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SABONET NEWS

Newsletter of the Southern African Botanical Diversity Network

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Editorial

Welcome to the third issue of *SABONET News*, the official newsletter of the Southern African Botanical Diversity Network. This newsletter is designed to inform you of happenings within the SABONET project, and promote communication and networking between individuals and institutions working on southern African plants. The primary focus is on herbaria and botanical gardens, but extends much further into the realm of botanical diversity, which inevitably includes *in situ* plant conservation. We would welcome any articles on southern African *in situ* plant conservation projects or activities. So if you are involved with the *in situ* conservation of any southern African plant taxon(-a), populations, communities or biomes, we would like to hear from you.

There are a variety of articles in this issue of the newsletter. There is a profile on Gideon Dlamini, Curator of the Swaziland National Herbarium, an article about the highest botanical garden in southern Africa (Katse, Lesotho) as well as reports from conferences, country visits by the project coordinator, training courses held in the region, collecting trips and SABONET's monitoring and evaluation process amongst others. John Bolton has provided an interesting overview of the state of algal taxonomy in southern Africa, and SABONET will be consulting with John and the PSSA in the presentation and organisation of future training courses for staff working in southern African national/university herbaria.

As promised in the last issue of the newsletter, there is a list of e-mail addresses of botanists working in southern African herbaria and botanical gardens. This is by no means a complete or comprehensive list, and will be expanded in future editions of this newsletter. If you think you should be listed, please let me know via e-mail, and I will add your name and e-mail address to the list. This is clearly an on-going process, with the list needing continual updating. It is, however, very useful information, especially considering the fact that e-mail is probably the fastest and most efficient way to communicate in our modern technological era.

Also listed are the SABONET National Working Groups, with a contact person in each country - so if you would like to get involved with SABONET activities in a particular southern African country, a contact name and details have been provided for you.

A regular feature, starting this issue, is *The Paper Chase* by Dr Hugh Glen of the National Herbarium in Pretoria, South Africa. If there is any botanical literature you think might be of interest to botanists working on southern African plants, please inform Hugh by telephone, fax or e-mail so he can list the books, journals or articles in future issues of this newsletter. Finally, there is a section entitled *Regional News Updates* which serves as a notice board for news from around the southern African region - and it is with great sadness that we announce the tragic and untimely death of Dr MAN Müller in Namibia. An obituary for Dr Müller will appear in a future issue of this newsletter.

Included with this issue is an order form for a new publication (NBI's *Strelitzia* series, Number 5) on the taxonomic literature of southern African plants (*Flora of southern Africa* (FSA) region). You can order the book directly from the NBI in South Africa. This should be a very useful publication and essential reference book for all botanists working on southern African plants - maybe in future the geographical area covered could be extended to include the *Flora Zambeziaca* (FZ) countries as well. SABONET should certainly be working towards this.

Special thanks go to all the contributors to this issue of *SABONET News*, and to Pascale Hartzer, Adela Romanowski, Gill Condy, Hugh Glen and Mmabatho Phuduhudu for their valuable assistance in the production of this issue of the newsletter.

The success of *SABONET News* depends primarily upon materials for publication which its readership provides. If you have some unexpressed ideas or knowledge important the conservation of southern African plants, please consider sharing them with the rest o us through *SABONET News*. Contributions the fourth issue, scheduled for publication August 1997, should be received by 25 July. Please consider making a submission.

SABONET News is issued free-of-charge to interested persons, so if you would like to be added to the mailing list, please let me know

Christopher Willis
EDITOR

Profile : Gideon Dlamini

Gideon Mehluli Fipha Didumfula Dlamini was born on 10 January 1952 in Manzin Swaziland. He obtained his Primary School Certificate from the Manzini Central Primar School (1958-1967), his Junior Certificate fr Franson Christian High School (1968-1970) and the Ordinary Level Certificate from St Christopher's High School (1971-1972). He went on to obtain a Bachelor of Science (B degree in Agriculture, with Botany as a sec major, from the Tuskegee Institute, Alabam USA (1973-1977), and a Master of Science Botany from Auburn University, Alabama, USA (1979-1982).

▲ *Gideon Dlamini.*

Married with four children, Gideon is a botanist, Chief of the Nkhungwini Community and farmer. All his life, Gideon has enjoyed gardening and hence his interest in Agriculture. One of his first jobs in Swaziland was as an Agricultural Officer in the Soil Testing Unit. This involved testing soils for farmers and making fertilizer and lime recommendations to improve crop yields. He was always fascinated by flowers of all sorts, hence his interest in Botany. He was at one stage persuaded by the then Curator of the Swaziland Herbarium, Mrs Ellen Kemp, and the then Principal Secretary in the Ministry of Agriculture to pursue Taxonomic Botany, as there were no Swazis trained on this subject.

Gideon is presently the Curator of the Swaziland National Herbarium (SDNH) which falls under the Ministry of Agriculture and Cooperatives. As Herbarium Curator, Gideon is expected to make a botanical inventory of the Swaziland flora, to monitor such flora and recommend conservation measures to be undertaken as well as promote awareness campaigns and run the Herbarium. He has a special interest in the Fabaceae, Acanthaceae and Rubiaceae families.

In addition to his responsibilities of being Curator of the National Herbarium, Gideon chairs the Swaziland National Plant Genetic Resources Centre (NPGRC) Committee and represents Swaziland on the Board for the SADC Plant Genetic Resources Centre (SPGRC), based in Lusaka, Zambia. This is a network of the SADC Member states whose aim is to conserve the plant genetic resources of the region, both crop and indigenous, as well as to promote their sustainable utilisation.

Gideon is the Swaziland representative on the SABONET Steering Committee and also serves as a member of the SABONET Executive Committee.

As a Chief (Fipha II) of the Nkhungwini Community in the south of the country, he allocates land for home construction and farming, oversees the proper utilisation of pasture and natural resources as well as maintaining the general peace of the community. He is a naturalist with a deep appreciation for every creation and is "greatly respectful of snakes".

A member of the traditional regiments affiliated with the Inyatsi Regiments, he strongly supports culture and is expected to participate in the traditional ceremonies at national, regional and community level. His regimental name is Didumfula. Presently, he is a member of the Constitutional Review Committee which is charged with drafting a new constitution for the country over the next two years.

Gideon enjoys singing, listening to music and watching football and boxing as well as walking in the veld.❑

Mr Gideon Dlamini *can be contacted at the National Herbarium, Malkerns Research Station, Malkerns, SWAZILAND.*
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GARDEN IN THE SKY

BACKGROUND

The Lesotho Highlands Water Project (LHWP) is a major water transfer project, designed to deliver water to South Africa and generate hydroelectric power for Lesotho for local consumption. Phase IA of the LHWP is currently under construction. Phase IA comprises a large concrete arch dam on the Maliba-mats'o River at Katse, extensive water transfer and delivery tunnels, a dam and hydropower station at 'Muela. Phase IA is scheduled for completion by 1997, while infrastructure development is presently being implemented in Phase IB and the further long-term development of LHWP envisages dams at

Mashai, Tsoelike and Ntoahae with further tunnel construction.

Lesotho comprises a number of unique montane and valley ecosystems, with the "alpine" region (at an altitude of greater than 2 000 m above sea level) providing habitat for a large number of endemic, rare and threatened species of plants. These important ecosystems have in the past been subject to considerable degradation due to human activities such as overgrazing and population increase, amongst others. A new threat comes from the implementation of the LHWP and the inundation of the Katse Reservoir which will destroy well over 100 plant species of range (forage), medicinal and cultural importance. Appropriate development of a botanic garden and its management is one of the approaches used in the conservation and protection of plant genetic resources, but has not yet been applied in the LHWP catchments. The use of botanic gardens for tourism and education presents an income source for the country and the local communities.

The Lesotho Highlands Development Authority (LHDA) is an autonomous statutory parastatal body set up to develop and ultimately operate the LHWP in accordance with the terms of the treaty signed between Lesotho and South Africa in October 1986. As part of its mandate, the LHDA has undertaken extensive environmental studies and impact assessments within the Phase IA project area. These studies have included biological surveys, assessment of the status of threatened flora and fauna, identification of areas that can be developed for conservation, environmental awareness and educational use, rescue of plant genetic resources in the Katse Dam Basin, and tourism as part of social and economic development of rural communities in the LHWP catchments.

A one-year (January 1991-February 1992) biological survey which collected distribution and population data on Phase IA catchment area has been completed. The data included information on vegetation, mammals, reptiles, fish, amphibia, birds and invertebrates, and established a baseline for future monitoring programmes. A rescue operation for plant genetic resources in the Katse Dam Basin was conducted in April 1995, and established the need for a botanic garden/plant field gene bank in the Phase IA area. An essential component of the Environmental Action Plan (EAP) is the protection and conservation of endangered species and unique habitats, so as to ensure that the implementation of LHWP does not result in the extinction of species, in particular, rare and endangered species.

Botanic Garden at Katse

The Katse Botanic Garden will be a first botanic garden to be developed in Lesotho (*Editor's note: apart from the small botanic garden at the National University of Lesotho*) and its importance therefore cannot be overemphasized. In the southern African region this will be the one botanic garden that will represent the high altitude "alpine flora" and will therefore serve as a centre for conservation and protection of the alpine flora, not only for Lesotho, but for the region as well. The main objective of establishing a botanic garden at Katse is to conserve, protect and manage the plant genetic resources and botanical diversity within the Katse Dam catchment.

The long-term objectives of the programme are:

- To establish a live record of botanical diversity of the LHWP Phase IA area;

- To conserve and protect the botanical diversity of LHWP Phase IA and redress the situation where foreign scientists have collected plant genetic material in Lesotho, but development and storage of such material was done elsewhere in the world;

- To develop a mechanism of community-based botanical conservation through extensive use of indigenous knowledge (IK) of the plants

and their uses, especially medicinal and utilitarian plants that are important in the Lesotho culture (such as thatching grass);

- To promote awareness of botanical diversity of the LHWP among the local communities, tourists, students and the public at large;

- To enhance and take advantage of income generation opportunities that can be derived from a botanic garden for the local communities; and

- To develop strategies that will assist to strike a compromise between other LHDA studies/programmes dealing with botanical resources and the ultimate conservation and protection of these resources.

Progress on Katse Botanic Garden

Work on the Katse Botanic Garden started in October 1995 with most of the plant collection coming from the Katse Dam Basin before the dam's inundation, but also including plants of interest to different community groups. A pot collection comprising *ca.* 350 plants (about 100 species) was established around this time. The plant collection is being maintained and additional collection missions are being undertaken. The limiting factor in this regard has been the short collecting season that is experienced in the high altitude areas of Lesotho. Plant species that are of interest to the community groups were determined together with the communities.

The highlands of Lesotho are mostly inaccessible, but projects such as LHWP have brought with them infrastructure thereby making them accessible. The local communities in the project area express a concern that with the construction of the road to Katse Dam the commercial herb sellers are now visiting and gathering all sorts of plants to sell in the lowlands. The local communities therefore see the development of the botanic garden as a means to conserve and protect the local plant diversity, especially the medicinal plants and utilitarian plants.

A series of Pitsos (*a Pitso is a traditional public meeting where local communities participate in terms of expressing their needs and concerns and build up development issues. Pitsos are extensively used in Lesotho as a public participation strategy*) have been held with the local communities and the planning and the design of the botanic garden is taking into account their needs and concerns about the local plant resources. In general, the local communities see the establishment of the garden as the answer to the control of harvesting of the plant resources and eventual protection and conservation of these plant resources. The Pitsos are still continuing and follow-ups are made on the issues raised by local communities. The indigenous knowledge of the local communities about the plant resources is invaluable. Plant identification, information on current patterns of plant utilisation, species distribution and status of the plant species in the wild is but some of the invaluable IK being made use of in the development of this botanic garden.

The garden is capitalising on three main issues: conservation, education and community participation in the garden development. It is with this in mind that four species that are rare and/or endangered are being flagged as the core of the garden. Among these four species is the indigenous aloe - *Aloe polyphylla* (spiral aloe) (see photograph), which is also being singled out as a stand-alone project that will require specific research and inputs. The plan is that eventually this precious aloe can be propagated in a community nursery and the communities can sell plants from the nursery, thereby reducing the pressure on the wild populations.

Because a botanic garden is a new development in Lesotho, expertise has been sought from within the region whereby technical assistance is being offered to the staff of LHDA to

establish the garden. LHDA is collaborating with other local and regional agencies in this development. On the job training is being offered to LHDA staff with short courses being undertaken in relevant institutions in the Republic of South Africa.

