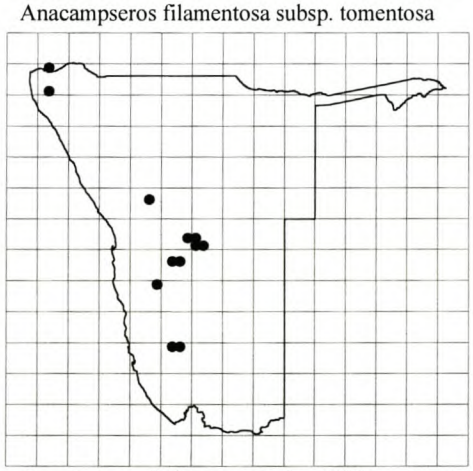


Anacampseros dinteri

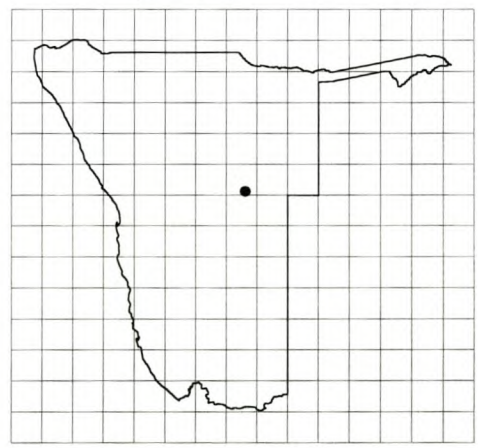
Anacampseros filamentosa subsp. tomentosa



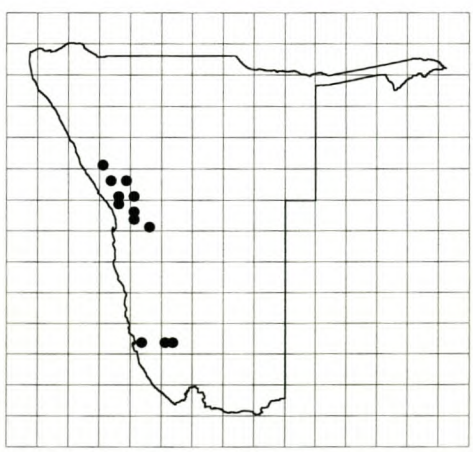
Anginon streyi



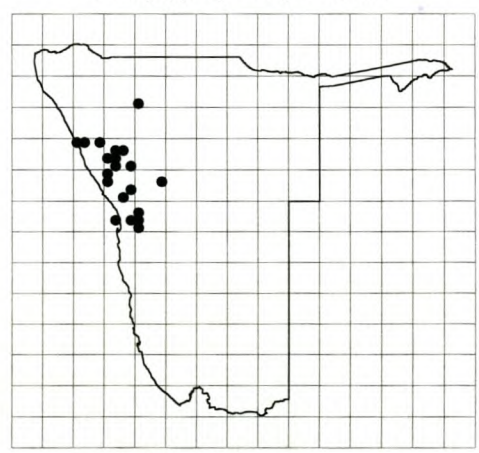
Anisopappus pinnatifidus



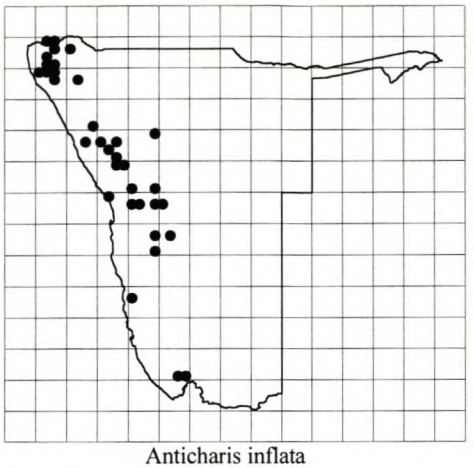
Anisopappus pseudopinnatifidus

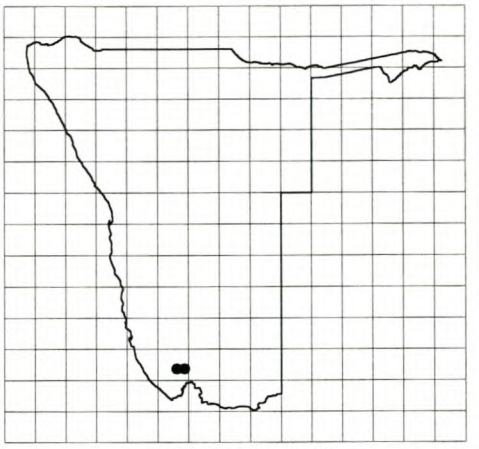


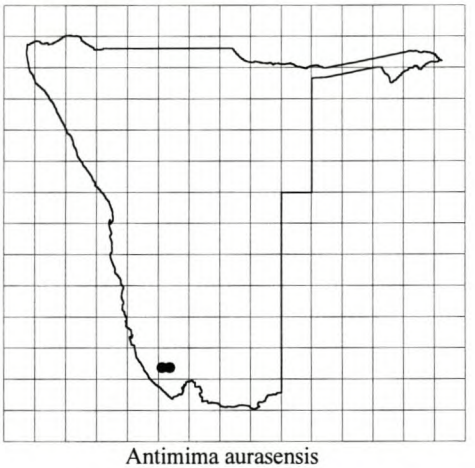
Anticharis ebracteata

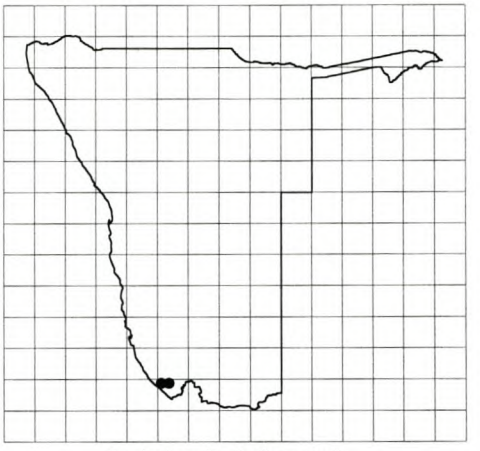


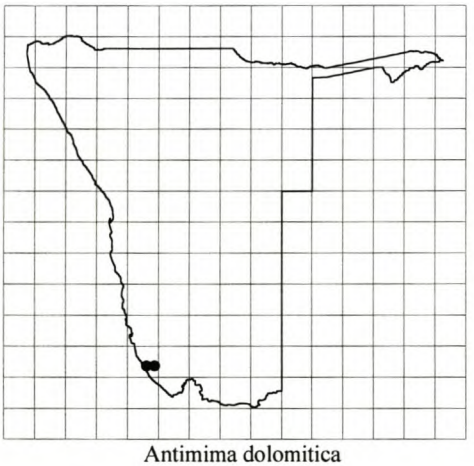
Anticharis imbricata

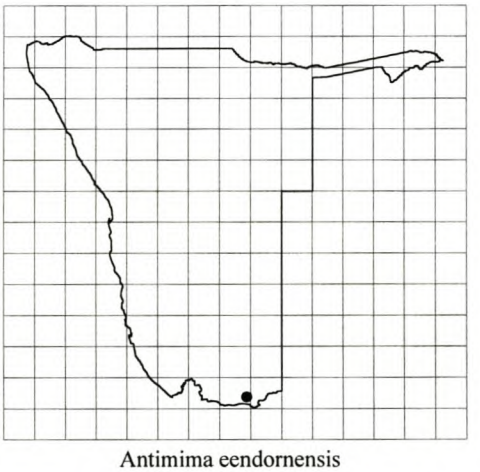

Anticharis inflata

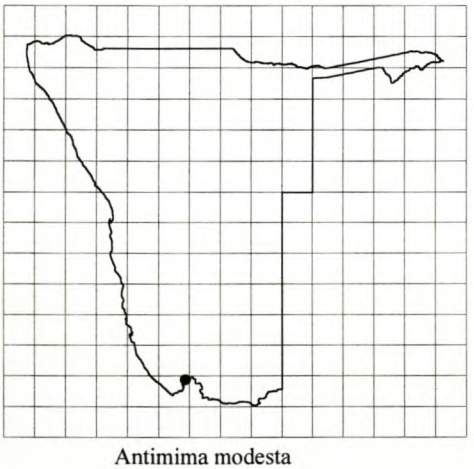

Antimima argentea

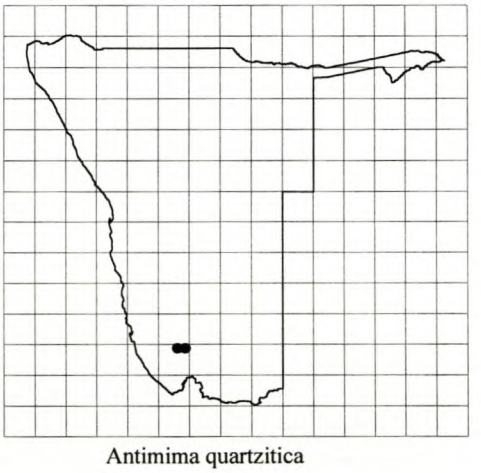

Antimima aurasensis

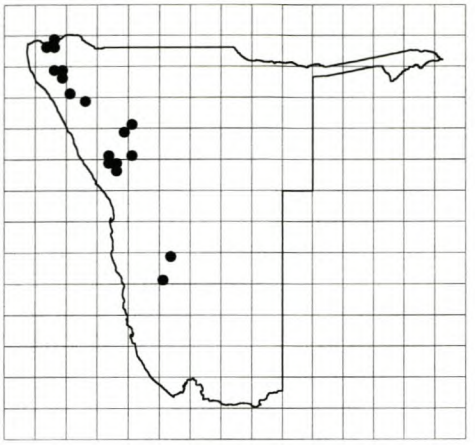

Antimima buchubergensis


Antimima dolomitica

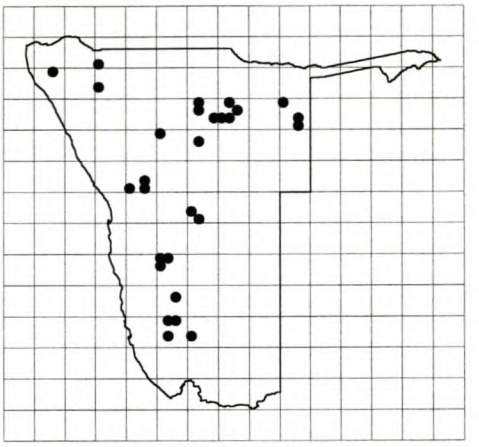

Antimima eendornensis


Antimima modesta

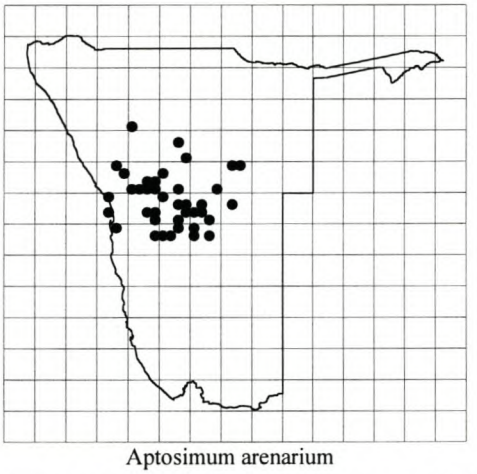

Antimima quartzitica



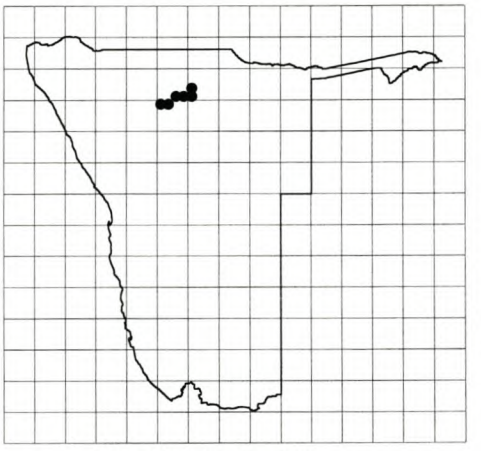
Antiphiona fragrans



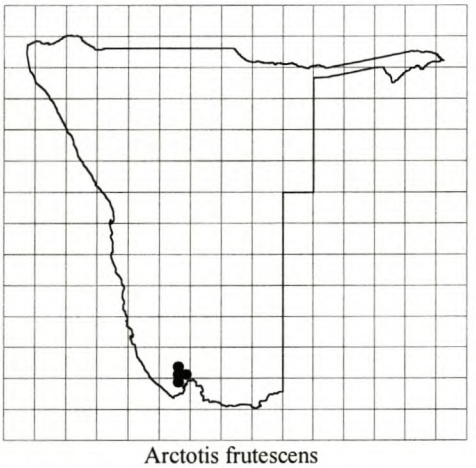
Antiphiona pinnatisecta



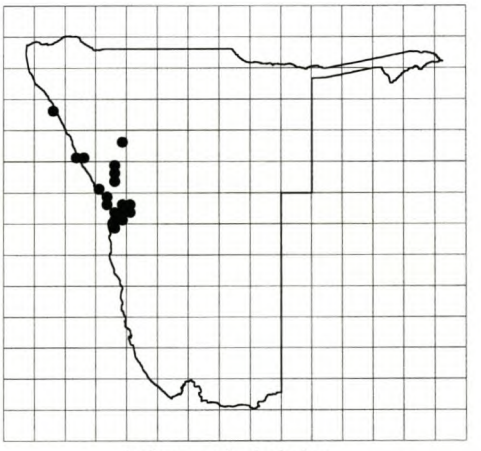
Aptosimum arenarium



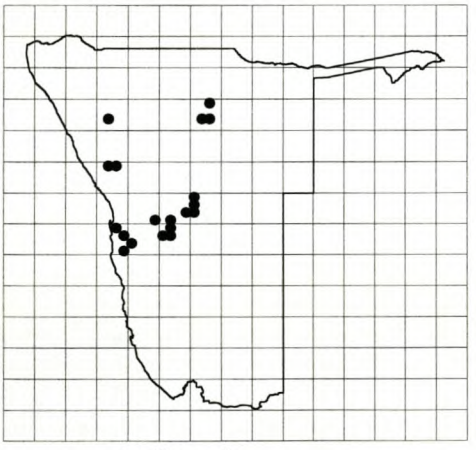
Aptosimum suberosum



Arctotis frutescens



Arthraerua leubnitziae



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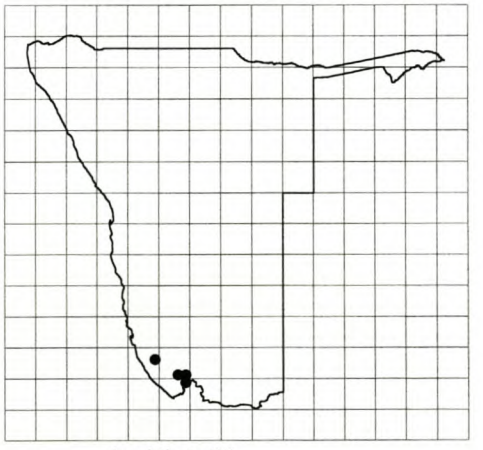

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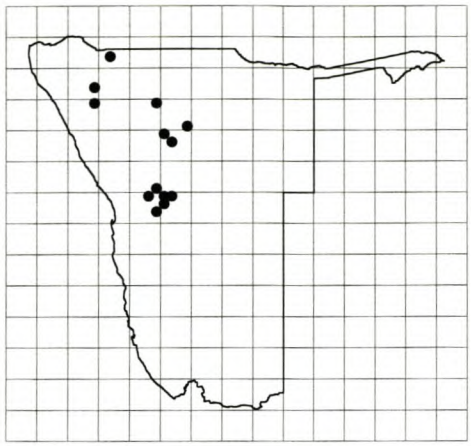
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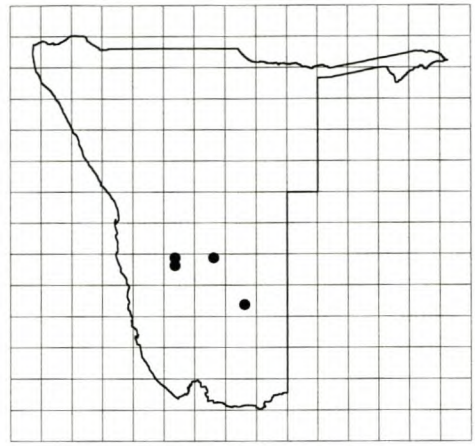
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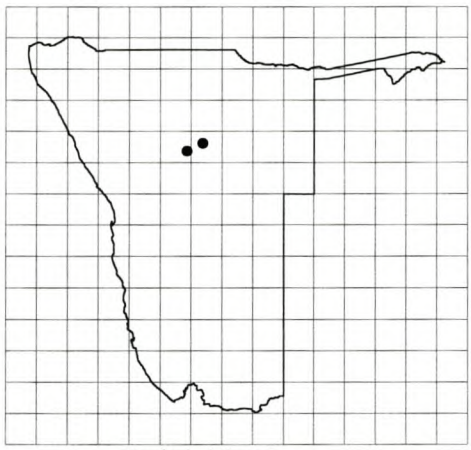
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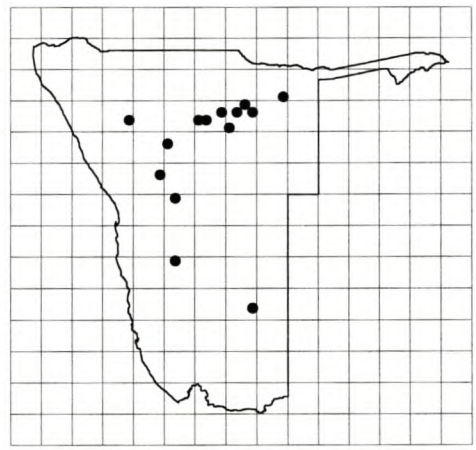
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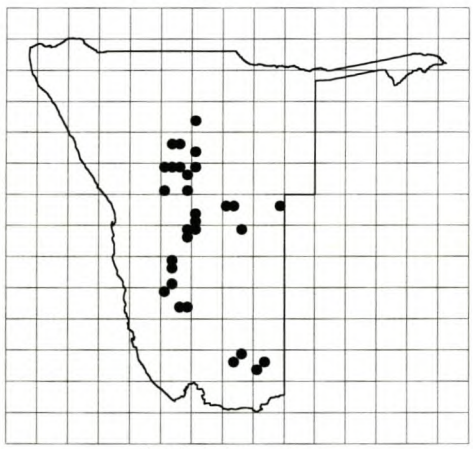
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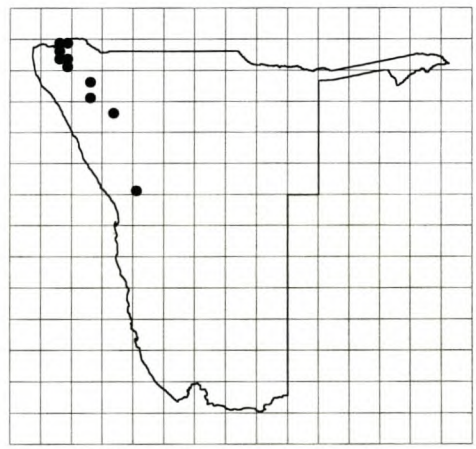
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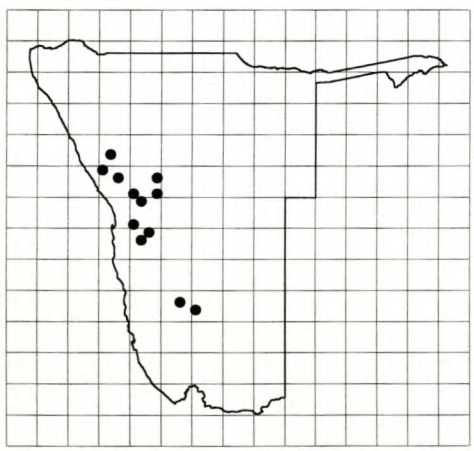
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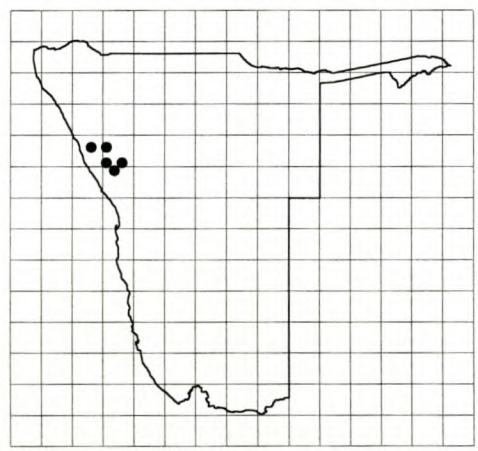
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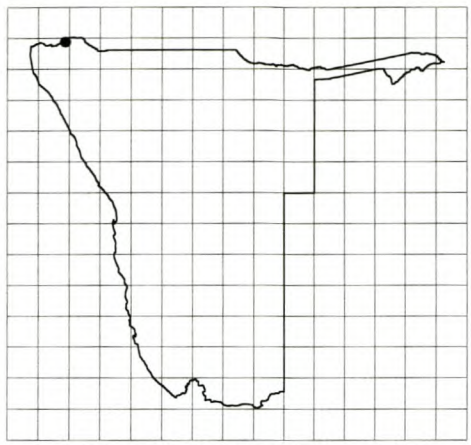
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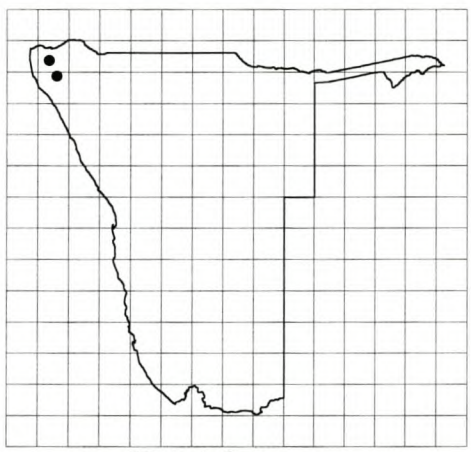
Berkheya schinzii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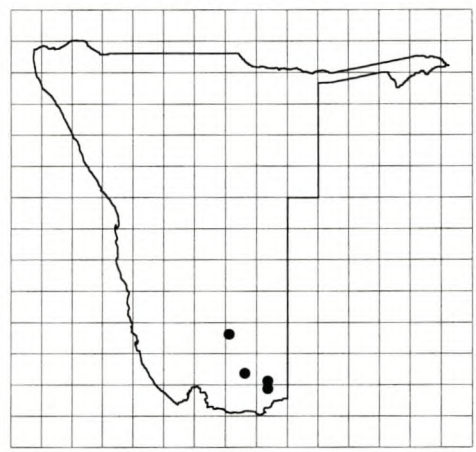
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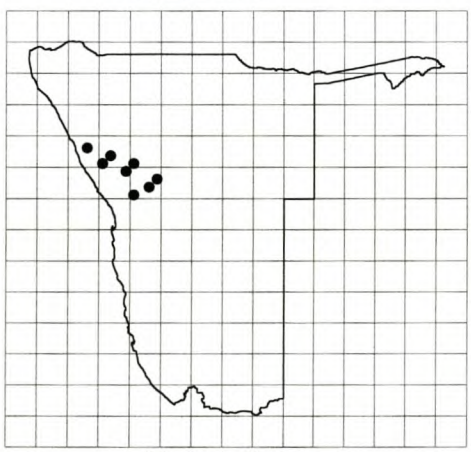
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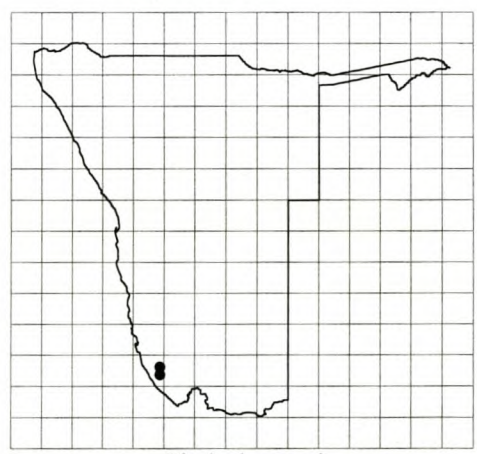
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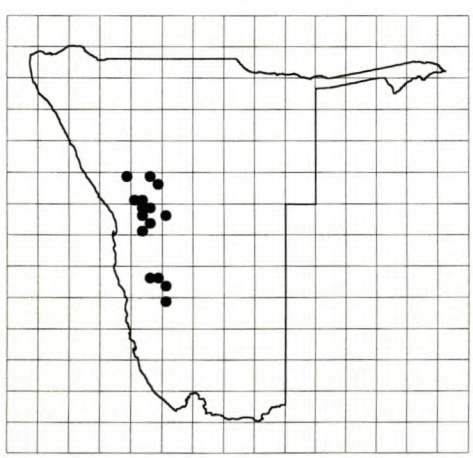
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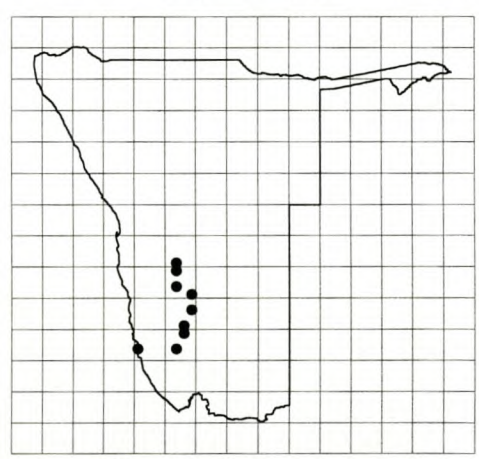
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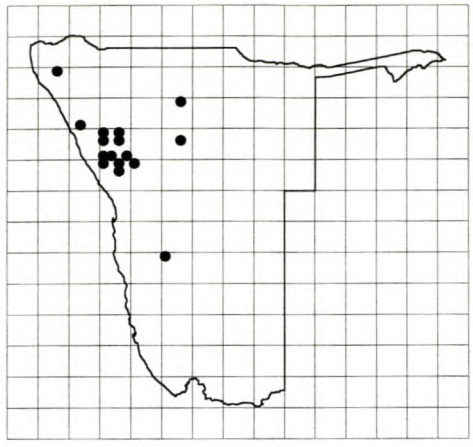
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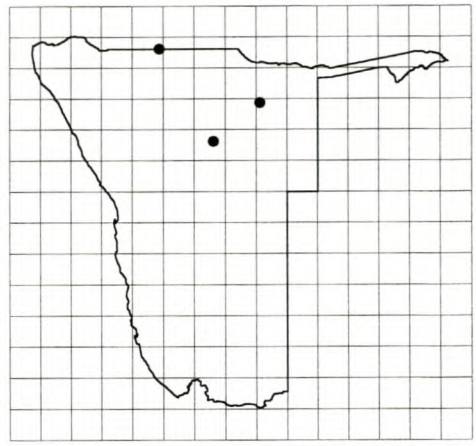
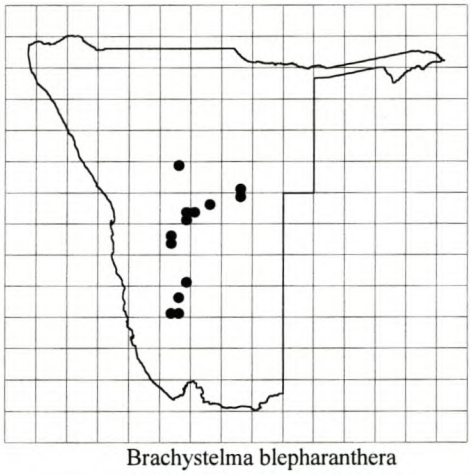

Bolusia amboensis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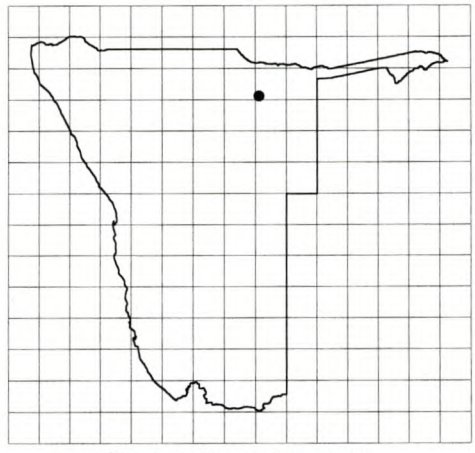
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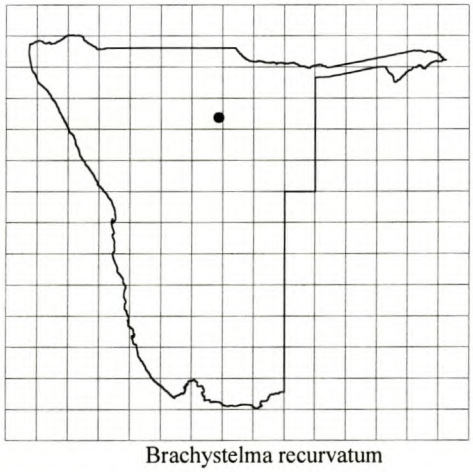
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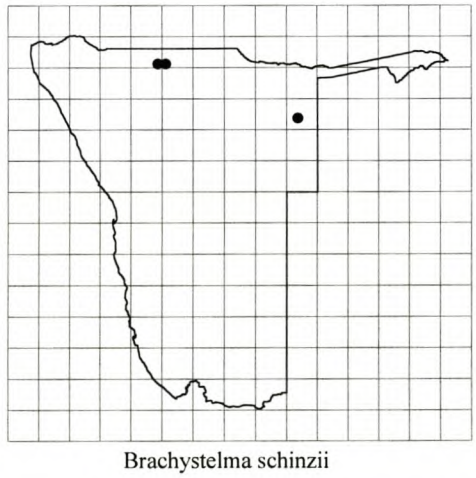
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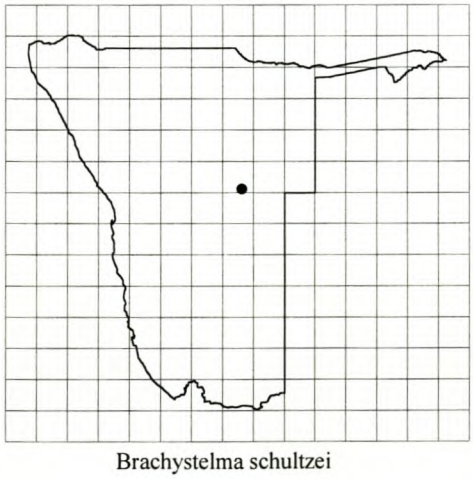
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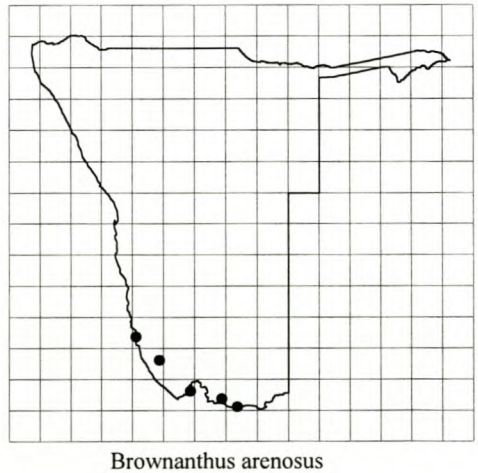
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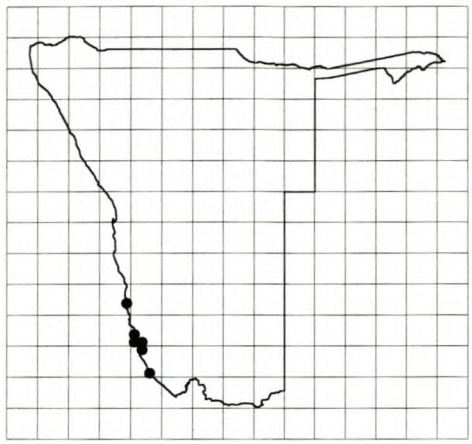
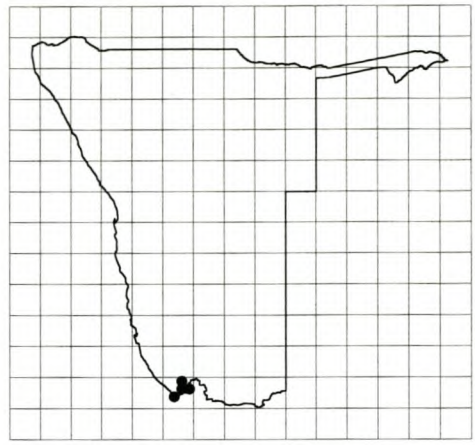

Brownanthus namibensis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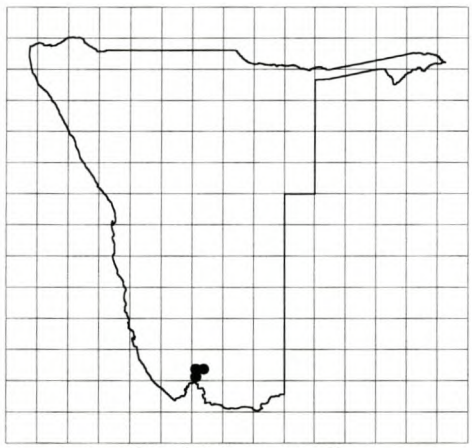
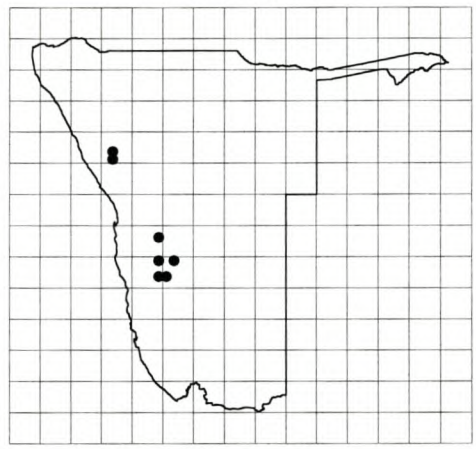

