

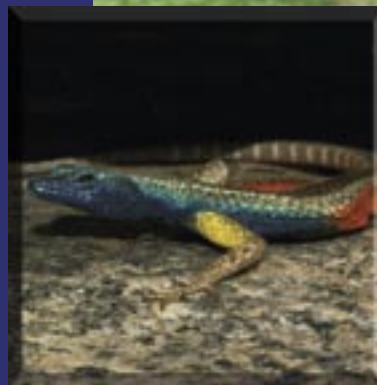
SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE



SOUTH AFRICAN

national
biodiversity
institute

S A N B I



Annual Report 2004-2005

Copies available from:

**SANBI
Private Bag X101
Pretoria
0001**

**tel: (012) 843 5200
fax: (012) 804 3211**

**SANBI
Private Bag X7
Claremont
7735**

**tel: (021) 799 8800
fax: (021) 762 3229**

website: www.sanbi.org

August 2005

ISSN 1021-7460

Layout and Design: Davidson Design Solutions (021 689 2566)

Annual Report 2004 – 2005

For submission in terms of the
Public Finance Management Act, No. 1 of 1999



SOUTH AFRICAN

national
biodiversity
institute

S A N B I



THE SANBI LOGO

Our logo is based on the flower of *Strelitzia reginae* (bird of paradise or crane flower), a species that is endemic to the east coast of South Africa. The *Strelitzia* flower has fascinated biologists for centuries, due to its adaptation to pollination by birds, a symbiosis between the animal and plant kingdoms which symbolizes the new mandate of SANBI. *Strelitzia reginae* is a uniquely South African plant that has become a garden favourite world-wide, reflecting our commitment to promoting the sustainable use, conservation and enjoyment of our rich biodiversity by all people.

MANDATE

The functions of the South African National Biodiversity Institute are detailed in the National Environmental Management: Biodiversity Act No. 10 of 2004 and include *inter alia*, to:

- monitor and report on the status of the Republic's biodiversity;
- undertake and promote research on indigenous biodiversity and its sustainable use, and establish, manage, control and maintain herbaria and collections of animal specimens;
- collect, generate, process, coordinate and disseminate information about biodiversity and maintain databases;
- manage, control, and maintain all National Botanical Gardens, with facilities for horticultural display, environmental education, visitor amenities and research;
- coordinate and promote taxonomy;
- assist in the development of a national biodiversity framework, bioregional plans and strategies;
- coordinate programmes in conservation and sustainable use of indigenous biological resources and the rehabilitation of ecosystems.

VISION

The vision of SANBI is:

To be the leading institution in biodiversity science in Africa, facilitating conservation, sustainable use of living resources, and human well-being.

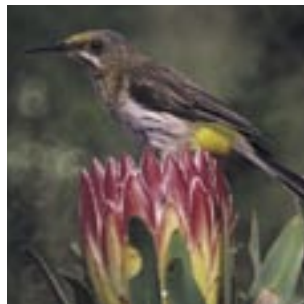
MISSION

The mission of SANBI is:

To promote the sustainable use, conservation, appreciation and enjoyment of the exceptionally rich biodiversity of South Africa, for the benefit of all people.

CONTENTS

FOREWORD BY THE CHAIRPERSONS	2
INTRODUCTION	3
HIGHLIGHTS 2004-2005.....	4
GARDEN AND HORTICULTURAL SERVICES.....	6
ENVIRONMENTAL EDUCATION SERVICES	20
RESEARCH AND SCIENTIFIC SERVICES.....	26
BIODIVERSITY PROGRAMMES, POLICY AND PLANNING SERVICES.....	38
ECOSYSTEM REHABILITATION PROGRAMMES	43
MARKETING AND COMMUNICATION SERVICES	45
HUMAN RESOURCES SERVICES.....	46
FINANCIAL SERVICES	49
DONATIONS, GRANTS AND SPONSORSHIPS	50
CORPORATE GOVERNANCE	51
STATEMENT OF RESPONSIBILITY OF THE BOARD	57
REPORT OF THE AUDIT COMMITTEE.....	57
SUMMARY OF KEY PERFORMANCE INDICATORS.....	58
REPORT OF THE AUDITOR GENERAL.....	59
FINANCIAL STATEMENTS...	60
BALANCE SHEET	60
INCOME STATEMENT.....	61
NOTES TO THE ANNUAL FINANCIAL STATEMENTS.....	62
STATEMENT OF CHANGES IN EQUITY	68
CASH FLOW STATEMENT ...	69



FOREWORD BY THE CHAIRPERSONS

This foreword is presented by both the outgoing and the incoming Chairpersons following a decision of the Board and a desire to effect a seamless transition of the National Botanical Institute into the South African National Biodiversity Institute during the 2004/2005 financial year. This change results from the establishment of the South African National Biodiversity Institute (SANBI) on 1 September 2004, in terms of the National Environmental Management: Biodiversity Act No. 10 of 2004 and the appointment of a new Board which took office in November 2004.

To date, through the leadership given by the Department of Environmental Affairs & Tourism and the CEO of NBI, the two boards of the NBI and SANBI have been able to work together to prepare for the implementation of the Act, whilst ensuring that the operations of the Institute were uninterrupted.

The establishment of SANBI results from the government's recognition that the increasing demands for decision support relating to the conservation and sustainable use of our biodiversity resources requires a focused, coordinated and well supported national institute. The resultant challenge

now is in the creation of a SANBI that is devoted to assessing, monitoring and reporting on the status of the Republic's biodiversity, while undertaking research on the dynamics, threats and opportunities relating to biodiversity and promoting an awareness of the values and benefits of this rich national resource amongst and for all the people of South Africa. The leadership challenge for the incoming Board is to create an institutional form that accomplishes the given mandate, drawing on the historical successes of the NBI and other affected institutions and building new resourcing options and institutional innovations that can take SANBI to new heights.

The parliamentary mandate of SANBI demonstrates the government's commitment to the goals of the Convention on Biological Diversity and other multilateral environmental agreements to which the Republic is signatory. The Boards of both NBI and SANBI have placed emphasis on ensuring that the Institute's activities respond to the focal areas of the government's priorities in socio-economic development, transformation and *Batho Pele*. This Annual Report covers the activities of NBI up to September 2004 and an overview

of the funded and continuing activities that relate to the new mandate for SANBI. It thus provides evidence of the Institute's commitment to increased service delivery to the three tiers of government, and in particular to the public at large through its rapidly expanding ecotourism, environmental education and outreach programmes.