The botanic garden is being developed over a five-year period in stages. The nursery and potting shed have already been established. Fencing is about to start and this will also involve recovery of natural flora through reduced grazing - this area will be part of the botanic garden which will give an indication of what the natural flora of the area comprised. Plans for the garden and the educational/ information centre have been finalised and construction will begin this year.❑

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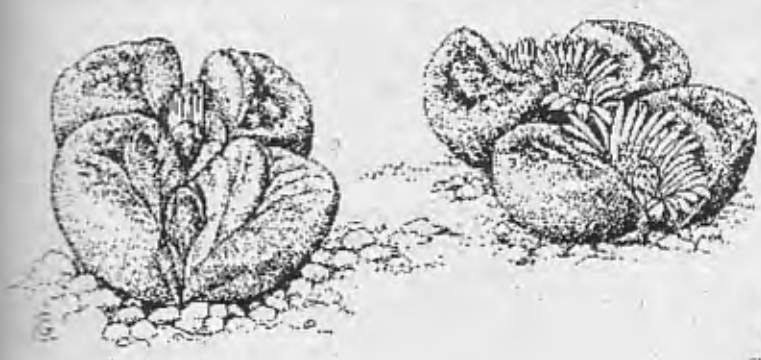
▲ *The spiral aloe,* **Aloe polyphylla**, *in natural habitat, Drakensberg mountains, Lesotho. The spiral aloe is the national flower of, and endemic to, Lesotho and is highly endangered. (Photo: LHDA/Mahlape Mothepu)*

Katse Botanic Garden joins a select group of botanic gardens in the world that are positioned at an altitude of 2000 metres above sea level (a.s.l.) or higher. The following is a list of those world botanic gardens lying at 2000 m a.s.l. or above (source: International Directory of Botanical Gardens. 5th Edition (1990) by Heywood, C.A. and Heywood, V.H. - from those gardens where altitude is known)

Jardín Botánico "José Celestino Mutis" (COL), Bogota, COLOMBIA (2556 m)
Jardín de la Facultad de Agronomica (MANIZ), Universidad de Caldas, Manizales, Caldas, COLOMBIA (2170 m)
Station Alpine du Lautaret (GR), Saint-Martin-d'Heres Cedex, FRANCE (2050 m)
Escuela Agrícola Panamericana (EAP), Tegucigalpa, HONDURAS (800-2200 m)
Lloyd Botanic Garden (DARJL), Darjeeling, West Bengal, INDIA (2134 m)
Botanic Garden Darjeeling (DARJ), Darjeeling, INDIA (2050 m)
The Bryant Park (KODAI), Kodaikanal, Tamil Nadu, INDIA (2000 m)
Government Botanic Gardens (OOTAC), Ootacamund, INDIA (2250 m)
East African Agriculture and Forestry Research Organization (EA), Kikuyu, KENYA (2135 m)
Jardín Botánico Escuela Nacional de Medicina y Homeopatia (FRACC), Fraccionamiento la Escalena, MEXICO (2240 m)
Jardín Botánico Instituto de Biologia (MEXU), Universidad Nacional Autónoma de México, Mexico D.F., MEXICO (2320 m)
Wild Botanical Garden (MEXCW), Desierto de Los Leones Cultural & Recreational Park, Mexico City, MEXICO (2800-3750 m)
Asociación Mexicana de Orquideologia A.C. (AMO), Mexico City, MEXICO (2300 m)
Royal Botanical Garden Godawari (KATH), Kathmandu, NEPAL (1500-2000 m)
Lipizauga Botanical Sanctuary (LIPIZ), Goroka, PAPUA NEW GUINEA (2000-2500 m)
Highland Orchid Collection (LAIAG), Laiagam, PAPUA NEW GUINEA (2200 m)
Jardín Botánico Universitario (SNEV), Sierra Nevada, SPAIN (2500 m)
Alpengarten Schynige Platte (INLKN), Interlaken, SWITZERLAND (2000 m)
Flagstaff Arboretum (TZHI), Flagstaff, Arizona, USA (2179 m)
Navajo Nation Zoological and Botanical Park (NAVAJ), Arizona, USA (2075 m)
Pamir Botanical Garden (PAMI), Khorog, Tadzhikistan, former USSR (2100-3000 m)
Botanic Garden, Dagestan Branch (DAGES), Makhachkala, Dagestan, former USSR (1670-2000 m)
Varzob Mountain Botanical Garden (VARZO), Varzob, Tadjik, former USSR (1100-2400 m)



Lithops naureeniae (Mesembryanthemaceae) drawn by Gillian Condy (1997). This is one of many illustrations by several artists that will accompany the forthcoming publication, ***List of southern African succulent plants***. The list, a joint venture between the National Botanical Institute and the Succulent Society of South Africa, is due to be published later this year. Southern Africa has approximately 40% of the known succulents of the world.

AETFAT 1997

The 1997 AETFAT Congress took place in a cold, wet Harare, and was hosted by the University of Zimbabwe. The conference started with stimulating lectures on the conservation and biodiversity of the African Flora, with a parallel session on development of African herbaria. In the latter, a grim picture was painted of African botany, although one had to admire the optimism and courage of the botanists working in underprivileged countries. Taxonomic advances and phytosociology of African plants

◀ *Botanizing in the mistbelt on the Great Dyke during the AETFAT field excursion. (Photo: NBI/Janine Victor)*

were the main themes of the afternoon. The second day was devoted to ethnobotany, plant resources and sustainable development, taxonomy and evolution, and the biodiversity convention. On the third day a large fleet of slow buses set off for a botanical excursion to the Great Dyke (see photograph). This interesting geological feature is a serpentine-rich area boasting rare endemic plant species, such as an *Aloe* and two Euphorbias, one of which is presently undescribed. The serpentine flora is unique in that it has specialised adaptations to enable it to utilise the mineral enriched soils. The day was cool and misty, and the Kew people, who felt quite at home in such damp weather, leapt for joy when the occasional spot of warm sun shone through the clouds. The unusually heavy rainfalls had resulted in a very lush vegetation with numerous plants in flower, and we all learnt many interesting things about the Zimbabwe flora.

The following day the poster and paper sessions continued with conservation, taxonomy, biosystematics, evolution and plant resources and sustainable development, with a mini-symposium on the mopane ecosystems. That

hosts put on an indigenous feast for botanists. They first starved us (little sandwiches in the early morning for lunch), to make sure we would eat what we were served. A group of traditional dancers put on a show to whet our appetites while we drank red muzumbani (*Lippia javanica*) tea. Botanists from all over the world let their hair down and joined in, feet drumming to the rhythm of the African beat. The feast started with jugo beans (*Vigna subterranea*), tilapia, and of course, mopane worms (*Gonimbrasia belina*), which really were not that bad. The main course was surprisingly delicious impala stew with marula jelly, and tasty ostrich steaks. Some unrecognisable wild vegetables were served to those who dared taste foreign substances in polite company. The wine from Mazoe vineyards was excellent. After the feast the party animals continued the happy theme in the common room at the residence.

The following day the lecture sessions dealt with biosystematics and phytogeography, with a parallel poster session on ecology. After that, a group of post congress travellers departed for the wet, wet mountains, and the remaining delegates either set off for home, or went on their own informal tours of the country before leaving Zimbabwe. It had been an extremely worthwhile, exciting congress, and I am sure that everyone was sad to leave the beautiful country with its happy (although wet!) African atmosphere. ❑

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Editor's note: The XVIth AETFAT Congress has been scheduled for the second half of August 2000, and will be held in Meise, near Brussels, Belgium.

AETFAT RESOLUTION

The following resolution, presented by Dr Pete Lowry (Missouri Botanical Garden), was adopted at the Business meeting of the 15th AETFAT Congress

Request that the AETFAT Secretariat appoint a Working Group to explore and pursue options for accessing international funds for an AETFAT-endorsed project to develop and establish an international, collaborative effort to complete the inventory and description of the flora of sub-Saharan Africa, and to compile and disseminate this information in a variety of forms accessible to a broad range of end-users.

Project Document to GEF

The Draft Project Document (PD) for the GEF/UNDP funding was approved with minor modifications by the SABONET Steering Committee at their 3rd meeting held in Harare, Zimbabwe, on 5 February 1997. The recommended changes have now been made to the document, and the final document was submitted to the UNDP on 2 April 1997, for revision/approval and endorsement by the GEF and the UNDP. Once the PD has been endorsed by the GEF Council

members and the GEF CEO, the PD will be sent to each country office for government signature. Once the PD has been signed by each government and the cover page received by GEF Headquarters (New York), the Regional Bureau for Africa (RBA) Director can sign on behalf of the UNDP, and a copy of the PD reflecting all signatures will be distributed to each participating country. Only once all these activities have taken place can funds be disbursed for use in the project, according to the usual UNDP procedures.❑

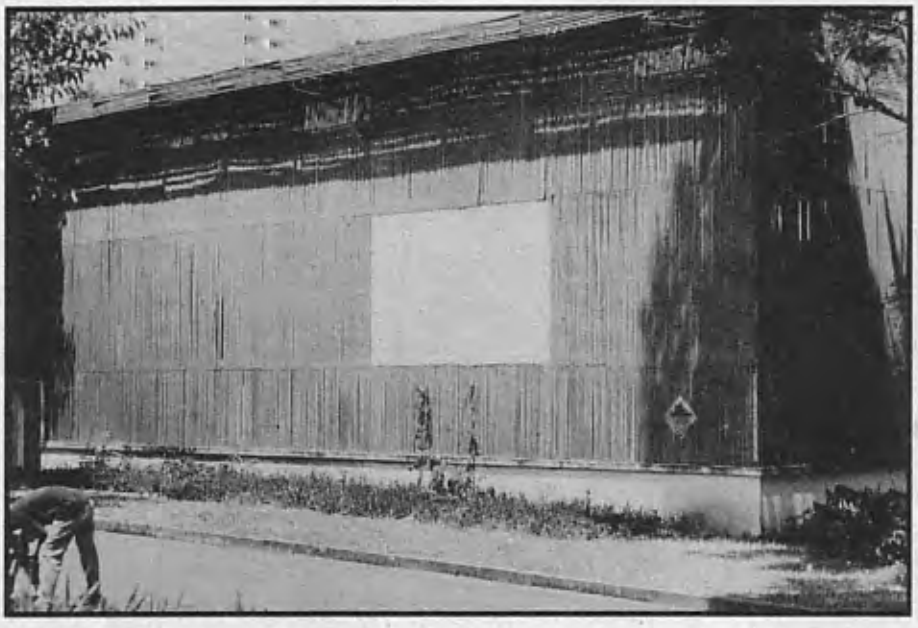
Country Visits

Mozambique

The SABONET Steering Committee Chairman, Prof. Brian Huntley, Prof. Gideon Smith (South African representative on the SC) and the Coordinator, Christopher Willis, visited Mozambique from 25-27 February 1997. Visits were made to the two main herbaria in the country - the LMU- and LMA Herbarium. The LMU Herbarium is attached to the Eduardo Mondlane University, and is under the curatorship of Salomão Bandeira, ably assisted by Ms Filomena Barbosa, an ethnobotanist. The LMA Herbarium must arguably have some of the finest herbarium cabinets and cabinet arrangement in southern Africa, and is curated by Mr Calane da Silva. Botanic gardens visited were the Maputo (LMU) Botanic Garden attached to the Department of Biological Sciences at the Eduardo Mondlane University, and the Tunduru Botanical Garden in the centre of Maputo. The University Botanic Garden, founded in 1976, is 7.8 hectares in area, and contains many indigenous plant taxa and an attractive succulent garden. Tunduru (named after a military training camp in Tanzania) is a municipal botanic garden (formerly known as the Lourenco Marques (LMARQ) Botanic garden) in Maputo, founded in 1885 and is approximately 6.4 hectares in area. The garden hosts some magnificent old trees, most of which have their natural distribution range outside of Africa. The garden also has one very unusual and elegant greenhouse ("estufa") consisting of hundreds of thin wooden panels with a small gap between each.