Caesalpinia merxmeullerana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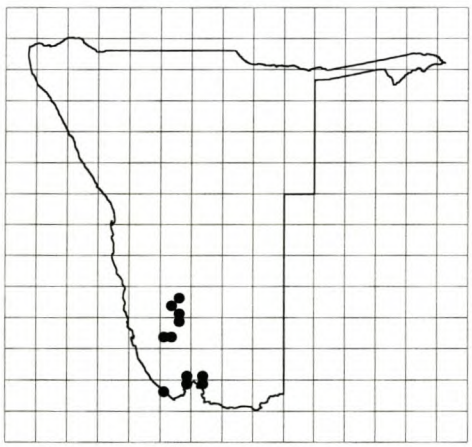
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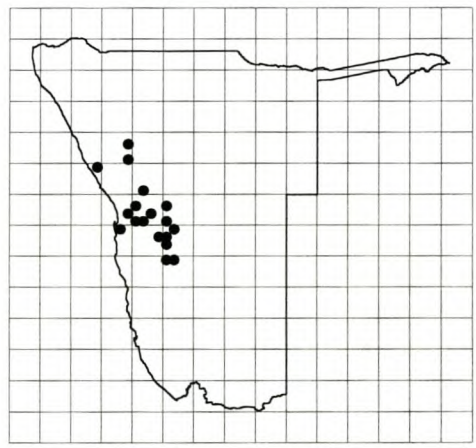
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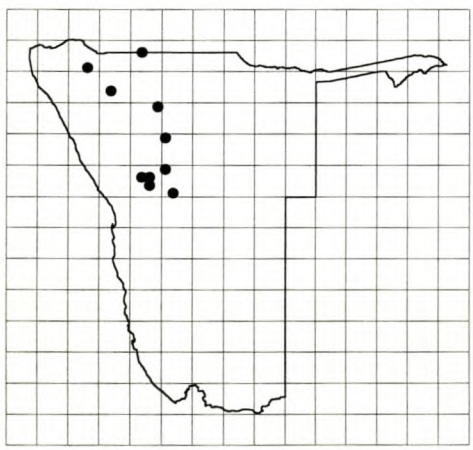
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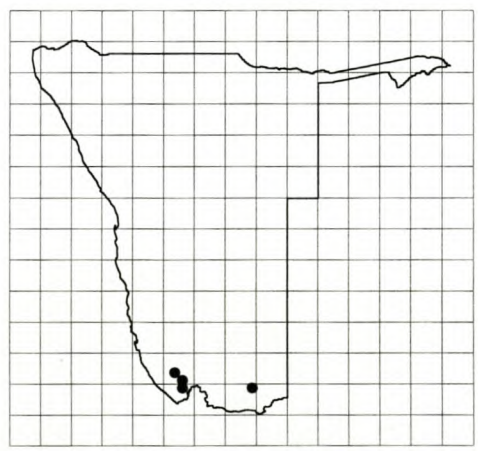
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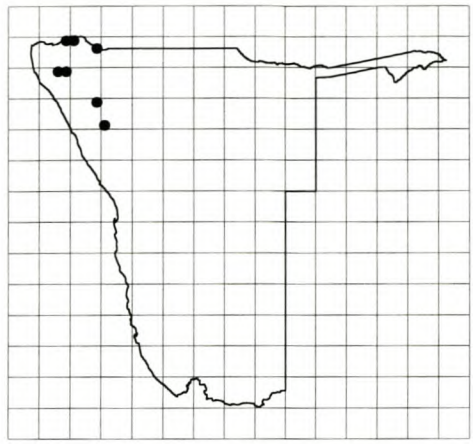
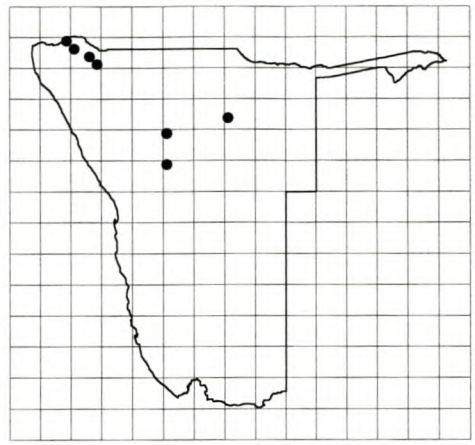
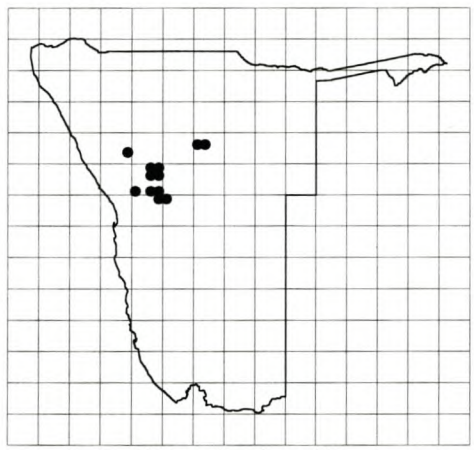


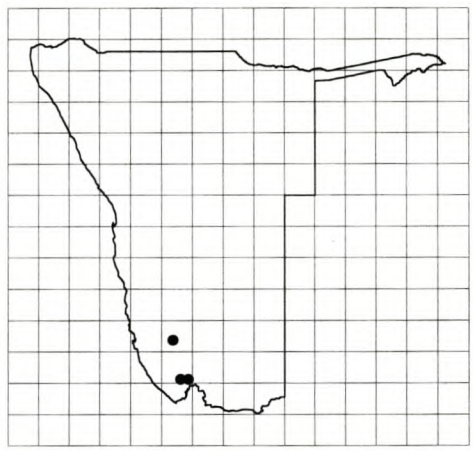
Ceraria longipedunculata



Ceropegia dinteri



Chamaegigas intrepidus



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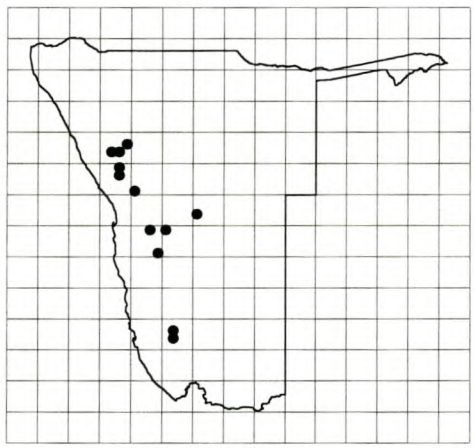
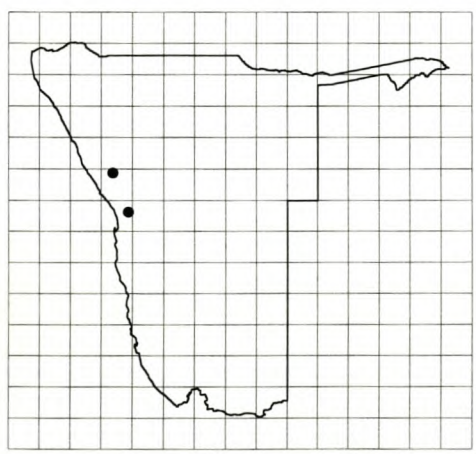
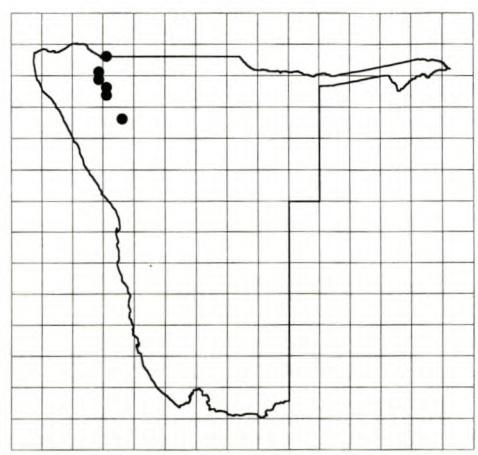


Citrullus rehmii

Cleome carnosa

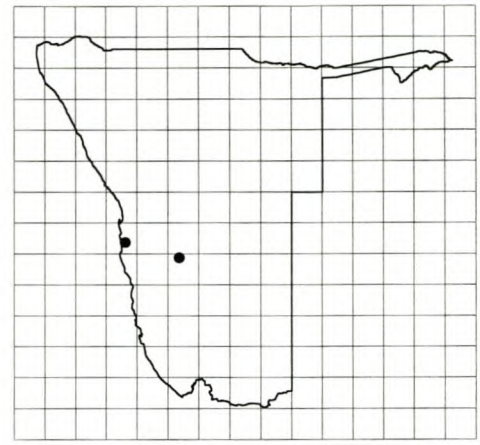


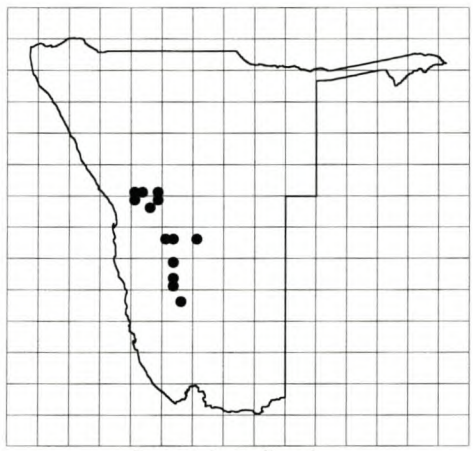
Cleome foliosa var. namibensis

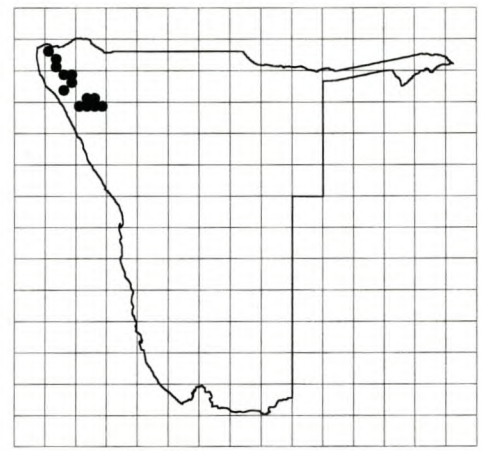


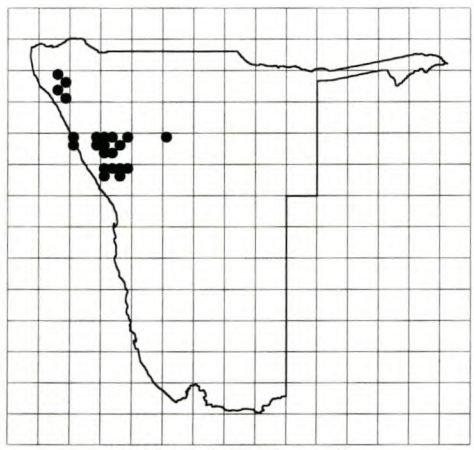
Cleome laburnifolia


Cleome suffruticosa


Commicarpus fruticosus


Commiphora dinteri


Commiphora giessii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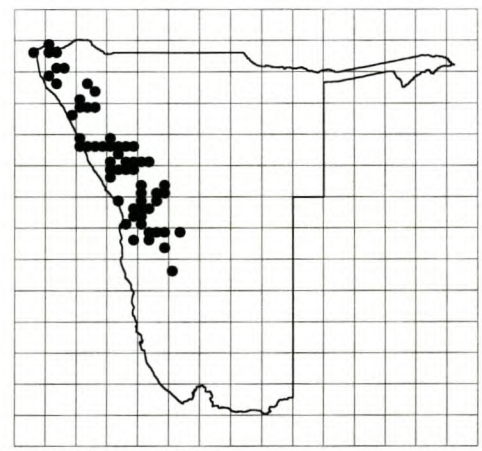
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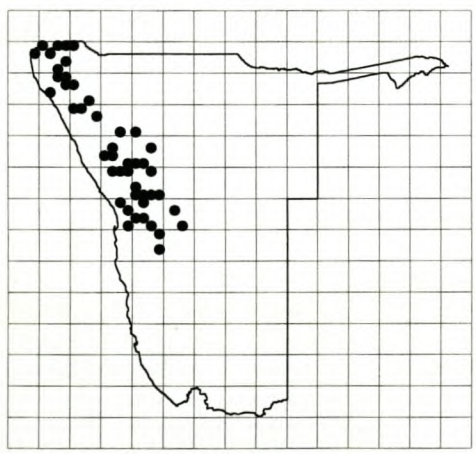
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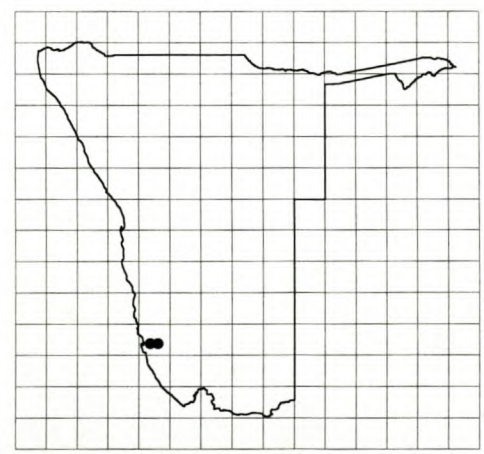
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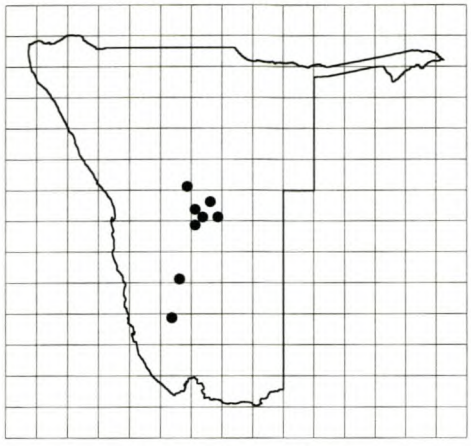
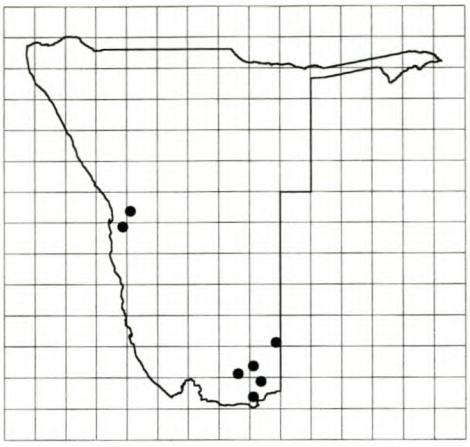
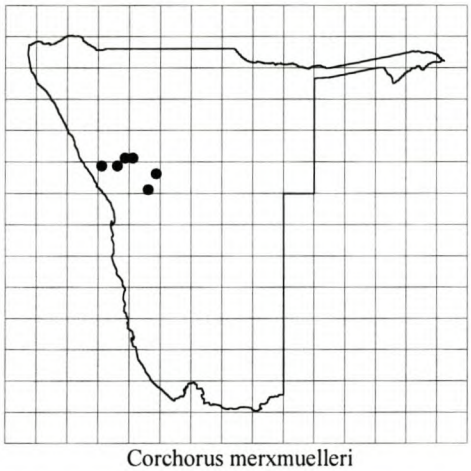


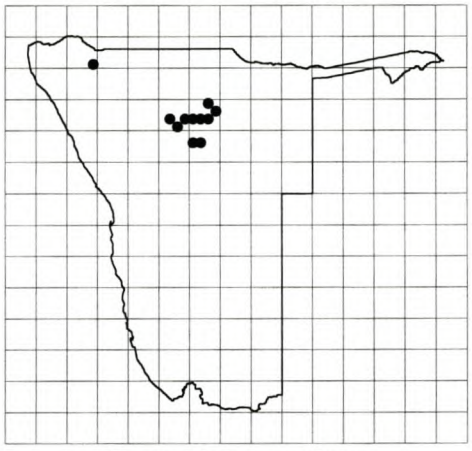
Convolvulus argillicola



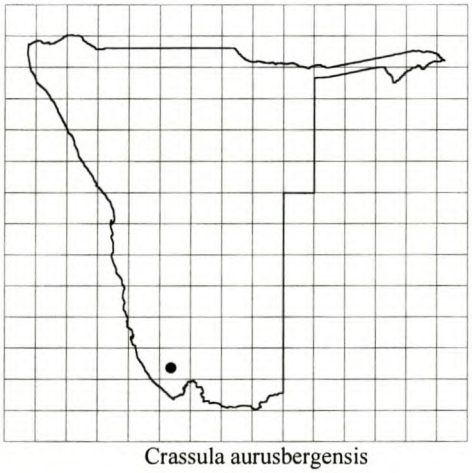
Corbichonia rubriviolacea



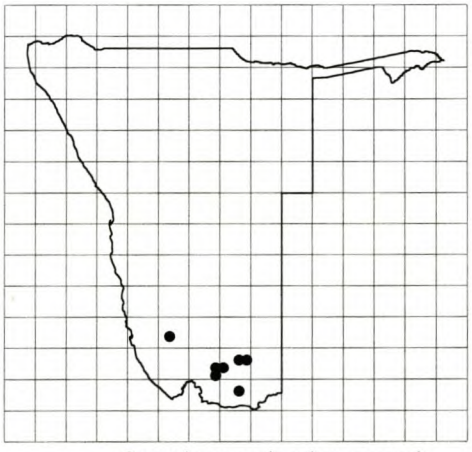
Corchorus merxmuelleri



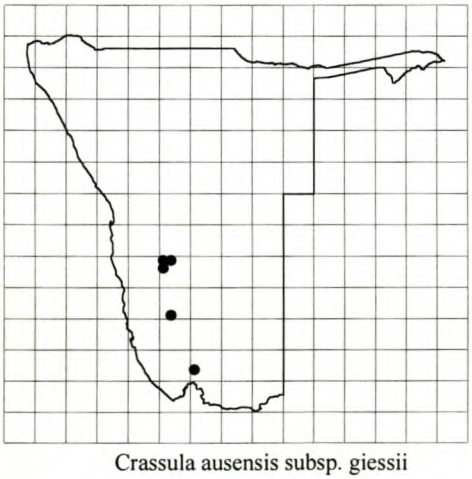
Crassocephalum coeruleum



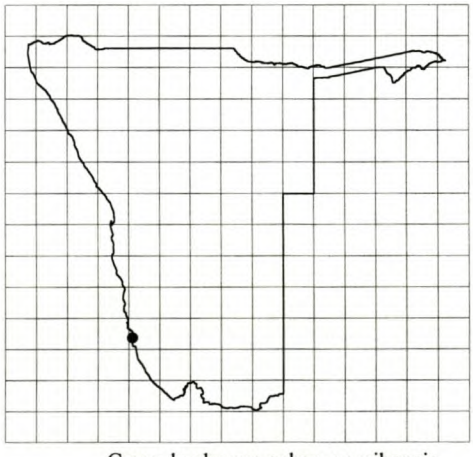
Crassula aurusbergensis



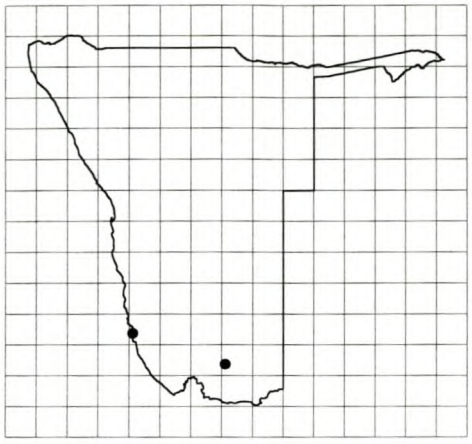
Crassula ausensis subsp. ausensis

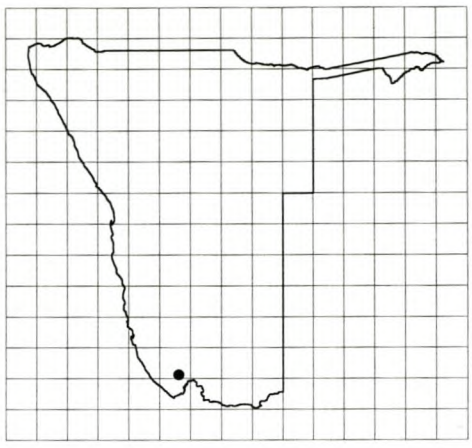


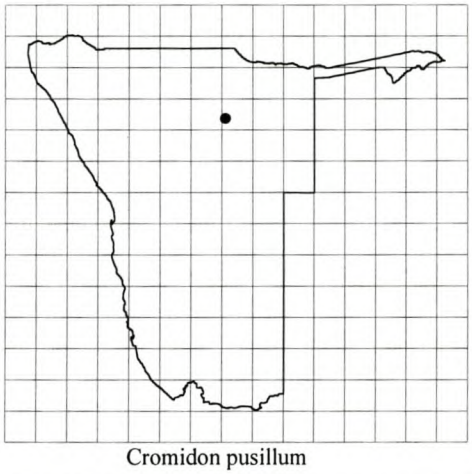
Crassula ausensis subsp. giessii

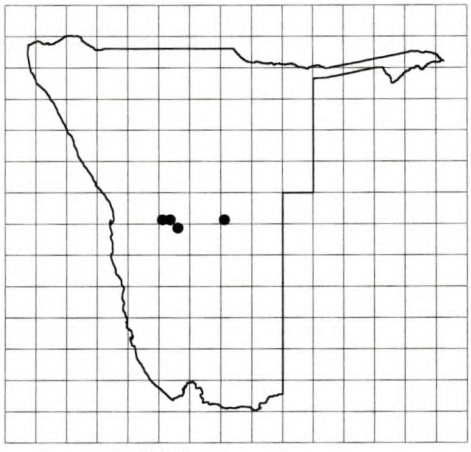


Crassula elegans subsp. namibensis


Crassula luederitzii


Crassula numaisensis


Cromidon pusillum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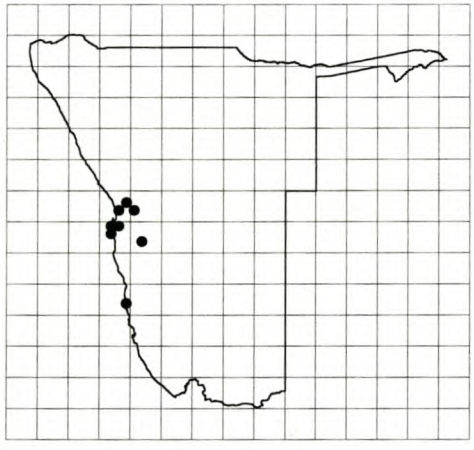
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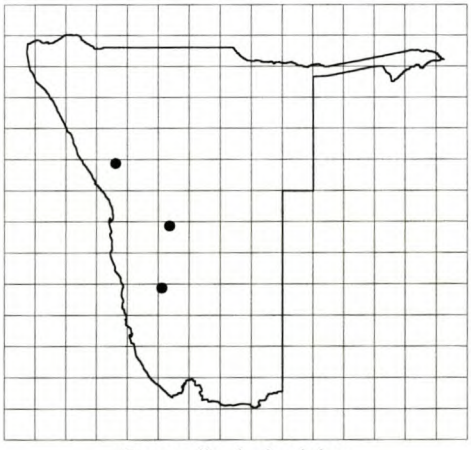
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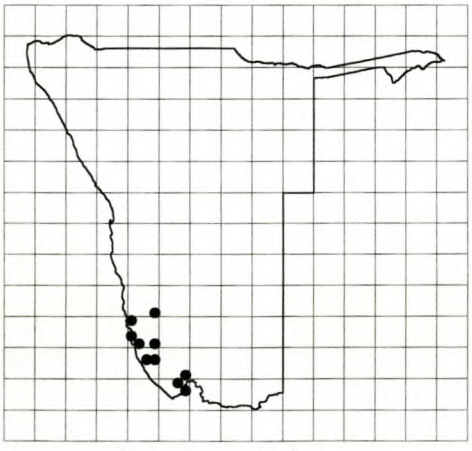
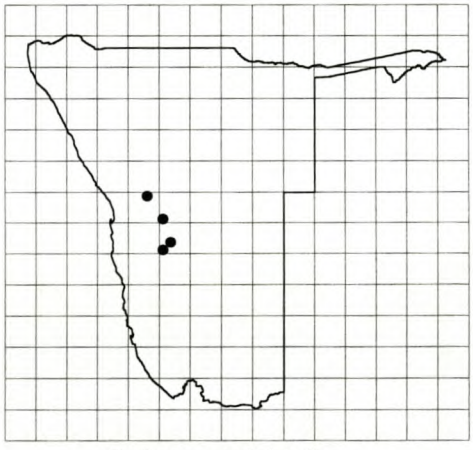
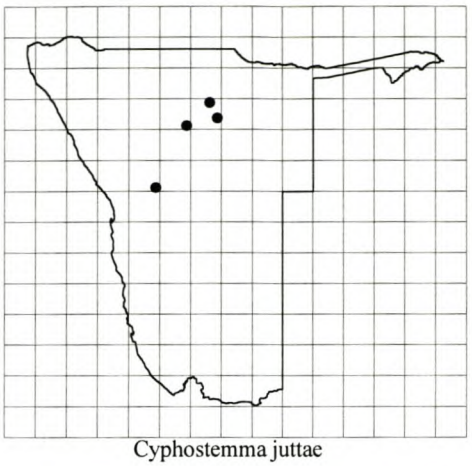

Cynanchum meyeri


Cyphostemma bainesii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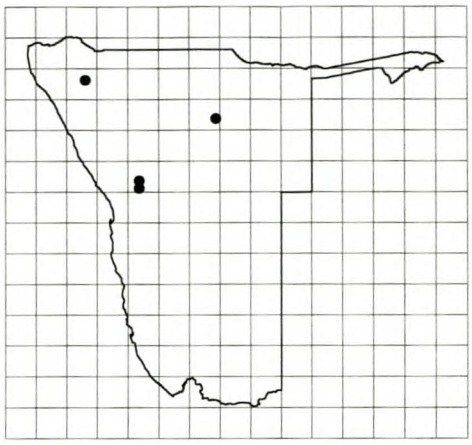
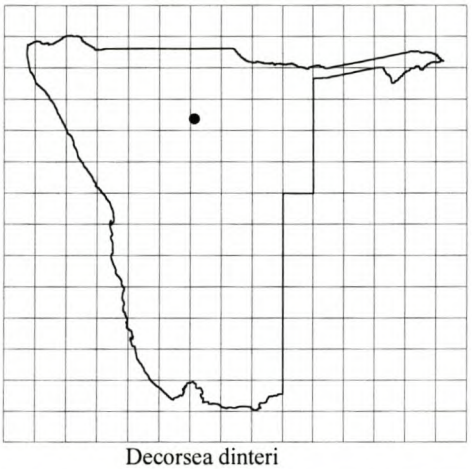
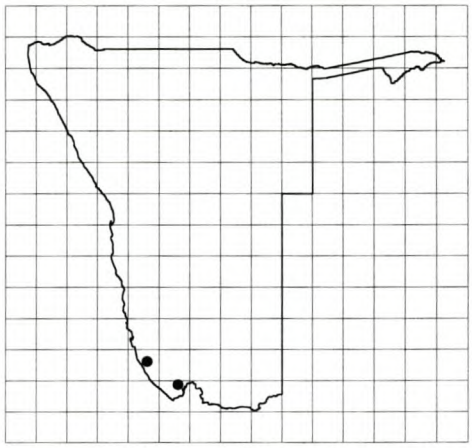

Cyphostemma omburense


Decorsea dinteri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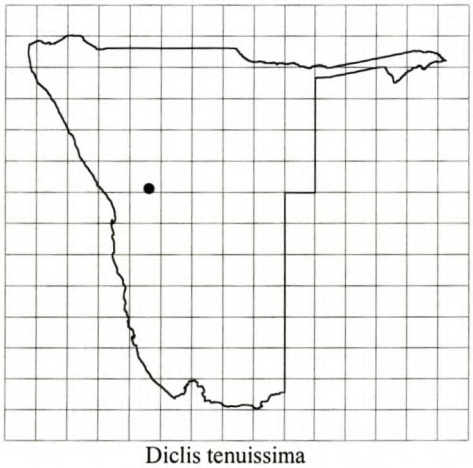
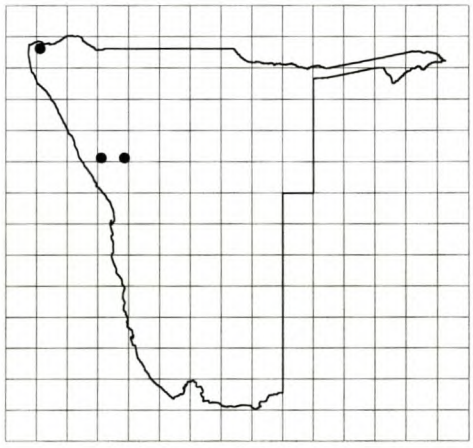
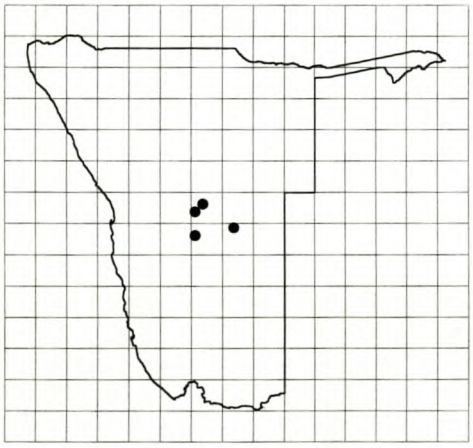

Diclis tenuissima


Dicoma cunenensis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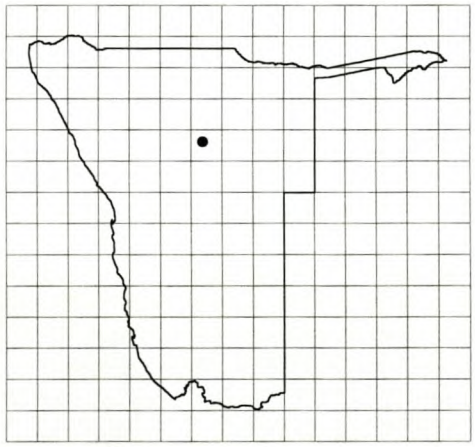
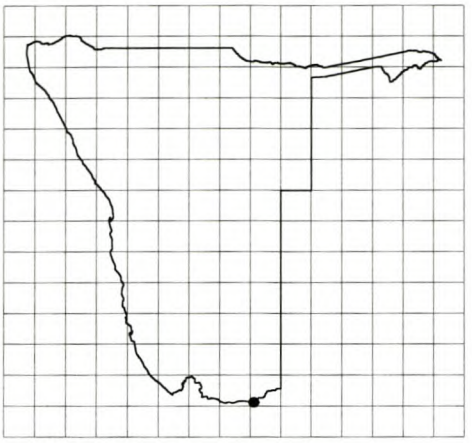

Dintera pterocaulis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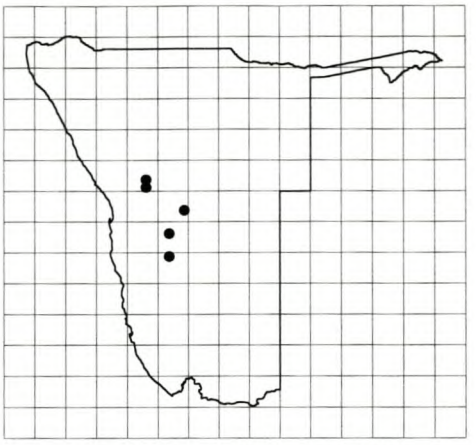
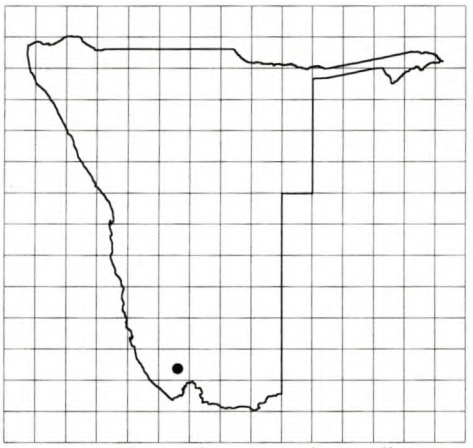
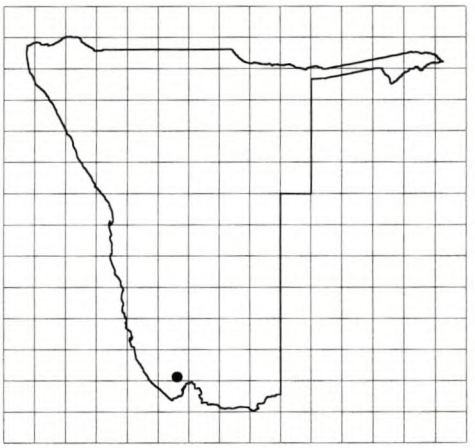
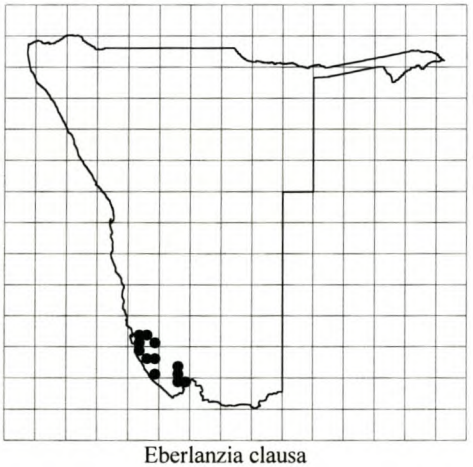
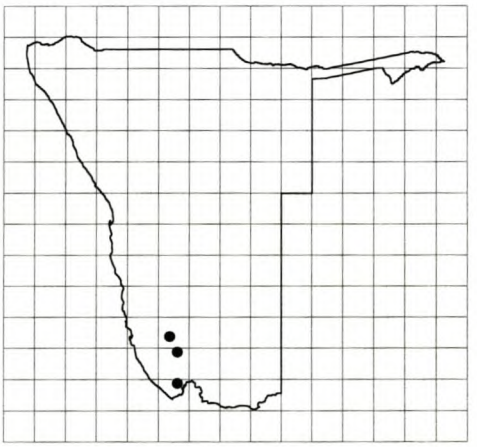
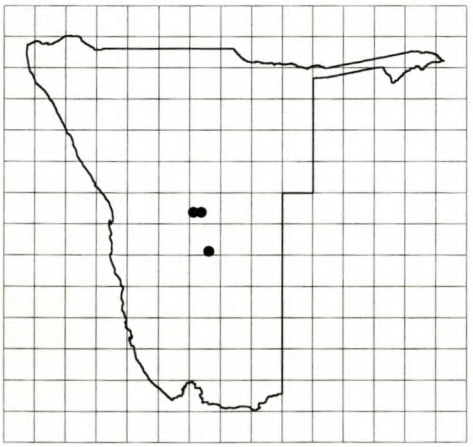