The initiative taken by the NBI Board to commission an analysis of institutional responses to the Biodiversity Act laid the basis for the Institute to take advantage of the opportunities resulting from the creation of SANBI.

It gives us great pleasure, as chairpersons of the two Boards during this transition, to thank the previous Minister, Mr. Valli Moosa and his Director-General, Dr Crispian Olver, as well as the new Minister, Mr. Marthinus van Schalkwyk and Director General, Ms. Pamela Yako, who guided the legislative and implementation process leading to the establishment of SANBI, for their contribution.

Finally, a word of tribute to the NBI/SANBI management and staff, who have responded with energy and commitment to driving the transition forward.



Mr. Saliem Fakir
Board Chairperson
National Botanical Institute
1 April 2004 – 31 August 2004



Ms. Bongiwe Njobe
Board Chairperson
South African National Biodiversity Institute
1 September 2004 – 31 March 2005

INTRODUCTION

South Africa was privileged to host the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 – an international mega-conference that set the environmental agenda for the new century. The substantive results of the WSSD – synthesized in the Johannesburg Programme of Implementation – provided a strong stimulus to our government's understanding of the need to strengthen our national capacity in biodiversity conservation and sustainable use. The promulgation of the National Environment Management: Biodiversity Act, and the establishment of SANBI from 1 September 2004 was a significant outcome of the WSSD vision.

The transformation of the NBI into SANBI has been an exciting, if challenging, opportunity for the management and staff of the Institute, guided and supported by both the outgoing and incoming Boards, and throughout the process, by our colleagues in the Department of Environmental Affairs and Tourism (DEAT).



Brian J. Huntley
CEO
National Botanical Institute
1 January 1990 – 31 August 2004

The new mandate is a response to the increasing need for cost-effective, comprehensive and coordinated approaches to describing, understanding and monitoring the status and trends of our biodiversity heritage. SANBI is well placed to meet the demands of the new mandate. The Institute has been able, with the support of DEAT, donor agencies and the private sector, to rapidly expand its infrastructure in research, education, visitor amenity and information technology. It has also developed a wide national and international network of strategic partners, providing synergies which have created an institution much larger than the sum of its parts.

In responding to the expectations of our stakeholders, particularly with regard to fulfilling goals relating to the faunal component of our biodiversity, the new Institute will make increased use of a “managed network” approach. This institutional model requires effective cooperative governance and synergies between SANBI and our colleagues in the provincial and local governments, universities, the NGO sector and civil society at large. Where priorities require direct financial support for such joint work programmes, SANBI will need to raise such funding, not only from Treasury, but through the diverse sources that have seen our corporate budget increase from R15 million in 1990 to R250 million in 2005.

The past year has provided encouraging indications that we can and will deliver on expectations for the future. The successful

conclusion of many of the ambitious capital development projects funded by the DEAT's Extended Public Works Programme, the rapid expansion of the environmental education and outreach programme, and the excellence of our science programmes, described in detail in this report, provide measures of the Institute's success.

Investment in training of staff at all levels, particularly from previously disadvantaged groups, is paying great dividends as the middle and senior management levels strengthen in performance, confidence and delivery. The success of internship programmes for entry level researchers and horticulturists is having a very positive effect in recruitment and staff retention, even in specialist professions which have few candidates in the market place.

The Board has engaged actively with management to place new emphasis on our role in demonstrating the critical importance of biodiversity resources to our country's socio-economic development. This vision will be pursued through new programmes on the ecosystem services provided by wise natural resource management, and on sustainable use of the components of biodiversity, and the fair access to benefits arising from such use.

Management wishes to recognize the dynamic leadership provided by our two Board Chairpersons, and of the leadership and direct support of the Department of Environmental Affairs & Tourism.

Acting CEO
South African National Biodiversity Institute
1 September 2004 – 31 March 2005



8



10



9



7



6



5

Conclusions of the NBI

During August 2004, the NBI Board appointed an independent group of international experts to evaluate the Institute's performance against its 2000 – 2004 Strategic Plan. The team comprised Professor Sebsebe Demissew: Addis Ababa University, Ethiopia; Professor Kingsley Dixon (Chair): University of Western Australia; Dr Peter Wyse-Jackson: Botanic Gardens Conservation International, United Kingdom.

- "The National Botanical Institute continues to achieve national and international status as a leader amongst the biodiversity institutions and botanical gardens of the world.
- The External Review Group offers its sincere congratulations to the Chief Executive and Board, as well as to the staff on the remarkable leadership that the NBI has brought to biodiversity nationally as well as throughout Africa. Its leadership is well recognized

HIGHLIGHTS

- President Thabo Mbeki signs the National Environmental Management Biodiversity Act in September 2004, bringing into being the South African National Biodiversity Institute
- Cape Floral Region, including Kirstenbosch NBG, declared a World Heritage Site in June 2004 [2]
- Visitor numbers at the NBGs reach 1,219,757 (7.5% increase on previous year)
- Visitor numbers at Kirstenbosch NBG increase by 9% and at Walter Sisulu NBG by 8%
- Proceedings of the inaugural African Botanic Gardens Congress launched at the 2nd World Botanic Gardens Congress in Spain
- State President, Mr. Thabo Mbeki and Mrs. Zanele Mbeki visit Kirstenbosch [6]
- Braille Trail at Kirstenbosch upgraded
- Summer concerts at Kirstenbosch attended by 121,999 people
- New visitor and education facilities at Lowveld NBG opened [8]
- New environmental education centre, restaurant and visitors' centre built at Free State NBG
- New restaurant and wetland built at Pretoria NBG
- New Biodiversity Centre at Pretoria NBG opened by the Minister of Environmental Affairs and Tourism Mr. Marthinus van Schalkwyk [1]
- New restaurant, visitor's information centre, retail nursery and gift shop built at Walter Sisulu NBG [3]
- Sappi concerts at Walter Sisulu NBG attended by 20,299 visitors
- SANBI's environmental education programme provides guided garden visits to 17,960 learners
- SANBI environmental education programme expands to Limpopo, the Northern Cape and the Eastern Cape
- SANBI's outreach greening programme receives R3.2 million from the National Lotteries Distribution Trust Fund and R70 million from the DEAT's Expanded Public Works Programme
- The Gold Fields Centre celebrates its 10th anniversary and wins the Cape Times/Caltex environmental award for its outstanding contribution to environmental education [10]
- SANBI's Pretoria education team receives the 2004 Gauteng Department of Education Award for contributing towards the indigenous greening of schools [5]
- SANBI's outreach greening programme takes on 31 new schools [7]

External Review Group

- throughout the world amongst the global community in this regard.
- The NBI has developed an enviable, robust, innovative and growing capital infrastructure programme and externally funded research, development and education activities.
 - The operations of the NBI have been well underpinned by an extensive network of interactions with stakeholders at all levels. The organization successfully manages a broad range of sponsors and donors and links well to aligned institutions.
 - During the review period, NBI has established the essential framework on which to build the current and proposed programmes of SANBI. The institution is therefore well positioned to embrace its new leadership roles in marine, coastal and water management."