The SABONET-Mozambique National Working Group meeting (conducted in Portuguese by Prof. Huntley) was held on the afternoon of Wednesday 26 February, and was

◀ **Raphia australis** *at Bobole, a possible site for the proposed Mozambique National Botanical Garden. (Photo: SABONET/ Christopher Willis)*



▲ *The greenhouse or "estufa" in Tunduru Botanical Garden, Maputo. (Photo: SABONET/Christopher Willis)*

▲ *Participants at the first SABONET-Mozambique National Working Group meeting, Maputo. L-R: Salomão Bandeira (LMU), Gideon Smith (NBI, South Africa), Joaquim de Sousa (Tunduru), Calane da Silva (LMA, Chairman), Simon Anstey (IUCN), Felicidade Munguambe (MICOA), Frederic Fettweis (UNDP), Samira Izidine (LMA), Filomena Barbosa (LMU) and Brian Huntley (Chairman, SSC).(Photo: SABONET/Christopher Willis)*

attended by the following Mozambican institutions and individuals:

LMA Herbarium: Mr Calane da Silva and Ms Samira Izidine
LMU Herbarium: Mr Salomão Bandeira and Ms Filomena Barbosa
Tunduru Botanical Garden: Mr de Sousa
UNDP-Mozambique: Mr Frederic Fettweis
IUCN- Mozambique: Mr Simon Anstey
Ministry for Coordination of Environmental Affairs (MICOA): Ms Felicidade Munguambe

After the meeting a small group of people visited the site that has been identified as the possible locality for a future National Botanical Garden for Mozambique. The site lies close to the village of Bobole, on a tributary of the Nkomati River that flows into the Indian Ocean. Approximately 100 naturally-occurring live specimens of the palm *Raphia australis* have been recorded by Salomão Bandeira at the site, which are threatened by human expansion in the area. *Raphia australis*, which, according to Coates Palgrave's *Trees of Southern Africa*, occurs naturally in southern Mozambique and around Kosi Bay in northern Kwazulu-Natal (South Africa), is essentially a palm of swampy areas, and can be distinguished from the other *Raphia* of southern Africa, *Raphia farinifera* (commonly known as the Raffia palm - with the largest leaves in the plant kingdom - up to 18 metres), by the flower head which is carried vertically above the crown of leaves.

Many palms in the area have, over the past few years, been cleared to make way for banana and cashew plantations. The palms provide important habitat and source of food for the Palmnut Vulture (*Gypohierax angolensis*) (listed as "Rare" in the South African Red Data Book - Birds), which

roosts communally and normally breeds in association with the palms, and eats, amongst other things, the husks of the *Raphia* fruits. It would be interesting to know the present distribution of *Raphia australis* in Mozambique, as it was probably much more widely distributed in the past. The possibility of Bobole forming the site for a future National Botanical Garden in Mozambique is still under discussion.

ZAMBIA

Proff. Huntley, Smith and the Coordinator, Christopher Willis, visited Zambia from 24-26 March 1997. During this visit, meetings, arranged by Dr Patrick Phiri (Curator of the University of Zambia Herbarium (UZL), Lusaka, and Zambian representative on the SABONET Steering Committee), were held with Prof. Siwela, Vice-Chancellor of the University of Zambia (Great East Road Campus) and members of the SABONET-Zambia National Working Group. The National Working Group meeting, chaired by Dr Phiri, was held on the morning of 25 March 1997, and was attended by the following Zambian representatives:

University of Zambia:
Dr PSM Phiri (Chairman, SSC representative)
Dr LE Mumba (SSC alternate)
Ms T Banda (minute secretary)
UNDP: Mr Amos Muchanga (National Programme Officer)
National Parks and Wildlife Services: Mr Henry Mwima
National Plant Genetic Resources Centre: Mr Michael Nawa
Environmental Council of Zambia: Mr Chilumba Chipepo

▲ *Participants at the first SABONET-Zambia National Working Group meeting, Lusaka. L-R: Henry Mwima (National Parks), Gideon Smith (NBI, South Africa), Amos Muchanga (UNDP), Chilumba Chipepo (Environmental Council of Zambia), Brian Huntley (Chairman, SSC), Patrick Phiri (UNZA, Chairman of National Working Group), Michael Nawa (NPGRC), Tasila Banda (UNZA) and Luke Mumba (UNZA). (Photo: SABONET/Christopher Willis)*

The Tree's Prayer

Ye who would pass by and raise your hand
against me,
Hearken before you harm me.
I am the heat of your hearth on cold winter
nights,
The friendly shade screening you from the
summer sun.
And my fruits are refreshing draughts,
Quenching your thirst as you journey on.
I am the beam that holds your house,
The board of your table,
The bed on which you lie,
And the timber that builds your boat.
I am the handle of your hoe,
And the door of your homestead,
The wood of your cradle,
And the shell of your coffin.
I am the gift of God,
And the friend of man.
Ye who pass by, listen to my prayer
And harm me not.

(Published by the Zambian Forest Department)
The Tree's Prayer was taken from the IUCN's publication *The Nature of Zambia* (1988)

Organisations that are represented on the National Working Group but were not present at the meeting included:

Forest Herbarium (NDO), Division of Forest Research (Kitwe);

Mount Makulu Herbarium (MRSC), NPGRC;

▲ *Munda Wanga Botanical Garden, Chilanga, Zambia. (Photo: SABONET/ Christopher Willis)*

▲ *Wooden sculpture made from* **Spathodea campanulata** *(East African Flame Tree), Munda Wanga Botanical Garden.*
(Photo: SABONET/Christopher Willis)

Luangwa Integrated Rural Development Project; and the IUCN.

After the National Working Group meeting, a visit was made with Drs Phiri, Mumba and Ms Banda, to the Munda Wanga (meaning "My Garden" in Nyanja) Botanical Garden in Chilanga, south of Lusaka. Mr George Shipanuka gave the group a guided tour of the only botanical garden in Zambia. Munda Wanga Botanical Garden, 13 ha in area, which lies adjacent to the Zoological Gardens, is currently managed by the Zambian Ministry of Tourism, and was established in 1950. The garden was only opened to the public, however, in 1958. After seeing the Munda Wanga Botanical Garden, the group visited the SADC Plant Genetic Resources Centre (SPGRC), 27 km outside Lusaka. We were fortunate to have met up with Dr Godwin Mkamanga (thanks to prior arrangements made by Dr Phiri), and discussed potential areas of overlap and collaboration between the SPGRC and the SABONET project. The group was given a tour of the premises by the Curator, Mr Charles Nkhoma.

On Wednesday morning, 26 March 1997, a meeting was held with Mr Paul Banda, Chief Inspector of the Environmental Council of Zambia. The Environmental Council of Zambia appears to have a strong GIS section under Brian Chirwa, Geographical Information System Officer. Together with Dr Phiri and Ms Banda, information on the University Herbarium (UZL) listed in the ***Index Herbariorum*** (1990) was updated. Proff. Huntley, Smith and Mr Christopher Willis then returned to South Africa after a very interesting and constructive visit to Zambia.❑

Note: The baobab appearing in this article was taken from the cover page of the **National Conservation Strategy for Zambia (NCSZ) (1985).** When the NCSZ was officially adopted by the Zambian government in July 1985, it became the first such strategy to be completed in Africa.

◀ *Outside the SADC Plant Genetic Resources Centre, Lusaka, Zambia. L-R: Gideon Smith (NBI, South Africa), Charles Nkhoma (Curator, SPGRC), Tasila Banda and Patrick Phiri (UNZA), Godwin Mkamanga (Director, SPGRC) and Brian Huntley (Chairman, SSC). (Photo: SABONET/ Christopher Willis)*

Namibian Grass Identification Course

During March this year a week-long grass identification course (3rd - 7th) was held at WIND, in Namibia. Lyn Fish from the NBI in Pretoria presented the course to the staff of the National Herbarium of Namibia in a very effective fashion.

The first day was spent discussing terminology and examining the basic morphology of grasses in different groups. This was a period of enlightenment to many of us, during which pitfalls such as lemmas that attach themselves to caryopses and parts that are transmodified into vestigial remains or worse were revealed.

During the following days we addressed genera which we felt were presenting problems to us, amongst others *Eragrostis, Stipagrostis* and *Panicum.* Lyn was stoic and patient throughout, never betraying impatience or wrath at our groans and moans about keys that confused.....in fact, she even taught us to key out grass genera using Gibbs Russell *et al.* (no

▲ *Lyn Fish assisting Esmerialda Klaassen with a problematic* **Eragrostis** *identification, WIND, Namibia. (Photo: NBRI, Namibia)*

▲ *Patricia Craven pleased after solving one of her problems, WIND, Namibia. (Photo: NBRI, Namibia)*

mean feat, given our ignorance). It's quite amazing how one or two misinterpreted steps early in a key can lead to disaster!

On top of all this, Lyn went through our collection identifying specimens needing 'redetting' and even finding an unrecognised isotype languishing in a 'common or garden' species file. She left us with a determination to have a go at all our 'indets' and a far greater sense of confidence about our abilities as regards the identification of Poaceae.

We thank Lyn, the NBI and SABONET for making this course possible.❑

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[***Editor's note:*** The Namibian Grass Identification Course was the first 'national' training course held within the SABONET programme, where the logistics for the course are organised by the host institution, and a specialist from another institution within the southern African region offers the course. It is anticipated that similar courses will in future be offered in other parts of the southern African region, depending on the demand, and will be offered ***in addition to*** regional courses, where selected participants from several or all of the 10 southern African countries attend.]

Footnote: The woodcut of *Stipagrostis* appearing at the beginning of this article was taken from the book **"Grasses of South West Africa/Namibia"** by M.A.N. Müller (1984). The woodcuts used in the book were originally made by W. Giess, former curator of the S.W.A. Herbarium (now the National Herbarium of Namibia), while he was in the internment camp at Andalusia (currently Jan Kempdorp, South Africa). This and other woodcuts have also been used in a publication ***"Bestimmungsschlüssel für südwestafrikanische Grasgattungen"*** by O.H. Volk (1944), which is now Africana.

Successful Specimen Database course at WIND

A very successful Specimen Database training course was held at the NBRI in Windhoek, Namibia, from 11-13 March 1997. Mr Trevor Arnold, head of the NBI's Data Management section at the National Herbarium in Pretoria, presented background information on the Specimen Database, whereafter the "real training" of all WIND staff members started.

▲ *Trevor Arnold presenting the Specimen Database course at WIND in Namibia. (Photo: NBRI, Namibia)*

We learned more about data-entry, a few aspects on database management and had an introductory lecture on the useful MAPPIT programme. Using Namibian data already entered into the new database, maps were generated by one of our eager colleagues. This was the last bit of motivation needed to get our herbarium computerised as soon as possible! Data-entry is now in full swing in Namibia.❑

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SABONET FUNDING MECHANISM AND NETCAB EXPLAINED

In order to clarify some issues related to how the SABONET project is funded, an organigram has been compiled (see below) to illustrate how this process works. Essentially there are two funding sources - USAID (through their Regional Centre for southern Africa - based in Gaborone, Botswana) and the GEF. Funds from USAID are administered by the IUCN ROSA (the World Conservation Union's Regional office for southern Africa), based in Harare, Zimbabwe through the NETCAB programme. NETCAB is the acronym for the ***Regional Networking and Capacity Building Initiative for southern Africa***. Reford Mwakalagho is the NETCAB Programme Manager, based at IUCN ROSA in Zimbabwe. NETCAB's objective is as follows:

Enhanced capacity of southern Africa's government institutions and NGOs to address environmental policy and management issues relevant to increasing natural resource productivity through coordinated regional initiatives and networks.

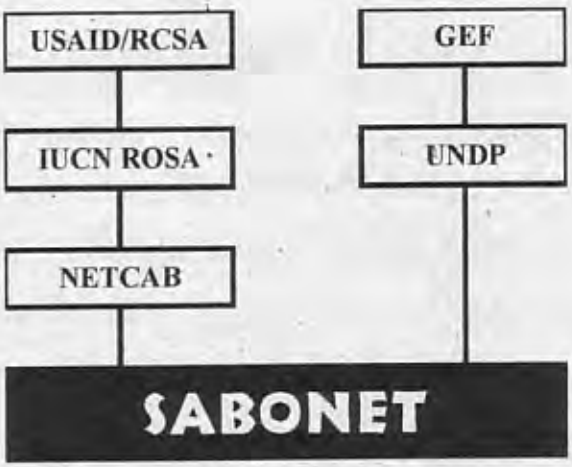
NETCAB, which started officially in October 1995, is being supported by USAID/RCSA for a period of five years, but divided into two phases - an initial 36 month period ending 30 September 1998, concluded with a joint USAID/IUCN ROSA assessment of the programme; followed by a further 24 month phase pending the outcome of the assessment.

