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SHORT NOTE

List of plant species from the Mirabib Hill Area

by
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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 Kuseeb 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 Eragnaxis annulata, Hermanniæ modesta, Triraphis pumilio, Indigofera auricoma, Gelgeria ornata 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 arnottii and Curroria decidualia are common components. Occasionally the tree Maerua schinzii occurs.

Petelidium 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 Petelidium setosum* (*indicates species found in archaeo-botanical remains) with Tephrosia dregeana (“vetch”) and the forbs Monechma desertorum, Trianthema triquetræ, Indigofera auricoma and Cleome luederitziana. There might be three species of grass present. This community often occurs in shallow soils or calcere.

Asclepias buchananiana community. This community is only encountered on the plains NNW of Mirabib. It consists of a tall dwarf shrub (Asclepias buchananiana) 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 pochuelii, Kissenia capensis and Asthenatherum glaucum. Following rains lilies such as Hexacrytis dickiana, Ornithogalum stapfii, Dipcadi bakerianum, Ornithoglossum viride and the very striking Ammobichris tinneana (a member of the family Amaryllidaceae) appear. A common grass in favourable seasons is Stipagrostis hohenstetterana. In the Mirabib area washes supporting this community are also occupied by Boscia foetida, Moringa ovalifolia and Crotalaria 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 variabile and Commiphora glaucescens — Anthephora pubescens communities of the pro-Namib mountains, but neither community has developed fully. Species which have affinities with these communities are Pegoletia 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 5 m in height)
- Deciduous
- Evergreen-sclerophyll
- Stem succulents

Thorn-shrubs
- Dwarf-shrubs (low shrubs spreading near the ground surface, less than 50 cm tall).

**Herbs** — (plants without perennial above-ground woody stems)
- Graminoids (grasses etc.)
- Forbs (herbs other than ferns or grasses)

**Thalophytes** — lichens, mosses and liverworts and fungi.

**Trees** — Deciduous
- Moringa ovalifolia
  - Broad-leaved evergreen
  - Boscia foetida — may also be an evergreen-sclerophyll shrub
  - Evergreen-sclerophyll
  - Cordia gharaf — strictly, this should be classed as a shrub.
  - Acacia erioloba
    - Acacia reficiens
    - Parkinsonia africana
    - Climbers
    - Corollocarpus welwitschii
    - Cumunis sagittatus

**Shrubs** — Deciduous
- Asclepias buchenaviana
  - Commiphora saxicola (?) — more of a dwarf-shrub
  - Polygala guerichiana (?) — more of a dwarf-shrub
  - Sarcoaulon mossambicense (?) — more of a dwarf-shrub
  - Evergreen-sclerophyll
  - Rhus marlothii — leaves are moderately large
  - Montinia caryophyllaceae — leaves are moderately large
  - Stem succulents
    - Euphorbia avasmontana
  - Thorn shrubs
    - Catophractes alexandrii
    - Phaeoptilum spinosum
  - Dwarf shrubs
    - Adenia pechuelii
    - Adenolobus pechuelii
    - Aiptosium angustifolium
    - Asparagus denudatus
    - Bavaria merzmuelleri
    - Blapharis obturator
    - Calicorema capitata
    - Chascanium garipense
    - Commicarpus squarrosus
    - Curroria decedua
    - Dyeroptyrum africana
    - Hermannia abrotanoides
    - Hermannia modesta
    - Hoodia currori
    - Kissenia capensis
Kohautia ramosissimæ
Kohautia virgata
Marceliopisis denudata
Monechma arenicola
Monechma genistifolium
Nolletia garipeñæ
Orthanthera albidæ
Petaldium setosum* 
Ruellia diversifolia
Salsola tuberculata
Senecio alliariifolius
Solamum riginescensoides
Sutera maxii
Tephrosia dregeana
Zygophyllum cylindrifolium
Zygophyllum stapfii

Herbs — Graminoids
Aristida adscensionis
Aristida parvula
Aethionema glaucum
Brachyaria floribunda
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)
Aizoanthera dinteri
Amaranthus thumbergii
Anticharis inflata
Blepharis grossa
Calostephanæ marlothii
Celosia argenteiformis
Cleome lauderianæ
C. diandra
Crotalaria podocarpa
Diecma capensis
Euphorbia inaquilata
E. glanduligera
E. phyloclada
Forsskaolæa candidæ
Geigeria alata
G. ornata
Gisekia africana
Helichrysum leptolepis
H. roseo-niveum
Indigófera auricoma
I. dregeana
Kohautia lasiacarpa
Lainuæa intybacea
Lineum argute-coronatum
L. sulcatum
Lotononis platycarpa
Mallugo cerviana
Monechma desertorum
Monsonia senegalensis
M. umbellata
Osteospernum microcarpum ssp. septentrionale
Pegolettia senegalensis
Penetia schinziana
Raphionacme (S-R 10)
Senecio flauus
S. marlothianus
Sesamum capense
Sesuvium sesuvioides
Sutera fragilis
Talinum arnottii
Tribeus terestris
T. zeyheri
Trichodesma africana
Triandrena triqueta ssp. parvifolia
Zygophyllum simplex

"Lilies"
Ammocharis tinneana
Eriopspermum roseum
Hexacyrtis dickiana
Ornithoglossum viride
Dipcadi bakeranum
Eriopspermum 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.

WHITTAKER, R. H.
1970 Communities and Ecosystems, MacMillan.
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7. The text should ideally consist of the following, in this order:
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   Results
   Discussion
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