2004-2005

- SANBI launches environmental education programmes at Lowveld and Free State NBGs
- Outreach greening programmes initiated in the Lowveld and Free State NBGs
- Staff at SANBI herbaria identify 16,596 plants
- Researchers at SANBI's herbaria produce 243 scientific, electronic and popular publications
- SANBI's Millennium Seed Bank team the top performer amongst all the countries participating in the Millennium Seed Bank project
- SANBI receives a further R2.9 million from the Mellon Foundation for the African Plants Initiative project
- Publication of *SASOL First field guide to Fynbos of Southern Africa* and *Southern African wildflowers: Jewels in the veld*
- Publication of *Sappi Tree Spotting: What's in a Name?* and *Sappi Tree Spotting: Lifer List*
- Publication of *Easy Identification of Aquatic Plants*
- Kirstenbosch Research Centre wins National Science & Technology Forum Award 2004 (organizational category) [9]
- SANBI's websites receive over a million hits per month
- SANBI publishes South Africa's first National Spatial Biodiversity Assessment
- SANBI initiates a conservation assessment of South Africa's reptiles
- SANBI receives US \$350,000 from GEF to develop a National Grasslands Bioregional Initiative
- SANBI hosts an international workshop on mainstreaming biodiversity in production landscapes
- SANBI receives R1.6 million from DEAT for a national wetland inventory
- SANBI wins awards at Chelsea Flower Show (UK) and Pacific Flora Expo (Japan) [4]
- SANBI launches Employee Assistance Programme (EAP) at Pretoria and Kirstenbosch NBGs
- The Cape Action for People and the Environment (C.A.P.E.) Project receives \$12 million for its five-year programme from the World Bank and the United Nations Development Programme
- The World Conservation Union (IUCN) establishes an office for the Chair of the Species Survival Commission (SSC) at Kirstenbosch
- The Global Invasive Species Programme (GISP) establishes its international secretariat at Kirstenbosch

GARDEN AND HORTICULTURAL SERVICES



Delegates to the 2nd World Botanical Gardens Congress in Barcelona, Spain.

The National Botanical Gardens (NBGs) are reaping the reward of substantial funding from the DEAT's Extended Public Works Programme for new visitor facilities. From March 2001 to date, SANBI has received R45 million from DEAT's Extended Public Works Programme for tourism infrastructure developments in NBGs other than Kirstenbosch. As a result of this funding, more than 1,000 people have been employed in temporary jobs, more than 80,000 temporary job days were worked including 25,000 temporary job days by women, more than 300 people were trained in various skills and 16 permanent jobs were created.

The numbers of people visiting the NBGs countrywide continues to increase. Visitor numbers showed a 7.5% increase for the 2004/5 financial year, with 1,219,757 visitors recorded during this period. Kirstenbosch NBG received a record number of 750,466 visitors during the year, a 9% increase over the previous year. Walter Sisulu NBG also received a record number of 171,697 visitors, an 8% increase on the previous year. Visitor numbers increased in six of the eight NBGs, but were down in Karoo Desert (2%) and Pretoria (15%), due in part to the disruptions caused by the construction of new facilities or lack of such facilities.

Further funding of R24.6 million from the DEAT's Extended Public Works Programme was approved during the year for visitor facilities in the Harold Porter, Karoo Desert, Natal and Walter Sisulu NBGs to be undertaken in the next financial year.

During the year an internal review of all eight NBGs was conducted in October 2004 as a pre-cursor to the independent external review of NBI that took place in November 2004. Amongst other things, the review assessed the Gardens' implementation of the International Agenda for Botanic Gardens in Conservation. Results from the survey indicated that on average across the eight NBGs, 53% of the 211 activities listed in the International Agenda are already being implemented and the NBGs are considering doing a further 26% of the activities. Kirstenbosch NBG, with the most advanced facilities and largest staff complement, was doing 70% of the activities and considering doing a further 20% of the activities. These results indicate the success our Gardens have achieved against international benchmarks for best practice – placing our network in the top 10 such systems of the world.

The Gardens continue to cultivate and display threatened species as part of a vigorous organization-wide threatened plants programme. Numerous threatened species have been planted in displays with threatened plant-related themes at most of the NBGs. Garden staff went on numerous collecting trips over the year to collect seed for these programmes as well as Kew's Millennium Seed Bank Project. Staff also attended a threatened plant workshop at the annual South African Association of Botanists (SAAB) Congress in Bloemfontein in January 2005.

The Gardens Directorate has also been instrumental in facilitating the upgrading of the Grahamstown Botanical Garden (founded in 1850) in the Eastern Cape and significant improvements were made to this garden over the past year. With funding of R2.9 million from the DEAT's Extended Public Works Programme the garden was fenced, an irrigation system was installed and the clearing of alien invasive plants and restoration of ponds is ongoing. With an additional R14 million allocated from the DEAT's Extended Public Works Programme, new visitor and education facilities will be developed in the Grahamstown Botanical Garden over the next two years.

The Gardens Directorate continued to play a leading role in networking African botanical gardens. SANBI representatives made significant contributions to the African Botanic Gardens Network meeting held in conjunction with the 2nd World

Botanic Gardens Congress in Barcelona, Spain, in April 2004. The proceedings of the inaugural African Botanic Gardens Congress, held in 2002 and published by SANBI, were also launched at the 2nd World Botanic Gardens Congress. The 18th annual Curators Week was held in the Walter Sisulu NBG in September 2004 followed by a two-day workshop held with staff from other southern African botanical gardens (Johannesburg, Durban, Potchefstroom and Maputo, Mozambique) to develop an action plan for implementation of African Botanic Gardens Network targets.