Activities being supported by the NETCAB programme include the following:

- ***IUCN ROSA's Technical Support Services***
- ***Regional Capacity Building Network for southern African Botanical Diversity (SABONET)***
- ***National Training Programmes for Natural Resource Managers in southern Africa***
- ***Environmental Economics Capacity Building Programme in southern Africa***
- ***Regional Wildlife Trade Control***
- ***Legal Study on Trade Restriction Compensation***
- ***Regional Environmental Strategies Network***
- ***Southern African Sustainable Use Specialist Group (SASUSG)***
- ***Short-term fellowships and professional exchanges***
- ***Natural Resource Databases and collections***

Funds from the GEF (Global Environment Facility) for use in the SABONET project are administered by the UNDP (United Nations Development Programme) and are available for a period of four years (1997-2001). Funds received from both USAID/IUCN ROSA/ NETCAB and the GEF/UNDP for the SABONET project are administered by South Africa's National Botanical Institute under direction from the SABONET Steering Committee.❑

Capsule of *Rhus dracomontana* (Anacardiaceae) illustrated by the late Ellaphie Ward-Hilhorst (***Flora of southern Africa*** 19(3), 1993).



▲ Organigram of the SABONET funding mechanism.

M & E

In October 1996, the NETCAB Programme Coordination Unit produced a document entitled "Guidelines for Monitoring and Evaluation". Often abbreviated as M & E, monitoring and evaluation are both considered important components of the NETCAB programme and the SABONET project.

The idea behind M & E is that evaluation should not be an *ad hoc* event, but rather an ***integrated and on-going process***. The process will help NETCAB to ensure that the activities undertaken within the project remain relevant and effective, and that partners/lead agencies will be able to take corrective or compensatory action as they go along, rather than wait for the end of the project to learn lessons. This will also assist in providing input into the USAID/IUCN joint mid-term external review/evaluation of the NETCAB programme (between January and March 1998), based on critical analysis of the work that has been done. Over the past few months (January to March 1997), the IUCN ROSA's NETCAB Programme Coordination Unit, under Reford Mwakalagho, together with Bill Jackson, the M & E "guru" from IUCN ROSA, have been assisting the NETCAB sub-grantees, of which SABONET is one, in developing their own monitoring and evaluation plans. The first meeting of the NETCAB sub-grantees (coordinators of the various programme activities) was held on 7 January at the IUCN ROSA offices in Harare. The objectives of this meeting were as follows:

➢ for the sub-grantees to meet and familiarise themselves with the various NETCAB activities, and

➢ for the sub-grantees to have a clearer view of the various procedures and guidelines required by the programme.

It was decided that the NETCAB sub-grantees should meet at IUCN ROSA on a semi-annual basis (just before the NETCAB Steering Committee meetings) to share experiences and understand what others are doing and have an opportunity to discuss, and have consensus on, cross cutting issues. The next meeting was scheduled for March 1997, where sub-grantees would present logframes (see later) for their activities. That same week (9 January), the Coordinator, Christopher Willis, made a short presentation to the members of the NETCAB Steering Committee on the progress that had been made within the SABONET project.

Stephen Mavi and Soul Shava of SRGH gave the NETCAB Steering Committee members a guided tour of the National Herbarium and Botanic Gardens of Zimbabwe on 10 January 1997.

Hirpicium armerioides (Asteraceae) illustrated by Rosemary Holcroft for ***A Field Guide to the Flora of the Natal Drakensberg*** by D.J.B. Killick (1990).

◀ *Bill Jackson and participants at the 2nd NETCAB Sub-grantees meeting, Harare, Zimbabwe. L-R: Michael Murphree (SASUSG), Carmel Mbizvo (IUCN ROSA), Reford Mwakalagho (NETCAB Programme Manager), David Mulolani (TRAFFIC East/southern Africa), Bertha Nherera (NETCAB Secretary) and Bill Jackson (M&E facilitator, IUCN ROSA). Absent from photo: Jacquie Chenje and Solomon Dzimba (IUCN ROSA).(Photo: SABONET/ Christopher Willis)*

Monitoring and Evluation defined

Monitoring is the continuous or periodic surveillance of the physical implementation of a project to ensure that inputs, activities, outputs and external factors are proceeding according to plan.

Evaluation is an assessment, as systematic and objective as possible, of an on-going or completed project, programme or policy, its design, or implementation. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability.

Monitoring and evaluation are both components of assessment. The key to assessment is ***asking questions and remaining open to answers.***

The second meeting of the NETCAB sub-grantees was held at the Bronte Hotel in Harare, Zimbabwe, from 13-14 March 1997, and took the form of an M & E workshop, facilitated by Bill Jackson, M & E Advisor for the IUCN ROSA.

The objective of the workshop was to continue the process of developing an improved M & E system for NETCAB and the NETCAB sub-grantees. The anticipated outputs of the workshop were:

- A shared understanding of the strategy for developing an improved M & E system for NETCAB;
- Skills in designing logical frameworks and planning for M & E
- Draft M & E plans for all sub-grantees.

Most of the two days were spent on developing and improving the existing logical frameworks of the various sub-grantees.

Logical Framework Approach

The Logical Framework Approach (LFA or Logframe) was developed by USAID during the late 1960s in order to assist in the planning, management and evaluation of development activities. It has since been adopted as a planning and management tool by a large number of other agencies involved in providing development assistance, including DANIDA, NORAD, ODA and SIDA.

In addition to its role during programme and project preparation, the LFA is also a key management tool during implementation and evaluation. It provides the basis for the preparation of action plans and the development of a monitoring system during implementation, as well as a framework for evaluation.

Logframe

The Logframe is the main output of the LFA. It is important to remember that the logframe (the basic layout of which is shown below) provides no magic solution to identifying or designing good projects. It is merely an analytical, design and presentational tool. The principle of 'garbage in, garbage out' can apply to the logframe if it is used mechanistically. When used properly, however, the logframe helps to make the logical relationships between activities, results, purpose and objectives more transparent, at least to the informed user. It is also important to note that the logframe must be seen as a dynamic tool, which should be re-assessed and revised as the project itself develops and circumstances change. It should be used to provide structure and purpose to project planning and budgeting without being perceived as an inflexible and constraining blueprint.

The Logframe itself consists of a table, or matrix, which has four columns and (in its most basic form) four rows. The vertical logic identifies what the project intends to do, clarifies the causal relationships and specifies the important assumptions and uncertainties beyond the project manager's control. The horizontal logic relates to the measurement of the effects of, and resources used by, the project through the specification of key indicators of measurement, and the means by which the measurement will be verified.

Overall Objectives	Indicators	Means of Verification	
Project Purpose	Indicators	Means of Verification	Assumptions
Results/ Outputs	Indicators	Means of Verification	Assumptions
Activities	Means	Costs	Assumptions

▲ *Basic format of the Logframe*

Indicators, or what are sometimes termed 'Objectively Verifiable Indicators' (OVIs) tell one how the project will achieve its objectives. Objectively verifiable means that different persons using the indicator would obtain the same measurements. The role of the OVIs is to describe the overall objective(s), project purpose, results and activities in operationally verifiable terms. The specification of OVIs acts as a check on the viability of objectives and forms the basis of the project monitoring system. To achieve this the OVIs must be:

Specific	-	in terms of quantity, quality & time (QQT)
Measurable	-	objectively verifiable at acceptable cost
Available	-	from existing sources or with reasonable extra effort
Relevant	-	to project objectives and sensitive to change
Timely	-	to ensure usefulness to managers

Once the indicator has been identified, it should then be developed to include brief details (where possible and relevant) of quantity, quality and time.

When indicators are formulated, the source of information and means of collection should be specified. This is done through what is called 'Means of Verification' or MOV. The MOV should specify:

- the **format** in which the information should be available (e.g. progress reports, project accounts, project records)
- **who** should provide the information
- **how regularly** it should be provided (e.g. monthly, quarterly etc.).

Means are the human, material and financial resources required to undertake the planned activities and manage the project.

Logframes for the SABONET project (using the NORAD format) have so far been developed for the GEF/UNDP and USAID/IUCN. Because the requirements of the funding agencies are slightly different, the two logframes are not entirely mirror images of one another. These logframes will be continually refined and improved as the project progresses. All NETCAB sub-grantees were requested by the NETCAB Programme Coordination Unit at the M & E workshop to prepare activity schedules for the USAID/IUCN component of their projects (for the full duration of the project: October 1995-September 1998). An activity schedule is a method of presenting the activities of a project which identifies their logical sequence and any dependencies that exist between activities. It is also used as a means of identifying who will be responsible for implementing an activity. The most commonly used presentation tool is the Gantt chart, which is the presentation tool to be used by the NETCAB sub-grantees (it has also been used by SABONET to illustrate the 1997 Workplan in the Project Document submitted to GEF/UNDP) using the **MS Project** software package.

SABONET training courses

Training courses and workshops held by SABONET now follow the NETCAB regulations for the implementation of training. The process of training consists of three integrated components:

(a) pre-training activities
(b) the training event, and
(c) follow-up activities.

Pre-training activities

These are the activities undertaken during the planning phase, and include:

(a) appropriate training needs assessment
(b) setting up objectives
(c) recording the name and type of training course, length of the course, number of participants
(d) establishing appropriate performance and impact indicators to assess the results of training
(e) selection of participants/trainees, taking into consideration gender
(f) recording biographical, educational, and employment information about the trainee/participant
(g) selection of training location.

Implementing training

A major activity during the training course, is to monitor its progress. Are the participants understanding the course contents? Is the training programme meeting the intended objectives? What is the feedback from the participants? We should strive for maximum participation and benefit for every course participant.

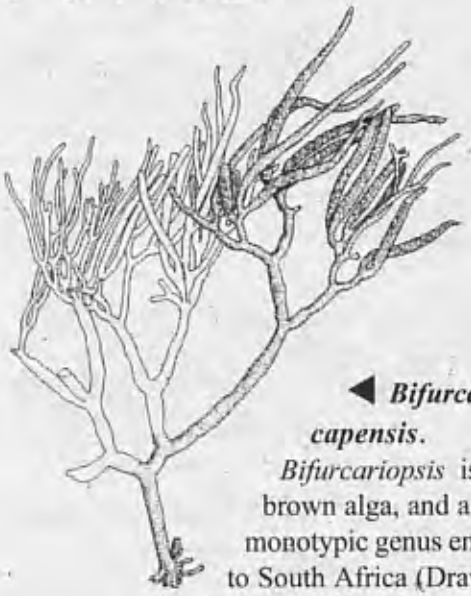
Post training: Evaluation and follow-up

USAID policy requires that a monitoring-evaluation component for each training activity must be developed and regularly applied to assess the performance of trainees and the impact of training in achieving results.

Post-training and follow-up evaluation procedures are still being developed by SABONET. Unfortunately, often, after the end of a training course there aren't any follow-ups by the trainers or course facilitators. This lack of follow-up has been noted and repeatedly criticised in training activity evaluation for many years. USAID policy now requires that any training activity addresses the critical needs for post-training support and periodic monitoring. Post-training activities are follow-up programmes that support the participants to enhance the impact of training and also assist them in achieving the training objectives. ❑

Kniphofia caulescens (Asphodelaceae) illustrated by Rosemary Holcroft for ***A Field Guide to the Flora of the Natal Drakensberg*** by D.J.B. Killick (1990).

Algal taxonomy in southern Africa



◀ ***Bifurcariopsis capensis.*** *Bifurcariopsis* is a brown alga, and a monotypic genus endemic to South Africa (Drawing by Herre Stegenga).

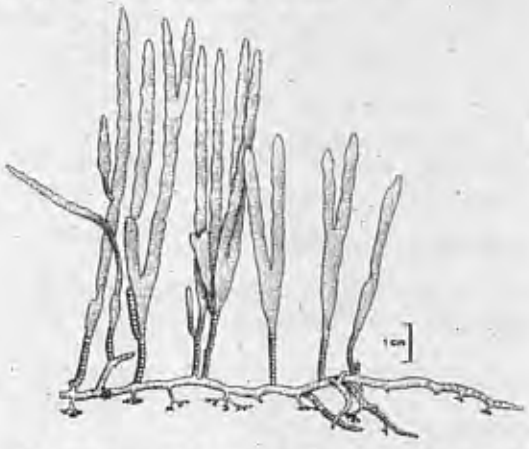
As algae have recently been accepted as part of SABONET's training programme, it seems opportune to consider the depth of knowledge of these organisms in southern Africa. This is a personal view (which cannot be comprehensive), and thus is more complete with respect to marine algae (my major interest), and has a South African bias (my locality).