Dombeya rotundifolia var. velutina


Drosanthemum nordenstamii


Drosanthemum pauper


Eberlanzia clausa


Ebracteola derenbergiana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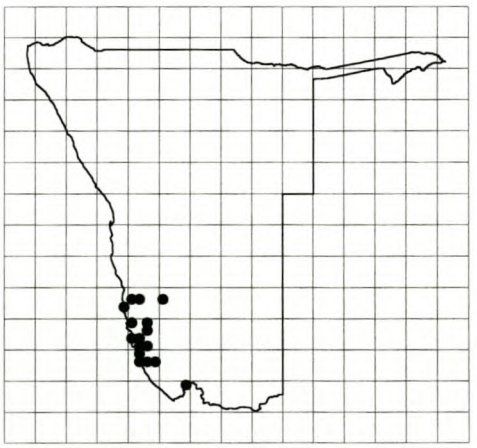
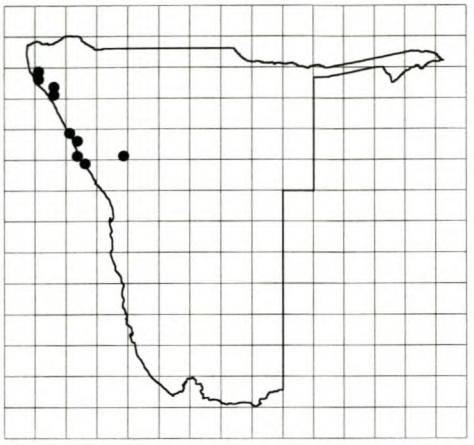
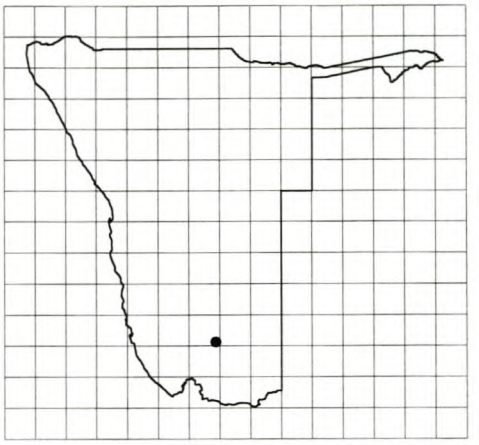
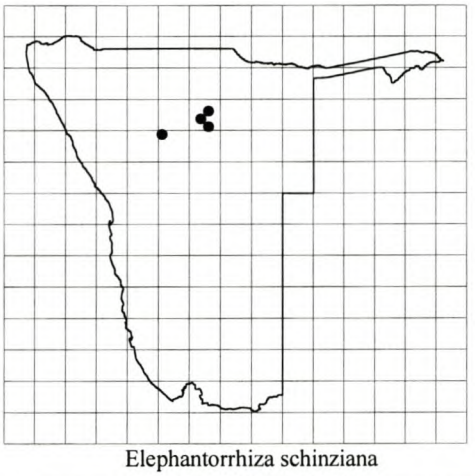

Ectadium latifolium



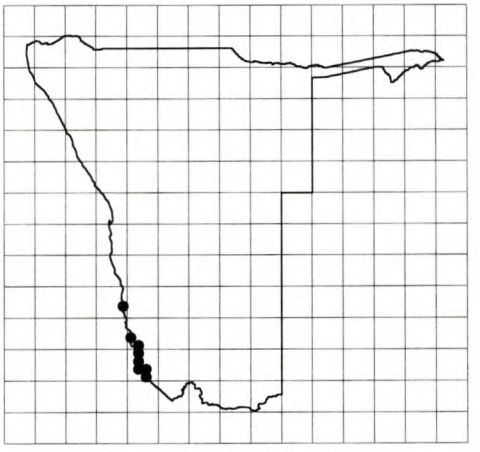
Ectadium rotundifolium



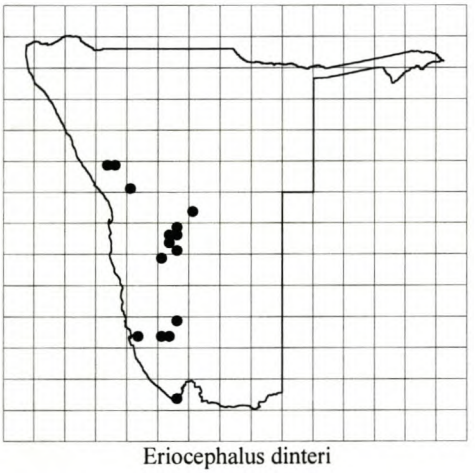
Elephantorrhiza rangei



Elephantorrhiza schinziana

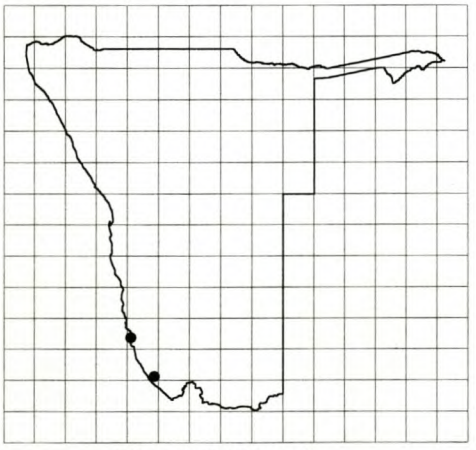


Eremothamnus marlothianus

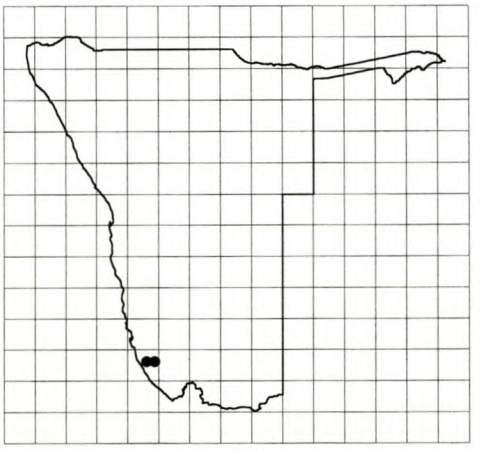


Eriocephalus dinteri

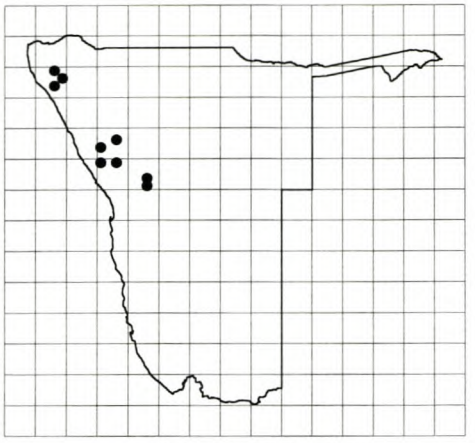
Eriocephalus giessii



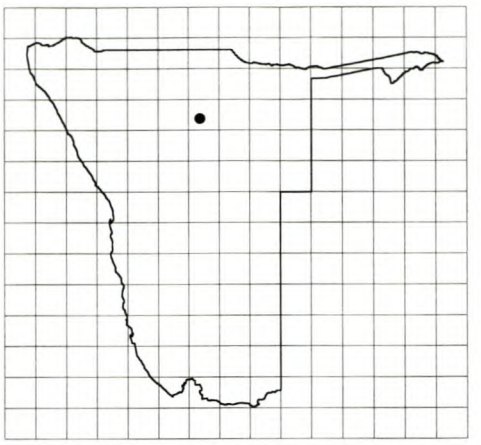
Eriocephalus kingesii



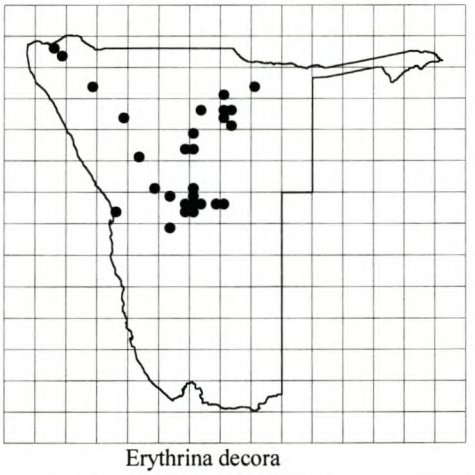
Eriocephalus klinghardtensis



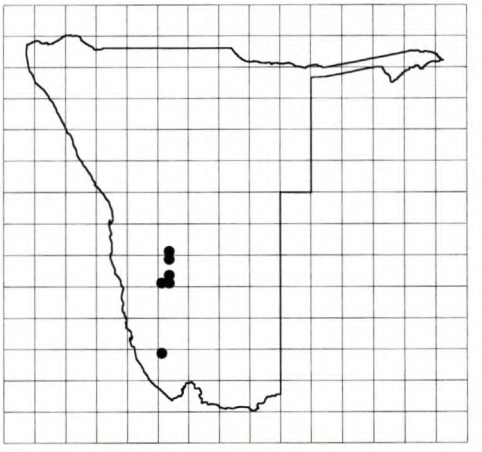
Eriocephalus pinnatus



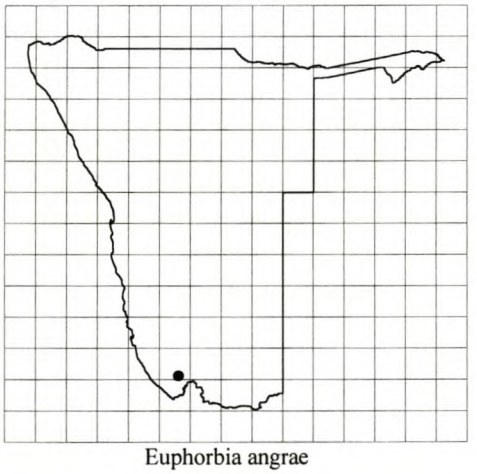
Eriosema harmsiana



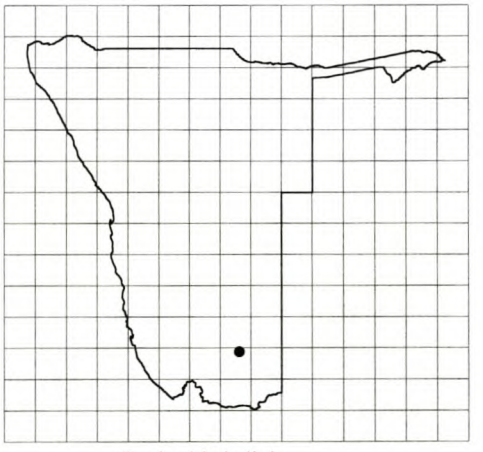
Erythrina decora



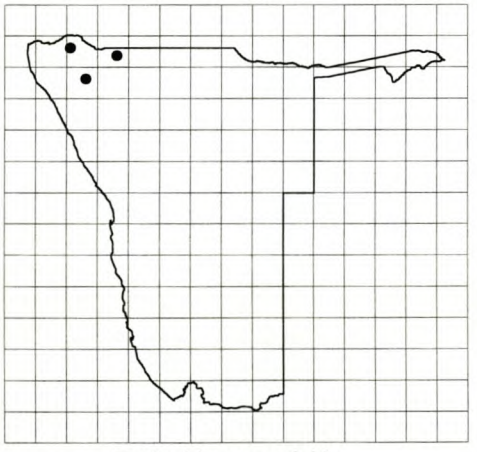
Euclea asperrima



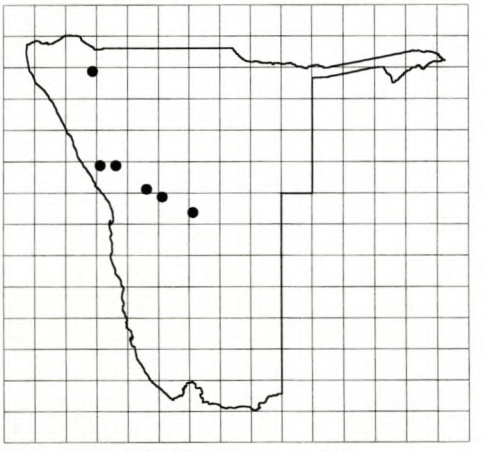
Euphorbia angrae



Euphorbia baliola



Euphorbia caperonioides



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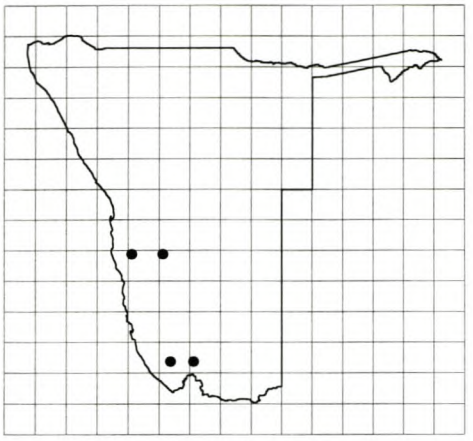

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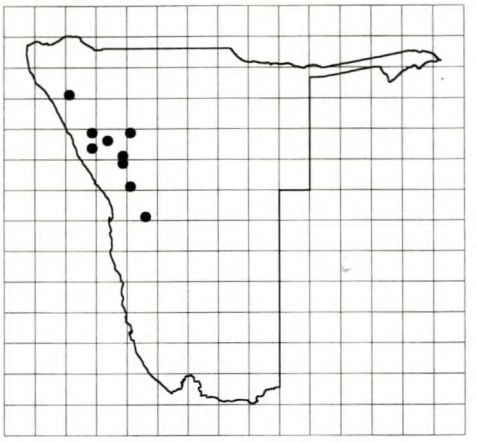
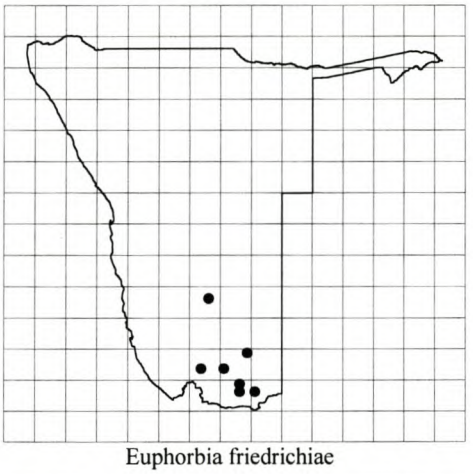
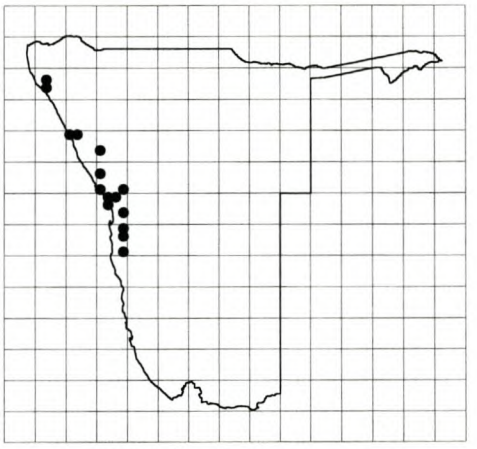


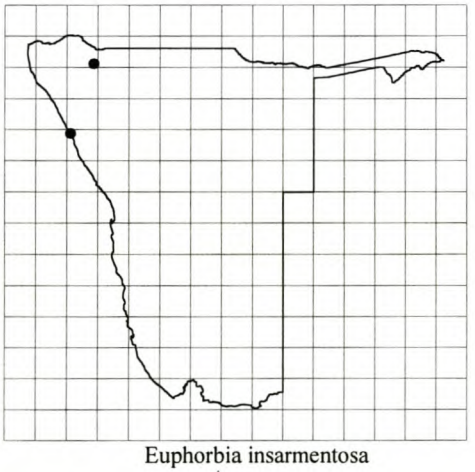
Euphorbia damarana



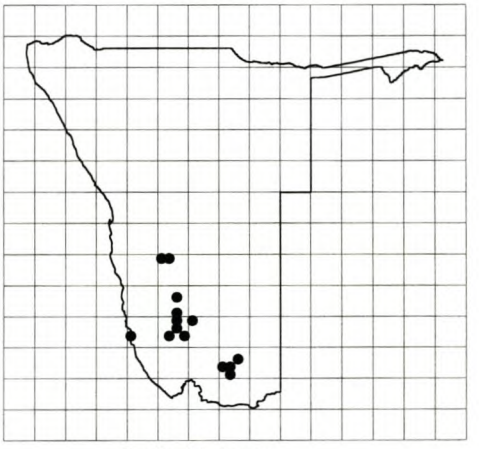
Euphorbia friedrichiae



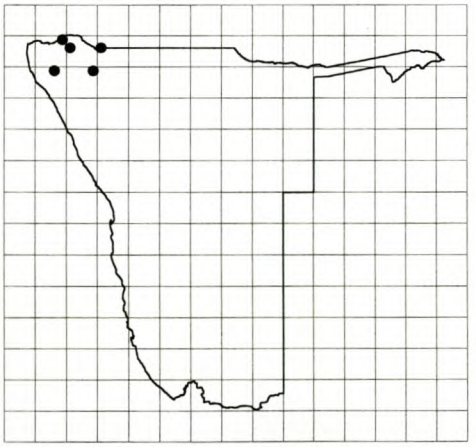
Euphorbia giessii



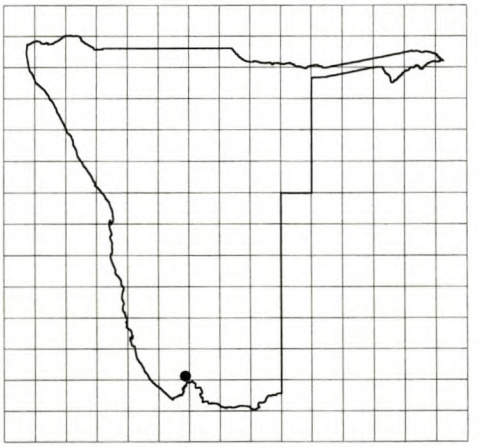
Euphorbia insarmentosa



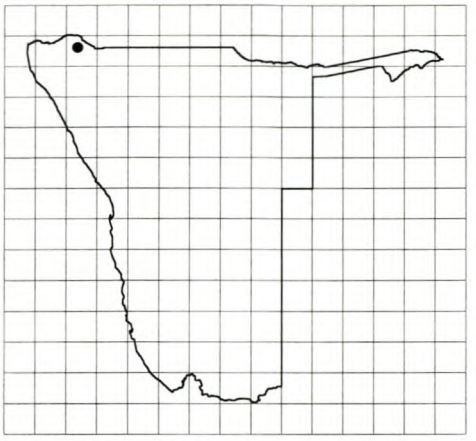
Euphorbia juttae



Euphorbia kaokoensis



Euphorbia lavrani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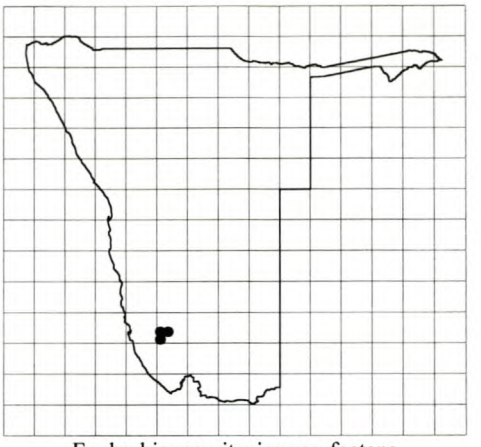
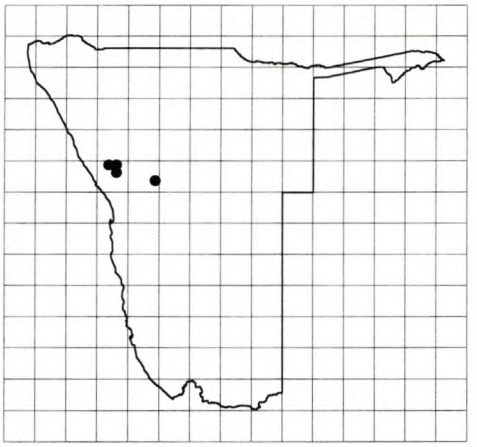
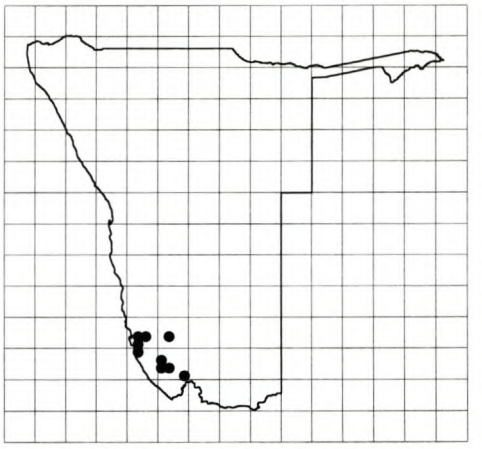
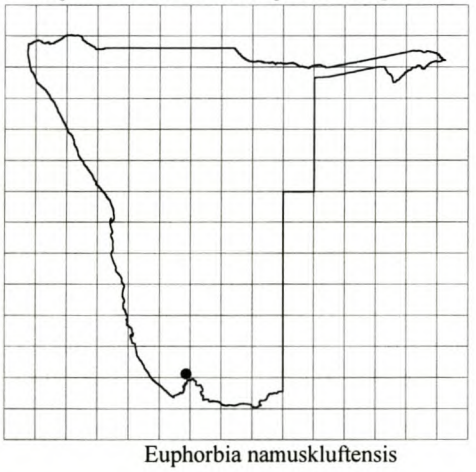
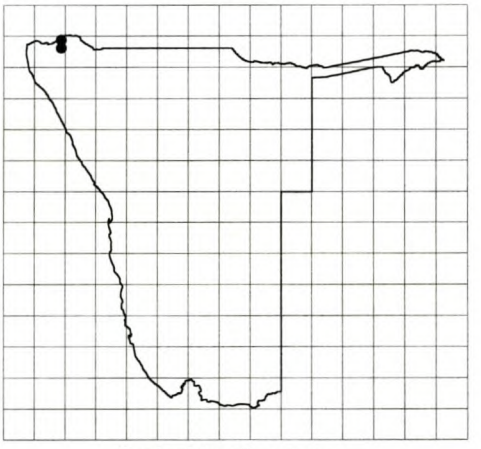
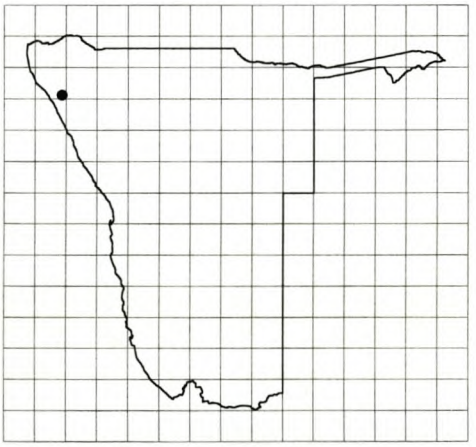

Euphorbia mauritanica var. foetens


Euphorbia monteiroi subsp. brandbergensis


Euphorbia namibensis


Euphorbia namuskluftensis


Euphorbia otjipembana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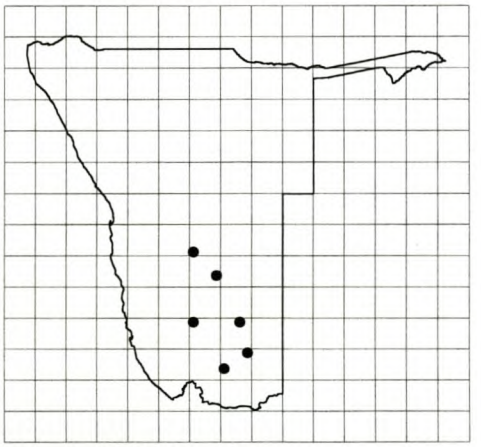
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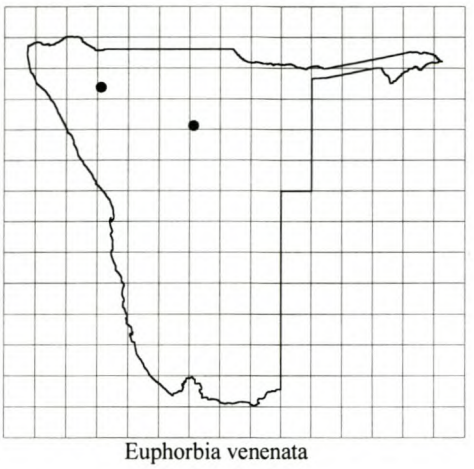
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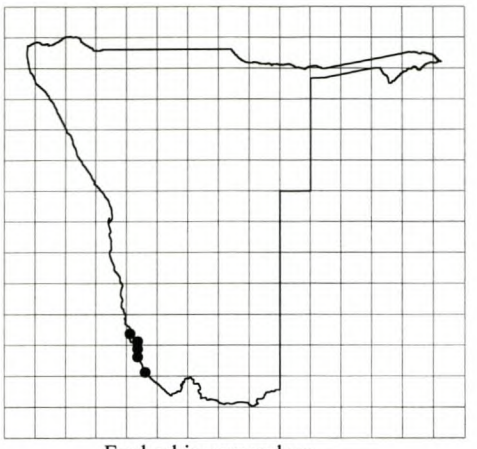
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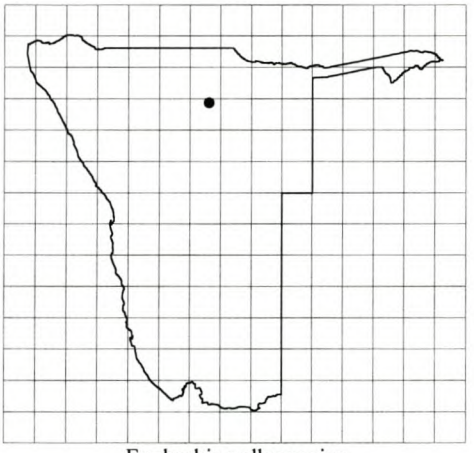
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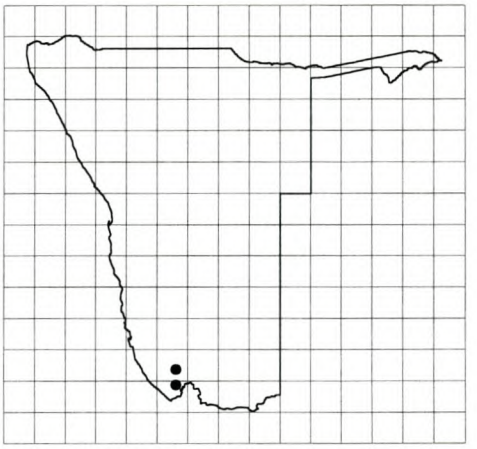
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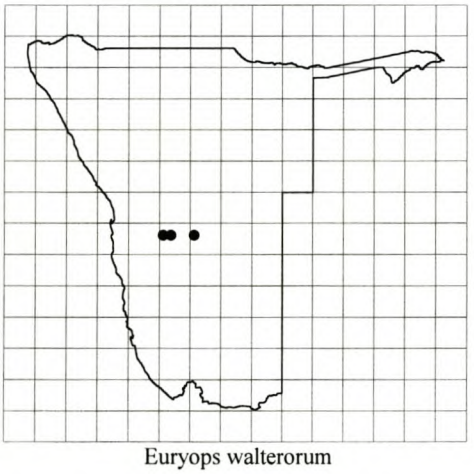
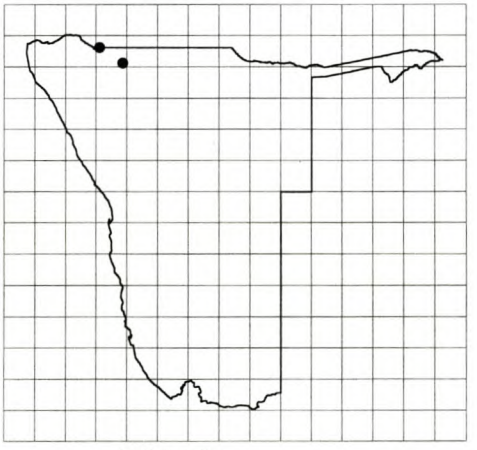

Euryops walterorum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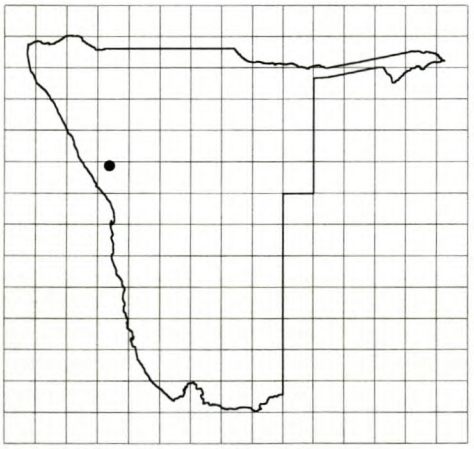
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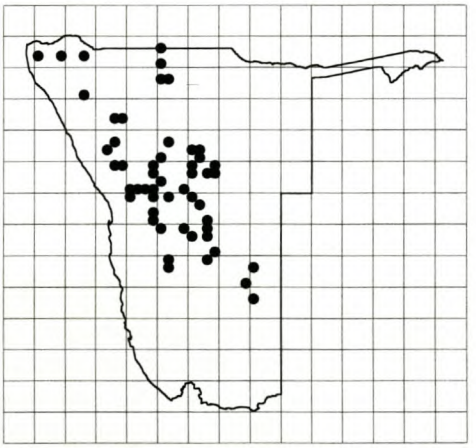
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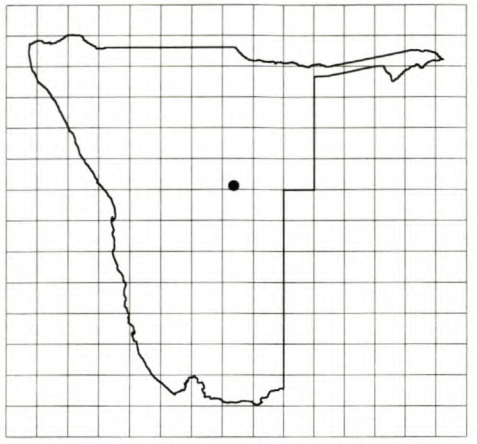
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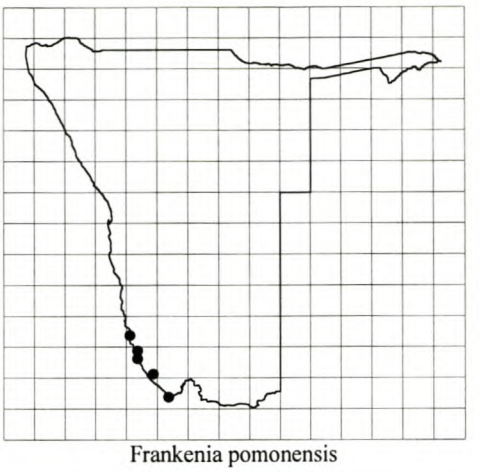
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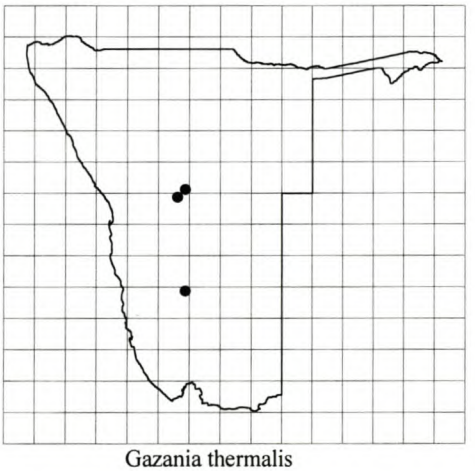
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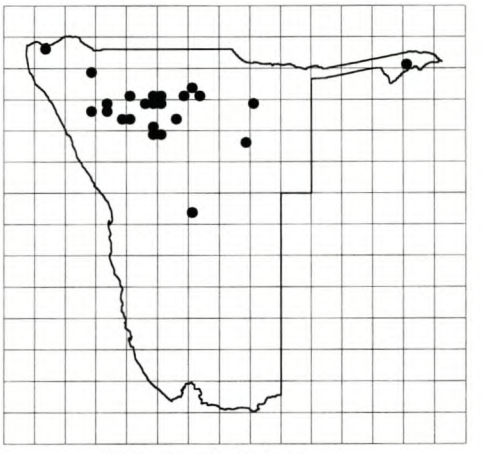
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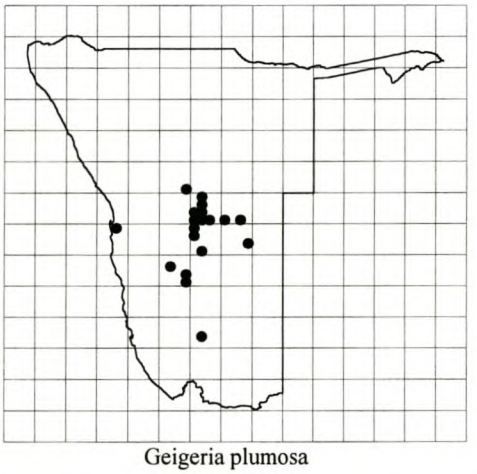
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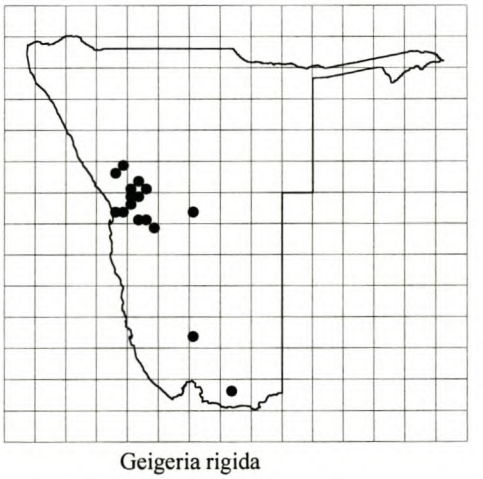
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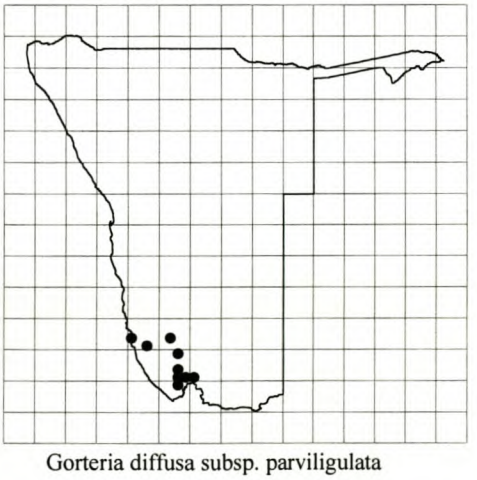
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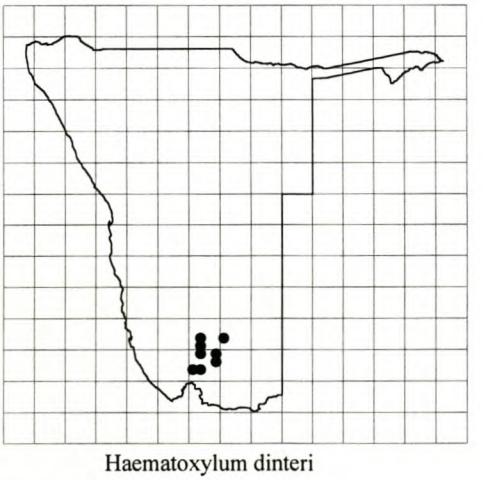
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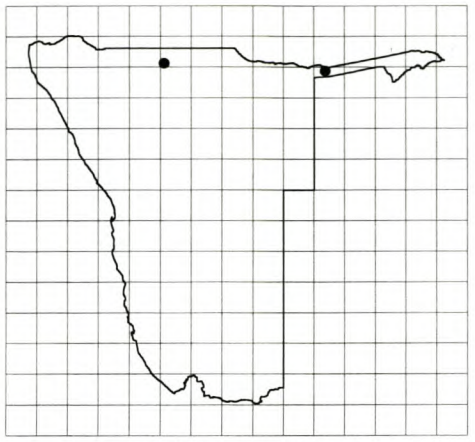
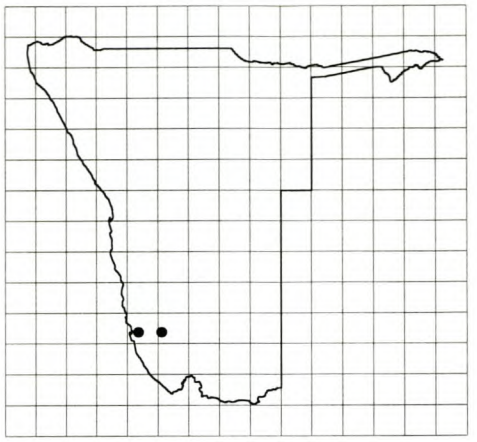