Various in-house and external training courses, including horticultural skills,

plant propagation, garden records data basing and first-aid courses were attended by gardens staff. HIV/Aids awareness sessions continued to be presented to staff by peer educators in the various NBGs.

Staff published various gardening articles in magazines and newspapers and contributed regular plant features to the popular 'Plant of the Week' series on the SANBI website.



Western Cape KIRSTENBOSCH NATIONAL BOTANICAL GARDEN [CAPE TOWN, Est. 1913]

Visitor numbers at Kirstenbosch NBG increased by 9.4% during the 2004/2005 financial year to 750,466, the highest number of visitors in the Garden's history to date. Amongst the many visitors to the Garden during the year were the State President, Mr. Thabo Mbeki and Mrs. Zanele Mbeki, who paid the Garden an impromptu visit on Christmas Eve 2004.

One of the major projects during the year was the upgrading of the Braille Trail at Kirstenbosch. With the guidance of the Lighthouse Association for the Blind and funding from the Kirstenbosch Rotary Club, the Braille Trail (originally constructed in 1986) was redesigned and revamped with new interpretive signage in Braille, new guide ropes and a new boardwalk.

Another project currently under development at Kirstenbosch is a Garden of Extinction which highlights the plight of South Africa's threatened plant species. During the year numerous threatened plant species were planted, including a specimen of the extremely rare *Encephalartos woodii* donated by Durban Botanic Gardens. Interpretation was developed for this demonstration garden and for another demonstration garden under development called *Weeds South Africa gave the World*. This garden displays South African plants presently invading other countries and illustrates South Africa's contribution to the global problem of alien invasive species. During the year the hard landscaping phase of this garden was completed including the building of paths and a pond that will be used to display indigenous aquatic plants

that are problem plants in other areas of the world.

Other improvements to the Garden included the upgrading of Mathews Rockery, renewal of the Erica Garden, and the construction of a Visitors Deck near the Rycroft Gate as a viewing platform for tour groups.

Work begins on the Weeds South Africa Gave the World demonstration garden.

Visitors exploring the newly upgraded Braille Trail at Kirstenbosch NBG.





Visitor numbers at Kirstenbosch NBG were up by 9.4%.

The premises of the Kirstenbosch Tearoom were extended and the landscaping around the Tearoom was improved with the addition of more trees. Since the opening of the Kirstenbosch Tearoom and Garden Centre in late 2003, there has been an increase of 30% in traffic through the Garden Centre gate.

The concert stage, which was improved with a new canopy, was the platform for another extremely successful concert season at Kirstenbosch. The 2004/5 Appletiser Summer Sunset Concert

season was attended by 69,699 people and generated R2.1 million for the Garden and the annual New Year's Eve concert was attended by 3,200 people and raised R208,955. A number of other high-profile concerts were also staged at Kirstenbosch including performances by Josh Groban, Johnny Clegg and Katie Melua, which together were attended by 26,600 people and generated R513,000 for the Garden. During the course of the concert season a total of 121,999 people came to the concerts, contributing close to R3 million to the garden's coffers.

Numerous collecting trips were undertaken by garden staff during the year including trips to Tsitsikamma, KwaZulu-Natal, northern Namaqualand, Kaokoveld (Namibia), Richtersveld and the Southern Cape. A collecting trip to the Cedarberg Wilderness Area yielded a rare specimen of *Disa marlothii*.

Activities in Kirstenbosch's threatened plants programme over the past year included cultivation of *Gladiolus aureus* and the introduction of 'extinct in the wild' and endangered taxa to Rondevlei Nature Reserve. Garden staff also collaborated with the Kirstenbosch Research Centre's molecular laboratory on projects of mutual interest, in particular molecular analysis of cycads and clivias.

Garden staff continued to contribute to the Plant of the Week feature on the SANBI website as well as giving lectures at the monthly Kirstenbosch gardening talks coordinated by Room To Grow. Horticultural staff attended and presented papers at horticultural symposia and congresses in Gibraltar and Japan. Kirstenbosch horticulturists also continued to mentor young horticulture students through the garden's highly-regarded student training programme.

Cape Floristic Region declared a World Heritage Site

The Cape Floristic Region was inscribed as South Africa's sixth World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in June 2004. The Cape Floristic Region World Heritage Site comprises a series of eight protected areas, stretching from the Cape Peninsula to Baviaanskloof in the Eastern Cape. Kirstenbosch has been included as part of the Table Mountain National Park component of the World Heritage Site, because of its importance as a gateway and educational resource to the site, and the globally significant biodiversity occurring in the garden.

Kirstenbosch is the first botanical garden to be included in a natural World Heritage Site. The other botanical gardens that have been inscribed, Padua Botanical Garden in Italy and the Royal Botanic Garden at Kew, have been for their cultural values.

The new Garden of Extinction highlights the plight of South Africa's threatened plant species.



KAROO DESERT NATIONAL BOTANICAL GARDEN [WORCESTER, Est. 1921]

The Karoo Desert NBG has received funding of R3.4 million from the DEAT's Extended Public Works Programme for visitor facilities including a new tearoom, palisade fencing and upgraded car park. A scoping report for anticipated developments in the Karoo Desert NBG was prepared by an Environmental Impact Assessment (EIA) consultant during the year and construction of the new developments, which are expected to greatly increase visitor numbers to the Garden, is due to begin in mid-2005.

A new glasshouse was constructed at Karoo Desert NBG sponsored by the Kirstenbosch branch of the Botanical Society of South Africa.

The Garden's threatened plants programme has had to switch focus as the very dry weather conditions experienced over the past two years have prevented seed from *Moraea worcesterensis*, the Garden's flagship threatened plant species, from being produced. Garden staff are now concentrating their efforts on the local endemic Red Data species *Didymaotus lapidiformis* which occurs in a very limited location in the Ceres Karoo. To date about 100 plants have been harvested and are doing well. About 1,500 bulbs of the rare *Haemanthus laceifolius* have also been collected.

Other conservation efforts included the rescue of approximately 12,000 bulbs, including a number of threatened species, from the farm Bettieskraal in Van Rhyndorp and approximately 1,500 succulents from Cape Lime, a lime-mining



Karoo Desert NBG is conserving the Red Data species Didymaotus lapidiformis.

operation near Vredendal. These plants have since been planted up in the Garden's new Bushmanland display and added to the Garden's geophyte index collection. Garden staff were regularly called on to assist nature conservation officials in identifying species that had been illegally removed from the veld in order to ensure successful prosecutions. The plants that were illegally removed from the field were handed over to the collections manager at the Karoo Desert NBG. Approximately 1,200 plants are currently in cultivation in the Garden.