In 1983 the Phycological Society of Southern Africa (PSSA) was formed, and has since been undoubtedly successful, with meetings hosting 30-40 delegates almost every January since then, including a meeting in Lüderitz, Namibia. A number of these meetings have been joint with the South African Association of Botanists (SAAB). The PSSA currently has around 80 members which, despite recent attempts to recruit more widely, are mostly in South Africa.

Marine algae

There has been a considerable upswing in seaweed research since 1980 in South Africa. However, most taxonomic work has been carried out by visiting foreign seaweed taxonomists, employed for a few years locally, who have since left (Herre Stegenga from Holland on the west and south coasts, and Richard Norris from the USA on the east coast).

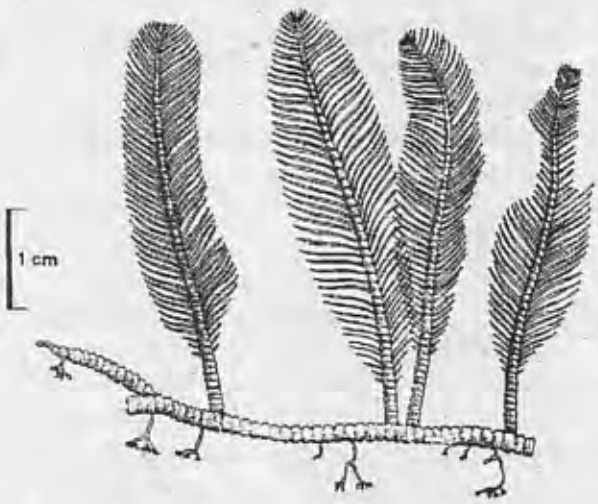
The first comprehensive document of the seaweed flora of any southern African region is currently in press (the South African west coast; Stegenga *et al.* 1997). A PhD student of mine (Henry Engledow) has almost completed a study of the seaweeds of Namibia which has increased the known species from *ca.* 130 to *ca.* 200. The seaweeds of Angola are only known from a single short visit by scientists from the Natural History Museum, UK (Lawson *et al.* 1975). A very active group under Prof. Derek Keats at the University of the Western Cape (South Africa) studies the ecology and taxonomy of crustose coralline red seaweeds, and Prof. Keats has given courses on these ecologically important organisms around the world.



▲ ***Caulerpa filiformis***, endemic to southern Africa. *Caulerpa* is a widespread genus of green algae, common in the Indian Ocean. (Drawing by Herre Stegenga)

One great problem is that no government body in South Africa considers algal taxonomic research a priority, and since the departure of Prof. Norris from the National Botanical Institute a few years ago, no algal taxonomist has been employed by the government. Training algal taxonomists is training for a non-existent job-market. The only active government-funded seaweed research in South Africa is done by the Seaweed Unit of the Sea Fisheries Research Institute under Dr Rob Anderson, who have published widely on ecology and resource management, but do not have seaweed taxonomy as part of the brief. Thus we have considerable new knowledge of the South (and southern) African seaweed flora, but no system for continued spread of this knowledge. There is no herbarium in southern Africa, as far as I am aware, with a staff member with even minimal knowledge of seaweed taxonomy *(Editor's note: possible exceptions are (a) the LMU Herbarium in Mozambique where Salomão Bandeira has experience in both seaweed and sea grass taxonomy and ecology, and (b) Ms René Glen at the National Herbarium (PRE) in South Africa).*

The other country with most seaweed research in sub-Saharan Africa is Tanzania. Early research was conducted largely under the extremely productive Prof. Keto Mshigeni, who is now the Vice-Rector of the University of Namibia. Prof. Mshigeni recently organised a workshop in Windhoek on seaweed resource utilisation (Mshigeni *et al.* 1992), and his efforts brought together seaweed scientists from many sub-Saharan African countries. Similarly, the south-west Indian Ocean has an active interactive group of local and northern hemisphere scientists working on marine plants, although Mozambique has only recently become involved in this sort of initiative (see Bjork *et al.* 1996; Proceedings of a workshop on Mauritius in December 1995).
There is a very active group studying the taxonomy of marine microalgae at the University of the Witwatersrand (South Africa) under Prof. Richard Pienaar. They have carried out many studies on marine flagellates, and more recently blue-greens (Cyanobacteria).



▲ ***Caulerpa holmesiana***, a green alga endemic to southern Africa. (Drawing by Herre Stegenga)

Certain groups of marine microalgae, particularly those responsible for 'red tides' are studied by the Plankton Section of the South African Sea Fisheries Research Institute in Cape Town (Dr Grant Pitcher), and Prof. Guy Bate's group at the University of Port Elizabeth (South Africa) have considerable expertise on the ecology of surf diatoms.

Freshwater algae

As with seaweeds, taxonomic research on southern African freshwater algae has largely been carried out by overseas scientists, with much early work (1930-50) by, for example, F.E. Fritsch in the UK. A number of papers on South African freshwater diatoms were produced (in German) by B.J. Cholnoky in the 1950s. M.A. Pocock wrote a large document summarising knowledge of the freshwater algae of southern Africa (Pocock 1966) which was never published. The expertise to identify freshwater algae has largely been lost in South Africa. At PSSA meetings, the freshwater section for a number of years has consisted of papers from the group of Prof. A.J.H. Pieterse (formerly of the University of the Orange Free

State, now at Potchefstroom University) (South Africa), working on the phytoplankton of the Vaal River. My own group has begun some work on freshwater filamentous algae which block irrigation canals, and one publication (Joska & Bolton 1994) includes a brief literature review on local freshwater algae. There has been a fair amount of taxonomic work, mainly by European scientists, on various algal groups in Francophone Africa, sometimes including southern Africa (e.g. the papers on green algae by Gauthier-Lievre). There is enormous scope for freshwater algal research in southern Africa, particularly with water problems being so widespread in much of the region, and with the potential for algae to form problem growths if nutrient input to water bodies is not controlled (see Joska & Bolton 1994).

Conclusions

These brief thoughts have outlined the parlous state of algal taxonomy in southern Africa. It seems to me that: **1.** There are relatively very few local scientists, mainly in universities, who can identify certain groups of algae, and who may be able to run training courses on algal identification, taxonomy and herbarium practice. **2.** The PSSA is an existing organisation which furthers links between local scientists working with algae. This can, I believe, be very important in a southern African context, providing the membership can be successfully extended to include more members from outside South Africa. At the last PSSA meeting in January of this year there was discussion about the possibility of holding a meeting in Mozambique in the near future. SABONET could possibly link with the PSSA in organising workshops and training courses on algae. **3.** As there are very few herbarium staff in southern Africa who actively take responsibility for algae, another initial difficulty may be to find organisations who are willing to have staff work on algae. Who is to be trained? **4.** SABONET could play an important role in improving the situation, by impressing on southern African national government bodies responsible for plant science the necessity of having someone dedicated to algal taxonomy/biodiversity studjes.

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CITES

What is CITES?

CITES is an acronym for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. It is a United Nations Convention which came into effect in 1975. At present, more than 120 countries are party to it.

Where is the office?

CITES Secretariat
15 Chemin des Anémones
Case Postale 456
1219 Châtelaine
Genéve, Switzerland
Tel: +41 22 979 9139/40
Fax: +41-22 797 3417
E-mail: cites@unep.ch

How does CITES work?

CITES was established for the purposes of controlling and monitoring international trade in animals and plants considered to be threatened or likely to be threatened through commercial exploitation. It provides the legal framework within which those in trade can be protected from possible extinction. The Convention itself consists of a list of plants and animals. Trade in listed species is controlled by means of a licencing system supervised by the CITES Secretariat in Switzerland. New resolutions on the implementation of the Convention are considered at biennial conferences. The 10th Meeting of the Conference of the Parties will be held in Zimbabwe from 9-20 June 1997.

The implementation of the Convention is the responsibility of member governments. Each country which belongs to the Convention has to incorporate the requirements of CITES into its own national legislation.

To export specimens of CITES species, one must have an export permit issued by the CITES authorities of countries of export. The European Union also requires import permits from the member state concerned. This system provides a means for countries which are rich in wildlife to regulate, or even prohibit, the export of their own natural resources. It also allows importing countries to check that species are not being threatened by over-exploitation.

The species subject to CITES controls are listed in three appendices to the Convention.

Appendix I lists endangered species, trade in which is prohibited, save in exceptional circumstances (e.g. for purposes which will assist the conservation of the species, such as scientific research). There are at present 800 different species listed. Trade in artificially propagated or captive bred specimens is allowed subject to licence. It includes elephants, tigers, great apes, certain parrots and certain species of orchids and cacti.

Appendix II lists specimens of species which may be traded on the condition that the country of (re-)export issues an export permit or re-export certificate confirming that the export will not be detrimental to the conservation of the species. Some countries have taken stricter measures, and do not even permit the export of Appendix II species of wild origin. Approximately 23,000 different species are listed. Trade in wild, captive bred and artificially propagated specimens is allowed, subject to licence. Species listed in this category include polar bears, Asiatic cobras, orchids, cacti and carnivorous plants.

Appendix III is little used for plants. It allows a Party to list some of its own species, thus asking the other Parties to assist in the control of international trade in these. The species include the Bengal fox from India, the Sacred Ibis from Shana and the Neotropical rattle snake from Honduras.

Why CITES?

Many species of plants are traded worldwide

Medicinal plants:
medplants@unima.wn.apc.org

National Botanic Gardens of Malawi
Mr Mphamba Kumwenda -
mkumwenda@unima.wn.apc.org

MOZAMBIQUE
LMA Herbarium
E-mail not yet available

LMU Herbarium
Mr Salomão Bandeira -
salomao@biologia.uem.mz
Ms Filomena Barbosa -
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Ms Carlota Quilambo -
carlota@biologia.uem.mz

NAMIBIA
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Ms Gillian Maggs - gillianm@lianam.lia.net
General NBRI address - nbri@lianam.lia.net
Ms Patricia Craven - nbri@lianam.lia.net

National Herbarium
Ms Renate Kubirske - renatek@lianam.lia.net
Ms Colleen Marnheimer - nbri@lianam.lia.net
Ms Esmerialda Klaassen - nbri@lianam.lia.net

National Botanic Garden
Mr Henk Dauth - nbri@lianam.lia.net

Vegetation Survey
Mr Ben Strohbach - bens@lianam.lia.net

National Plant Genetic Resources Centre
Ms Herta Kolberg - hertak@lianam.lia.net

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National Botanical Institute
Prof. Brian Huntley - huntley@nbict.nbi.ac.za
Dr Daan Botha - info@nbict.nbi.ac.za

National Herbarium
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Dr Maureen Wolfson - mmw@nbipre.nbi.ac.za
Ms Marinda Koekemoer -mk@nbipre.nbi.ac.z
Mr Trevor Arnold - tha@nbipre.nbi.ac.za
Dr Hugh Glen - hfg@nbipre.nbi.ac.za
Dr John Anderson - jma@nbipre.nbi.ac.za
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Ms Carole de Wet - cdw@nbipre.nbi.ac.za
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Mr Paul Herman - ppjh@nbipre.nbi.ac.za
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Ms Mienkie Welman -wgw@nbipre.nbi.ac.za
Mr Jean Meyer - jjm@nbipre.nbi.ac.za
Ms Julie Ready - jar@nbipre.nbi.ac.za
Mr Solomon Nkoana - lsn@nbipre.nbi.ac.za
Mr Cuthbert Makgakga -
mcm@nbipre.nbi.ac.za

PRECIS
precis@nbipre.nbi.ac.za

Compton Herbarium
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Dr John Manning - manning@nbict.nbi.ac.za
Dr Dee Snijman - snijman@nbict.nbi.ac.za
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Mr Chris Cupido - cupidocn@nbict.nbi.ac.za

Natal Herbarium
Ms Rosemary Williams -
nbidurb@dbn-pop.iafrica.com
Mr Neil Crouch - nbidurb@iafrica.com or

nbidurb@dbn-pop.iafrica.com
Ms Yashica Singh - nbidurb@dbn-pop.iafrica.com
Mr Alfred Ngwenya- nbidurb@dbn-pop.iafrica.com
When sending mail to a staff member at the Natal herbarium, insert the name of the person in the subject line.