Helichrysum amboense



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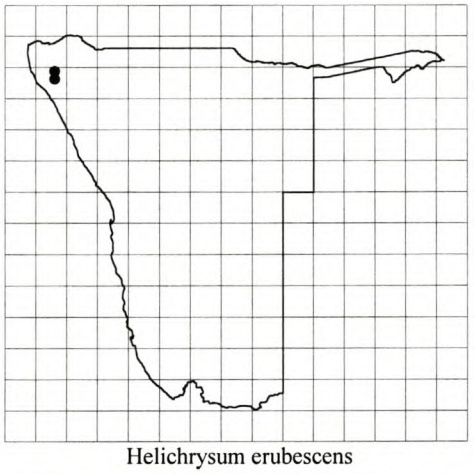

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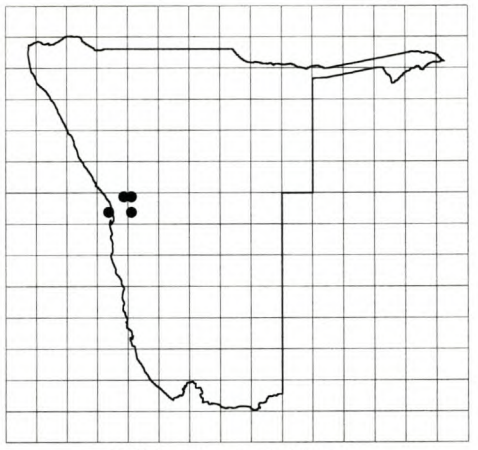

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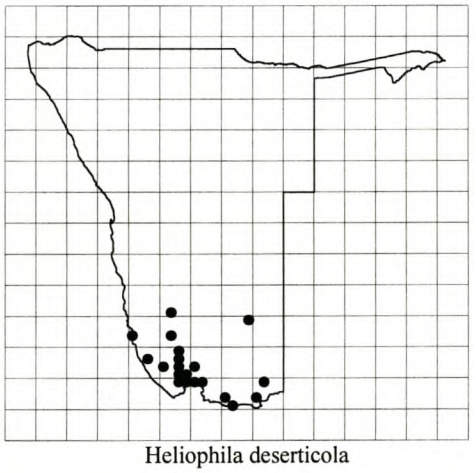

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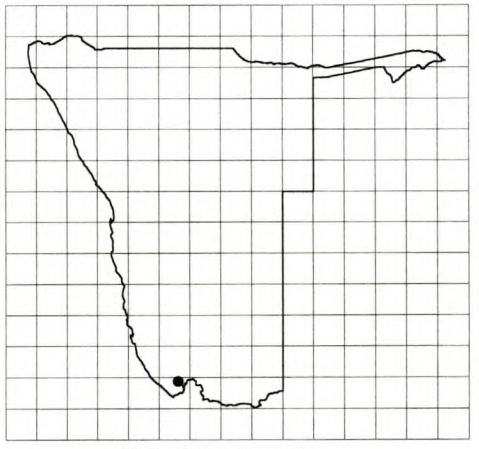

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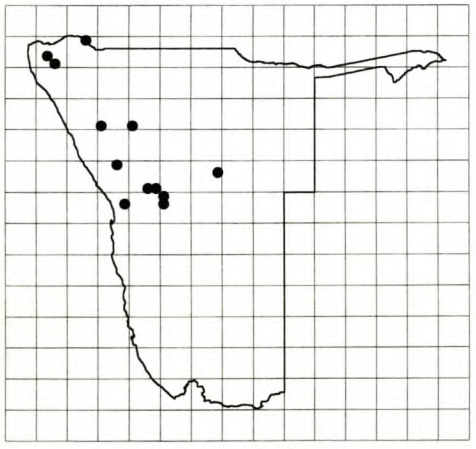

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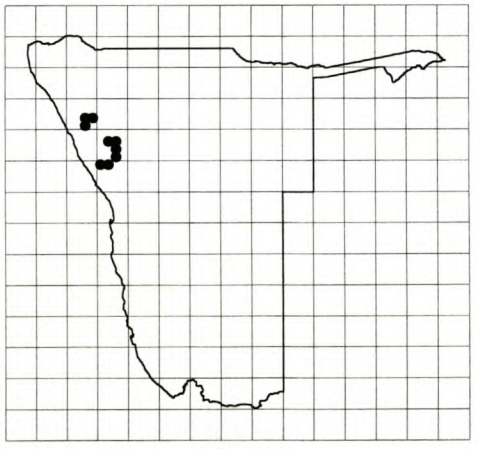
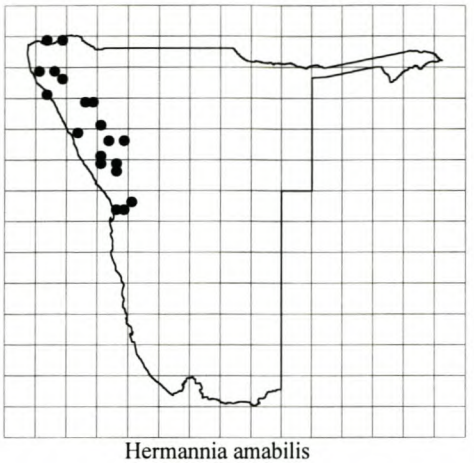


Hemizygia floccosa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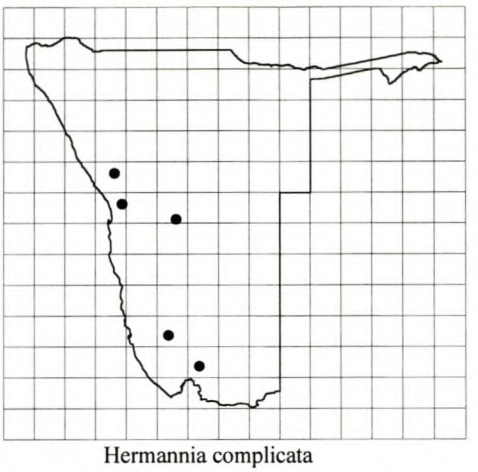
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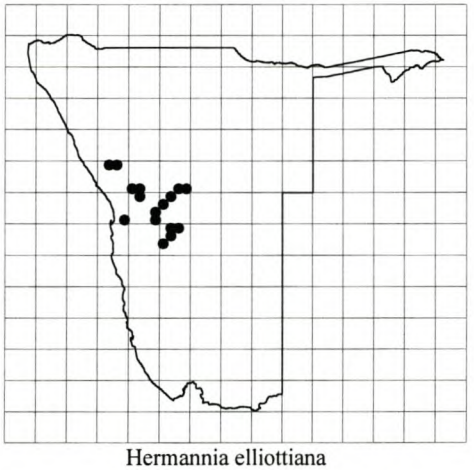
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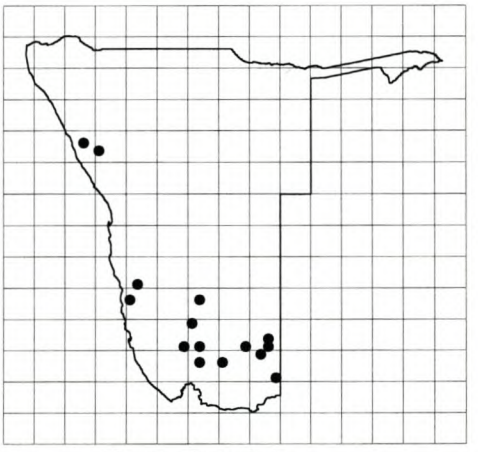
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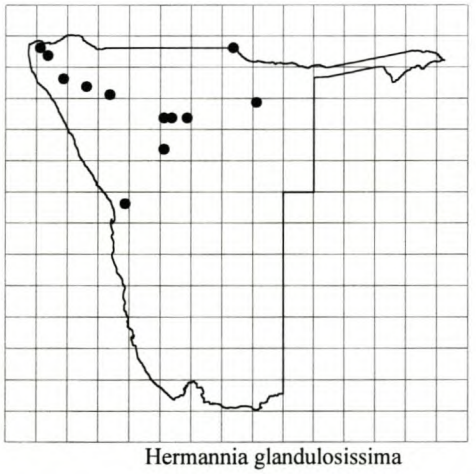
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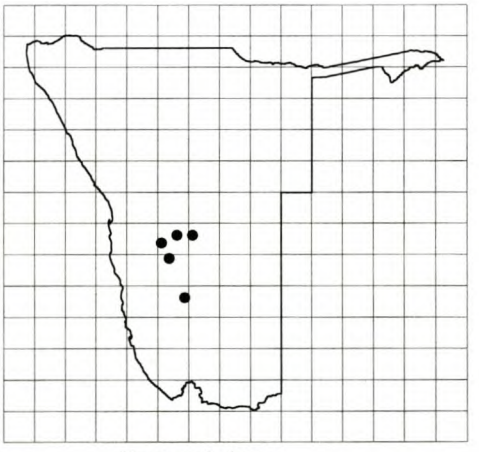
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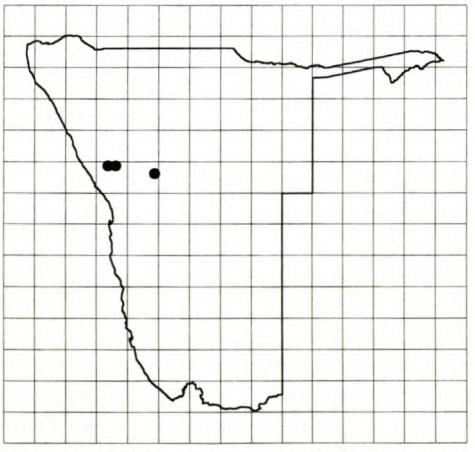
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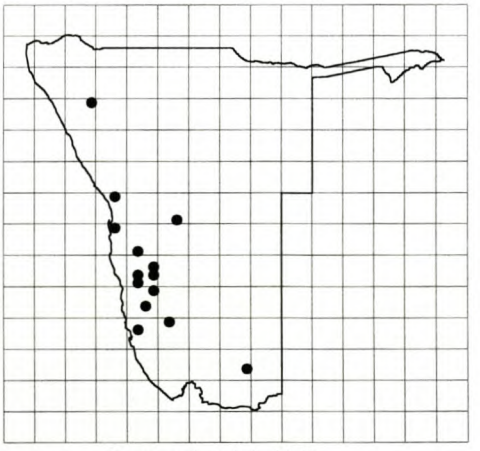
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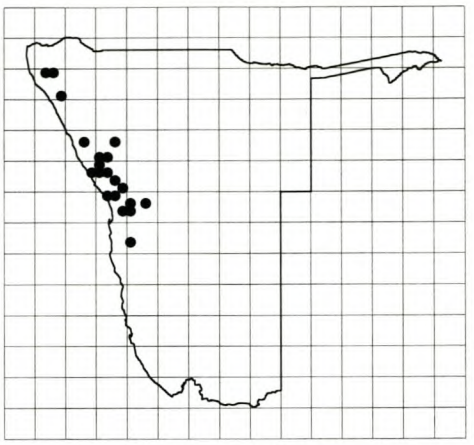
Hermannia solaniflora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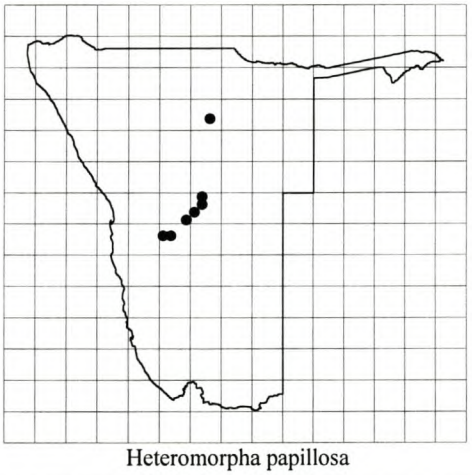
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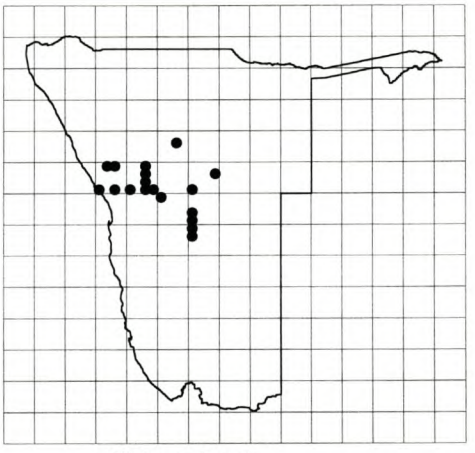
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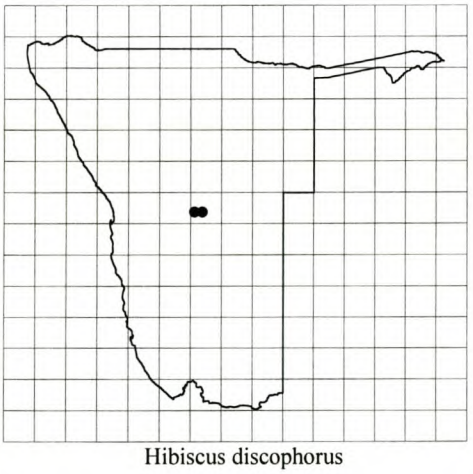
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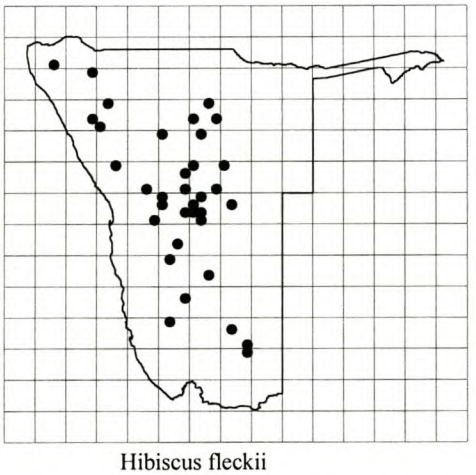
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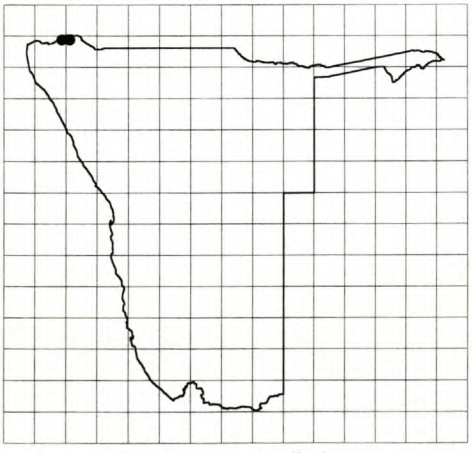
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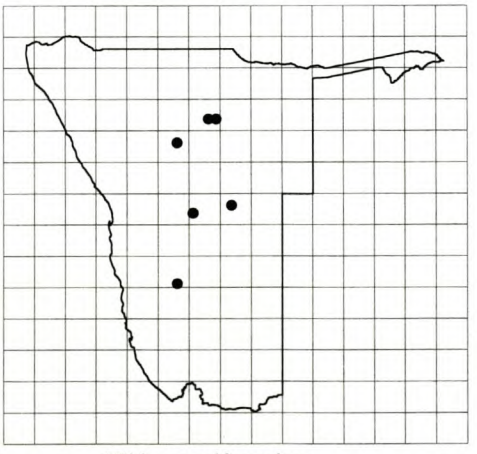
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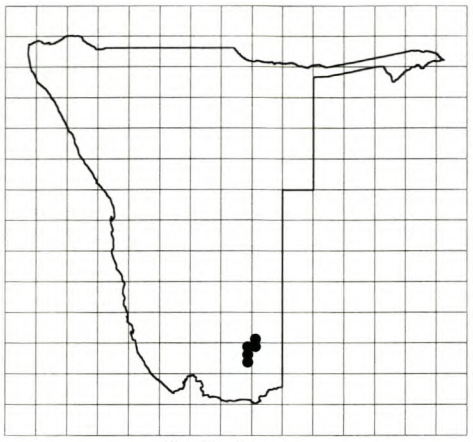
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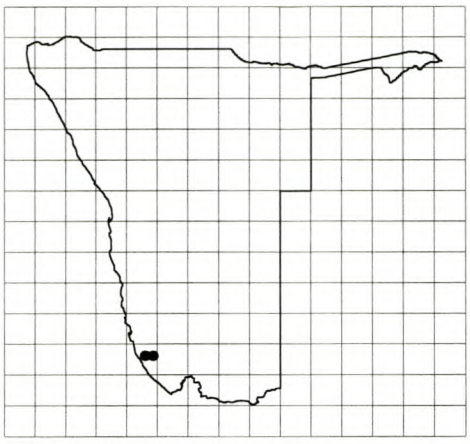
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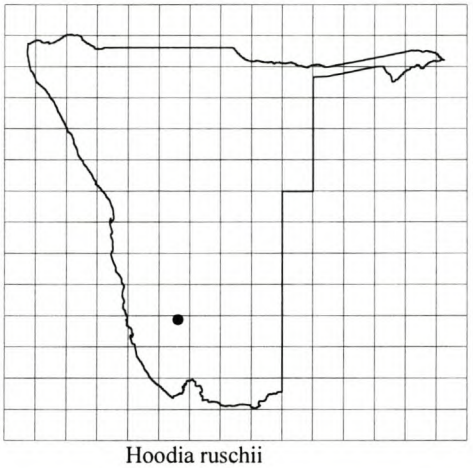
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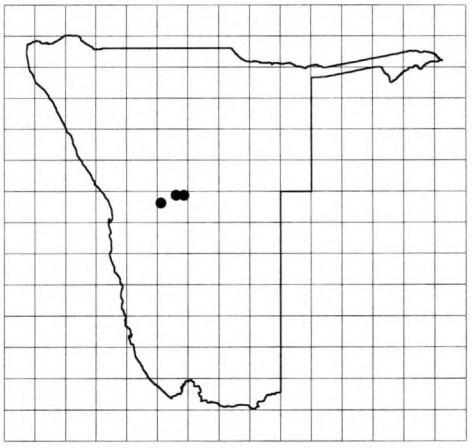
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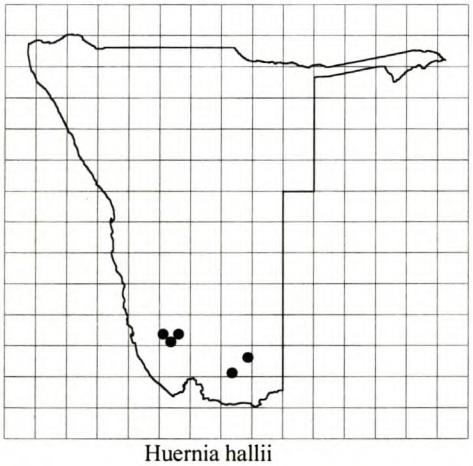
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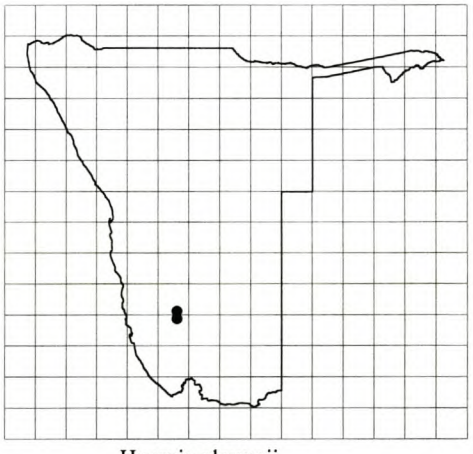
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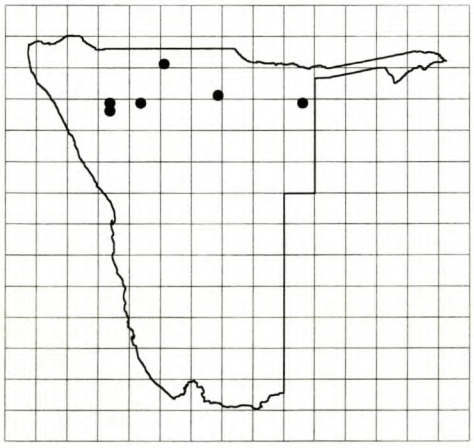
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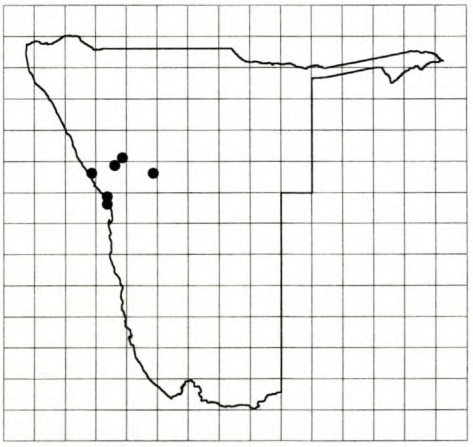
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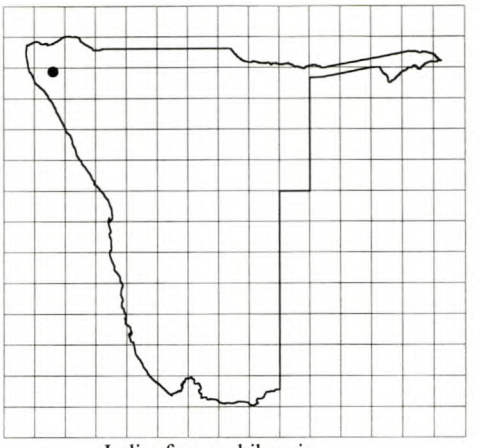
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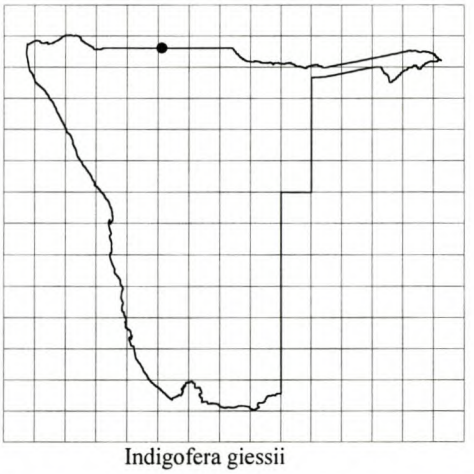
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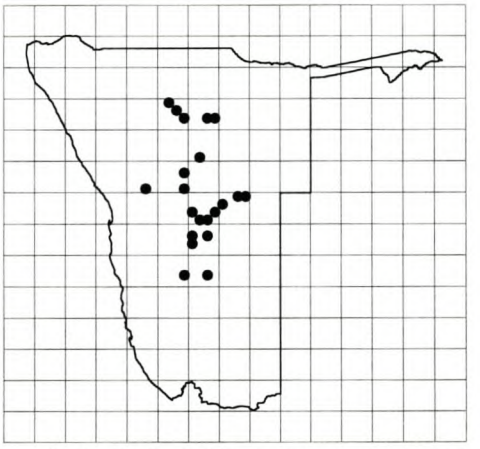
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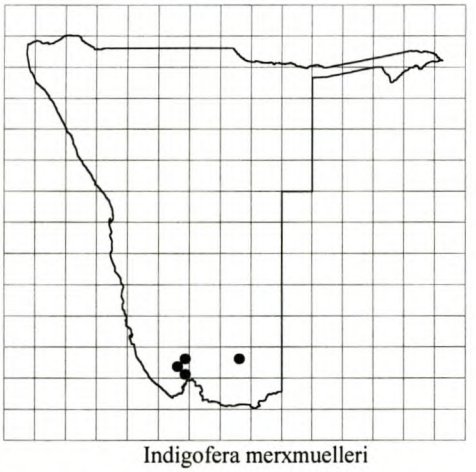
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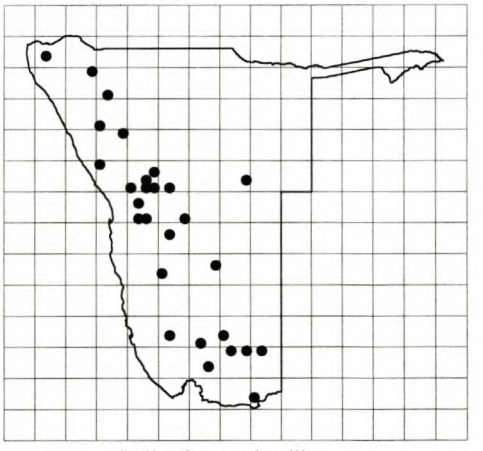
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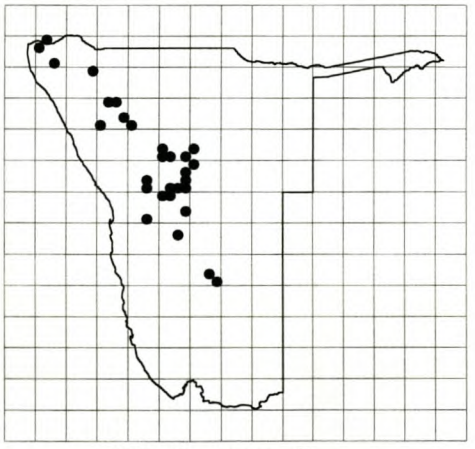
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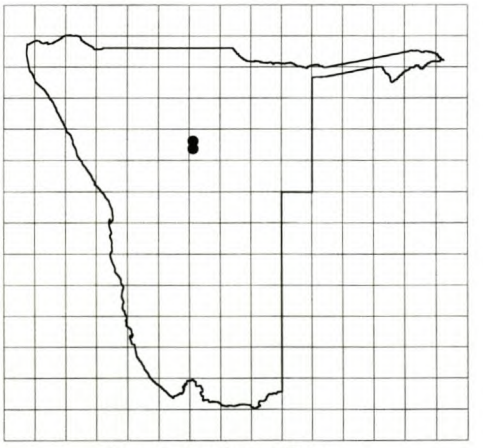
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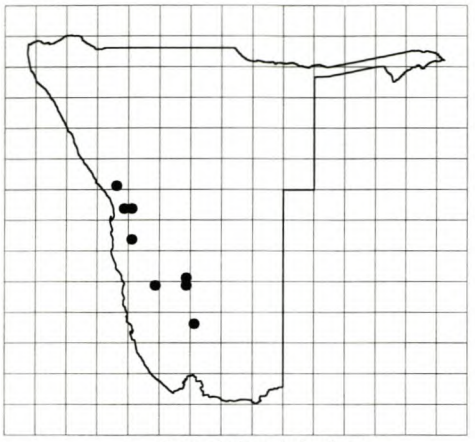
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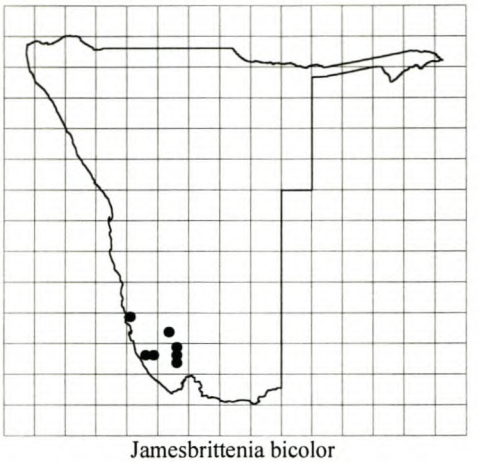
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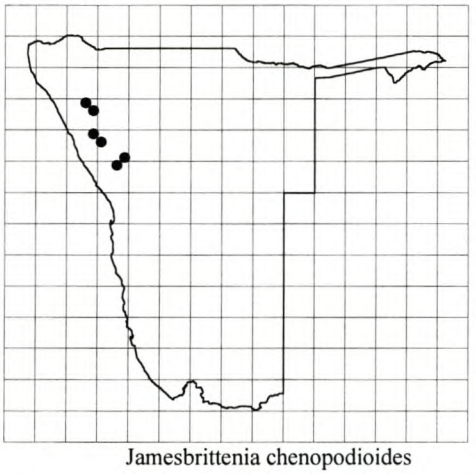
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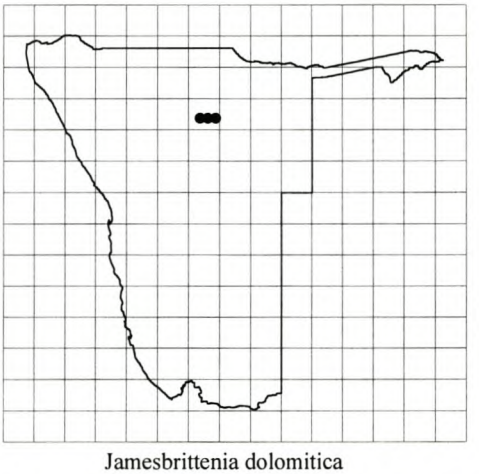
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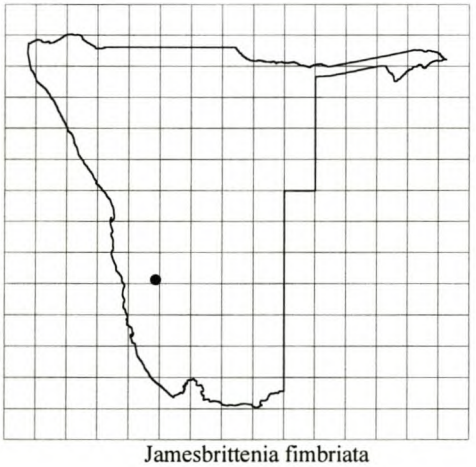
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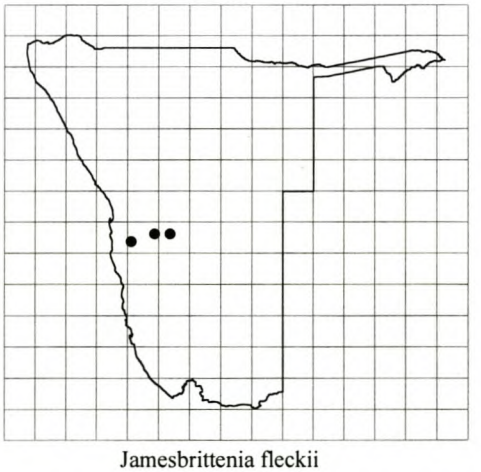
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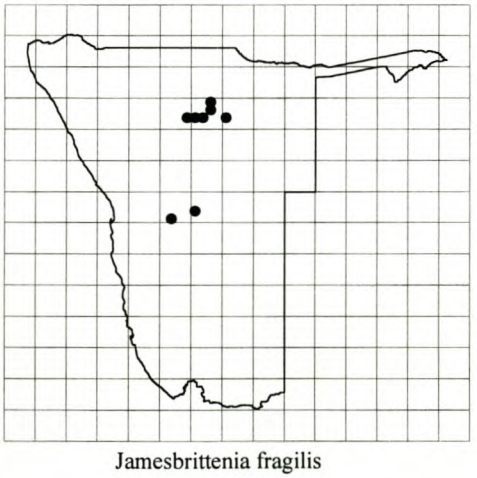
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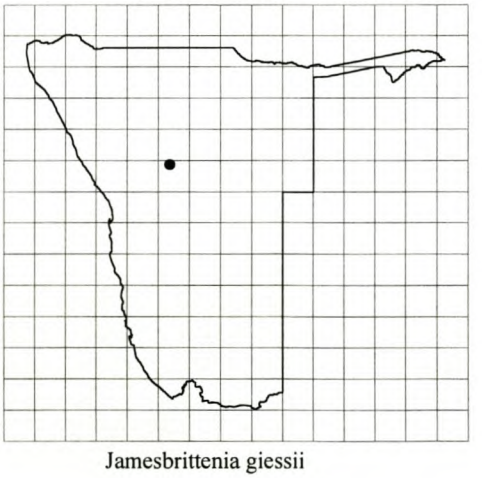
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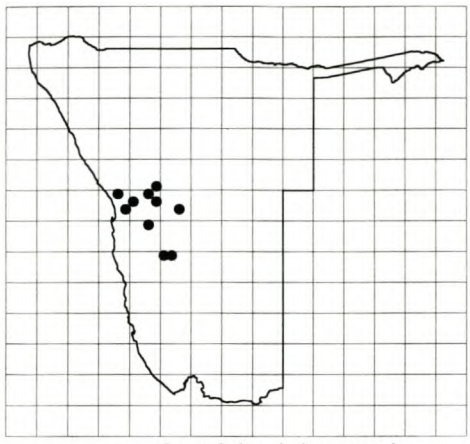
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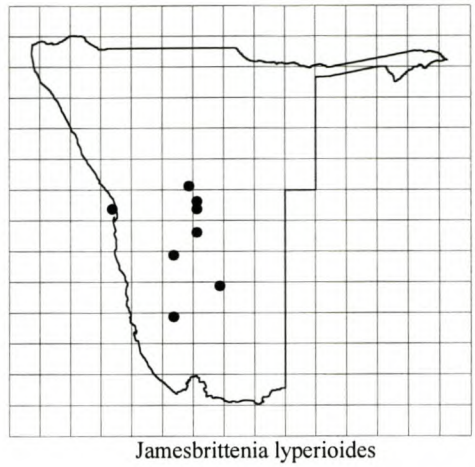
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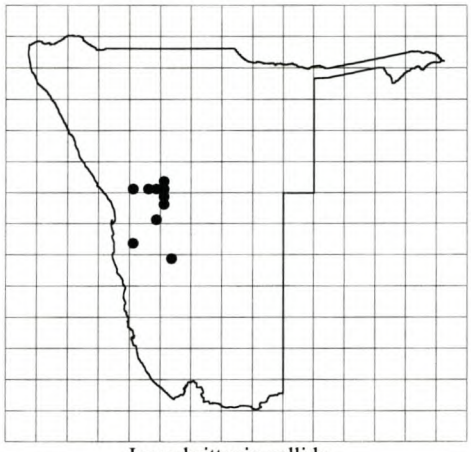
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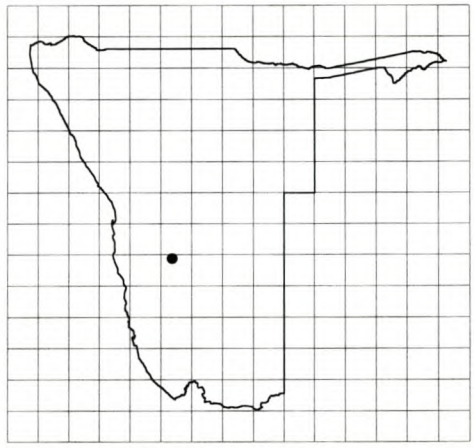
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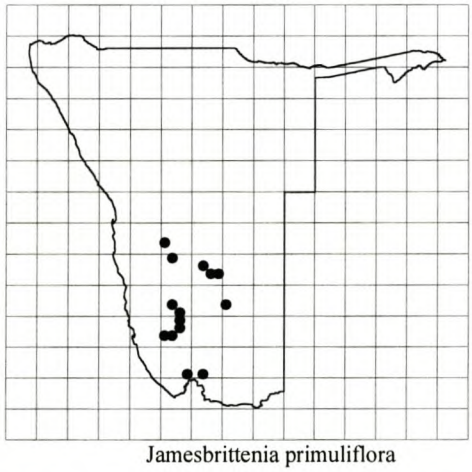
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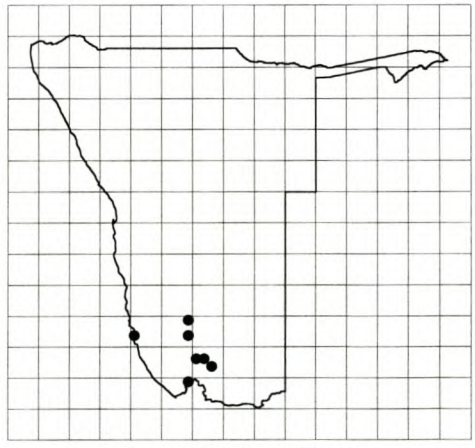
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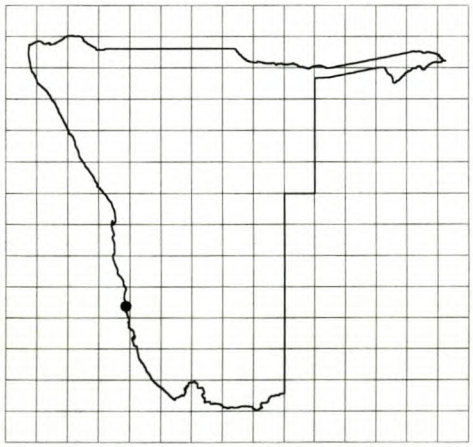
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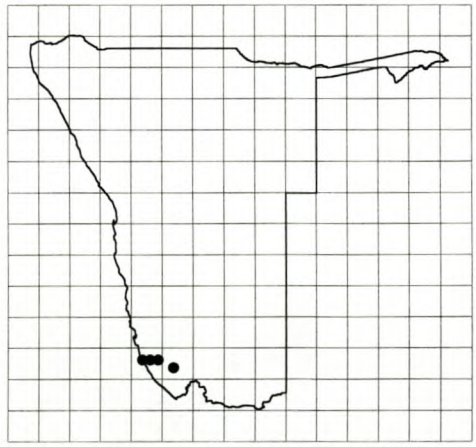
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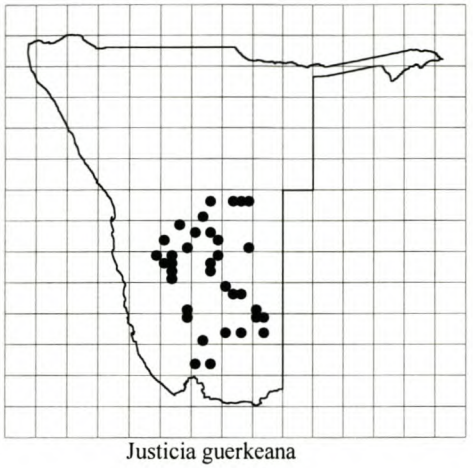
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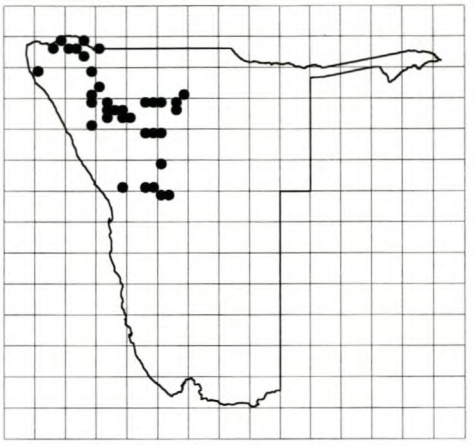
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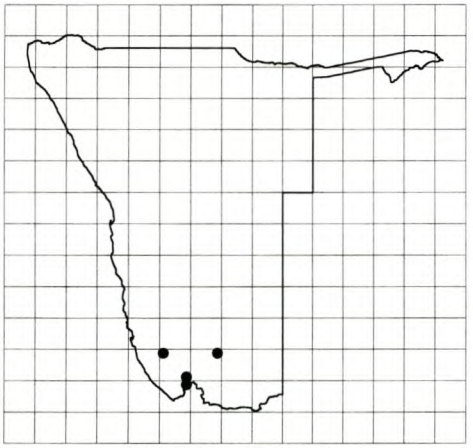
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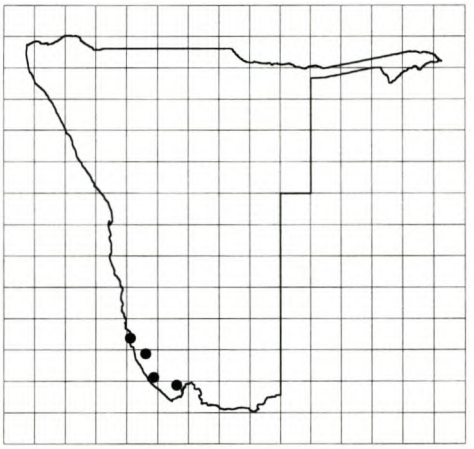
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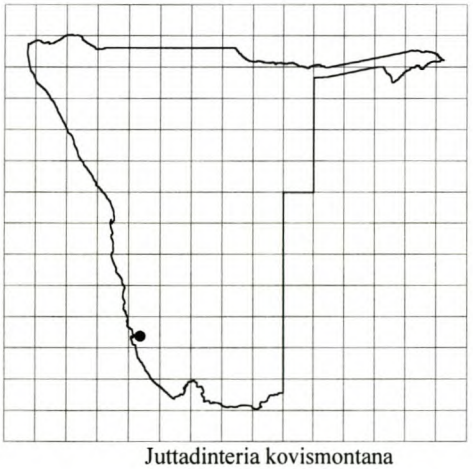
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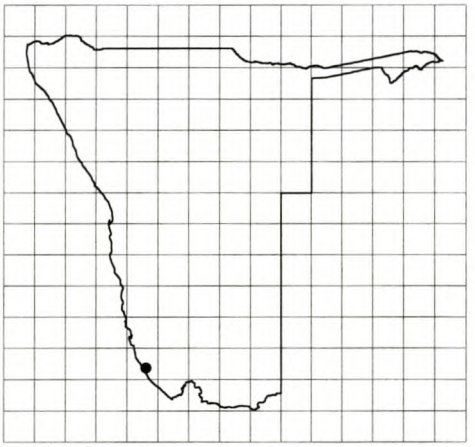
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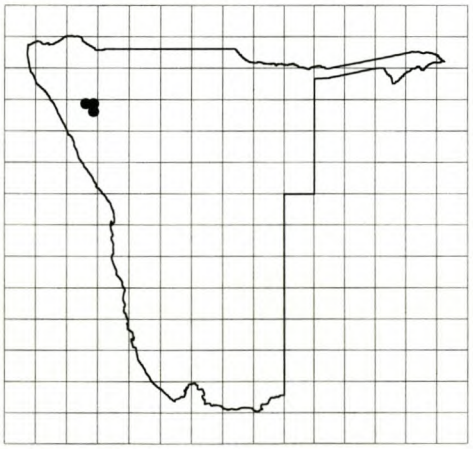
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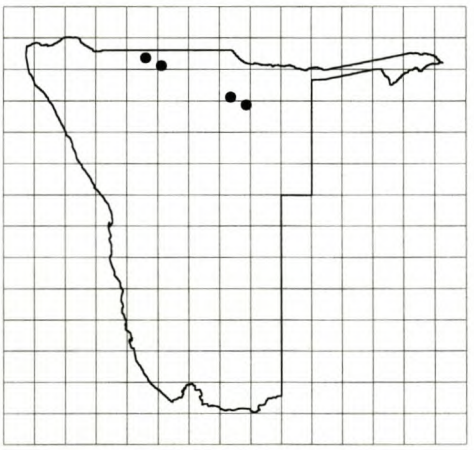
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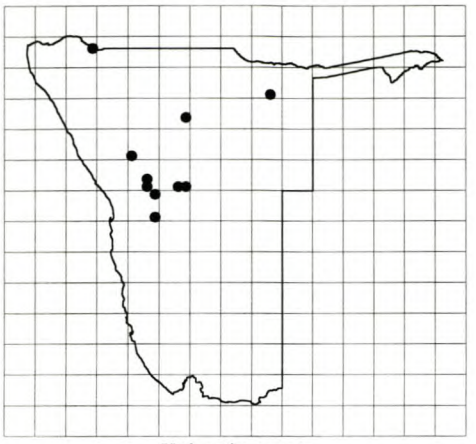
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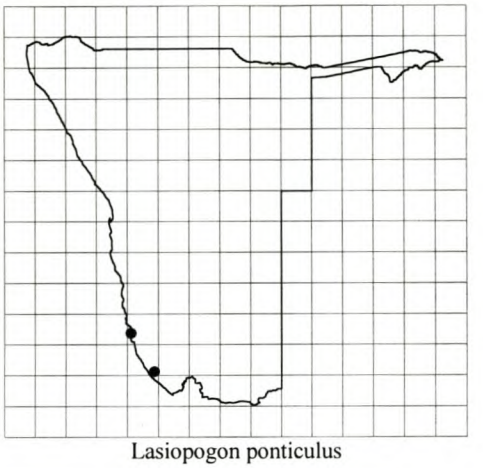
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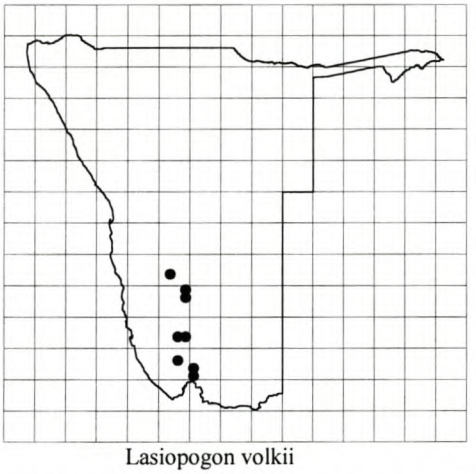
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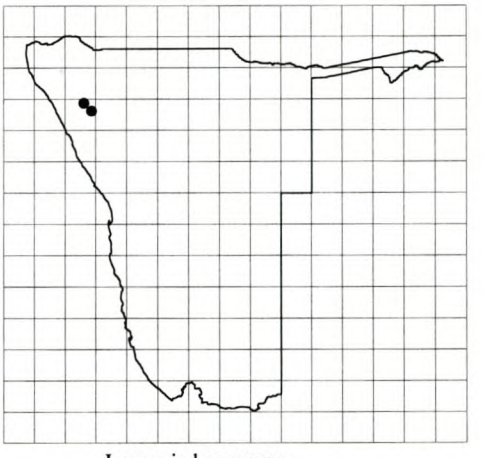
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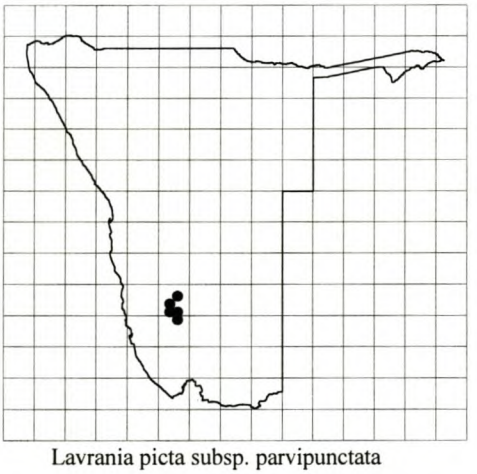
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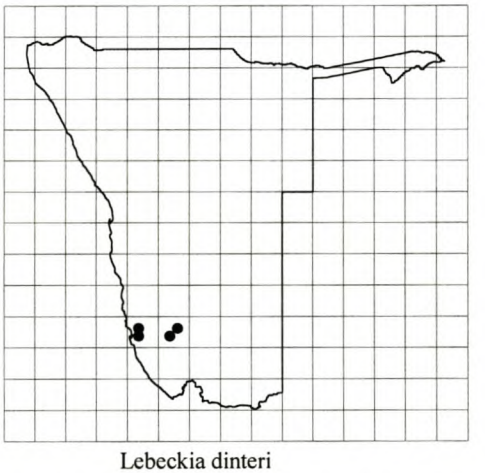
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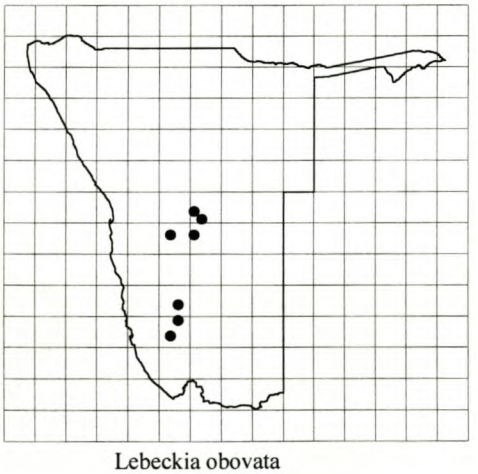
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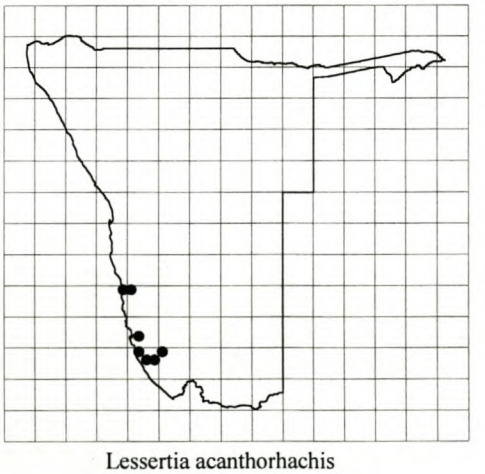
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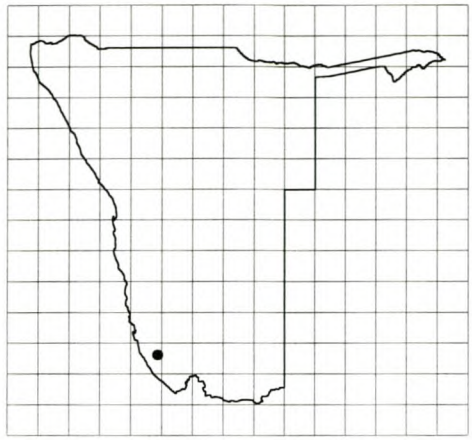