Garden staff contributed monthly gardening articles to the local newspaper *Worcester Standard* and gave numerous talks and guided tours to local schools and foreign visitors. The Karoo Desert NBG remains a popular destination for foreign visitors, particularly tourists from Germany and the UK, and is also frequently used as a location for international fashion and film shoots.

Plants rescued from a mining site are replanted at the Karoo Desert NBG.



HAROLD PORTER NATIONAL BOTANICAL GARDEN [BETTY'S BAY, Est. 1959]



The annual Fynbos Fair and plant sale at the Harold Porter NBG.

Guided school visits have now been introduced at Harold Porter NBG.

The Harold Porter NBG has been granted R8 million funding from the DEAT's Extended Public Works Programme for capital developments including a new restaurant, visitors' centre and upgraded parking area. A number of public meetings were held to discuss the proposed developments in the Garden and to garner public participation in the Environmental Impact Assessment. Harold Porter NBG also exhibited at the Hermanus Wildflower Show, held at the Fernkloof Nature Reserve during the Hermanus Whale Festival, to promote the Garden and introduce the proposed capital developments.

The public response to the proposed plans has been very positive to date.

The Wetland section of the Garden's Four Ecosystem Trail was completed and given interpretative signage funded by the World Wildlife Fund (WWF) and the Rowland and Leta Hill Trust. A 46 metre boardwalk provides disabled-friendly access through the trail and a stepping stone path through the wetland is proving popular with young garden visitors. The Fynbos section of the trail is nearing completion and displays common fynbos species as well as a few rare fynbos species cultivated as part of the Garden's threatened plants programme such as *Erica patersonii*, *Erica lowryensis*, *Brunia stokoei*, *Nivenia stokoei* and *Witsenia maura*.

Landscape plans were drawn up for a Khoisan Plant Use Garden that will display and interpret plants traditionally used by Khoisan people. Other improvements to the Garden included repairs and renovations to the reflection ponds, repair work on the Olive May Porter bridge and planting of herbaceous perennials along the Garden's circular route.

The Garden's annual Fynbos Fair and plant sale held in April 2004 was well-attended, with the nursery, restaurant and gift shop all enjoying good sales. Concerts and



Carols by Candlelight were held in the Garden during the festive season and the number of visitors attending these concerts has increased considerably. The Garden also initiated a new guided walk option on the first weekend of each month called 'Special Saturdays', where guides are available for guided walks and discounts are offered on plant sales and at the Garden's shop and restaurant.

There is an ever-increasing demand for guided school visits to the Garden and to meet this demand an environmental education programme was initiated with the assistance of education staff at Kirstenbosch. Garden staff and volunteers were sent on an orientation and training programme at the Gold Fields Centre at Kirstenbosch and currently three learning programmes on local themes are being developed for use at Harold Porter NBG. As an introductory step environmental education resources were gathered



and distributed to the 18 schools in the Kogelberg area along with information about the Garden.

The new Wetland Garden at Harold Porter NBG.

The Garden also hosted four students from Green Futures, a horticultural training initiative at Grootbos Nature Reserve, for three weeks to complete their in-service training.

Mpumalanga LOWVELD NATIONAL BOTANICAL GARDEN [NELSPRUIT, Est. 1969]

The new developments at the Lowveld NBG, which include an environmental education centre, restaurant, curio/bookshop, retail nursery, information centre, pedestrian bridge and upgraded parking areas, were officially opened by Ms. Nomsa Mtsweni, MEC for Agriculture, Conservation and Land Administration, in June 2004. The Garden received an award from the Lowveld Chamber of Business and Tourism for the exemplary way it handled the environmental impact of the new developments in a very sensitive area, in particular its thorough Environmental Impact Assessment and sound Environmental Management Plan.



These new facilities, which were funded by the DEAT's Extended Public Works Programme and Tsogo Sun Casinos, have already had a positive impact on garden visitor numbers with visitor numbers up by 28%. The new restaurant called 'Makulu Manzi' is also proving popular as a venue for private functions in Nelspruit.

Garden's education programme off the ground.

The new curio and gift shop at the Lowveld NBG.

The environmental education centre was fully equipped with funding from the Botanical Society and Sappi and opened its doors in February 2005. An environmental education officer, outreach environmental education officer and outreach greening horticulturist were appointed to get the

Work continued on the landscaping of the areas surrounding the new developments and a group of 15 DEAT Extended Public Works Programme contract workers were given a three-week course in landscaping. The Botanical Society donated R12,874 towards the landscaping of the upgraded parking area at the main garden entrance.

The Garden's concert stage was also extended and upgraded with funds raised by the Friends of the Lowveld NBG. Three concerts were held in the Garden, including

The annual Sappi Garden Festival at the Lowveld NBG included a performance by the Johannesburg Philharmonic Orchestra.



a performance by the Johannesburg Philharmonic Orchestra. The annual Sappi Garden Festival held in September 2004, which included a concert by the Johannesburg Festival Orchestra, was a huge success. A Carols By Candlelight evening, organized by the Friends of the Garden and linked to the official Nelspruit Festival of Lights, was also held in the Garden.

Lowveld NBG staff undertook a number of collecting trips during the year to collect seed for the Garden's threatened species programme and the Kew Millennium Seed Bank, in particular seed of *Acacia ebutsiniorum* and *Dioscorea* sp. The Garden continued with its cycad breeding programme adding 209 seedlings of an extremely rare cycad, *Encephalartos nubimontanus*, to its clone bank.

Several private functions were held in the Garden including a function for the Mpumalanga provincial legislature for 200 delegates to a South African Development Community (SADC) conference. The Garden also hosted a Christmas function for 150 orphans from a local AIDS care centre.

The Lowveld NBG made history with the appointment of the first female foreman in the history of the NBGs.

The Lowveld NBG has become a member of the Riverside Precinct Association, an organization that represents the interest of landowners and businesses in the vicinity of the Garden.

Free State FREE STATE NATIONAL BOTANICAL GARDEN [BLOEMFONTEIN, Est. 1967]

Guided visits at the Free State NBG.



A number of new visitor facilities funded by the DEAT's Extended Public Works Programme were completed at the Free State NBG during the year including an environmental education centre, restaurant, visitors' centre, gift shop and retail nursery, and the upgrading of the Garden's entrance and parking area.