Kirstenbosch Research Centre
Dr Mike Rutherford - rutherfo@nbict.nbi.ac.za
Dr George Davis - davis@nbict.nbi.ac.za
Dr Timm Hoffman - hoffman@nbict.nbi.ac.za
Dr Tony Rebelo - zoot@nbict.nbi.ac.za
Dr Guy Midgley -midgley@nbict.nbi.ac.za
Dr Mike O'Callaghan - moc@nbict.nbi.ac.za
Dr Hannes de Lange - delange@nbict.nbi.ac.za
Dr John Donaldson - donaldso@nbict.nbi.ac.za
Dr Dave McDonald - mcdonald@nbict.nbi.ac.za
Dr Jabulani Mjwara - mjwara@nbict.nbi.ac.za
Dr Neville Brown - brown@nbict.nbi.ac.za
Dr Charles Musil - musil@nbict.nbi.ac.za
Mr Craig Hilton-Taylor - hiltonta@nbict.nbi.ac.za
Mr Les Powrie - powrie@nbict.nbi.ac.za
Ms Ingrid Nänni - nanni@nbict.nbi.ac.za
Ms Stephanie Wand - wand@nbict.nbi.ac.za
Mr J de Wet Bosenberg - bosenber@nbict.nbi.ac.za
Ms Helga Pieper-Höweling - pieper@nbict.nbi.ac.za

Harold Porter National Botanical Garden
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Karoo National Botanical Garden
Mr Ian Oliver - oliveri@nbict.nbi.ac.za

Kirstenbosch National Botanical Garden
Mr John Winter - info@nbict.nbi.ac.za
Mr Ernst van Jaarsveld - info@nbict.nbi.ac.za
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Lowveld National Botanical Garden
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Natal National Botanical Garden
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OFS National Botanical Garden
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Pretoria National Botanical Garden
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General: info@nbict.nbi.ac.za

Witwatersrand National Botanical Garden
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NBI Libraries:
NBI Librarian: Ms Yvonne Reynolds - reynolds@nbict.nbi.ac.za
Mary Gunn Library - info@nbict.nbi.ac.za
Librarian: Mary Gunn Library (Ms Estelle Potgieter), National Herbarium - ep@nbipre.nbi.ac.za

SWAZILAND
National Herbarium
E-mail not yet available

ZAMBIA
Herbarium - University of Zambia
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Ms Tasila Banda - tbanda@natsci.unza.zm

ZIMBABWE
National Herbarium & Botanic Garden
E-mail not yet available

NATIONAL WORKING GROUPS

In-country National Working Groups have been established in each participating country to oversee the SABONET activities in that country. As can be seen below, these working groups have wide representation, and although there are some organisations that are common to every group, such

as the UNDP, they vary depending on the institutional arrangement within the individual country. The Terms of Reference of the National Working Groups, as defined by the SABONET Steering Committee in their Project Document submitted to the GEF/UNDP, include, amongst others, the following:

- Oversee and coordinate the in-country project activities and make recommendations to the Steering Committee;
- Review membership of the National Working Group;
- Monitor allocation of funds to in-country activities, and
- Monitor progress of in-country trainees, with recommendations to the Steering Committee.

Listed below are the SABONET National Working Groups as they currently stand. The country representative on the SSC is listed first, indicating his/her contact addresses, phone, fax and e-mail address (where available).

Angola

- Luanda Herbarium: Ms Liz M Matos (Chairperson)
  c/o Universidade Agostinho Neto
  Faculdade de Ciencias
  CP 815
  Luanda
  Tel: 244 2 390 092/321 688/351 650
  Fax: 244 2 330 520
  Email: fitogen@angonet.gn.apc.org
- Lubango Herbarium
- Huambo Herbarium
- UNDP
- University
- National Environment Secretariat
- Agriculture
- National Plant Genetic Resources Centre

Botswana

- University of Botswana Herbarium: Dr Than Than Aye (Chairperson)
  Department of Biological Sciences
  Private Bag 0022
  Gaborone
  Tel: 267 355 2603 or 371 170
  Fax: 267 356 591 or 355 2784
  Email: ayett@noka.ub.bw
- Okavango Research Centre: Dr Elmar Veenendaal
- IUCN: Mr Ruud Jansen
- National Herbarium: Ms Queen Turner
- UNDP: Mr Kagiso Keatimilwe
- National Conservation Strategy: Mr Stevie Monna
- Sebele Agricultural Herbarium: Mr G Tacheba
- National Plant Genetic Resources Centre
- Department of Environmental Sciences, University of Botswana

Lesotho

- Biology Department, National University of Lesotho (NUL): Prof. CR Nagendran (Chairperson)
  PO Roma 180
  Lesotho
  Tel: 266 340601 ext. 2383
  Fax: 266 340000
  Email: crn@herb.nul.ls
- Biology Department, NUL: Ms Annah Moteetee (SSC alternate)
- Herbarium, NUL: Mr Paseka Mafa
- Biology Department, NUL: Mr Moretloa Polaki
- Biology Department, NUL: Mr Chaba Mokuku
- UNDP: Mr Koenraad Collier
- Conservation Division: Ms Lerato

Seleteng
- Conservation Division: Ms Nkareng 'Mota
- National Plant Genetic Resources Centre: Ms Maleoa Mohloboli

Malawi

- National Herbarium & Botanic Gardens: Prof. Jameson H. Seyani (Chairperson)
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  Zomba
  Tel: 265 523 145/118/388
  Fax: 265 522 108
  Email: jseyani@unima.wn.apc.org
- UNDP: Mr Sean Southey
- University
- National Parks
- Forestry

Mozambique

- LMA Herbarium: Mr Calane da Silva (Chairperson)
  National Institute of Agronomic Research
  PO Box 3658
  Maputo
  Tel: 258 1 460097/9
  Fax: 258 1 460074
- UNDP: Mr Henny Matos
- IUCN Mozambique: Mr Simon Anstey
- LMU Herbarium, University of Eduardo Mondlane: Mr Salomão Bandeira (SSC alternate)
- Ministry for Coordination of Environmental Affairs (MICOA): Ms Felicidade Munguambe
- Ministry of Agriculture

Namibia

- National Herbarium: Ms Gillian L Maggs (Chairperson)
  NBRI
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  Windhoek
  Tel: 264 61 202 2020
  Fax: 264 61258 153
  Email: gillianm@lianam.lia.net
- National Herbarium: Ms Renate Kubirske
  (SSC alternate)
- National Herbarium: Ms Coleen Mannheimer (SSC alternate)
- Plant Production Research: Mr JP Venter
- University of Namibia: Mrs Erica Maas
- UNDP: Mr Oddvar Jakobsen

South Africa

- Director Research, NBI: Prof. GF Smith (Chairperson)
  National Botanical Institute
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  Pretoria
  Tel: 27 12 804 3200
  Fax: 27 12 804 3211
  Email: gfs@nbipre.nbi.ac.za
- National Herbarium: Ms Marinda Koekemoer (SSC alternate)
- Data Management, NBI: Mr Trevor Arnold
- Natal Parks Board: Mr Rob Scott-Shaw
- Department of Environmental Affairs & Tourism (DEA & T): Dr Gert Willemse
- UNDP: Ms Birgit Degnbol
- University: Prof. B-E. van Wyk
- SAAB: Prof. Himansu Baijnath
- Bolus Herbarium: Ms Pat Lorber

Swaziland

- National Herbarium: Mr Gideon M Dlamini (Chairperson)
  Curator
  Malkerns Research Station

PO Box 4
Malkerns
Tel: 268 83236
Fax: 268 83360/83490

- UNDP
- Swaziland National Trust Commission
- Agriculture
- Forestry
- University
- Swaziland Environment Authority
- Biodiversity Working Group

Zambia

- UNZA Herbarium: Dr Patrick SM Phiri (Chairperson)
  Senior Lecturer/Herbarium Curator
  Department of Biological Sciences
  School of Natural Sciences
  University of Zambia
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  Lusaka
  Tel: 260 1 252 514/292 884
  Fax: 260 1 254 406 or 253 952
  Email: pphiri@natsci.unza.zm
  Dr LE Mumba (SSC alternate)
  Ms T Banda (secretary)
- Department of National Parks and Wildlife Services
- Forest Herbarium (NDO), Division of Forest Research
- Luangwa Integrated Rural Development Project
- Mount Makulu Herbarium (MRSC), NPGRC
- UNDP: Mr Amos Muchanga
- Environmental Council of Zambia
- IUCN

Zimbabwe

- National Herbarium and Botanic Garden: Ms Nozipo Nobanda (Chairperson)
  PO Box CY550
  Causeway
  Tel: 263 4 744 170/725 313
  Fax: 263 4 708 938
- UNDP: Mr TPZ Mpofu
- Ministry of Agriculture: Mr SN Chinogwenya
- Department of Research and Specialist Services: Dr S Mlambo
- Department of Biological Sciences, University of Zimbabwe: Dr Shakkie Kativu (SSC alternate)
- Institute of Environmental Studies: Prof. Bruce Campbell
- Forestry Commission: Mr Crispen Marunda
- Department of Natural Resources: Mr Amon Murwira
- Enda-Zimbabwe: Mr Bowdin King
- Africa-2000: Mrs Khethiwe Mhlanga
- IUCN ROSA: Mr Reford Mwakalagho

"Most nights I go to bed with some botany book. My work is now too much to permit of philosophy at that late hour. But botany is like a sweet opiate, . expelling the day's interests and preoccupations." - from a letter written by General Jan C. Smuts (1933) appearing in *Smuts the Botanist* by Piet Beukes (1996).

SAHDIGgers Linked up

The SAHDIG (Southern Africa Herbarium Discussion Group) List server has been set up at Rhodes University for the Southern African Herbarium Working Group (SAHWG). It is intended to provide an easy way for the herbarium community in southern African countries to exchange news, views and queries. As with any List server, its use depends entirely on its subscribers. E-mail messages sent in by subscribers will be distributed to all other subscribers. Subscription to SAHDIG is free.

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2. To cancel your subscription send an e-mail message to MAISER@RHOBOT.RU.AC.ZA and in the first line of the message type "UNSUBSCRIBE SAHDIG" followed by at least two blank lines.
3. To send a message that will be forwarded to all subscribers send your message to SAHDIG@RHOBOT.RU.AC.ZA.

There is already a formidable "brains trust" attached to the List server, including several botanists from northern botanical institutions. So if you have access to e-mail, subscribe to SAHDIG today.....

Important Notice:

SAHWG Annual Meeting

The 1997 annual meeting of the SAHWG will be held in Grahamstown (South Africa) at the Albany Museum on the 10th and 11th September 1997. These dates are still provisional, but if you would like to get further information about the meeting, you can either subscribe to the SAHDIG (where you will be kept informed of any changes in the provisional dates and logistical information about the meeting) or contact either Tony Dold or Nigel Barker at the following addresses:

Tony Dold
Assistant Curator
Selmar Schonland Herbarium (GRA)
Albany Museum
PO Box 101
Grahamstown 6140, SOUTH AFRICA
Tel: (27) 461 22638
Fax: (27) 461 22398

Dr Nigel Barker
Botany Department
Rhodes University
Grahamstown 6140, SOUTH AFRICA
Tel: (27) 461 318 598
Fax: (27) 461 25524

Editor's note: In the December 1996 issue of *SABONET News* (Volume 1 No.2), a photograph was published of Kurt Dinter and his assistant laying out drying papers in Namibia *ca.* 1920. Dr Hugh Glen ("the good doctor"), using his extraordinary investigatory powers, managed to find the name of Dinter's assistant shown in the photograph - ***Wilfried Tjuezu.*** Wilfried's name appeared in Herr Rudolph Georg Strey's (1907-1988) card index.

Unlocking the Literature to the Taxonomy of Southern African Plants

The *Flora of southern Africa (FSA)* region (South Africa, Namibia, Botswana, Lesotho, Swaziland) has the richest flora of any area of comparable size in the world. This immense diversity has been known for many years and much has been written both taxonomic and otherwise on the plants of the subregion. Owing to the multitude of publications available on the flora, it is often difficult to decide which publications are the most useful for identifying and naming the subcontinental plants. To assist in the choice of available literature, a publication has been compiled aiming principally to list the most useful taxonomic literature at the generic rank for the entire flora: *Taxonomic literature of southern African plants*, published in the *Strelitzia* series of the National Botanical Institute of South Africa. This information was compiled by staff of the National, Compton, and Natal Herbaria of the National Botanical Institute.

This work should assist in providing plant scientists with a much needed overview of the vast literature available on the rich southern African flora. In this way it will play an important role in herbarium curation and management. Since the publication dates of the cited literature are placed prominently, those groups for which no recent taxonomic treatment exists, can easily be identified from the list. This should assist workers in setting priorities for, and focusing future research efforts in, subcontinental plant systematics. Since plants do not observe political boundaries, this publication should also be useful in other parts of Africa, but particularly in southern tropical Africa.