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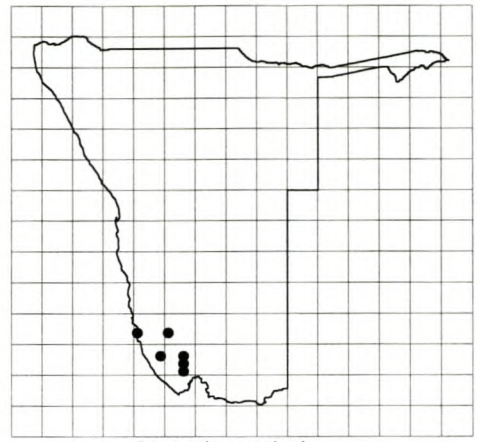

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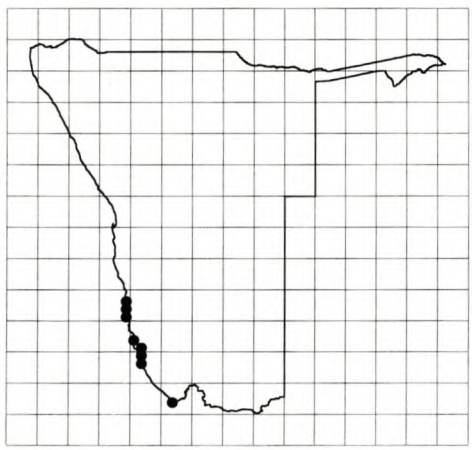
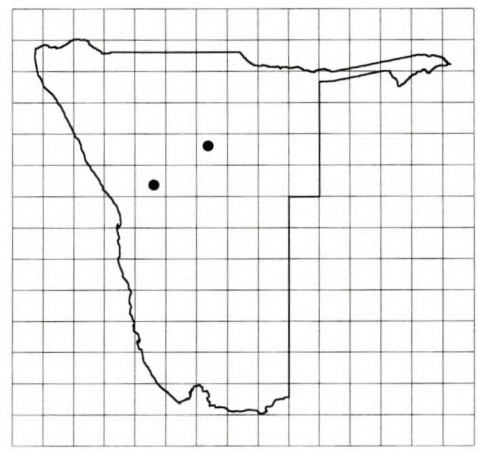
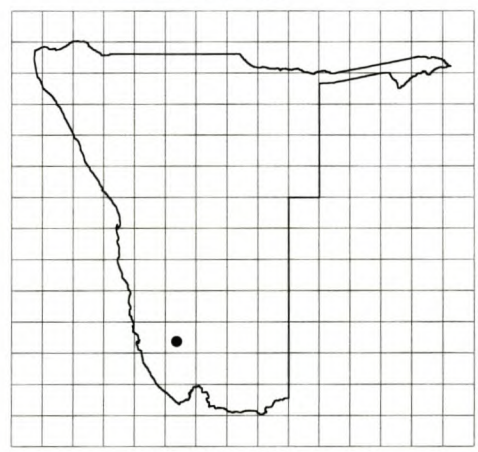


Limonium dyeri



Lobelia hereroensis

Lotononis bracteosa



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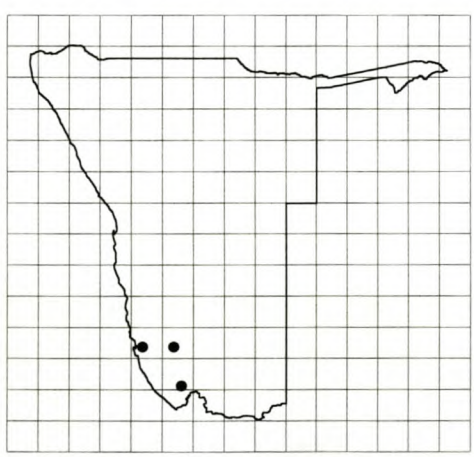

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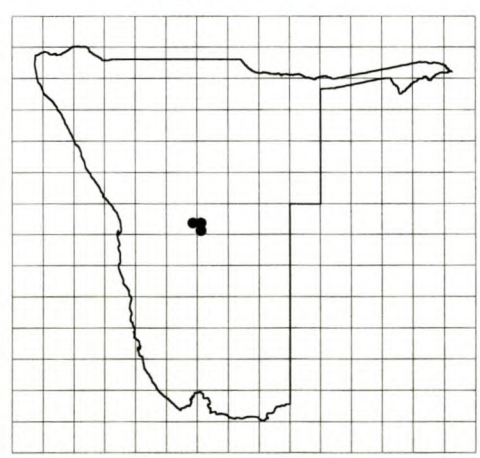

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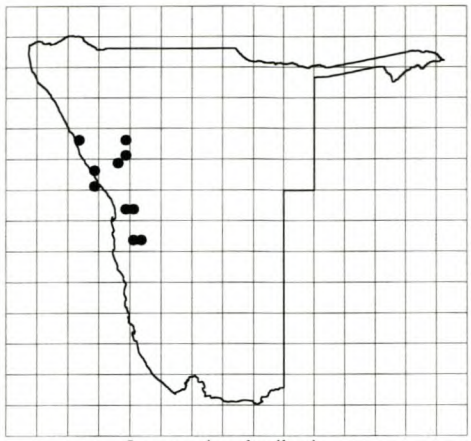
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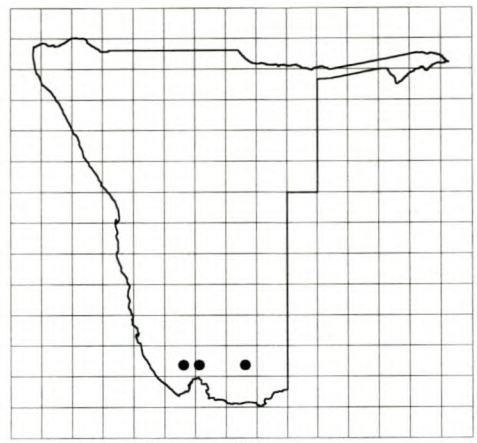
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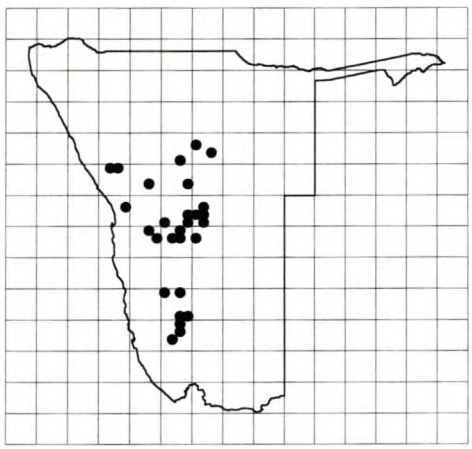
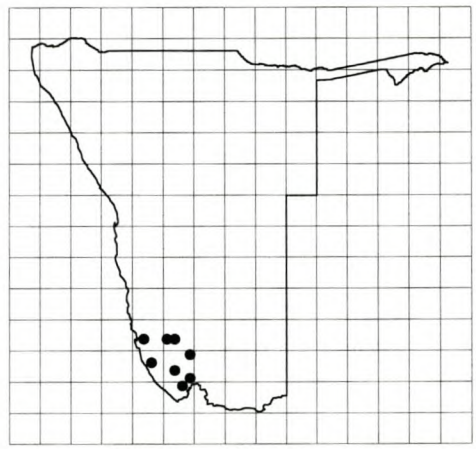
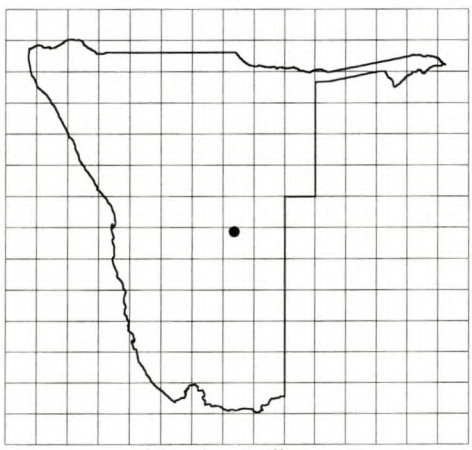

Manulea dubia


Manulea namibensis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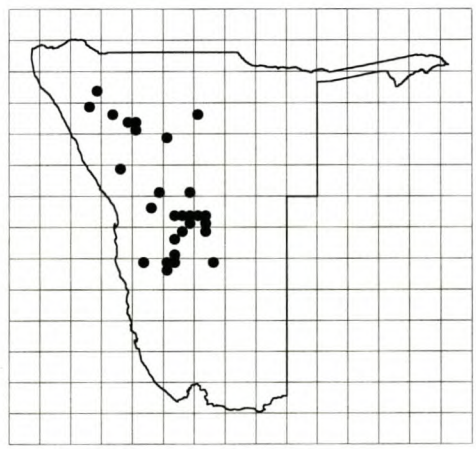
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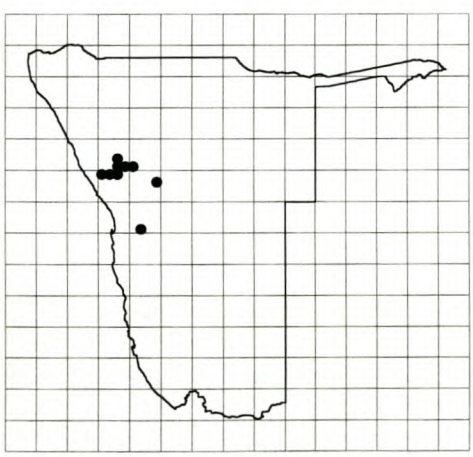
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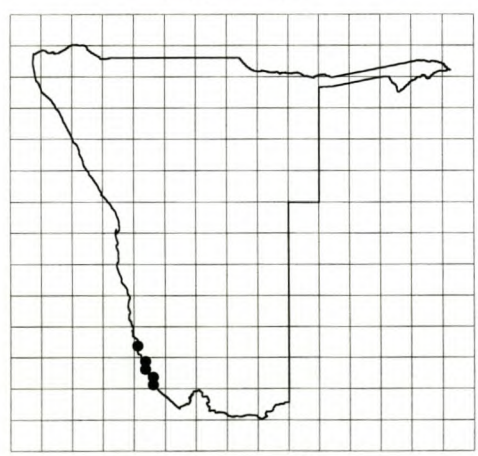
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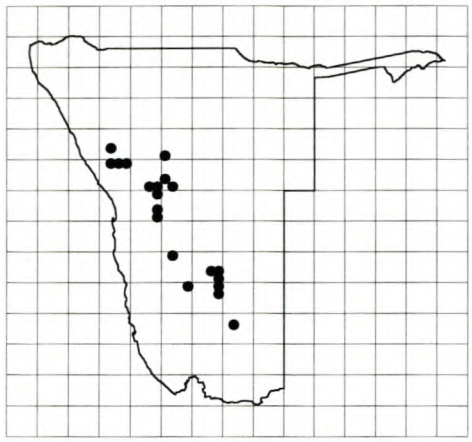
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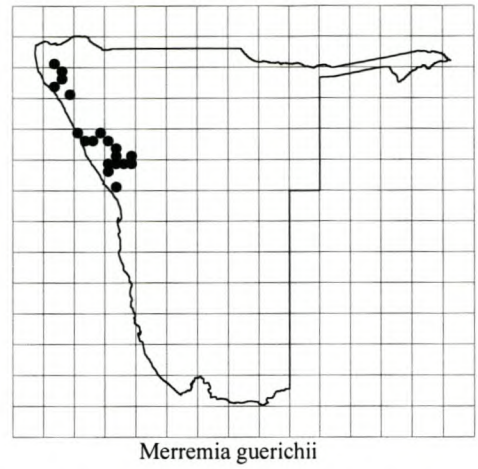
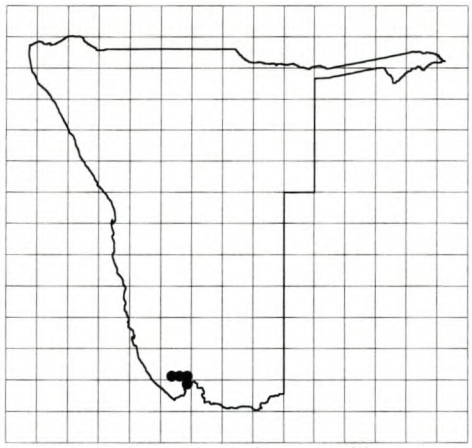
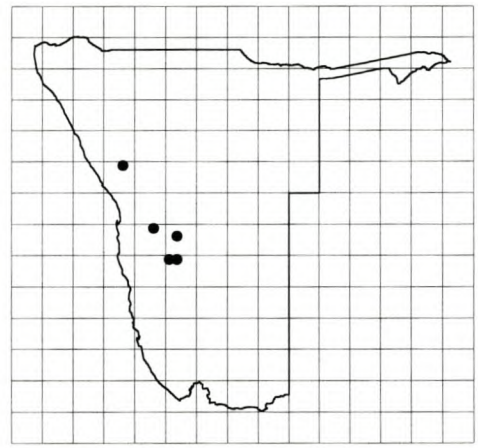
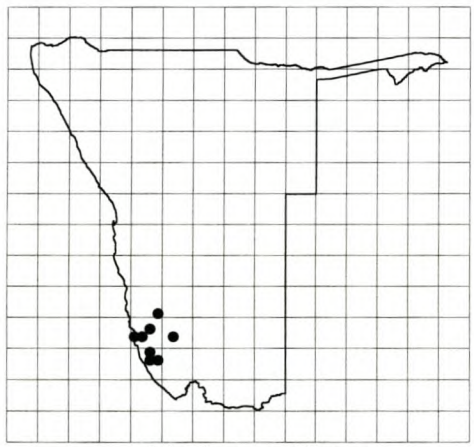