The environmental education centre was completed in July 2004 and an environmental education officer and outreach horticulturist were appointed in October 2004 as well as three environmental education interns. The new restaurant, called Gecko's Restaurant, was

completed and opened in February 2005. Construction of the visitors' centre, gift shop, retail nursery and parking facilities is still underway and is expected to be finished by mid-2005.

The Garden has already shown an increase in visitor numbers and this trend is expected to continue with the new facilities fully operational.

Garden staff were kept busy with landscaping and planting around the new developments as well as the creation of a new fragrance garden and the revamping of the medicinal plants and water-wise garden displays.

The Garden's threatened plants programme has taken off following the construction of a growth tunnel for cultivation of select species. Conservation efforts included the collection of seed of *Boophane disticha* from Mpumalanga, which was sown with

100% successful germination rate, and the cultivation of *Merwillia plumbea* (*Scilla natalensis*) seedlings. Garden staff were also involved in ongoing threatened plant projects with the National Museum in Bloemfontein, the University of the Free State, Free State Nature Conservation and SANParks.

Seven concerts and an art exhibition were held in the Garden during the year in conjunction with the local branch of the Botanical Society and Bloemvisie. Garden staff also presented a number of guided tours and lectures on gardening topics to local schools and garden clubs.

The Free State NBG has joined the Bloemfontein Municipality's Institute for Environmental and Recreation Management. Garden staff were also called upon to provide input to a biodiversity conservation strategy for the Free State province.



The new restaurant at Free State NBG.

Kwazulu-Natal **NATAL NATIONAL BOTANICAL GARDEN** [PIETERMARITZBURG, Est. 1874]

Work began on the first phase of a Biodiversity Walk, a new garden feature that will highlight the biodiversity of the KwaZulu-Natal province. The first phase included the construction of pathways and the planting of a large section of grassland that includes over 100 local grassland species from some 30 families. This new development was featured on the gardening programme 'Tuinpaleis' and garden staff were also interviewed about gardening with grassland species.

Other new garden displays created were two demonstration displays promoting the use of indigenous plants in domestic gardens called 'Inspiring Indigenous' and 'Dazzling Daisy'. The Cycad garden was also extended with the addition of four new species.

The Natal NBG has continued with the gradual removal of some of the older exotic trees found in the Garden. To assist this process an inventory of all the exotic trees and wetland plants in the Garden was done by staff at the KwaZulu-Natal Herbarium.



A Celebration of Lights event was held at Natal NBG to raise funds for the Children in Distress (CINDI) Project.



The Garden's threatened plants programme, which focuses on the rare Hilton Daisy, *Gerbera aurantiaca* is progressing well. To date the Garden has managed to establish a collection of about 200 plants representative of 11 populations in its nursery. The Garden continues to collect *Gerbera aurantiaca* seed for germination and survival trials and plant material for scientific study. Funding received from SANBI's Threatened Plants programme was used for genetic research to establish the taxonomic boundaries of the species and the extent of hybridization with *Gerbera ambigua*. Micro-propagation attempts have been hampered by contamination problems but new approaches are being investigated. A poster presentation on the conservation of *Gerbera aurantiaca* at Natal NBG was presented at the World Botanic Gardens Conference in Barcelona, Spain, in April 2004. Garden staff have also collected and germinated seed of the



threatened species *Dierama nixonianum* and *Aloe reitzii* var. *vernalis*.

The Natal NBG hosted a 'Celebration of Lights' function in aid of the Children in Distress (CINDI) Project, a project for children orphaned by HIV/AIDS, in May 2004. This event, which involved a number of schools and individuals making and displaying non-electric lamps in the Garden, drew about 1,500 people and raised R12,000 for CINDI. The Garden also hosted the SA Clivia Club's annual general meeting and *Clivia gardenii* show in June 2004 and both the regional launch and prize-giving of the Pam Golding Properties/SANBI 'Gardens of Pride' competition. Other events held at the Garden during the year were the Clivia Pre-Primary fun walk in August 2004 and a Teddy Bear's Picnic in March 2005.

The Garden's restaurant re-opened with new lessees in April 2004. The Garden's popular programme of guided walks continued with new options introduced in conjunction with the restaurant such as 'Birding and Breakfast Walks'.

The Natal NBG has been granted funding of R7.5 million from the DEAT's Extended Public Works Programme for new visitor and tourism facilities and a number of meetings were held with architects and EIA consultants during the year to begin the planning process.

Public participation was invited around the proposed name change for the Natal NBG and it was recommended to the SANBI Board that the name change to KwaZulu-Natal NBG. The name change is still to be approved by the DEAT Minister and published in the Government Gazette.

Gauteng
PRETORIA NATIONAL BOTANICAL GARDEN
 [PRETORIA, Est. 1958]

A number of new developments funded by the DEAT's Extended Public Works Programme were completed in the Pretoria NBG during the year including a new restaurant, adjacent wetland and improved parking area. The new Biodiversity Centre adjacent to the Garden and the National Herbarium, which now houses the main offices of SANBI, was opened by the Minister of Environmental Affairs and Tourism, Mr. Marthinus van Schalkwyk, in December 2004.

During the year work also began on the development of an Enabling Garden for disabled people funded by the Pretoria branch of the Botanical Society and Spar. Various organizations were consulted on disabled people's requirements and on how to make the layout of the Enabling Garden disabled-friendly. The garden, which will feature raised flower beds and wheelchair-friendly pathways, will demonstrate how gardening can best be enjoyed by disabled people.

Other improvements to the Garden included the upgrading and extension of the medicinal plant garden, which has now been included as a stop on the Pioneer Trail, re-landscaping of the Peace Garden and enlarging of the concert lawn. Garden staff were also kept busy with the landscaping around the new restaurant, wetland and parking area as well as the gardens surrounding the new Biodiversity Centre. The wetland was landscaped with wetland bulbs and plants rescued by garden staff from mining operations in Mpumalanga.

A four-page full-colour booklet on the birds of the Pretoria NBG was produced in conjunction with the Gauteng Birding Society. Discussions were also held with various biodiversity specialists to conduct faunal surveys in the Pretoria NBG, including surveys of insects, spiders and bats. During the year an insect survey by externally-funded consultants commenced in the Pretoria NBG.