In addition to serving as a general bibliographic reference work on the southern African flora, the publication will introduce the uninitiated to those publications that are useful for plant identification at species and infraspecific level. The scope of each reference is classified with a code. For example, a monograph with a key would carry the code **MONO**. Other works are classified as either revisions, conspecti, synopses, floras, checklists, or taxonomic notes. An additional code (**KEY**) denotes whether or not a key or keys are included in the work. Where known, the name and affiliation of a researcher currently working on a particular group, are provided.

The publication deals with the mosses, ferns, gymnosperms and flowering plants of southern Africa. In a bold step aimed at the simplification of what could be a difficult topic, and to facilitate easy reference, the families and their constituent genera are arranged alphabetically within each of these groups. The number of genera, species, subspecies, varieties and formas are also listed for each family.

One or more taxonomic references are cited for each genus. These are cited in full, i.e. the date, the author's surname and initials, the full title of the book or paper, the full title of the journal or publisher, as well as page numbers, are given. It may come as a relief that no abbreviations have been used!!

The suggested references are typically those that would be used for plant identifications, or by someone who wishes to become more familiar with the taxonomy of a particular group of plants. Although an attempt was made to cite only the most relevant reference per genus, it was necessary to list several contributions in many instances, especially where more than one recent treatment was available for a group.

Taxonomic literature of southern African plants is now available from the NBI in Pretoria. Secure your copy today by completing the order form which is included with this issue of *Sabonet News*. At only R80-00 per copy it's a steal!! ❑

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National Botanical Institute
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THE PAPER CHASE
by Hugh Glen

The object of this column is to keep an eye open for literature that SABONET users may find useful. This will mostly be new publications, but may well include older information in answer to questions such as "what's the best key to ...". It is neither possible nor desirable that the flow of such information should be one-way, from Pretoria outwards, so would readers please feel free to submit notes and useful information to the address at the end of this column.

The citation of an item here does not imply any guarantee of its contents or even its existence; very often the compiler has not seen the documents referred to.

Recent and forthcoming NBI publications:-

- ***Strelitzia*** 5: reported elsewhere in this number

- ***Strelitzia*** 6: E. Retief & P.P.J. Herman, *Plants of the northern provinces*. Due out in August. Deals with the flora of North-West Province, Gauteng, Mpumalanga and Northern Province, but should be useful in at least Botswana, Zimbabwe and Mozambique as well.

- ***Bothalia*** 27,1. Due out in May. Contains papers on *Plectranthus, Lachenalia, Fossombronia*, southern Cape forests, cytology, physiology and more. Includes an obituary of Larry Leach.

- ***Flowering Plants of Africa*** vol. 55. Due out in June. Tradition is maintained with 20 colour plates of plants, mostly southern African but including one from Madagascar.

Seen in a bookseller's catalogue:-

Cowling, R.M. & Pierce, S.M. eds. 1997. *Vegetation of southern Africa*. Price R650,00 + VAT R91,00 = R741,00.

Ellery, K. & Ellery, W. 1997. *Field guide to the plants of the Okavango Delta*. Price R60,00 + VAT R8,40 = R68,40.

Letham, L. 1997. *GPS made easy: using global positioning systems in the outdoors*. Price R75,95 + VAT R10,63 = R86,58.

Van Wilgen, B.W. *et al.* eds. 1997. *Fire in southern African savannas*. Price R131,58 + VAT R18,42 = R150,00

The same bookseller has a secondhand copy of Marloth's *Flora of South Africa* for which he wants R5000,00, ouch!

New books in the Mary Gunn Library, Pretoria, include these which someone may find worth getting for other libraries in SABONET:-

Grolle, R. 1995. *The Hepaticae and Anthocerotae of the East African Islands: an annotated catalogue*. Cramer, Berlin and Stuttgart.

Pauwels, L. 1993. *Nzayilu N'ti: guide des arbres et arbustes de la région de Kinshasa–Brazzaville*. Jaedin botanique national de Belgique, Meise.

The Mary Gunn Library has not yet, however, acquired this one, which must surely be required reading for all of SABONET:-

Coates Palgrave, M. 1996. *Key to the Trees of Zimbabwe*. Know Your Trees. Harare.

These new journal articles may be worth looking into:-

Ahmad, V.U. *et al.* 1996. Phytochemistry of the genus *Asparagus*. *Hamdard Medicus* 39: 27-43.

Ansari, S.H. *et al.* 1996. Evaluation of chemical constituents and trade potential of *Cymbopogon citratus* (lemongrass). *Hamdard Medicus* 39: 55-59.

Byalt, V.V. 1997. The list of type specimens of Crassulaceae from East and South Africa and Madagascar in the Herbarium of the Komarov Botanical Institute (LE). *South African Journal of Botany* 63: 60-63.

Schmid, R. 1997. Some desiderata to make floras and other types of works user (and reviewer) friendly. *Taxon* 46: 179-194.

Singh Y., Van Wyk A.E. & Baijnath H. 1996. Taxonomic notes on the genus *Zantedeschia* Spreng. (Araceae) in southern Africa. *South African Journal of Botany* 62: 321-324.

Van der Walt, J.J.A. *et al.* 1997. A biosystematic study of *Pelargonium* section *Ligularia* 3. Reappraisal of section *Jenkinsonia*. *South African Journal of Botany* 63: 4-21.

Theses have recently been placed in the Mary Gunn library by:-

M.J. Cadman, on *Ruellia*
T. Edwards, on *Buchenroedera* in Kwazulu-Natal
Y. Singh, on *Zantedeschia*.

Recently someone sent out a query that had to do with identifying *Juniperus*. Here's what PRE-cultivated has on that genus:-

Adams, R.P. 1995. Revisionary study of Caribbean species of *Juniperus* (Cupressaceae). *Phytologia* 78: 134-150.

Farjon, A. 1992. The taxonomy of multiseed junipers (*Juniperus* sect. *Sabina*) in southwest Asia and East Africa (Taxonomic notes on Cupressaceae 1.). *Edinburgh Journal of Botany* 49: 251-283.

Mitchell, A. 1986. *Juniperus*. in *European Garden Flora* 1: 84--87.

Christopher Willis tells me that MAL still has copies of the 1992 AETFAT Comptes Rendus (Congress proceedings) available for sale. Please contact MAL directly for further details. hese are a few random jottings serving to make up a first squawk of what we hope will become a permanent fixture in *SABONET News*. But in order for this to happen, I need help from YOU, the readers. You know what you would like me to keep an eye out for. Please share the secret with me, so that I can help you. Also if your herbarium has some excess literature to sell, or a new publication ... don't keep it secret; somebody somewhere in the SABONET community may be just dying for what you've slaved to produce!❑

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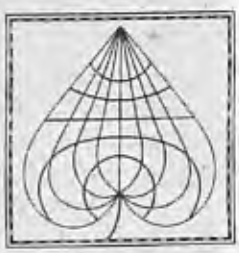
XVI International Botanical Congress in Missouri



A call for symposia for the XVI International Botanical Congress (XVI IBC) has been made. The XVI IBC will be convened at America's Center, the convention centre of St Louis, Missouri, USA from 1 (Sunday) - 7 (Saturday) August 1999. The Nomenclature Section will be held the week prior to the

Congress (July 26-30 1999) at the Missouri Botanical Garden in St Louis. The XVI IBC is held under the auspices of the International Union of Biological Sciences (IUBS), most recently through the International Association of Botanical and Mycological Societies (IABMS) of the IUBS. The deadline for submission of symposia is 15 September 1997. Proposals or questions regarding the Congress should be submitted to Peter C. Hoch, the XVI IBC Secretary General, at the following addresses:

Secretary General, XVI IBC
c/o Missouri Botanical Garden
P.O. Box 299
St. Louis, MO 63166-0299 USA
Telephone: +314-577-5175
Fax: +314-577-9589
E-mail: ibc16@mobot.org
http://www.ibc99.org

Regional News Updates

Congratulations!

Congratulations to Prof. James H. Seyani (General Manager of the National Herbarium and Botanic Gardens of Malawi, and Malawi's representative on the SABONET Steering Committee) on being elected as the new AETFAT Business Meeting manager. James was elected to this position at the Business meeting of the 15th AETFAT Congress held in Harare, Zimbabwe, from 3-7 February 1997.

Commiphora kraeuseliana (Burseraceae) drawn by Marietjie Steyn. From the forthcoming publication, ***List of southern African succulent plants.***

NEWSLETTERS FROM THE REGION

The National Botanical Institute (NBI) in South Africa now publishes three newsletters, *NBI Research News, NBI News* and the *National Herbarium Newsletter*, each having a slightly different focus. If you would like to be added to the mailing list(s) of one or more of these newsletters and be kept up-to-date with what is happening in the NBI, you can contact the respective editors.

NBI Research News:
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Forum Botanicum is the newsletter of the South African Association of Botanists (commonly abbreviated as SAAB). For information on this newsletter contact the editor (Gavin Hellström) at the following postal or e-mail address:

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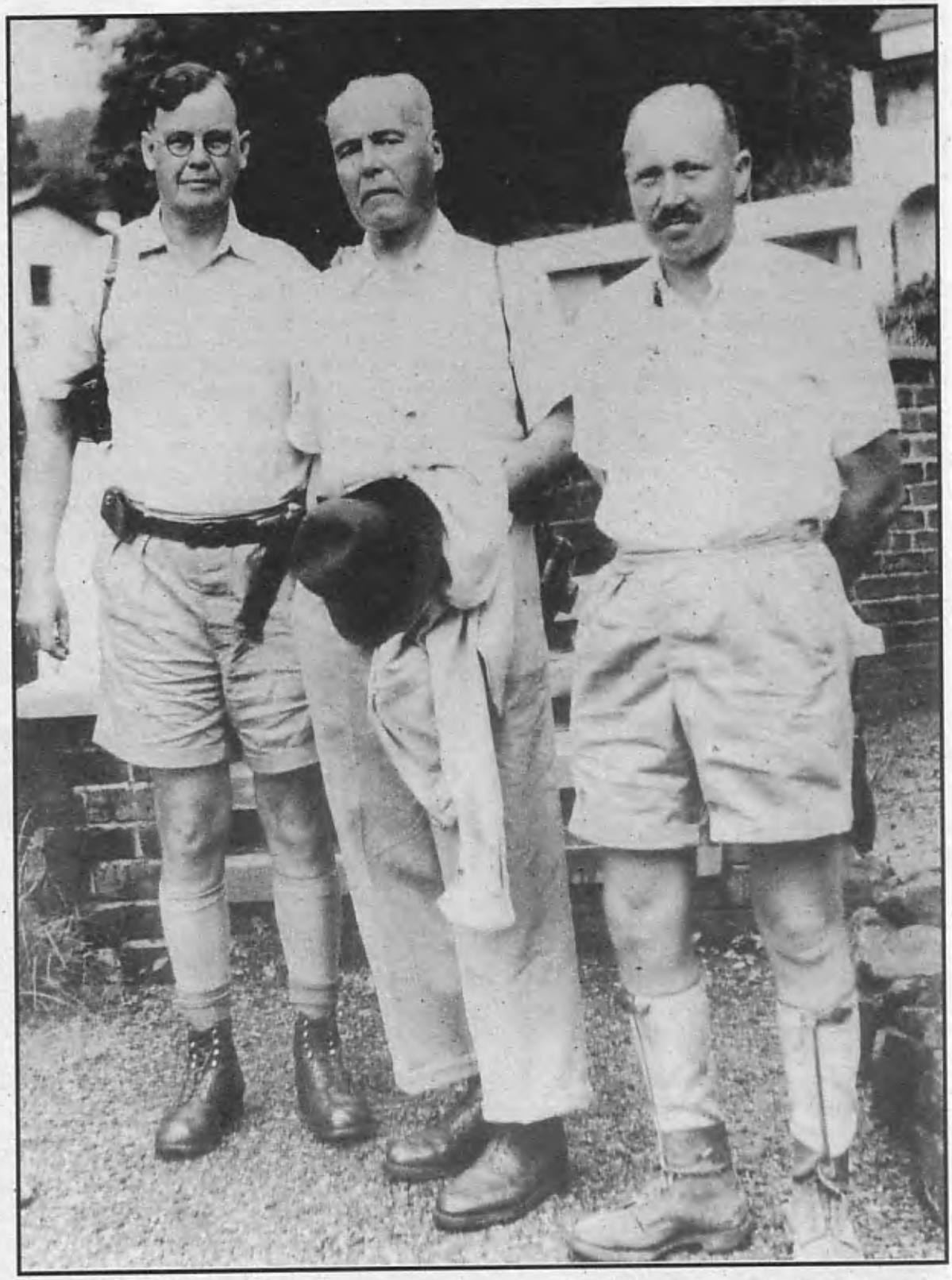

