

SHORT NOTE

List of plant species from the
Mirabib Hill Area

by

E. R. Robinson

Department of Botany,
University of Fort Hare, Alice, Cape.

Plants recorded for the Mirabib outcrops and the adjacent plains are listed below. The plant communities which can be recognised are listed, but the vegetation of the rock outcrops is a mixture, being a combination of communities of washes, the rock outcrops of the pro-Namib, and the grasslands, whose constituent species occupy the micro-habitats provided by outcrops of rock. In many respects this series of hills is ecotonal (that is, a tension zone between) to the pro-Namib hills (such as Tumasberg, "Boulder Beacon" and the broken country leading to the Kuiseb Canyon) and the arid grasslands.

PLANT COMMUNITIES

Stipagrostis obtusa and *Stipagrostis ciliata* sub-communities.

These are the grassland communities of the plains. Structurally and floristically simple, these consist of a single vegetation stratum of grasses and forbs. In more favourable microhabitats such as old animal wallows, the nominate grasses will be accompanied by species such as *Eragrostis annulata*, *Hermannia modesta*, *Triraphis pumilio*, *Indigofera auricoma*, *Geigeria ornativa* and *Tephrosia dregeana*. In other places *Zygophyllum simplex* forms extensive mats.

The *Sesuvium sesuvioides* — *Stipagrostis obtusa* community.

Physiognomically very similar to the above mentioned communities, this is an assemblage of forbs (*Sesuvium sesuvioides*, *Cleome diandra*, *Euphorbia phylloclada* etc.) and grasses. It occupies rocky slopes with shallow soils, particularly over granite.

Monechma genistifolia community. A rather ill-defined community of rocky areas, especially on schistose rocks. Structurally this is a more complex community than the foregoing ones, consisting as it does of a dwarf shrub and a herb stratum. Apart from the nominate species, *Stipagrostis uniplumis*, *Osteospermum microcarpum*, *Adenia pechuelii*, *Talinum arnotii* and *Curroia decudua* are common components. Occasionally the tree *Maerua schinzii* occurs.

Petalidium setosum community. Another two-strata community which is best developed in shallow drainage lines on the plains. It is characterised by the presence of the dwarf shrub *Petalidium setosum** (*indicates species found in archaeo-botanical remains) with *Tephrosia dregeana* ("vetch") and the forbs *Monechma desertorum*, *Trianthema triquetra*, *Indigofera auricoma* and *Cleome luederitziana*. There might be three species of grass present. This community often occurs in shallow soils or calcrete.

Asclepias buchenaviana community. This community is only encountered on the plains NNW of Mirabib. It consists of a tall dwarf shrub (*Asclepias buchenaviana*) with a very sparse herb stratum of *Stipagrostis ciliata*. It is of little significance except for the fact that the *Asclepias* seems to provide a niche for a number of insects (spiders, flies, wasps

and bees), frequently having shallow soil overlying schist rocks.

Adenolobus — *Acacia reficiens* community. Typically consisting of three strata (shrub, dwarf shrub and ground layers) this community occurs in the washes around Mirabib and also comprises the "gutter" community at the foot of the hills. Prominent species are *Acacia reficiens**, *Parkinsonia africana**, *Adenolobus pechuelii*, *Kissenia capensis** and *Asthenatherum glaucum*. Following rains lilies such as *Hexacrytis dickiana*, *Ornithogalum stapfii*, *Dipcadi bakeranum*, *Ornithoglossum viride* and the very striking *Ammocharis tinneana* (a member of the family *Amaryllidaceae*) appear. A common grass in favourable seasons is *Stipagrostis hochstetterana*. In the Mirabib area washes supporting this community are also occupied by *Boscia foetida**, *Moringa ovalifolia* and *Crotolaria podocarpa*. The substrate is generally sand or gravel, which may be of considerable depth.

Acacia erioloba community. Although only poorly developed, examples of this wash community occur in some of the sandy basins in the hills. In these basins are found a rich assemblage of plants, often from a number of the communities.