Another popular Pick 'n Pay-sponsored concert series was held in the Garden during the winter months attracting thousands of visitors to the Garden. This year the Carols by Candlelight event, sponsored by Spar and Jacaranda 94.2 fm, which was held



Mokha, the new restaurant at Pretoria NBG.

over two consecutive nights in December 2004, was attended by 8,294 people and raised funds for the new Enabling Garden. Other events hosted by the Pretoria NBG were the Pretoria Sun Gardens Hospice fun walk, Organ Donor Tribute Day and the annual Run/Walk for Life fun day.

The Pretoria NBG was promoted at the Getaway Show in September 2004 and garden staff have also been cooperating with Tshwane Tourism on ways to promote the Garden. Garden staff assisted a delegation from Swaziland in planning a botanical garden and also advised the University of Limpopo (Polokwane) on the proposed establishment of a university botanical garden.

Dr Max Clark and Peter Hawkes busy with an insect biodiversity survey at Pretoria NBG.



WALTER SISULU NATIONAL BOTANICAL GARDEN [ROODEPOORT/MOGALE CITY, Est. 1982]

The Walter Sisulu NBG also benefited from funding from the DEAT's Extended Public Works Programme for new visitor facilities. Developments completed during the year included a new restaurant, retail nursery and gift shop as well as the upgrading of the Garden's entrance and development of a visitor's information centre. Funding from DEAT also allowed for the purchase of 8.57ha of natural veld adjacent to the Garden in order to secure the Garden's sense of place within a rapidly expanding urban area.

The Garden's new restaurant called 'Eagle's Fare' was opened by the Executive

Isitiya, the new gift and bookshop at Walter Sisulu NBG.



Eagles Fare, the new restaurant at Walter Sisulu NBG.



Aerial view of the new People's Plants Garden at Walter Sisulu NBG.



Mayor of Johannesburg, Councillor Amos Maseko, in August 2004. The Random Harvest Nursery and Isitiya gift and bookshop both opened for business in October 2004. The Kitso EcoCentre which houses a taxidermy display of local birds and animals, flower and insect displays, a giant fish tank displaying indigenous fish as well as general tourist and garden information, is a welcome addition to the Garden. The Garden has experienced a significant increase in visitor numbers since the opening of these new facilities.

Garden staff were kept busy with landscaping and planting around the new restaurant and retail nursery developments as well as the completion of the new Useful Plants Demonstration Garden. Other improvements to the Garden included the installation of lighting along the main walkway and parking area.

The Garden enjoyed a very successful season of Sappi concerts attended by 20,299 visitors. The concerts raised R155,977 which will be used for improvement of facilities in the Garden's index nursery. Other events hosted in the Garden included the Ceres Easter Parade and Family Fun Day which raised R15,302 and a Teddy Bear's Picnic co-sponsored by Ceres and Pick 'n Pay which attracted 2,405 visitors. Pick 'n Pay also sponsored a Carols by Candlelight event in aid of Employability, an NPO working with people with disabilities, which was attended by 5,551 visitors. During the year construction began on a permanent stage in the Garden to be used for such concerts and events.

The Garden's threatened plants programme received funding from SABONET for the cultivation of *Aloe albida*. Garden staff also continued to collaborate with Mpumalanga and Gauteng Nature Conservation on various threatened plant species.

The Walter Sisulu NBG was extensively marketed with a number of newspaper articles and distribution of new promotional material for the Garden following its name change in March 2004.

The Walter Sisulu NBG won six medals for the clivias it exhibited at the 2004 Metro Clivia Show.

INTERPRETATION

New garden displays and projects that required interpretation during the year were the Braille Trail (Kirstenbosch NBG), Biodiversity Walk (Natal NBG), Garden of Extinction (Kirstenbosch and Natal NBGs), the Wetland section of the Four Ecosystems Trail (Harold Porter NBG), Grassland Display (Free State NBG), the new Visitors' Centre and Geological Garden at Walter Sisulu NBG and the new wetland at Pretoria NBG. Interpretation staff also gave their input to garden displays currently in development such as the Khoisan Plant Use Garden (Harold Porter NBG), Enabling Garden and Sappi Tree Trail (Pretoria NBG). Many of the new developments and buildings completed at the various NBGs required directional and information signage.

At Natal NBG the 'Grand Old Trees' series of interpretive storyboards was revised into a set of hangtags ('Every tree has a story'), and a brochure on the history of the Natal NBG produced. At the Free State NBG a new brochure about the Garden's walking trails was produced as well as a list of flowering plants available for sale according to their season. At the Karoo Desert NBG the interpretive storyboards on the Shale Trail were redone and storyboards about the Garden's plant rescue operations created.

At the Walter Sisulu NBG an aquatic display of indigenous fish was installed in the Kitso Ecocentre and a water-wise gardening demonstration was held in the waterwise-garden during Water Week. At the Pretoria NBG a four-page full-colour bird list was produced with the assistance of the Gauteng Birding Society and spider, insect and bat surveys were instituted. The Ndebele huts and interpretation in the Medicinal Plants Garden were upgraded and signage was also produced for the new Biodiversity Centre.

At the Lowveld NBG interpretation was developed for the new Hippo and Dragonfly routes and the interpretation signage in the Sappi Rain Forest was redesigned and replaced. Interpretation and directional/information signage was created for the new Visitors' Centre at Lowveld NBG, including fruit and seed displays, a 'creature feature' and 'what to plant' suggestions for gardeners. The annual Sappi Garden Festival was an



Braille signage on the Braille Trail at Kirstenbosch NBG.

ideal interpretation opportunity and the Lowveld NBG won a prize for their nursery display featuring plants that can be added to indigenous gardens. Interpretation was also created for a water-wise demonstration garden at the annual plant sale at Harold Porter NBG and a fragrance demonstration garden at the annual Kirstenbosch Garden Fair.

A number of new interpretation ideas and approaches were tested at various NBGs during the year. 'Special Saturdays' were introduced at the Harold Porter NBG where guides are available for guided walks and discounts are offered on plant sales and at the Garden's shop and restaurant. At Natal NBG bamboo flute-making workshops for children were held. New guided walk options such as a 'Breakfast and Birding' walk were also introduced in conjunction with the restaurant. Twilight spider walks at the Lowveld NBG and Bat Walks at the Pretoria NBG proved very popular with visitors. Brightly coloured hangtags were also used for spontaneous interpretation of short-lived events such as a wasps' nest, and to attract visitor's attention to interesting species on trails and walks.



Signage for the new wetland at Harold Porter NBG.





Indigenous fish display at Walter Sisulu NBG.