Merremia guerichii


Mesembryanthemum pellitum


Microloma hereroense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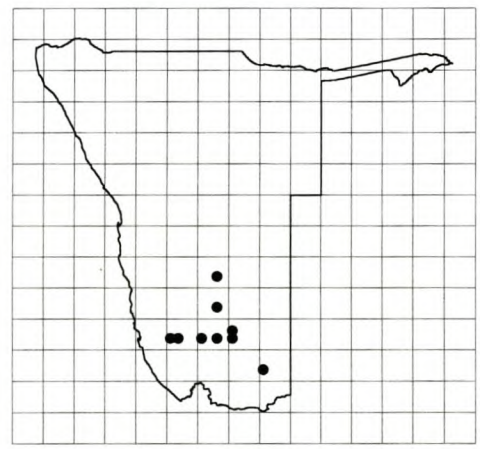
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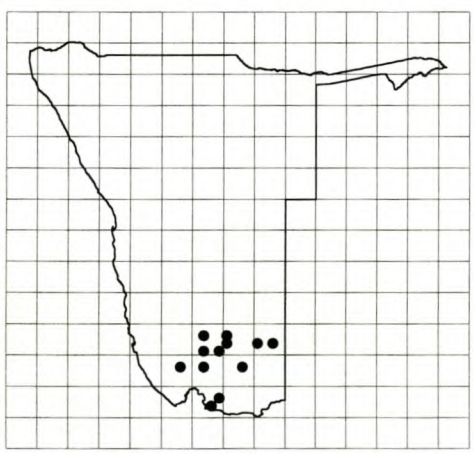
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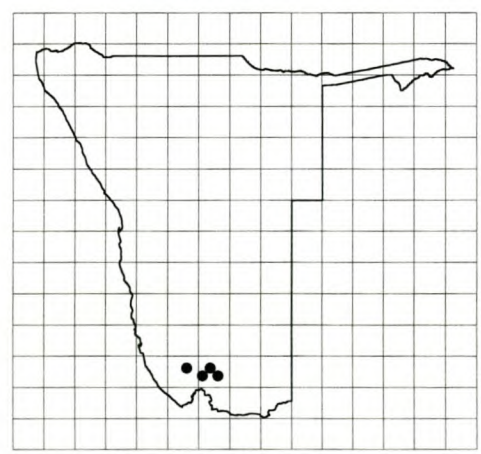
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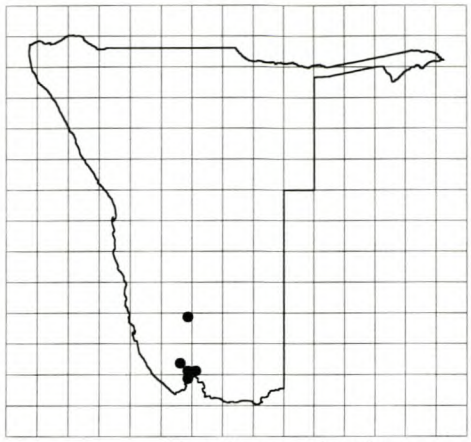
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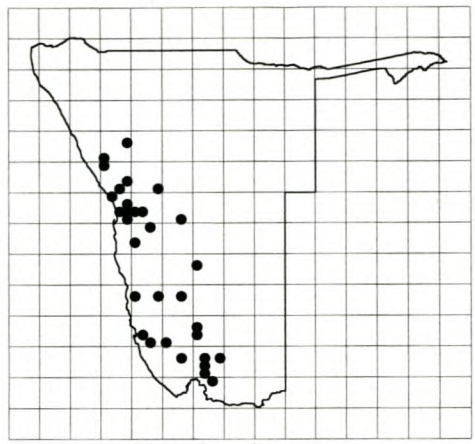
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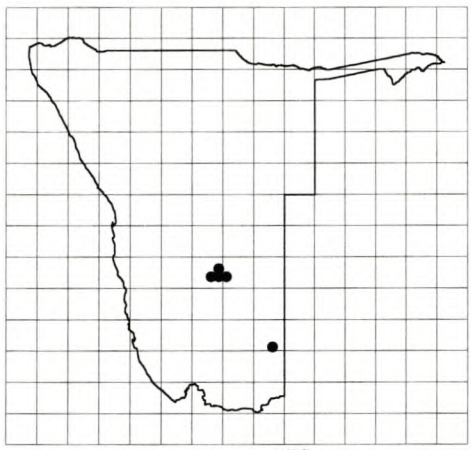
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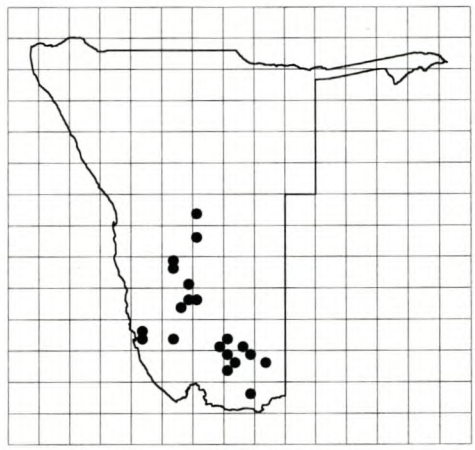
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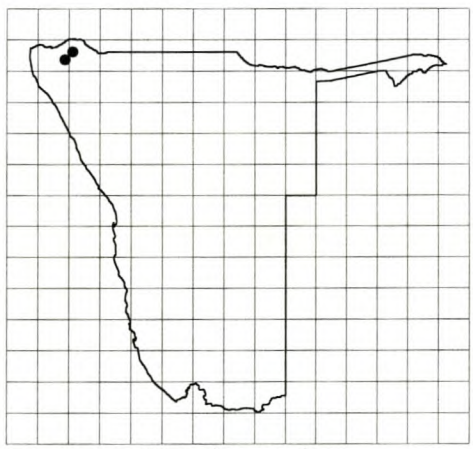
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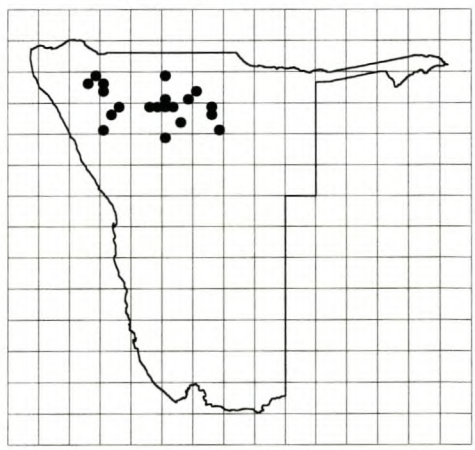
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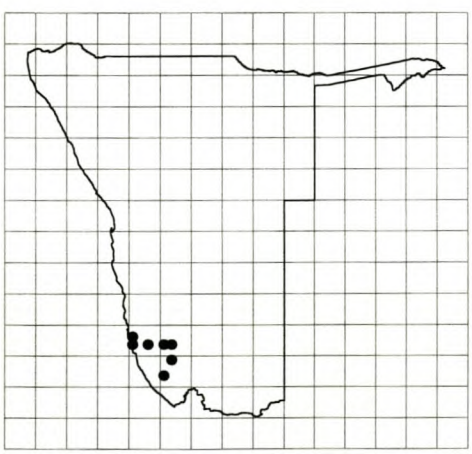
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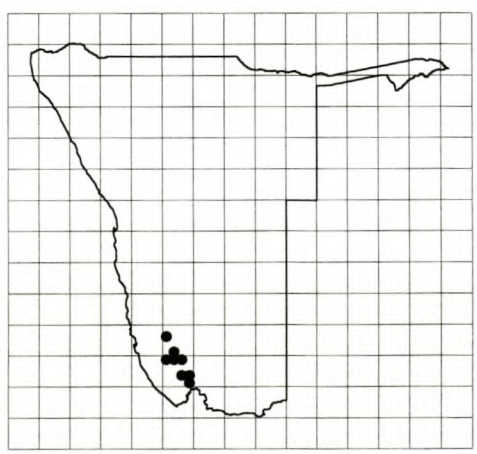
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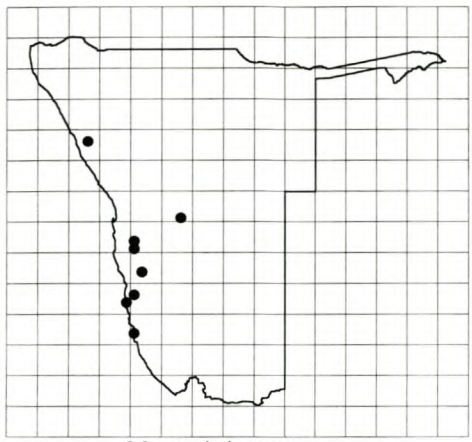
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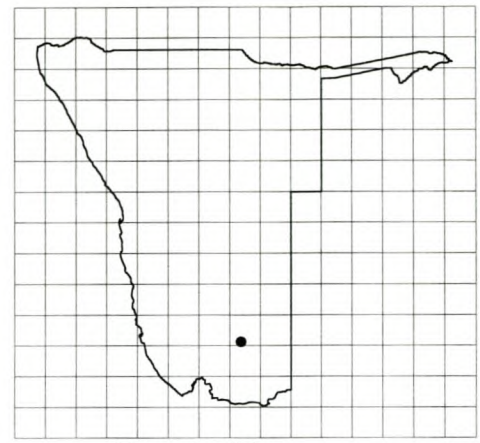
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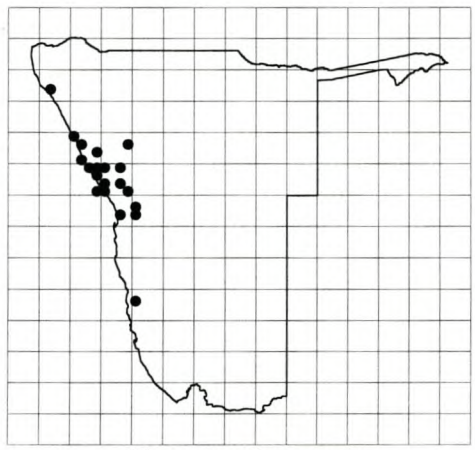
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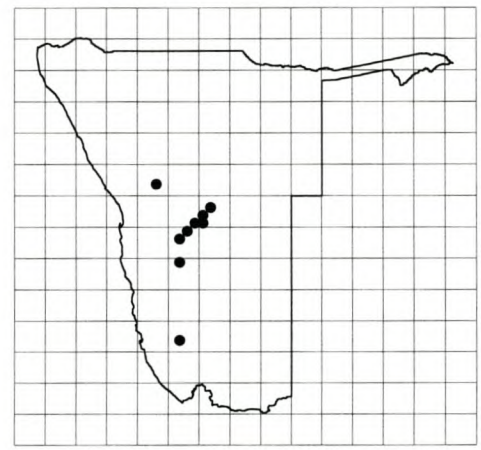
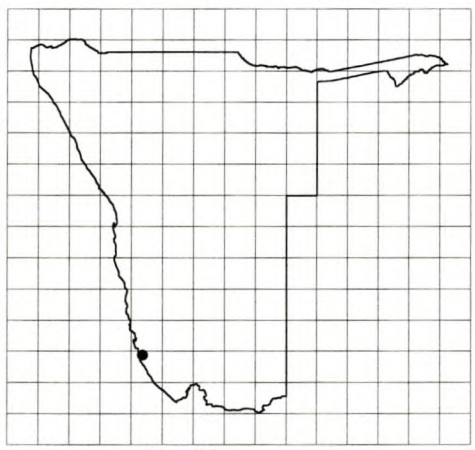

Namacodon schinzianum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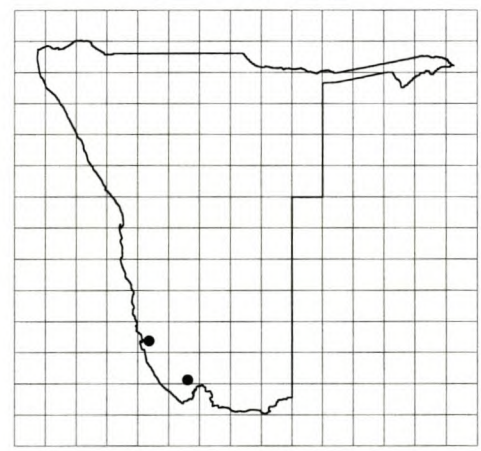
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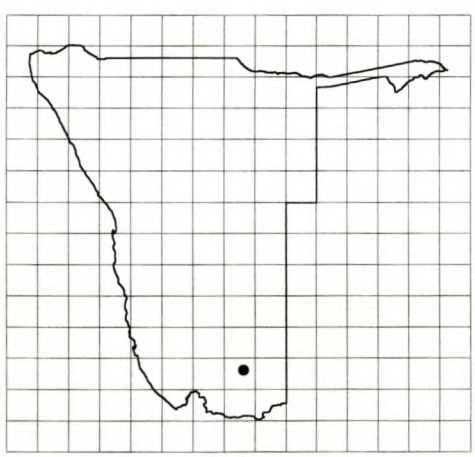
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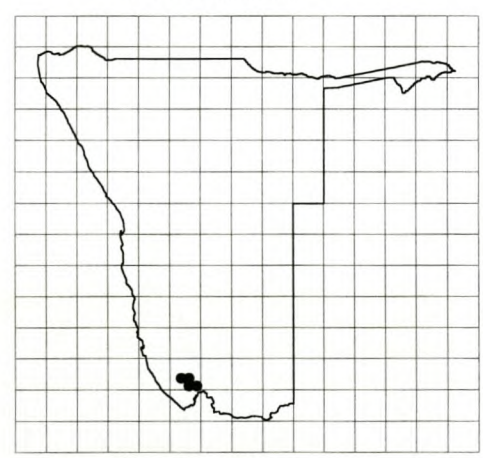
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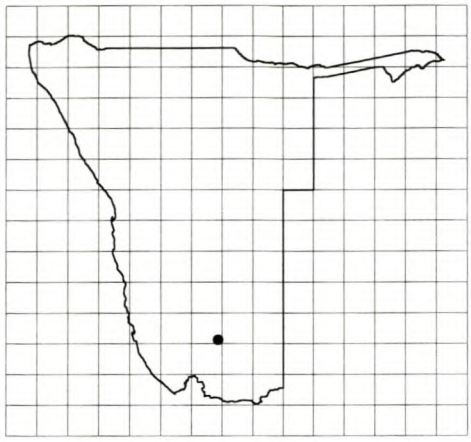
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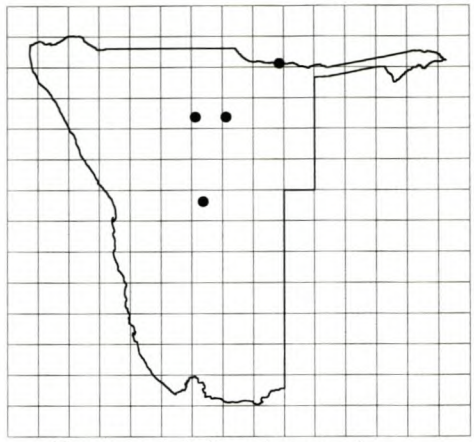
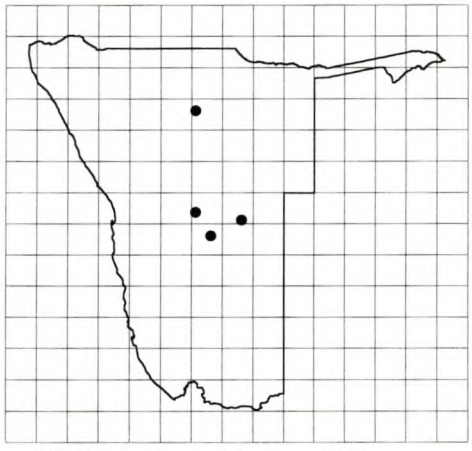
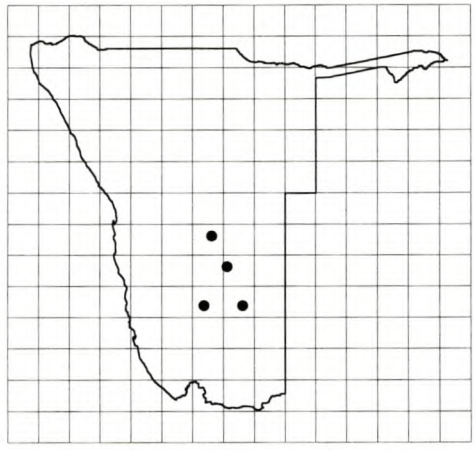

Nesaea luederitzii var. hereroensis


Nicolasia heterophylla subsp. affinis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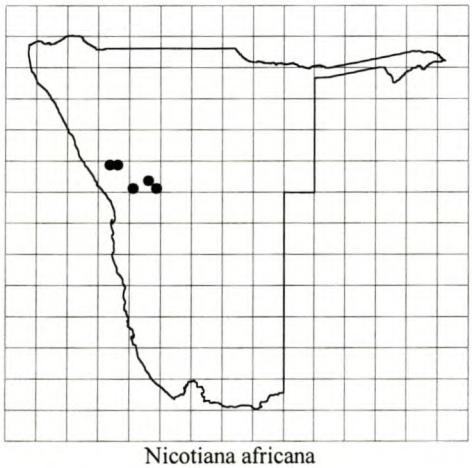
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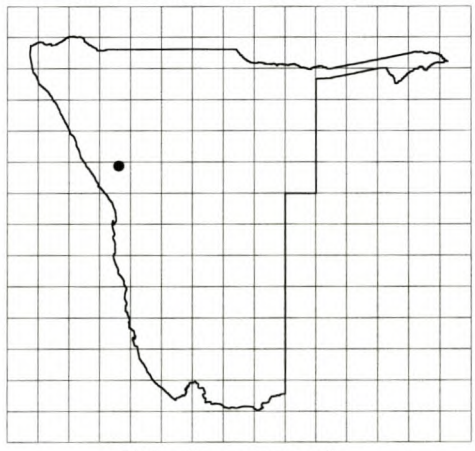
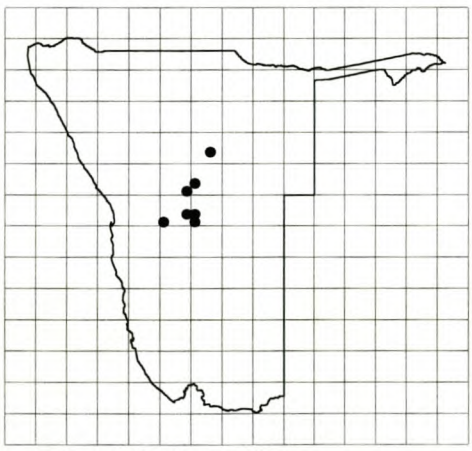

Nidorella nordenstamii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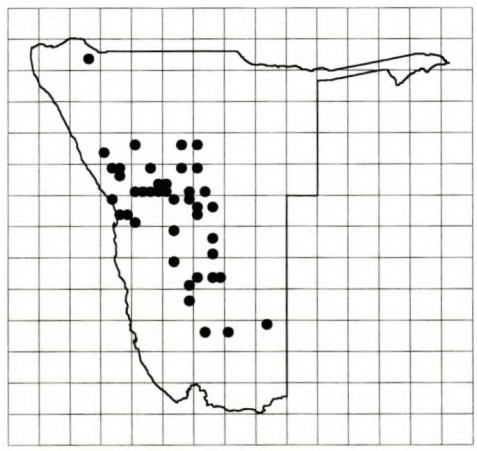
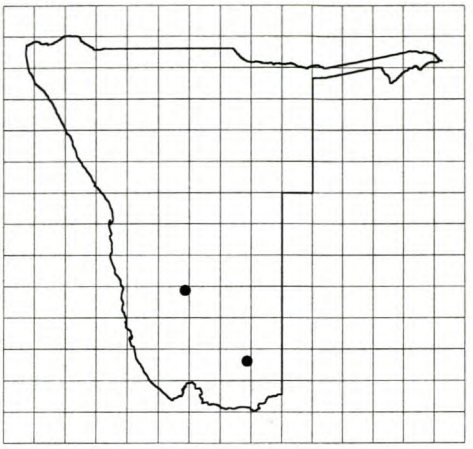
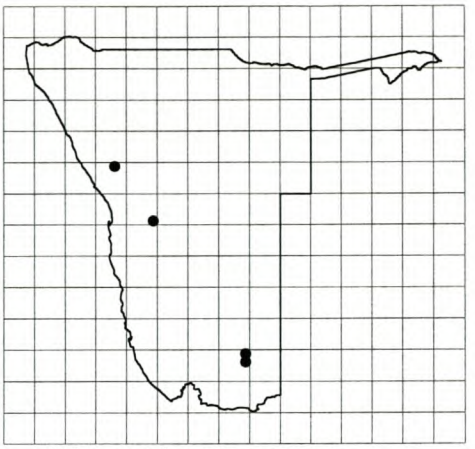
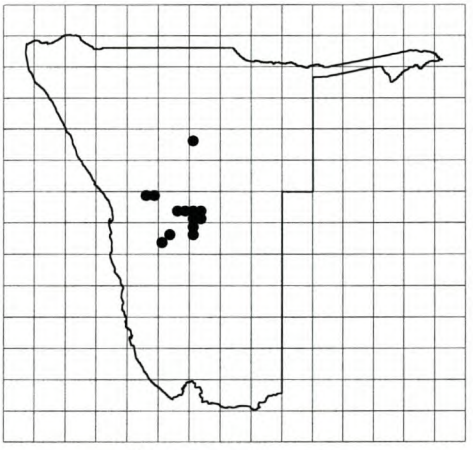

Ondetia linearis



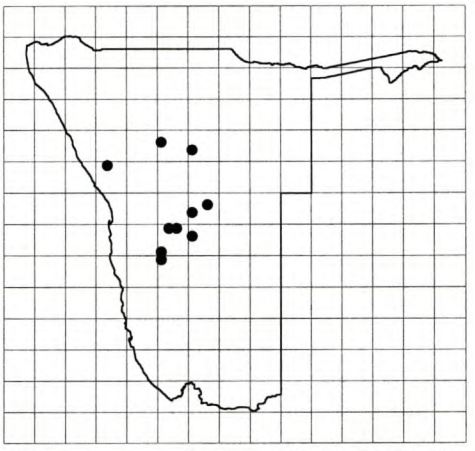
Orbea albocastanea



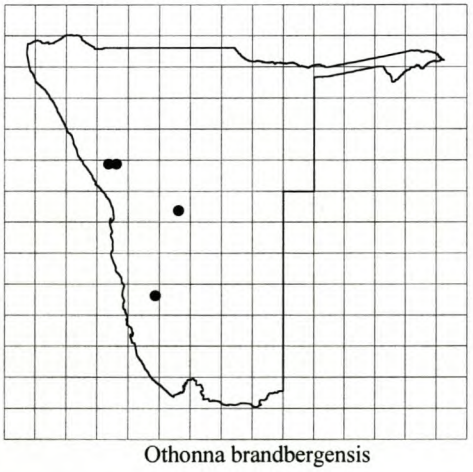
Orbea maculata subsp. rangeana



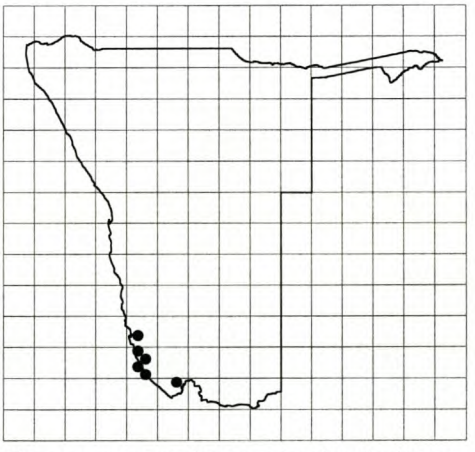
Osteospermum montanum



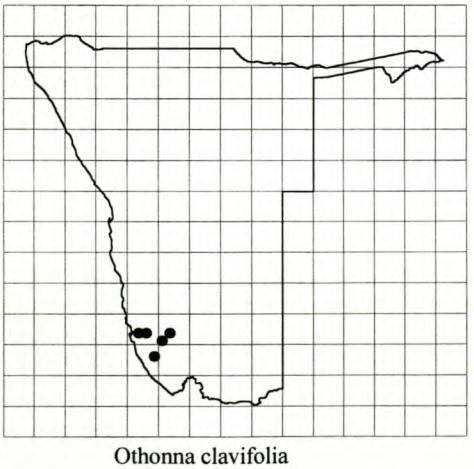
Osteospermum muricatum subsp. longiradiatum



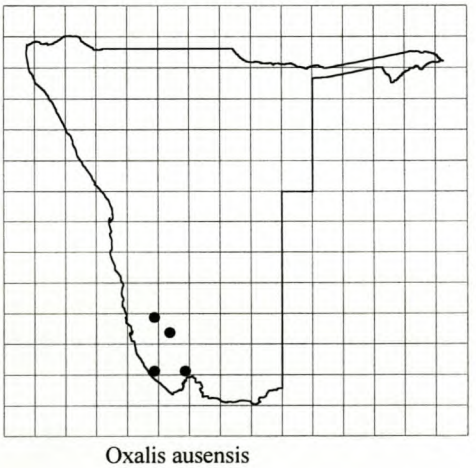
Othonna brandbergensis



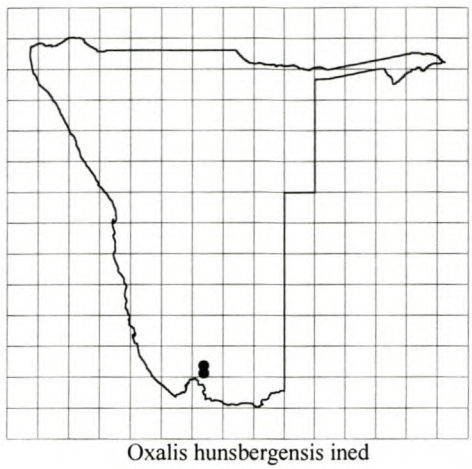
Osteospermum muricatum subsp. longiradiatum



Othonna clavifolia



Oxalis ausensis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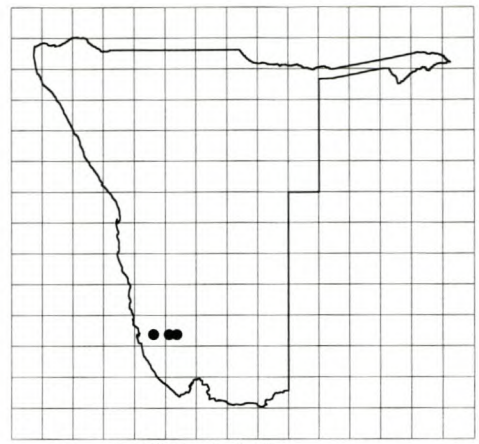
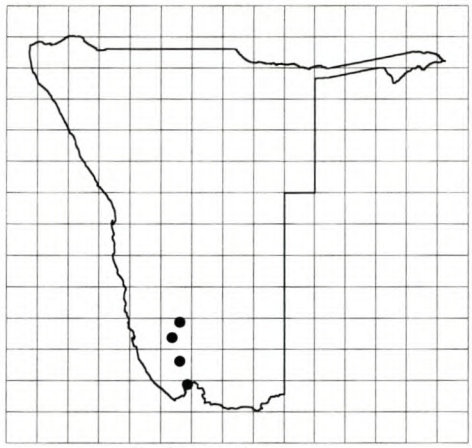
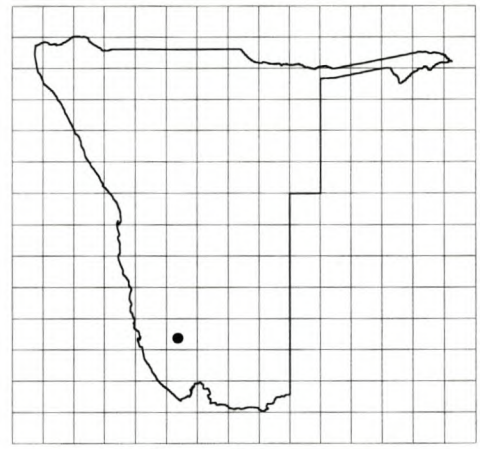
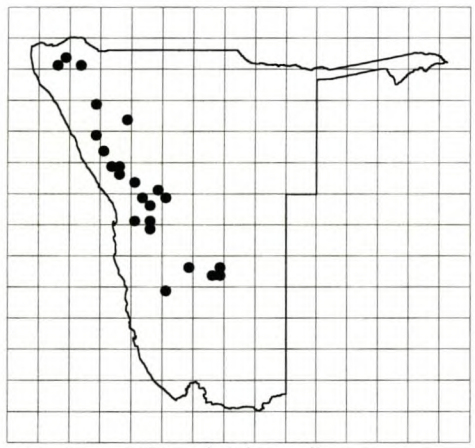
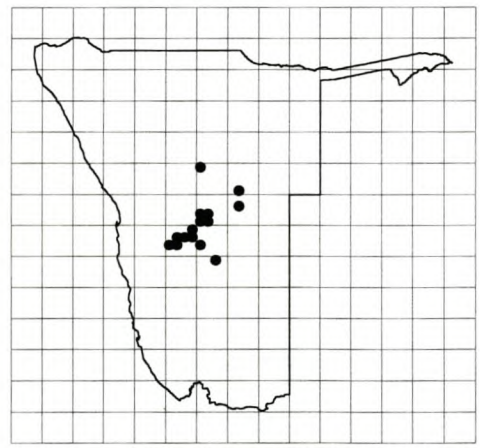
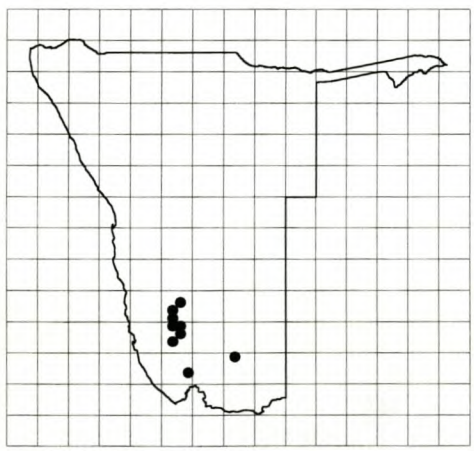

Oxalis luederitzii

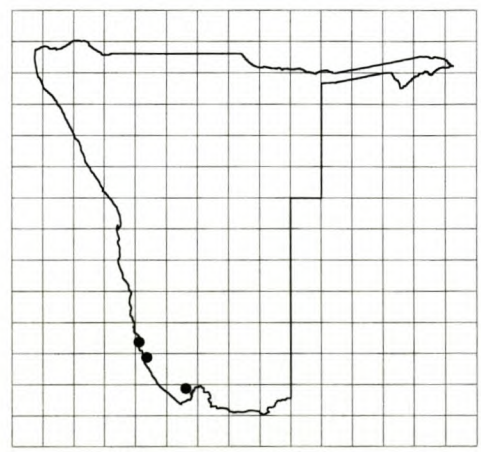

Oxalis pseudo-cernua


Oxalis schaeferi


Pavonia rehmannii


Pegolettia pinnatilobata


Pegolettia plumosa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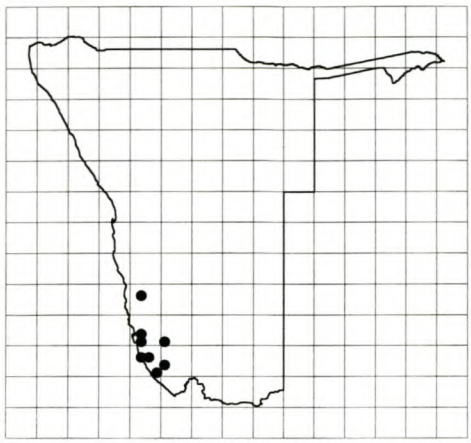
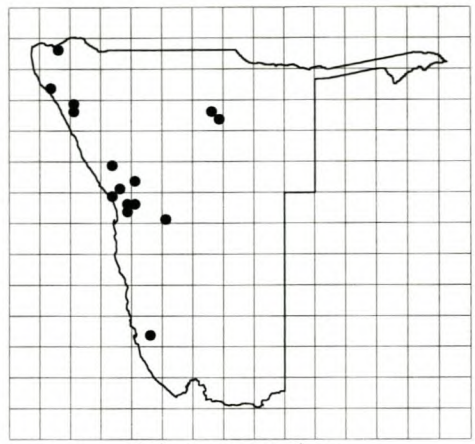

Pelargonium mirabile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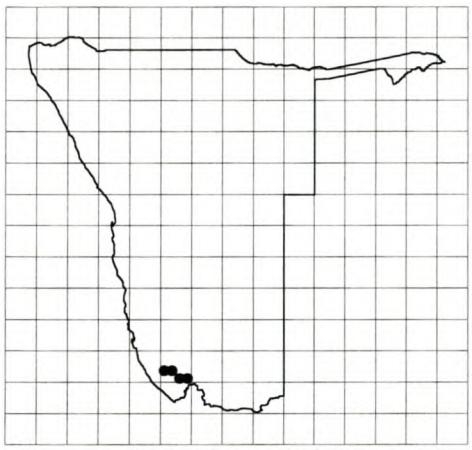
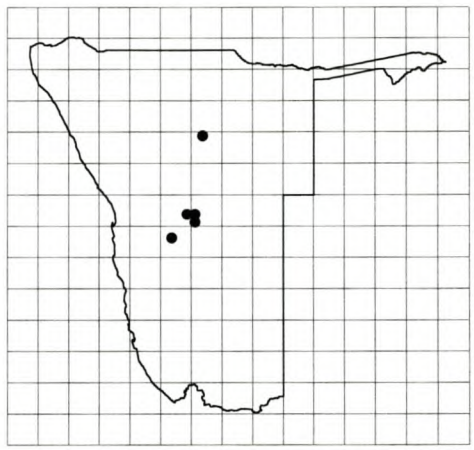
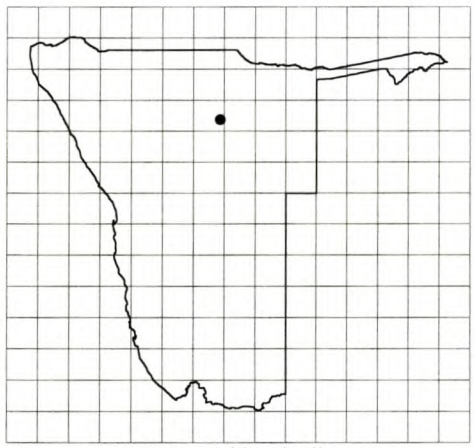
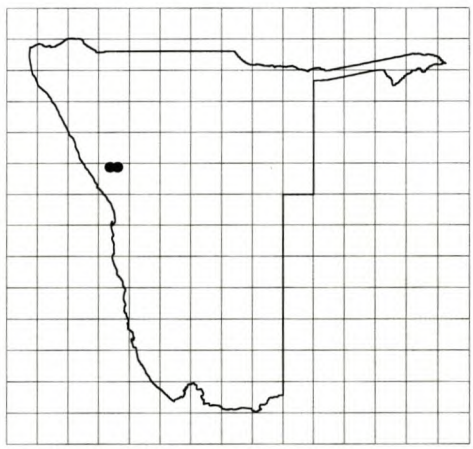
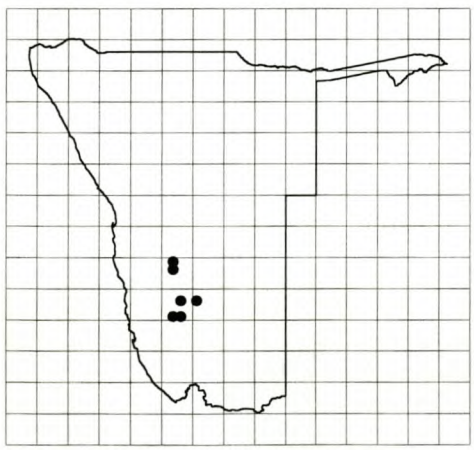

Pelargonium paniculatum


Pentatrichia avasmontana


Pentatrichia rehmii


Pentzia tomentosa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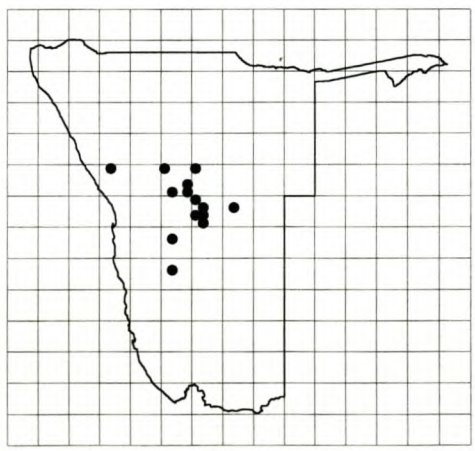
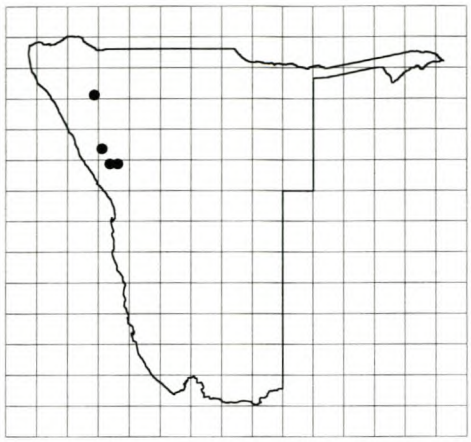
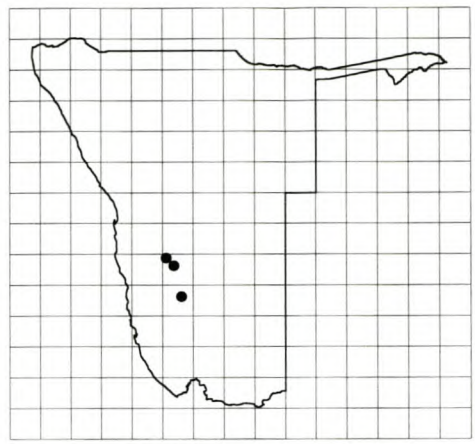
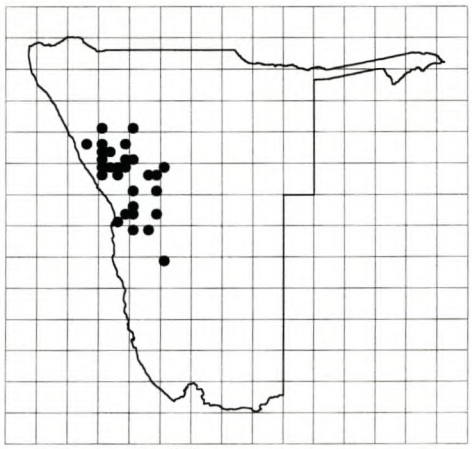

