

VEGETATION

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Sources of information

Data sources

Private recompilation, bibliography available from different publications.

Accessibility

University of Venda, private collection on request. Not up to date.

Period over which data has been recorded: 15 years.

Completeness

100% on a macro scale, landscape management units 10%, plant communities at structural level 2%, exotic plantations 50%, landtype maps (1: 50 000), land cover map 2000 version (1: 250 000?).

Summary statistics

- Acocks defines 7 veld types, Low & Rebelo 2 Biomes and 7 veld types.
- No statistics available for more detailed vegetation studies.
- Endemic vegetation types: North Eastern Mountain Sour Veld (Acocks, 1988),
- Soutpansberg Arid Mountain Bushveld (Low & Rebelo [eds], 1996)

Statistics on indigenous vegetation

Some isolated statistics are available from local vegetation studies. Studies, often in the form of reports, are not sufficiently known, and could be a valuable source. For example the species list from plots done at the Mutshidudi catchment area revealed the presence of 109 plant families, 397 Genera and 619 species (Weisser & Todd, 2001).

The same situation exists in relation to quantitative data on vegetation. For example, in the Matondoni area, near Thohoyandou, a pristine forest was studied using the point quarter method. (Weisser *et al.*, in prep). *Schefflera umbellifera* was the tree with the highest importance value, followed by *Bridelia micrantha*, *Cussonia spicata*, *Albizia adianthifolia*, *Brachylaena discolor*, *Combretum molle*, *Croton sylvaticus* and *Parinari curatellifolia*.

Statistics on invasive alien vegetation

Statistics on the presence and distribution of invasive alien plant species can be accessed through the national

data base coordinated by Ms Henderson (SAPIA) and Honours studies done at the University of Venda. The Working for Water Project also has information about the presence of and control methods for noxious weeds.

Comments and statistics on the conservation status of vegetation in the area

The area, being in a semi-arid climate (periodic droughts), is highly vulnerable to human degradation. Iron Age sites dating back about 1 200 years still show irreversible degradation. Growth rates of trees are usually slow (except exotic timber species) and abandoned fields are slow to recover.

Extrapolating from the information of Low & Rebelo (1996) one could assume that 65% of the area is transformed by human activities and about 12% formally conserved.

The transformation of many cattle farms into game ranching and tourist facilities, as well as the creation of conservancy areas, has enhanced conservation conditions considerably. On the other hand, population pressure, urban sprawl, clearing for agriculture, forestry plantations and overgrazing have caused the disappearance of extensive natural and semi-natural habitats.

Major studies and publications

Currently intensive work on the conservation status of riparian plant communities is in progress (Fouche, *pers. comm.*). Veld types of the Western Soutpansberg is currently under study by T. Mostert (Univ. of Pretoria, PhD project).

In relation to specific species, information is available on *Brackenridgea zanguebarica* (Todd, 1999; Tshisikhawe, 2002; and Todd *et al.*, 2003.). *Milletia stuhlmanni* was studied by Todd & Mukwevho (unpublished). Both species are highly endangered. However, these species are common in Zimbabwe and Mozambique, where they are not endangered.

The greatest problem is the commercialization of trading in the parts of these plants. Original use was sustainable, however, with the profit motive behind the muti trade, both plant species are highly endangered in this area. Although traditional healers still observe the rituals of collecting medicinal plants, the impact of middlemen involved in the trade cannot be ignored (Tshisikhawe, 2002).

Bibliography

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Recommendations for priority studies required to fill any gaps identified

Broad Scale Classification of Vegetation

Remote sensing techniques are central for vegetation studies. Up to now satellite imagery have been of limited use in a multi habitat, mosaic forming vegetation such as the Soutpansberg. Better results would be achieved using the latest aerial photo coverage combined with computer aided photo interpretation. This would allow the proposal of "photo derived vegetation units". These need then to be validated with fieldwork for refining and validation.

Vegetation data, sometimes from local reports (e.g. for veld management and farm planning purposes) should be captured in a form that is compatible with GIS (e.g. Arc View) and used as complementation of a progressively more complete plant communities map.

Detailed studies of selected, higher priority areas

Will be undertaken on the same basis as above.

Historic account of vegetative change

The oldest aerial photos of the region date back to 1936. A comparison between these and the newest available photos should give a clear indication by comparison of vegetation processes and environmental degradation.

Priority studies proposed

- Broad Scale Classification of Vegetation.
- Detailed studies of selected, higher priority areas. Financial assistance to currently highly advanced, but still incomplete vegetation works such as:
 - Mostert, T: Veld Types of the Western Soutpansberg.
 - Weisser, P. J. *et al.*: Some main plant communities of Venda, South Africa (85% completed).

- Weisser, P. J. *et al.* A vegetation transect from the Limpopo to the Mutale River (75% completed).
- Historic account of vegetative change.

“Hot spots” of importance

In a botanical context in the Soutpansberg it is difficult to apply the concept of hotspot. Very few taxa or communities are restricted to a specific region, most of them are widely spread.

Any un- or less-disturbed area can potentially contain rare plant species and communities. One is more likely to

find hot spots in the currently officially and privately protected areas or regions far away from settlements. Makuya Park, Madimba Corridor, Nwanedi Reserve, Thathe Vondo Forestry Area, Private Conservancies and Blouberg are some examples.

Recommendations for stakeholders who should be consulted in future

Theo Mostert, University of Pretoria



N. Hahn