Typical rock outcrop communities. As mentioned above, the Mirabib Hills provide niches for some of the species of the *Petalidium variable* and *Commiphora glaucescens* — *Antheophora pubescens* communities of the pro-Namib mountains, but neither community has developed fully. Species which have affinities with these communities are *Pegolettia senegalensis*, *Eragrostis nindensis*, *Euphorbia avasmontana*, *Gisekia africana*, *Trichodesma africana* and others.

LIST OF SPECIES

Although many species have pronounced habitat preferences these are dealt with elsewhere (Robinson 1976). The list given here is moderately comprehensive, but not exhaustive, and any additions will be welcome. Species are arranged alphabetically according to the major growth-forms, following the systems given by Whittaker (1970). The relevant classes are:

Trees (larger woody plants)

- Deciduous
- Broad-leaved evergreen (moderate sized leaves)
- Evergreen-sclerophyll (small, tough leaves)
- Thorn trees (armed with spines)

Lianas — here referring only to climbers

Shrubs (smaller woody plants, here usually between 0.5 and 3 m in height)

- Deciduous
- Evergreen-sclerophyll
- Stem succulents

Kohautia ramosissima
Kohautia virgata
Marcelliopsis denudata
Monechma arenicola
Monechma genistifolium
Nolletia garipense
Orthanthera albida
*Petalidium setosum**
Ruellia diversifolia
Salsola tuberculata
Senecio allariifolius
Solanum rigescentoides
Sutera maxii
Tephrosia dregeana
Zygophyllum cylindrifolium
Zygophyllum stapfii

Herbs — Graminoids

Aristida adscencionis
Aristida parvula
Asthenatherum glaucum
Brachiaria glomerata
Enneapogon brachystachyus
Enneapogon scaber
Eragrostis annulata
Eragrostis nindensis
Schmidtia kalahariensis
Sporobolus nebulosus
Stipagrostis ciliata
S. hirtigluma
S. hochstetterana
S. subacaulis
S. obtusa
S. uniplumis
Triraphis pumilio

— Forbs (other than lilies)

Aizoanthemum dinteri
Amaranthus thunbergii
Anticharis inflata
Blepharis grossa
Calostephane marlothii
Celosia argenteiformis
Cleome luederitziana
C. diandra
Crotolaria podocarpa
Dicoma capensis
Euphorbia inaequilatera
E. glanduligera
E. phylloclada
Forsskaolea candida
Geigeria alata
G. ornativa
Gisekia africana
Helichrysum leptolepis
H. roseo-niveum
Indigofera auricomma
I. dregeana

Kohautia lasiocarpa
Launaea intybacea
Limeum argute-coronatum
L. sulcatum
Lotononis platycarpha
Mollugo cerviana
Monechma desertorum
Monsonia senegalensis
M. umbellata
Osteospermum microcarpum ssp. *septentrionale*
Pegolettia senegalensis
Pentzia schinziana
Raphionacme (S-R 10)
Senecio flavus
S. marlothianus
Sesamum capense
Sesuvium sesuvioides
Sutera fragilis
Talinum arnottii
Tribulus terrestris
T. zeyheri
Trichodesma africana
Trianthema triquetra ssp. *parvifolia*
Zygophyllum simplex

"Lilies"

Ammocharis tinneana
Eriospermum roseum
Hexacyrtis dickiana
Ornithoglossum viride
Dipcadi bakeranum
Eriospermum tortuosum
Ornithogalum stapfii

Thallophytes

Lichens — The Mirabib Hills area is outside the fog zone, thus only a few species of crustose lichens occur.

Liverworts — One species of liverwort has been collected from a rock-pool in the Mirabib Hills, but has not been identified.

Fungi — Following rains in 1972, 1973 and 1974 two species of *Basidiomycetes* (sub-class *Homobasidiomycetes*, order *Agaricales* or mushrooms) have been recorded.

REFERENCES

- ROBINSON, E. R.
 1976 Phytosociology of the Namib Desert Park, South West Africa. M. Sc. Thesis: University of Natal.
- WHITTAKER, R. H.
 1970 *Communities and Ecosystems*. MacMillan.