Peristrophe hereroensis



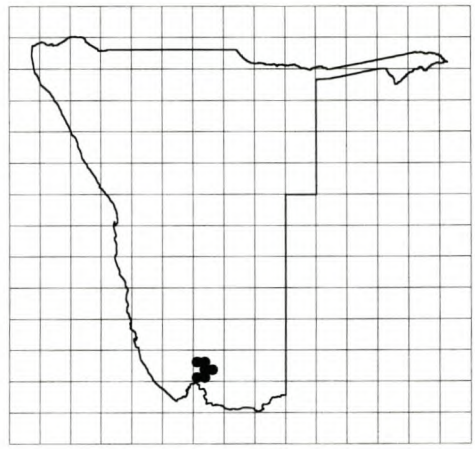
Peristrophe namibensis subsp. brandbergensis



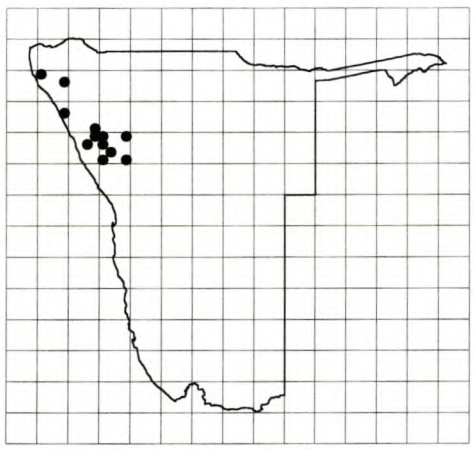
Peristrophe namibensis subsp. namibensis



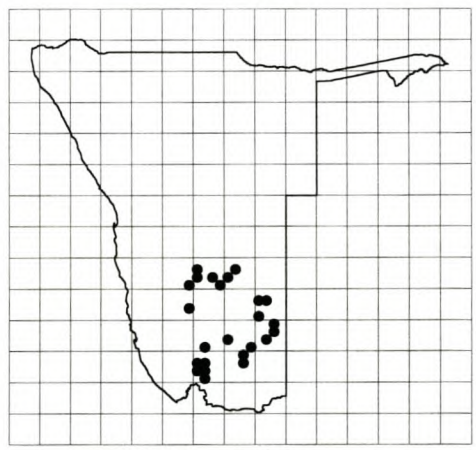
Petalidium canescens



Petalidium cymbiforme



Petalidium giessii



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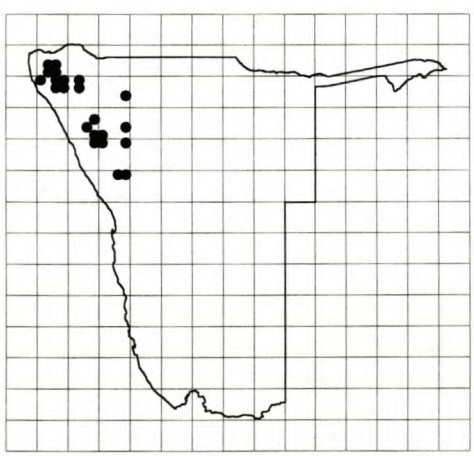
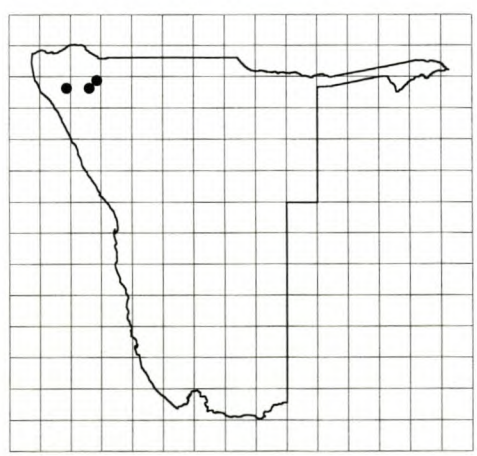
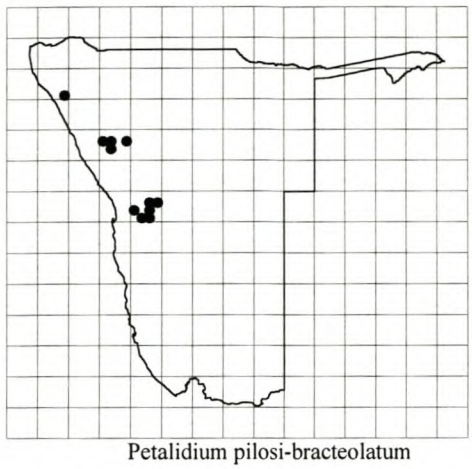


Petalidium luteo-album



Petalidium ohopohense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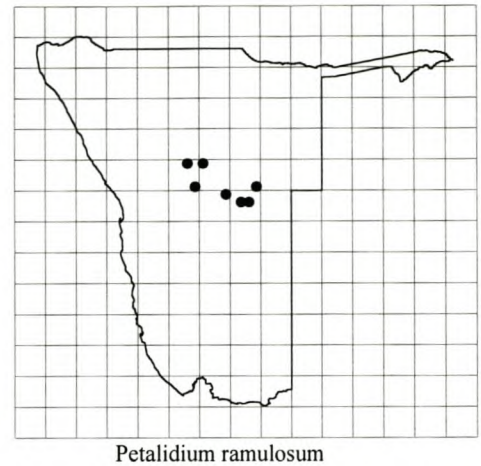
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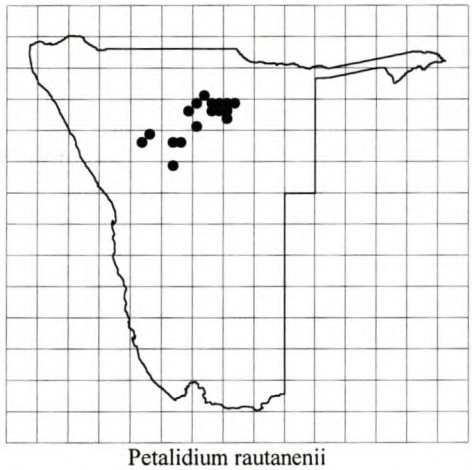
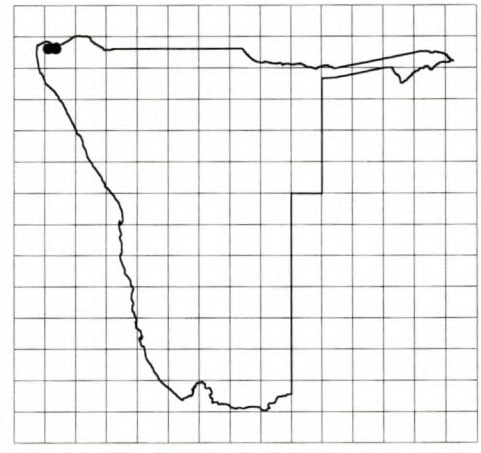
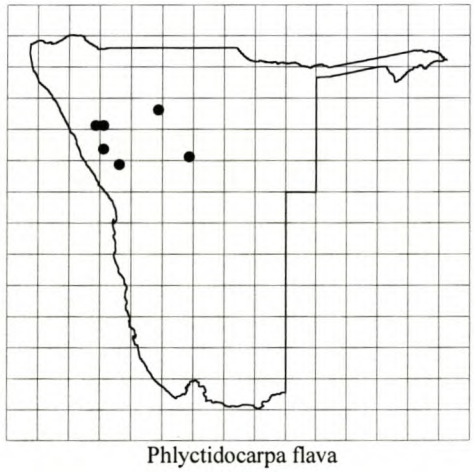
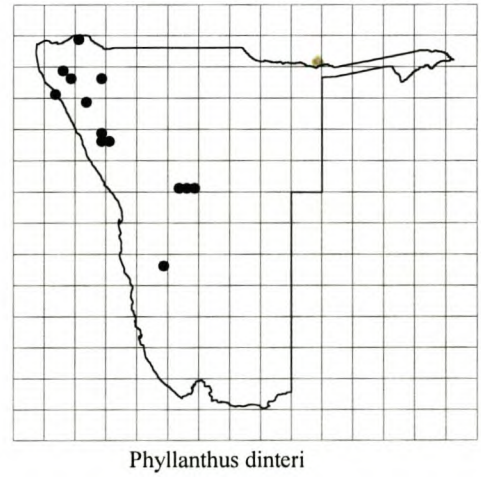
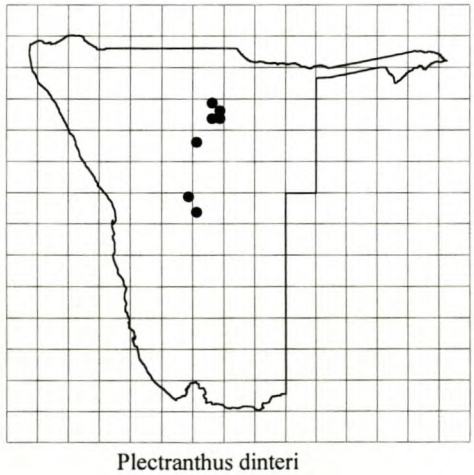
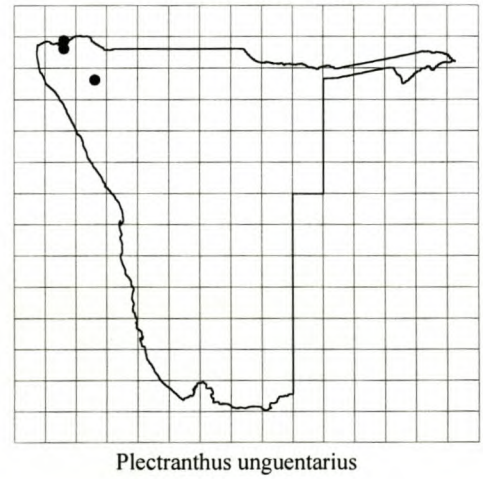

Petalidium rautanenii


Petalidium subcrispum


Phlyctidocarpa flava


Phyllanthus dinteri


Plectranthus dinteri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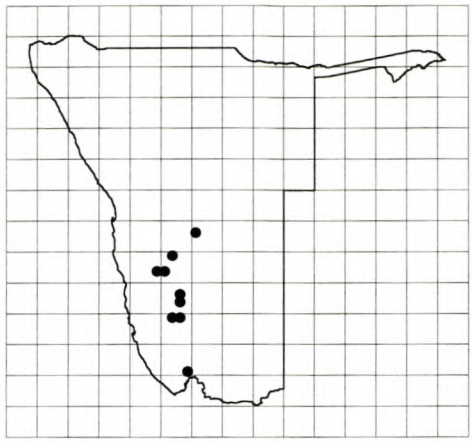
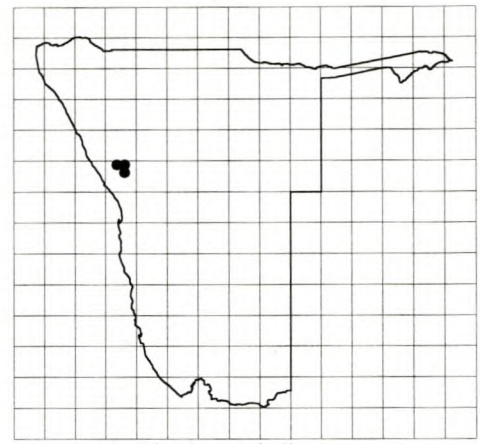
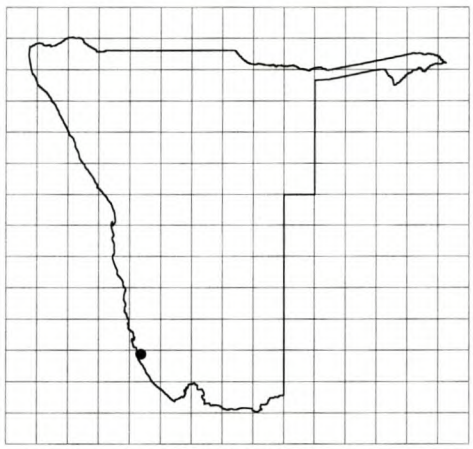
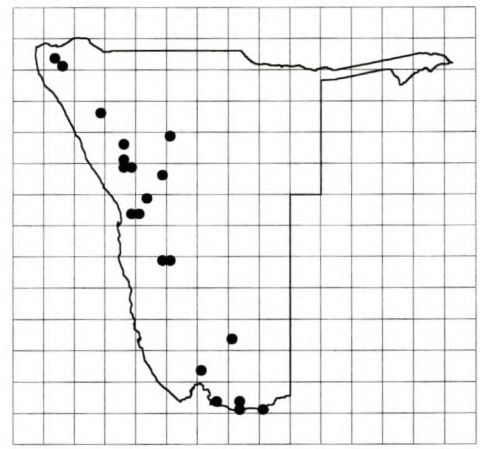
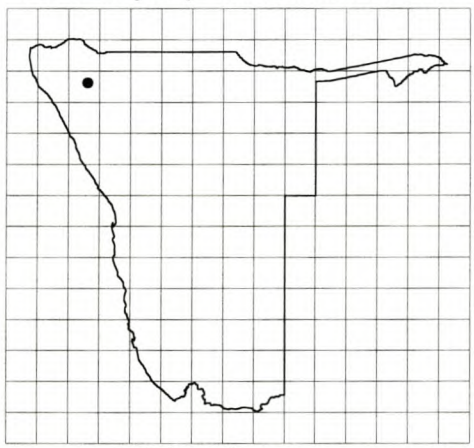

Plumbago pearsonii

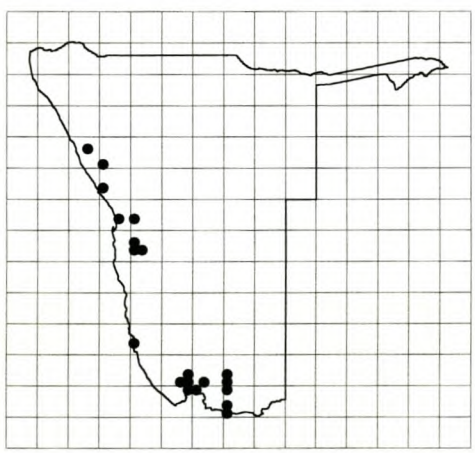

Plumbago wissii

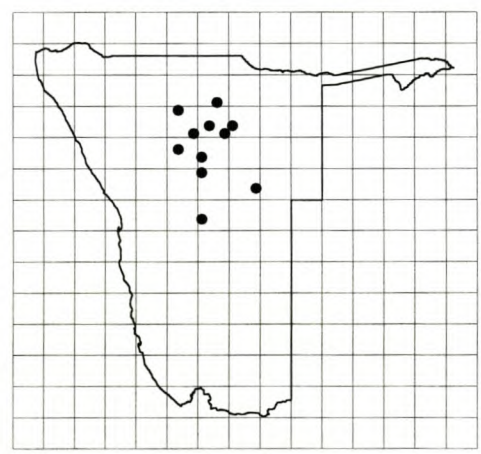

Polemanniopsis sp.= Merxmuller & Giess 32010

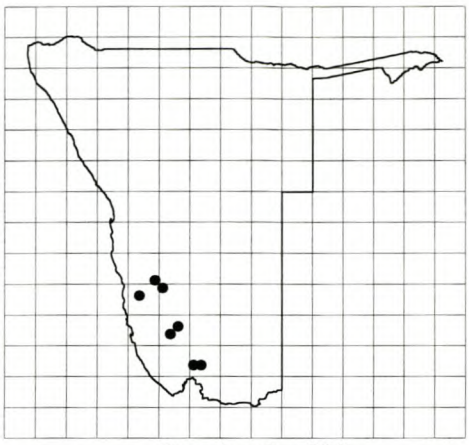

Polygala guerichiana


Priva auricoccea


Psilocaulon gessertianum


Psilocaulon salicornioides


Pteronia eenii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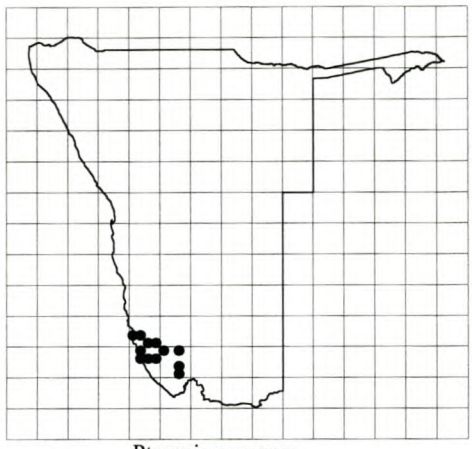
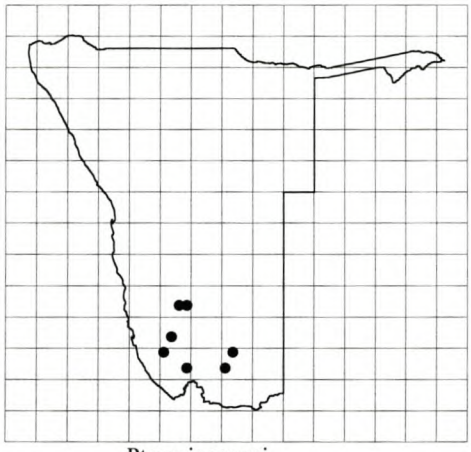
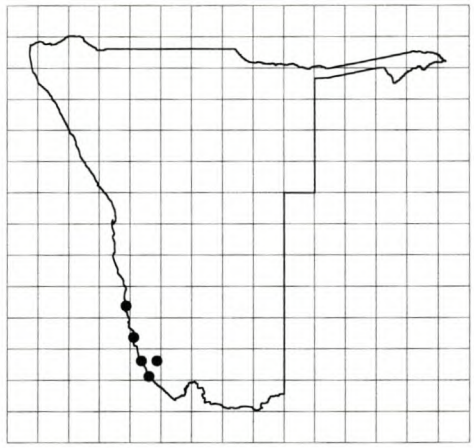

Pteronia pomonae


Pteronia rangei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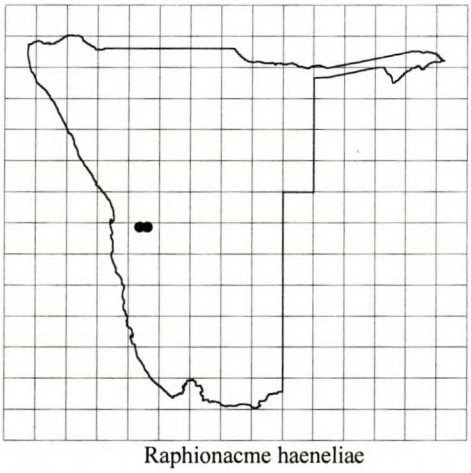
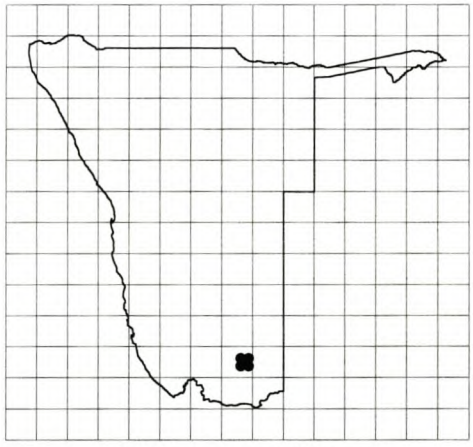
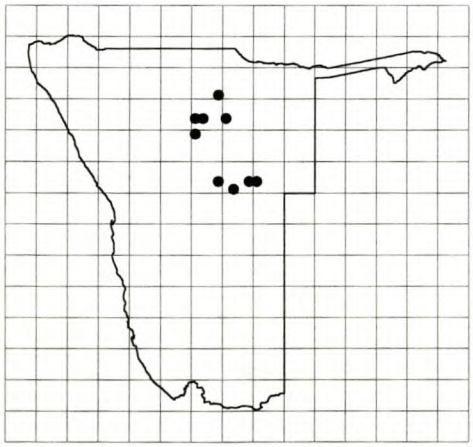
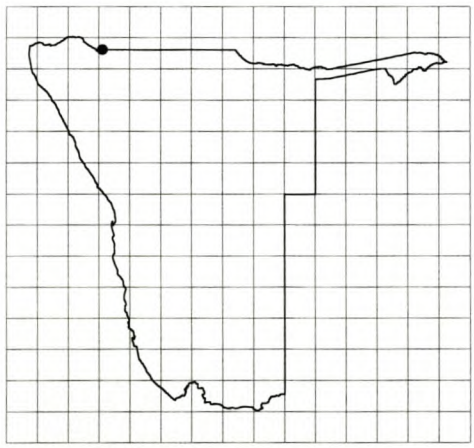
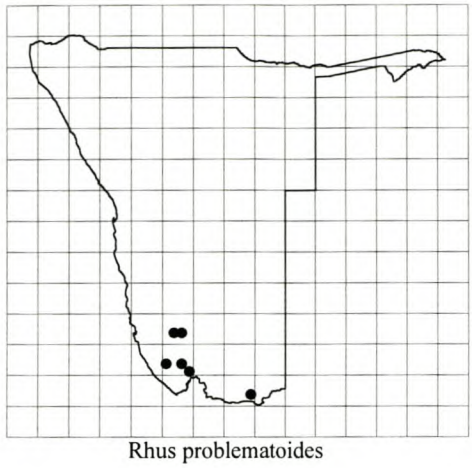
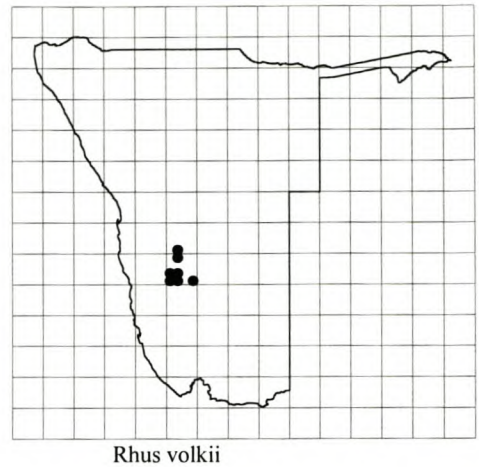

Raphionacme haeneliae

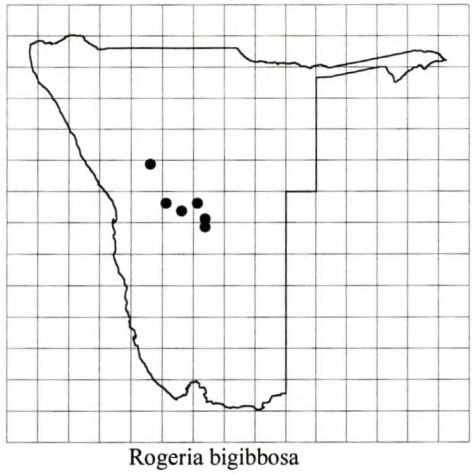

Raphionacme namibiana

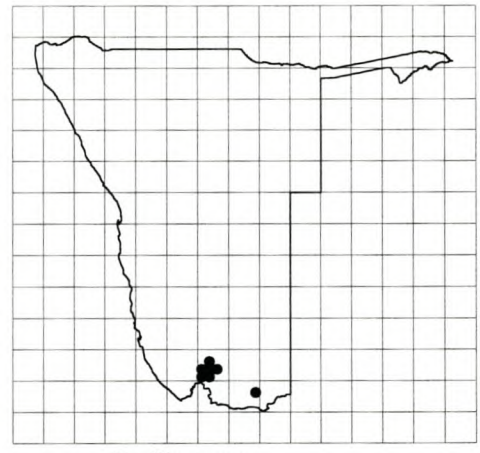

Rennera eenii

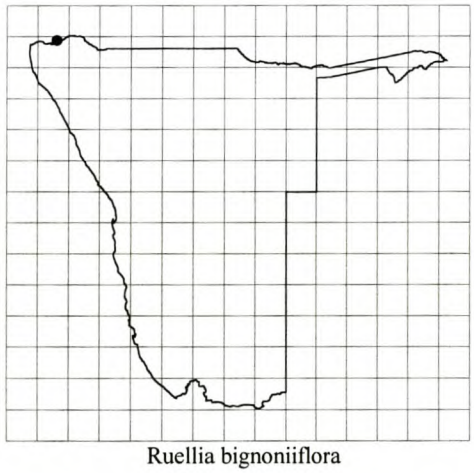

Rhinacanthus kaokoensis

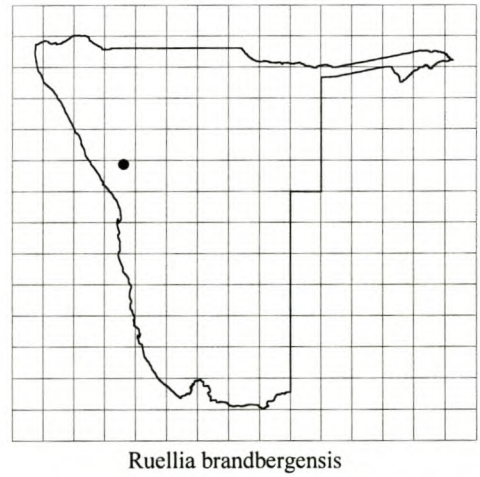

Rhus problematoides

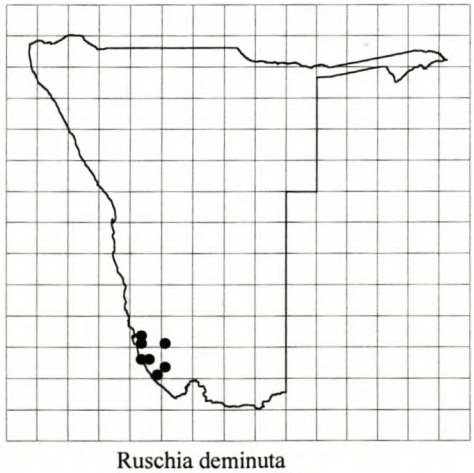

Rhus volkii

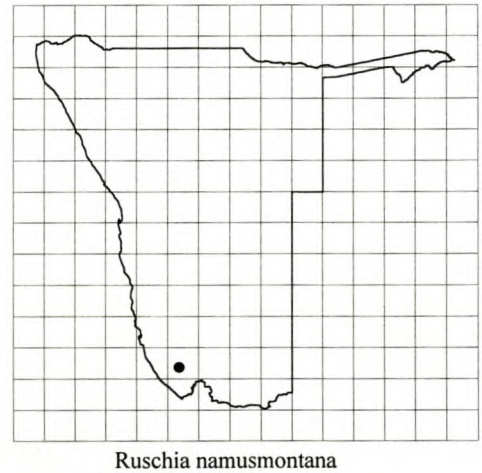

Rogeria bigibbosa

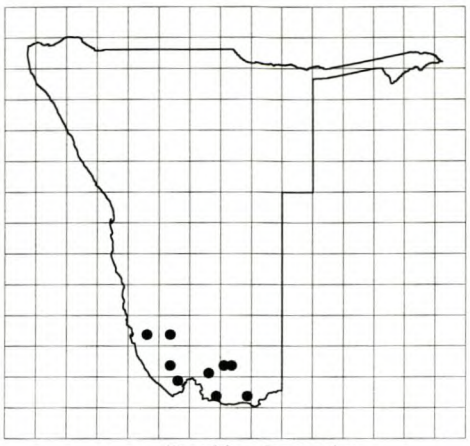

Ruellia aspera


Ruellia bignoniiflora


Ruellia brandbergensis


Ruschia deminuta


Ruschia namusmontana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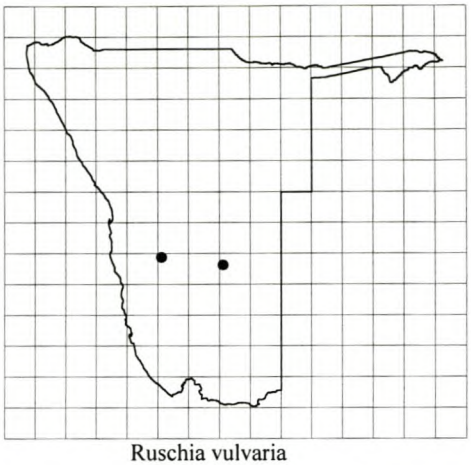
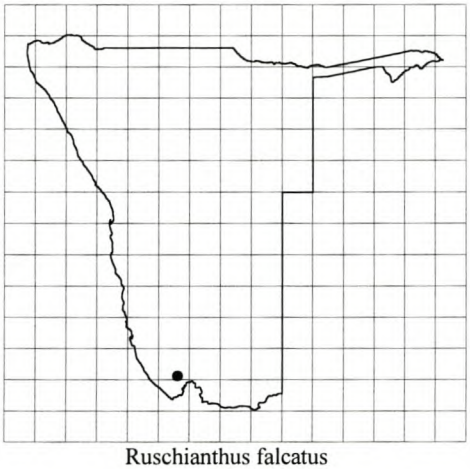
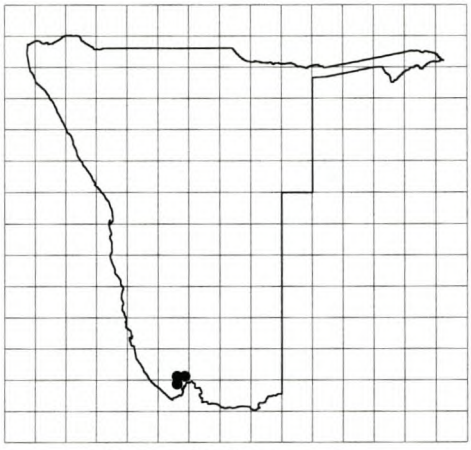
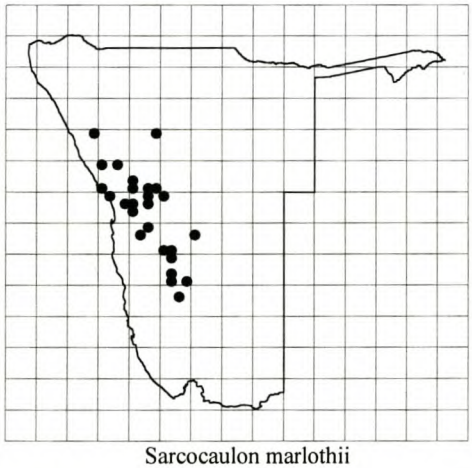
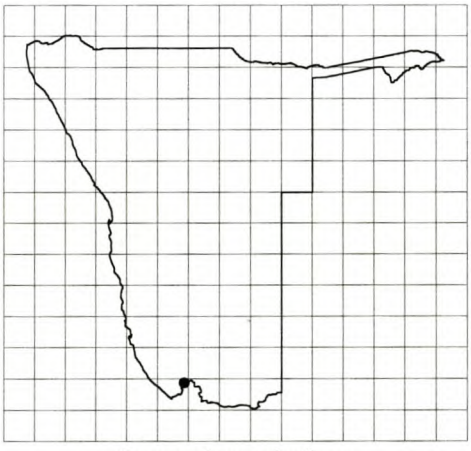
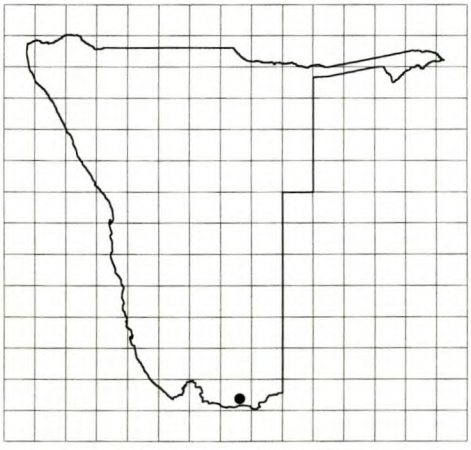

Ruschia vulvaria


Ruschianthus falcatus


Sarcocaulon inerme


Sarcocaulon marlothii


Sarcocaulon peniculinum


Schwantesia constanceae

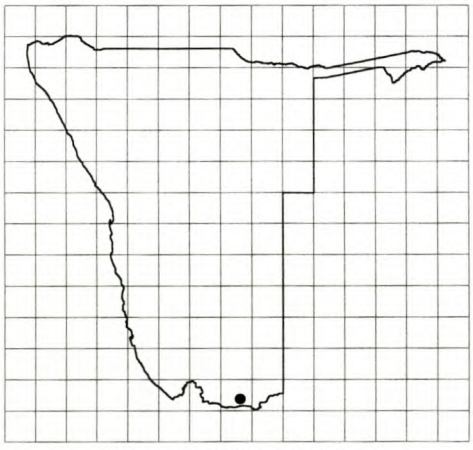
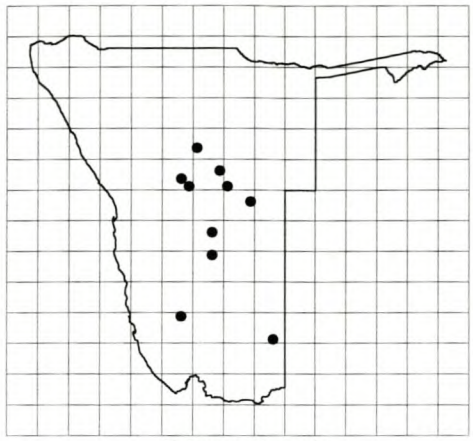
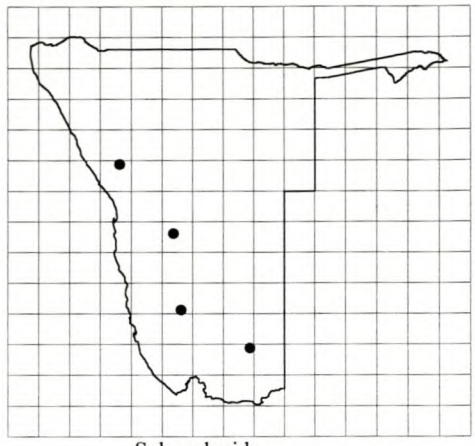