▲ *L-R: AW Exell (1901-1993), F. de A. Mendonça (1889-1982) and H. Wild (1917-1982) in Salisbury (now Harare) in 1955. At the time Exell was at BM, Mendonça at Coimbra and Wild at SRGH; specimens from this expedition are marked ITER ZAMBEZIACUM 1955. The purposes of this expedition were not primarily to collect plants but (a) to examine the feasibility of a single flora for Mozambique and the then Federation of Rhodesia and Nyasaland, and (b) to sell the idea to interested local scientists. Users of* **Flora Zambeziaca** *witness the fruits of this expedition every time they access that work. (Photo courtesy of SRGH).*

SOUTH AFRICA
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Peltophorum is the newsletter of the Tree Society of southern Africa (TSSA). For information about the TSSA and their newsletter, contact the editor at the following address:

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Another South African-based newsletter is ***PlantLife***. *PlantLife* is a newsletter for amateur botanists and indigenous plant growers. It provides a forum for communication between amateurs, and also attempts to bridge the gap between amateur and professional botanists, by making known the needs and interests of both groups. The ultimate aim of *PlantLife* is to serve the interests of Botany, particularly taxonomy, in southern Africa. For further information about this newsletter and ***subscription rates***, contact the Editor-in-chief, Tony Abbott, at the following address:

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In order to illustrate the type of material that is published in *PlantLife*, some of the articles (and associated authors) that have appeared in past issues of the newsletter are listed below:

Preparing herbarium specimens of small succulents ***(Gideon Smith)***
How to collect *Sarcostemma* (Asclepiadaceae) ***(Sigrid Liede & Brian Adams)***
Name changes of southern African plants ***(John Burrows)***
Are you able to recognize a sedge (family Cyperaceae)? ***(J & K)***
The structure of the Asclepiadaceae flower ***(Ashley Nicholas & Himansu Baijnath)***
Resurrection plants ***(Heather Shirwin)***
Pressing iridaceous flowers ***(Yashica Singh & Alfred Ngwenya)***
How to attract butterflies to your patch of Africa ***(Geoff Nichols)***
News from the Southern Cape Herbarium ***(Yvette van Wijk)***
Those esoteric Latin and Greek names and their puzzling prefixes and suffixes ***(Tony Abbott)***
Worldmap and the Protea Atlas Project ***(Tony Rebelo)***
Introduction to bryology in southern Africa ***(Jacques van Rooy)***
The role of herbaria in Environmental Impact Assessment ***(Rose Williams)***

As well as regular articles on the following.....

- Tributes to amateur plant collectors
- A series on amateur herbaria in South Africa
- Notes on plant collecting expeditions

If you know of other botanical newsletters in other parts of southern Africa, please inform, and send a copy to, the editor so they can be advertised in future issues of *SABONET News*.

"Whenever one does decide to publish, it is necessary to reckon with the great 'paper memory of mankind', the conserved experience of other workers who have loved and investigated the same things. It then becomes a duty to study the 'literature of the subject'.....Failure to do this may be justly interpreted as carelessness, sloth, ignorance, or conceit." - W.M. Wheeler in *Plant Life* (USA), 1946.

News from Angola

The Angolan Government ratified the Convention on Biological Diversity (CBD) on 1 April 1997 (*pers. comm.* Liz Matos). With Angola having ratified the CBD, the country becomes eligible for receiving financial support, through the SABONET project, from the GEF/UNDP. A pre-requisite for receiving GEF funding is that the country must have ratified the CBD.

News from Botswana

As a result of collaboration between the Peter Smith Herbarium (specifically Dr Elmar Veenendaal) in Maun, Botswana, and the NBI (specifically Prof. Gideon Smith), the Peter Smith Herbarium has proposed an acronym for the herbarium - **PSUB** - derived from **P**eter **S**mith Herbarium, **U**niversity of **B**otswana. The proposal has been made to Dr Patricia Holmgren, co-editor of ***Index Herbariorum***, for approval.

News from Lesotho

♦ The **SADC Seed Centre Network** conducted a Seed Source Identification Course for participants selected from Botswana, Lesotho, Mozambique and Swaziland in Lesotho from 11-13 March 1997. It was held in the Hotel Victoria, Maseru. Lectures were given on TREE IMPROVEMENT and IDENTIFICATION OF TREE SPECIES IN RELATION TO SEED SELECTION by Dr J. Wanyancha and Prof. C.R. Nagendran, respectively.

♦ ROML Herbarium of the National University of Lesotho has started computerizing data on herbarium specimens of LILIOPSIDA. So far, Mr Paseka Mafa, who was the Lesotho trainee on the November 1996 SABONET Herbarium Management training course held at the National Herbarium in South Africa, has so far computerised 1000 specimens in the PRECIS format.

♦ For three weeks Mrs A. Moteetee and Mrs M. Mthwalo visited QMW College of the University of London, UK. They screened angiosperms collected from Lesotho for anti-microbial activity. They intend to continue their research work on the medicinal plants of Lesotho.

Leaf of *Nervilia renschiana* (Orchidaceae) from *Johnson-Stewart* 312, drawn by Yue Jingzhu (***Flora Zambesiaca*** 11(1), 1995).

News from Malawi

❤ **Congratulations to Elizabeth Mayaka on her marriage. Elizabeth, Malawi's trainee on SABONET's 1st Herbarium Management training course, was married on 28 December 1996 in Malawi. We wish Elizabeth and her husband, Baleke, a future filled with many blessings.**

News from Namibia

SABONET extends sincere condolences to the family of Dr Michiel Adriaan Nicolaas Müller, who tragically died in a motor accident in Namibia on 4th April 1997, aged 49. Dr Müller was a member of the SABONET-Namibia National Working Group. An obituary dedicated to Dr Müller will appear in a future issue of this newsletter.

The Namibian National Assembly ratified the Convention on Biological Diversity (CBD) on 18 March 1997. The UN Convention to Combat Desertification was unanimously passed at the same meeting.

News from South Africa

Collecting Expedition to Namibia

On Tuesday 25 February 1997 I had the privilege of joining a team of taxonomists from the NBI's National Herbarium - Ms Lyn Fish (Poaceae specialist), Mr Gerrit Germishuizen (Fabaceae specialist) and Mr Lionel Riddles (Scientific officer) on a collecting trip to Namibia. For a man who had never been out of the "old Transvaal", I figured three weeks away from home would kill me. It didn't. Apart from Lionel's "disappearing act" (more information about this can be read in the NBI's *National Herbarium Newsletter* - contact the editor, Ms Millissa Heymann, for further information) I enjoyed every minute of the field trip.

The first thing that strikes one when crossing the border between South Africa and Namibia (Ariamsvlei) is the dry land. Surprised is an

understatement, I was amazed. I thought we were not going to collect any plants. One look at Lionel and I realised that he was as surprised as I was. *Aloe dichotoma* specimens are happy to act as trees on the ridges, a stone's-throw away from the road. *Stipagrostis uniplumis* and *Cenchrus ciliaris*, with its paint-brush inflorescence, formed a rather nice carpet by the roadside on the way from Mariental to Kalksrand.

When we skipped the Tropic of Capricorn, a beautiful scenery awaited us at Rehoboth. I reckoned we were entering another country. The river for a change was running, the vegetation....green! Everything was diametrically different from what we had seen that morning.

After searching for a nice and safe camping spot, we decided to put up tents on the side of the main road to Dordabis. I did not sleep a wink that night. In our country, and the Gauteng Province in particular, with the kind of set-up we have, we would have long been hijacked.

The next Monday we dropped Mrs Fish off at the NBRI in Windhoek for her grass course. The NBRI people were nice to us. We used their dryers. While Mrs Fish was busy displaying her knowledge of the POACEAE I got my first taste of grass collecting. I must admit, grasses are not easy to press. We collected in grids that were under-collected or not collected at all (as far as PRECIS is concerned). Collecting and pressing demands a lot of effort and patience. The experiences of our two scientists came in handy for Lionel and I in this regard. Mrs Fish has her own simple way of showing students how it is done. Come to think of it; she is a walking manual on "collecting and pressing".

It is amazing what a field-trip can do. Apart from helping us in building our collection, it allows us to learn more about each other. A case in point is that before the field-trip I knew Mr Germishuizen - the scientist and Assistant Curator-Finance (National Herbarium). What I didn't know was that the man is a fine cook. Who said taxonomists can't cook? I enjoyed every spoon of the meals he prepared for us.

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News from Swaziland

♦ The Swaziland National Herbarium is based at the Malkerns Agricultural Research Station where it temporarily shares a building with the Swaziland National Plant Genetic Resources Centre. The 7 200 plant specimens in the herbarium are housed in wooden cupboards but will soon be transferred to the steel cupboards donated by the National Botanical Institute (Natal Herbarium) through SABONET.

♦ The Assistant Curator of the National Herbarium, Mr Titus Dlamini, having successfully completed a BSc Honours in Botany at the University of Cape Town towards the end of last year, is currently pursuing a Masters programme at the University of Cape Town.

♦ The National Herbarium's technical assistant, Mr Bongani Dlamini, returned from Zimbabwe towards the end of 1996, having successfully obtained a diploma in forestry.

♦ To combat destructive practices such as the injudicious harvesting of plants for medicinal, firewood and other purposes, legislation is currently going through the normal process to parliament and the King. However, in addition to the legislation, meetings with Chiefs, the custodians of both the people and the flora in the rural areas, are planned to share ideas on how best plant conservation can be achieved. Further, a ministerial development strategy to become part of the National Development Strategy has been approved by the ministry. This strategy has National Policies, objectives and strategies including those of small sections such as the Herbarium. This approval includes possible transfer of the Forestry Section and the Herbarium to the Ministry of Natural Resources and Energy. However, the implementation date and logistics have not been finalised.

♦ Other activities have included identifying plants for farmers, public officers and the general public as well as receiving some students and individuals who visited the herbarium, and curating the herbarium.

♦ One long term plan for the Herbarium Unit is the establishment of a permanent Herbarium and Botanic Gardens. A project proposal towards this is currently being developed, and five possible locations for the gardens were visited late last year. These visits were conducted by a team involving officers from Forestry, the Herbarium, Land Use Planning, Tourism and the National Trust Commission.

♦ As a result of collaboration between the National Herbarium (specifically Mr Gideon Dlamini) and the National Botanical Institute (specifically Prof. Gideon Smith), the National Herbarium of Swaziland has acquired an acronym - **SDNH** - derived from **S**waziland **N**ational **H**erbarium from Dr Patricia Holmgren, co-editor of *Index Herbariorum*. It is interesting to note that Swaziland was not listed in the Eighth Edition (1990) of *Index Herbariorum*.

News from Zambia

The University of Zambia herbarium (UZL) has now received the project computer, which has been installed in the Department of Biological Sciences. The long-awaited SABONET-ZAMBIA account has also finally been opened. This account will be used to administer the grant emanating from USAID/IUCN ROSA. This financial input, amongst others, will facilitate the re-organisation of the University herbarium in readiness for the start of the taxonomic database relating to an inventory of plants in the country.

In view of the need to establish a network and achieve ideals of consistency in the region, the Curator of UZL is consulting with the management of the Pretoria National Herbarium (PRE) to explore the possibility of re-organizing the angiosperm taxa in the University herbarium in accordance with the Englerian classification system.

❤ **Congratulations to Tasila Banda (Zambia's trainee on SABONET's 1st Herbarium Management training course) who was married on 5 April 1997 in Lusaka. We wish Tasila and Sam many years of happiness together.**

In the August issue of *Sabonet News*.....

- **Profile: Brian Huntley (SSC Chairman)**
- **SABONET training courses**
- ***Sabonet Report Series***
- **Angola visit**
- **Namibia's NBRI officially opened**
- **The Paper Chase**
- **Regional News Updates**

.....and lots more...

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IUCN
The World Conservation Union

USAID

United Nations Development Programme

25TH CONGRESS OF THE INTERNATIONAL ORGANIZATION FOR SUCCULENT PLANT STUDY

KIRSTENBOSCH, SOUTH AFRICA

31 AUGUST - 4 SEPTEMBER 1998

IOS

THE 25th IOS CONGRESS will be hosted
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First Announcement

14 to 18
September
1998

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