Schwantesia succumbens

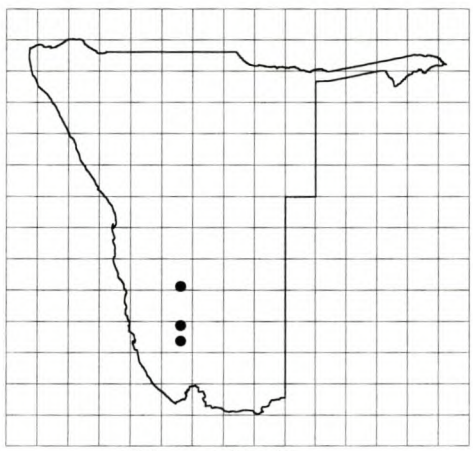
Plate 56



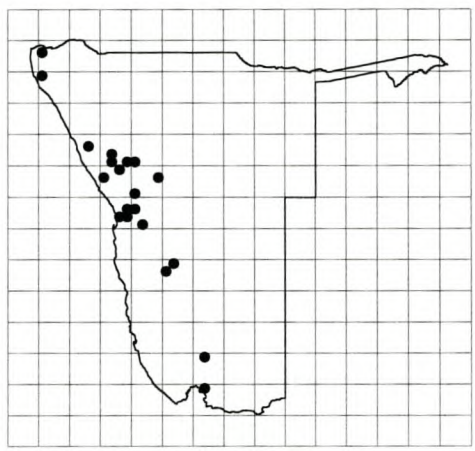
Selago amboensis



Selago lepida



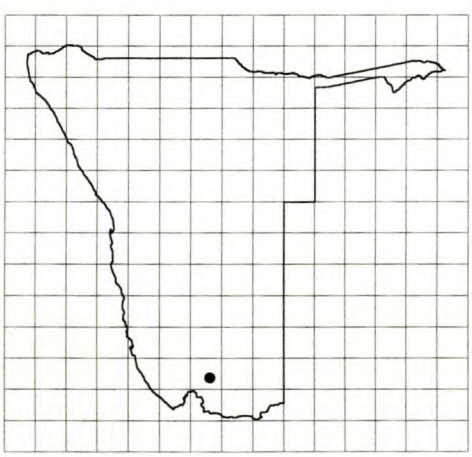
Selago nachtigalii



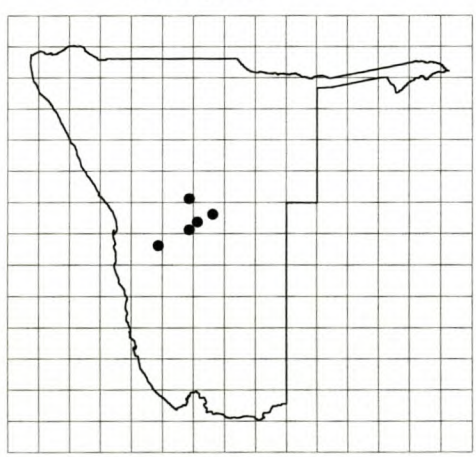
Senecio alliariifolius

Senecio engleranus

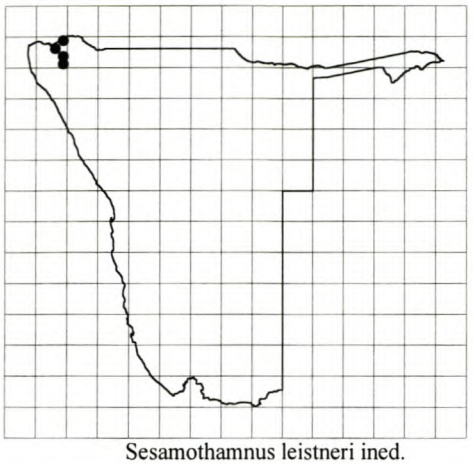
Senecio giessii

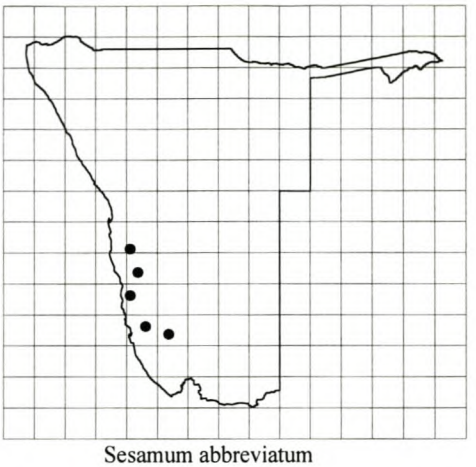


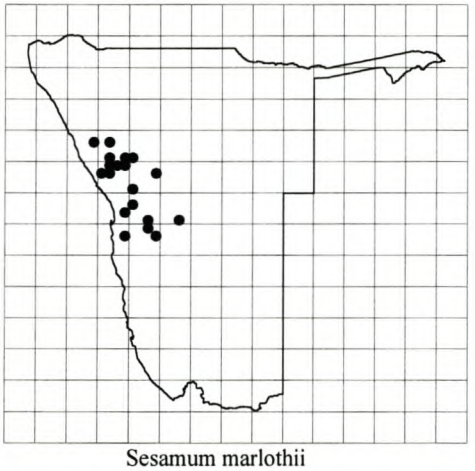
Senecio hermannii

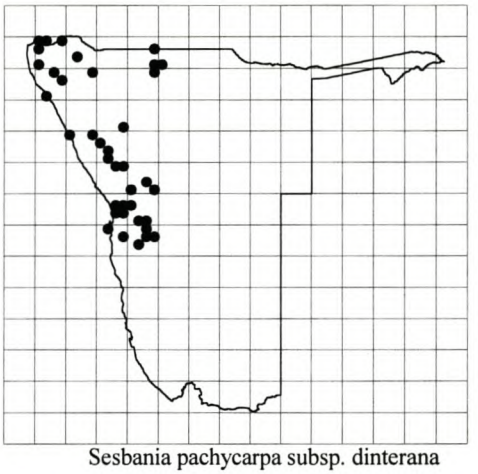


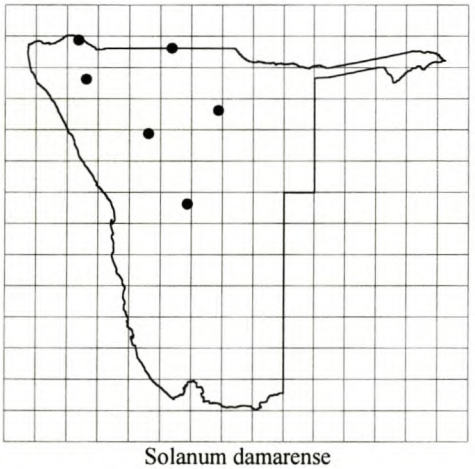
Senecio windhoekensis

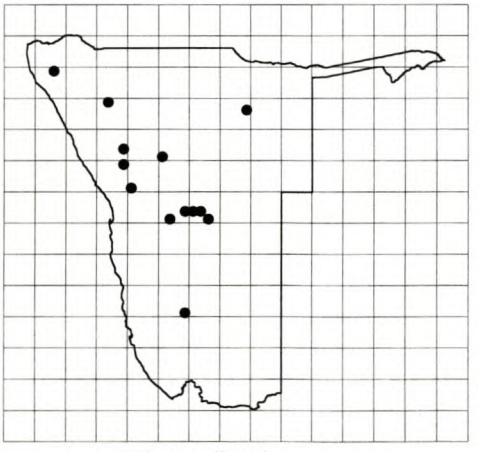

Sesamothamnus leistneri ined.

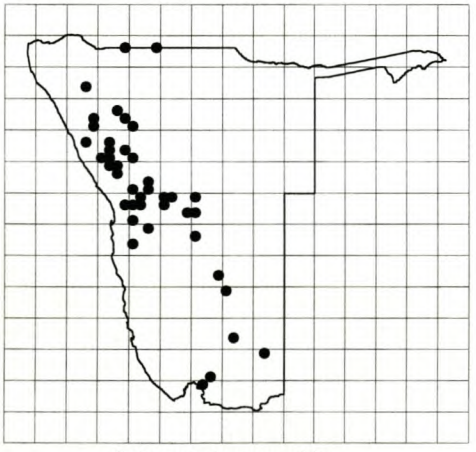

Sesamum abbreviatum

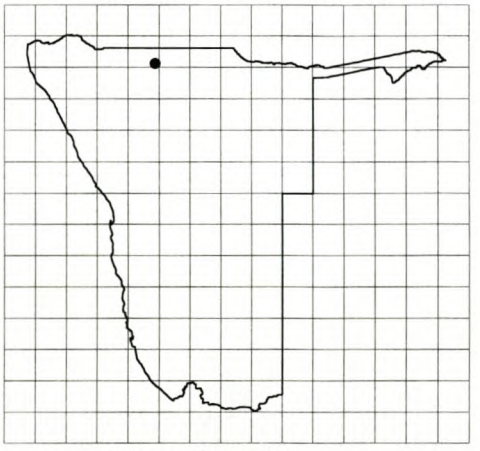

Sesamum marlothii

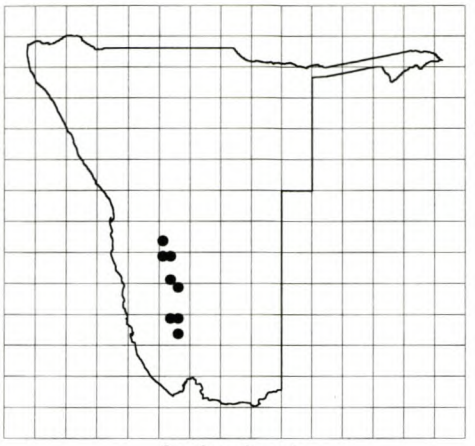

Sesbania pachycarpa subsp. dinterana

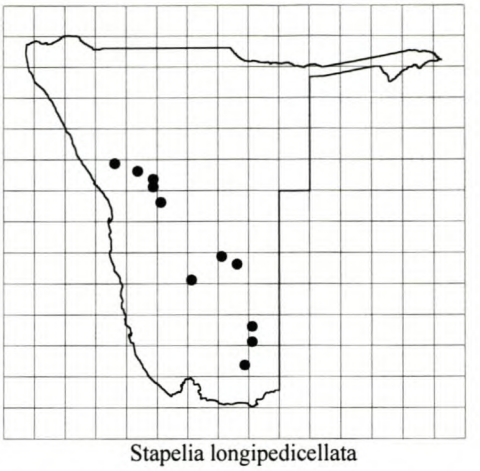

Solanum damarense

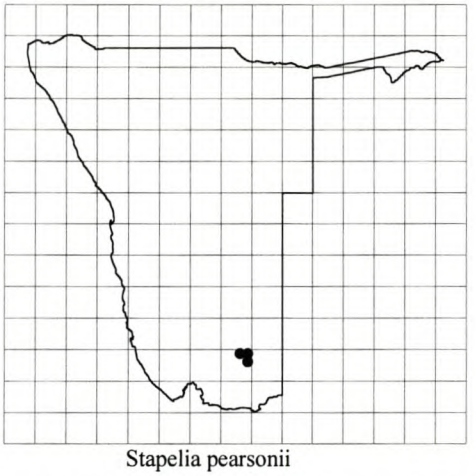

Solanum dinteri

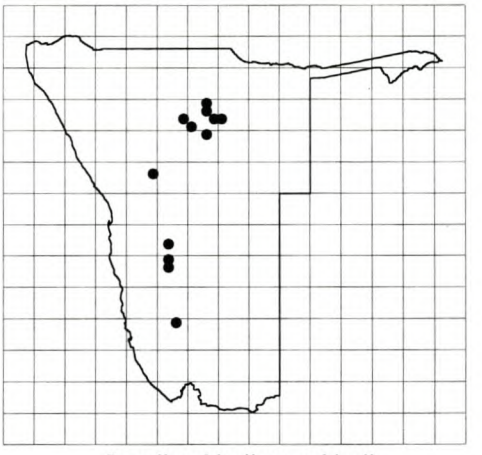

Solanum rigescentoides

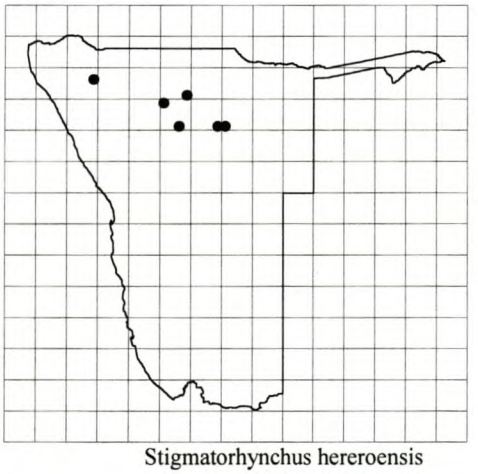

Sphaeranthus wattii

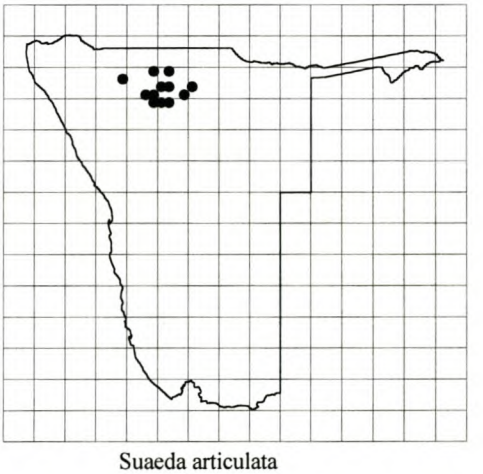

Stachys dinteri

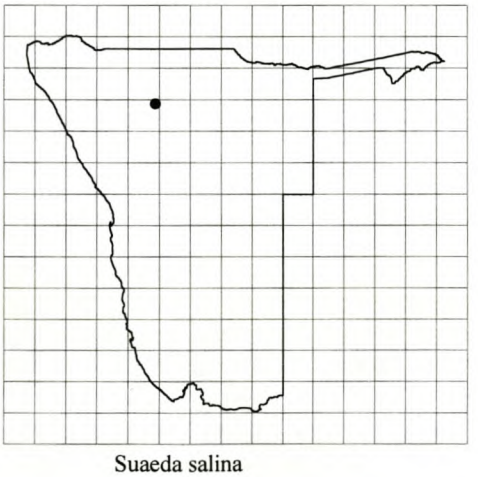

Stapelia longipedicellata


Stapelia pearsonii

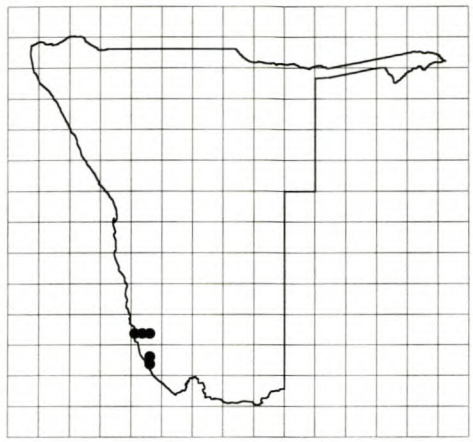

Stapelia schinzii var. schinzii

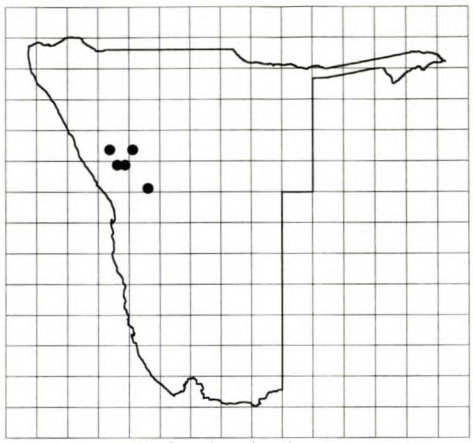

Stigmatorhynchus hereroensis

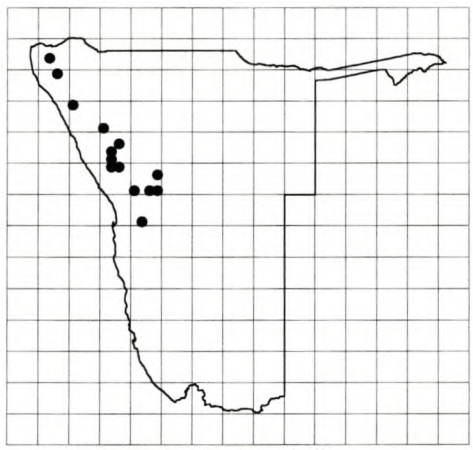

Suaeda articulata

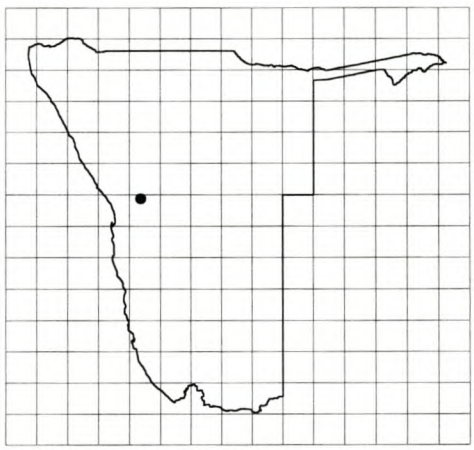

Suaeda salina

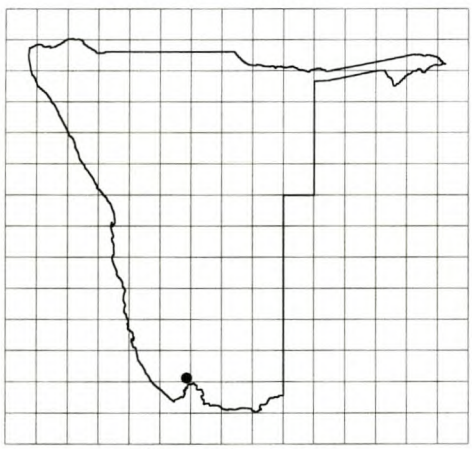

Suessenguthiella caespitosa

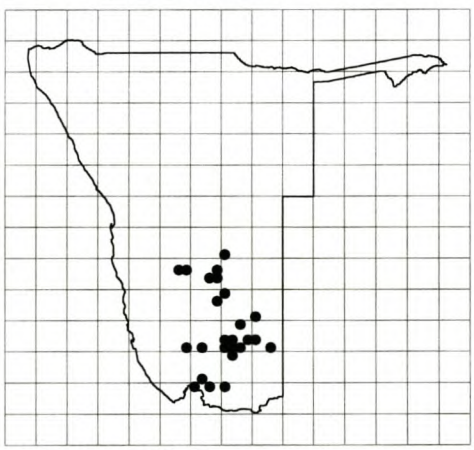

Synaptophyllum juttae

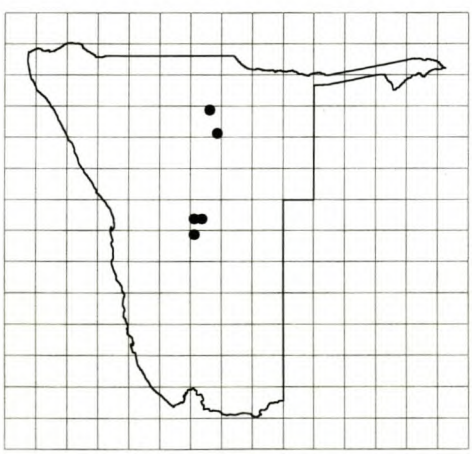

Tephrosia griseola

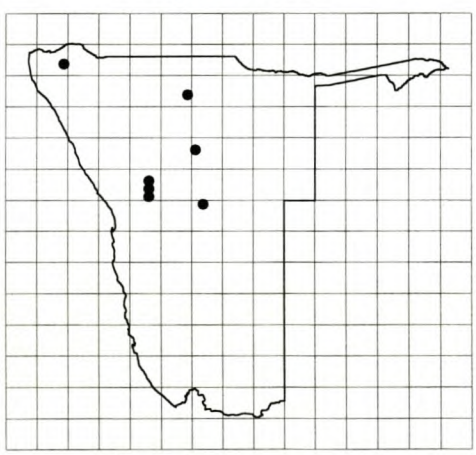

Tephrosia monophylla

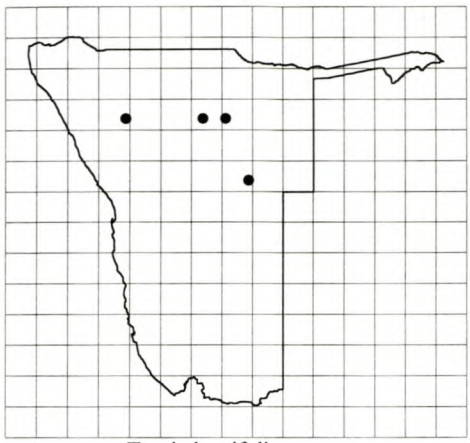

Tephrosia pallida

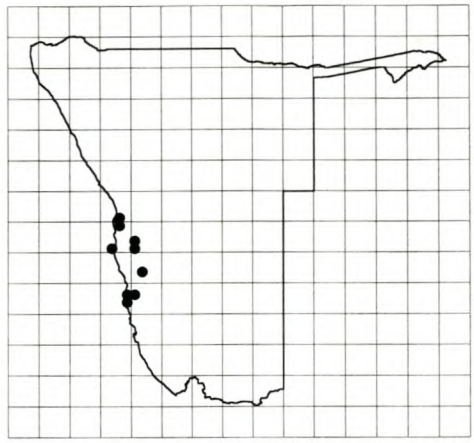

Tetragonia rangeana

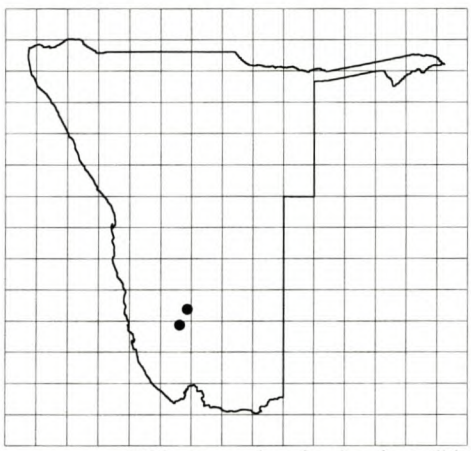

Tetragonia schenckii

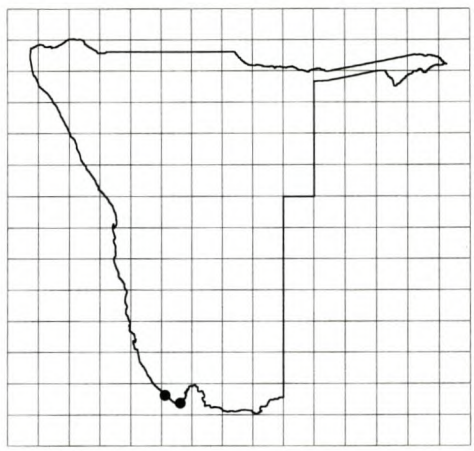

Thesium xerophyticum

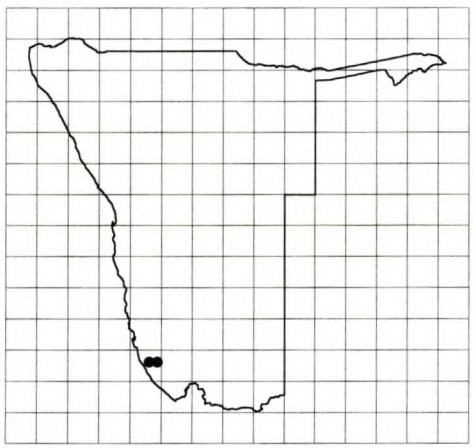

Tragia dinteri

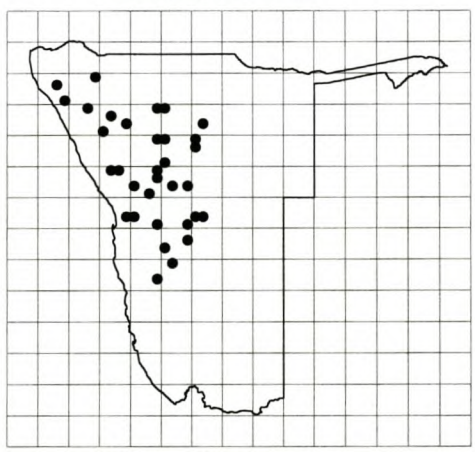

Tragia lancifolia

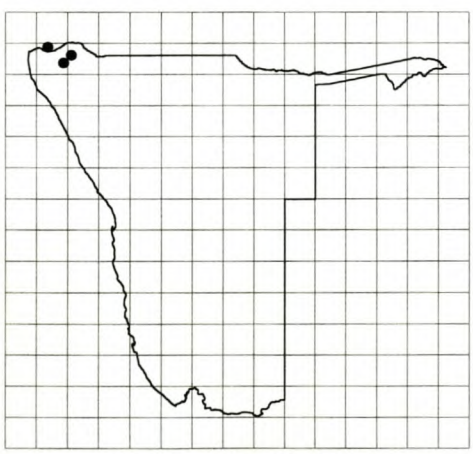

Trianthema hereroensis

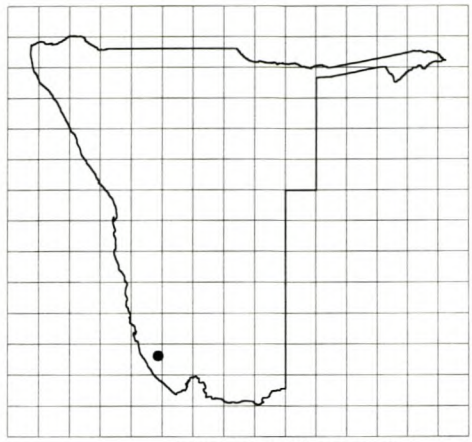

Tridentea marientalensis subsp. albipilosa

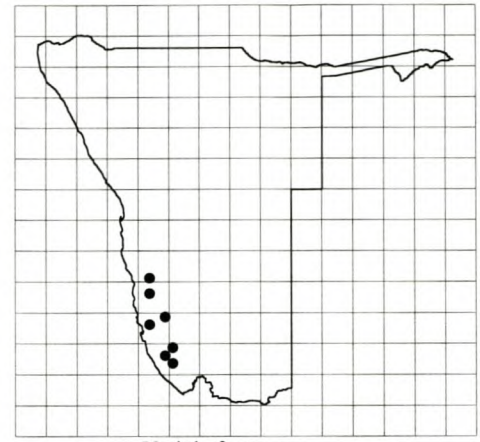

Tridentea pachyrrhiza


Tripteris nervosa

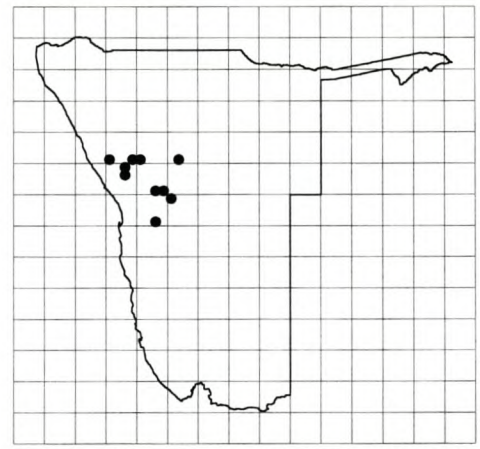

Tromotriche ruschiana

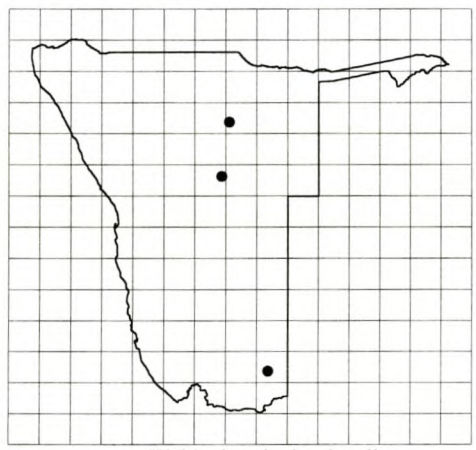

Turnera oculata var. paucipilosa

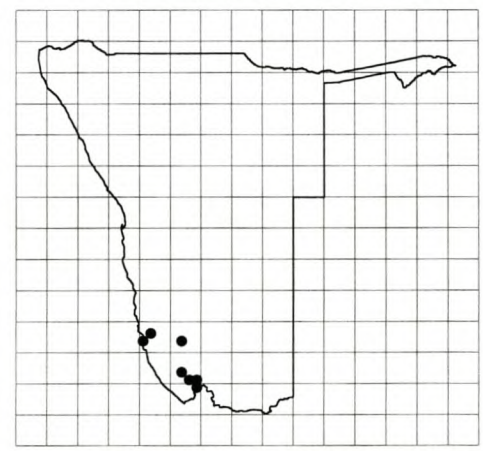

Tylecodon aridimontanus

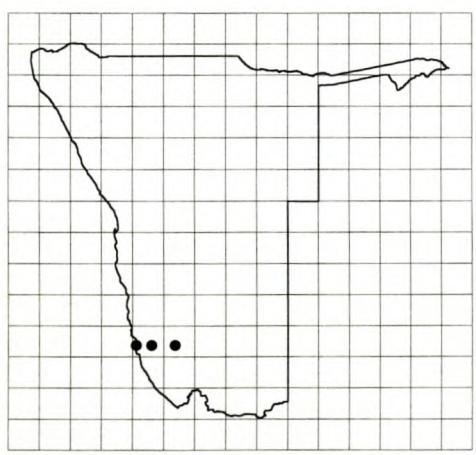

Ursinia frutescens


Vernonia obionifolia subsp. dentata

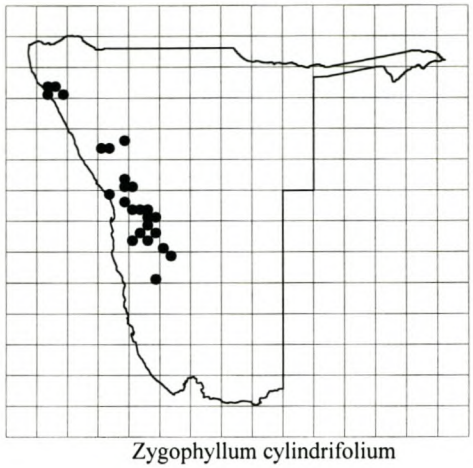

Vernonia obionifolia subsp. obionifolia


Wahlenbergia densicaulis

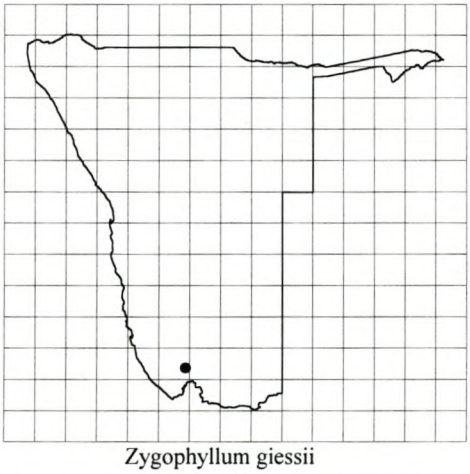

Wahlenbergia erophiloides


Wahlenbergia subumbellata

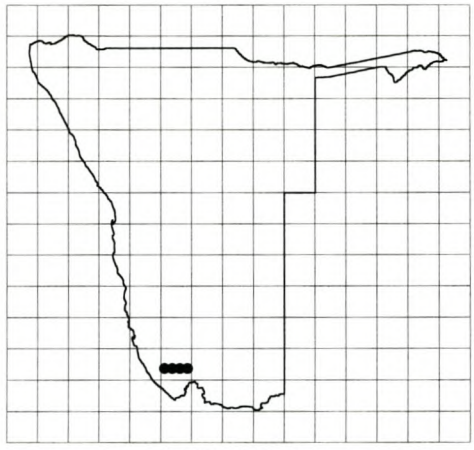
Zygophyllum applanatum



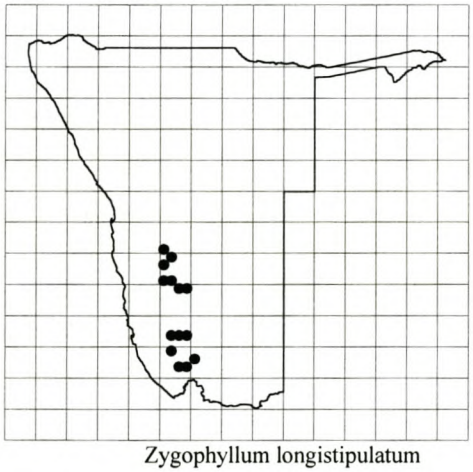
Zygophyllum cylindrifolium



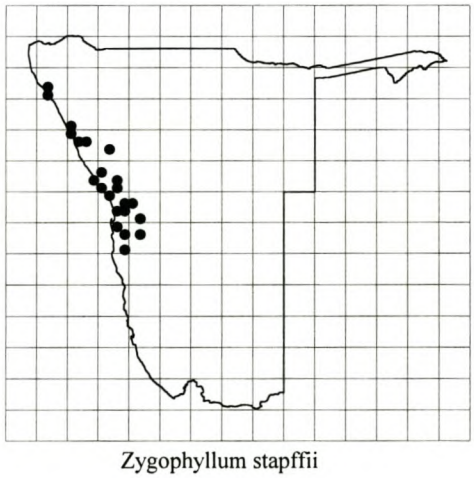
Zygophyllum giessii



Zygophyllum hirticaule



Zygophyllum longistipulatum



Zygophyllum stapffii