Interpretation staff presented a workshop on Biodiversity Interpretation at the Walter Sisulu NBG in November 2004, a

workshop on interpretation principles and design for SANBI environmental education staff during Educators Week and a short training session for AEOs at Gold Fields Centre. Presentations were given at the 4th International 'Soul-in-education' conference at Pietermaritzburg and at the Environmental Education Communication forum in Durban. Staff also trained and assessed 22 students from the South African Wildlife College in environmental education and interpretation. SANBI's interpretation coordinator is now registered as an assessor with the Tourism and Hospitality Education and Training Authority (THETA) and can officially assess nature guides for the NBGs.

URBAN CONSERVATION

The past year has been one of substantial growth for the Urban Conservation Programme through the expanded scope of all of its projects. Currently the Urban Conservation Unit manages three main projects: *Cape Flats Nature* (a.k.a. *Mainstreaming Biodiversity on the Cape Flats*), *Urban Wetland Restoration (Working for Wetlands)* and the *Overberg Useful Plants* project. All these projects tackle the pressing problems associated with biodiversity conservation in urban settings that are heavily impacted by human activity. A Media Project within the Programme produces *inter alia* short videos as a means of improving communication with beneficiaries, stakeholders and funders.

The *Cape Flats Nature* project is a multi-partner project that aims to develop local leadership for nature conservation on the Cape Flats and to protect the unique biodiversity of the Cape Flats. It concentrates on four pilot sites: Edith Stephens Wetland Park, Wolfgat Nature Reserve, the Macassar Dunes and Harmony Flats Nature Reserve. The project, which is funded by the City of Cape Town, Table

Mountain Fund and the Critical Ecosystems Partnership Fund (CEPF), is progressing well and since the beginning of 2004 has grown both in terms of staffing and scope.

In order to increase the use of Edith Stephens and Wolfgat as outdoor classrooms for environmental education a pilot programme has been developed in conjunction with the Western Cape Education Department to assist local educators in developing lesson plans for use at Edith Stephens and Wolfgat. To this end educators from five schools were taken on a tour of the sites in June 2004 followed by a workshop to develop educational worksheets for both sites in August 2004.

During the year a number of events were co-ordinated by the project at its four sites. In October 2004 a Weedbuster Action Day was held during which 270 learners from 14 Khayelitsha schools participated in educational activities at six different learning points in the Macassar dunes. Two 'Youth for Wolfgat' clean-up hikes took place in April and December 2004 with 145 participants from Mitchells Plain and Khayelitsha. Two Cape Flats Nature Trail hikes were held during this period and attended by 188 learners from nine local schools. An Arbor Week programme held at the Harmony Flats Nature Reserve was attended by approximately 300 learners from five schools.

As part of the project's capacity building initiative a training programme was initiated

Cape Flats Nature Conservator, Luzann Hendricks, with an endangered Leopard Toad found at Edith Stephens Wetland Park.



for volunteers to lead future activities in the Wolfgat Nature Reserve. In consultation with community partners a group of 33 youth were selected for the programme and attended two training sessions on the importance of conservation and alien plant removal.

The *Urban Wetland Restoration* project expanded to a R1 million project and consolidated itself well as a Western Cape component of the national Working for Wetlands programme, recently assumed by SANBI. During the year routine wetland restoration work undertaken included clearing of reeds in the Noordhoek reed beds (with additional funding from Good Hope Bank), rehabilitation work at Rondevlei, Zandvlei, Zoarvlei, Zeekoevlei and Strand wetlands and alien clearing in Soetvlei (Tokai), Blaauwbergsvlei and Kuils River wetlands. Project staff presented a paper at the International Mire Conservation Group Symposium in Paarl during September 2004 and also played a role in the coordination of the Western Cape Wetland Forum as well as involving local communities in Wetlands Day celebrations in February 2005.

The *Overberg Useful Plants* project aims to develop horticultural and entrepreneurial skills and environmental awareness in the communities of Betty's Bay, Kleinmond, Hawston and Hermanus. During the year a community nursery was established on land leased from the Overberg municipality which will be used to teach horticultural skills to unemployed people as well as propagate plants for community projects. Negotiations are also underway with the Overberg municipality to look at the viability of recycling and compost-making to create employment opportunities.

Project staff were also involved in the planning of a Khoisan Plant Use Garden at the Harold Porter NBG in Betty's Bay as a link to the project as well as advising the Grootbos Green Futures College on the development of their medicinal garden. Community interest in the project was fostered by way of an environmental gardening club started in Kleinmond and a demonstration fynbos garden created at the annual Harold Porter NBG Fynbos Fair. Project staff also visited Groundwork, a NGO which develops horticultural skills and environmental awareness in urban settings in the UK and also gave presentations on the Overberg Useful Plants project to the Director of the Royal Botanic Garden, Kew



and the President of the Royal Horticultural Society when they visited the Harold Porter NBG while touring South Africa.

Working for Wetlands contract workers working on a fence at Edith Stephens Wetland Park.

Activities undertaken by the Urban Conservation Unit's Media Project during the year included production of a new video for *Cape Flats Nature*, depicting the role of a new generation of Nature Conservation officers whose role it is to bring biodiversity protection into the everyday lives of people on the Cape Flats, and contributing to the IUCN commissioned video on red data species.

At the programme level presentations were made on the work of the Urban Conservation Unit at the C.A.P.E. conference in June 2004. The Urban Conservation Unit also continues to make input into the Columbia University/UNESCO Biodiversity and Society Project (CUBES) looking at Urban Biosphere Reserves, and in this role presented an overview of the City of Cape Town's Biodiversity Network to a UNESCO conference in Paris, Biodiversity and Society, during January 2005. The Urban Conservation Unit's project leader also serves on the Cities and Nature Task Force at the IUCN's World Commission on Protected Areas (WCPA).

Outdoor classroom: environmental education activities at Edith Stephens Wetland Park.



ENVIRONMENTAL EDUCATION SERVICES

SANBI's environmental education staff at the annual Educators Week.



The SANBI Environmental Education Programmes run at Kirstenbosch, Walter Sisulu, Pretoria and Lowveld NBGs provided guided garden visits to 17,960 learners during the past year. A further 6,409 learners visited these Gardens on self-guided visits. The Environmental Education Programme was given a huge boost when funding of R3.2 million was received from the National Lotteries Distribution Trust Fund for environmental education programmes, specifically programmes that promote biodiversity education and education for sustainability, and for transporting learners from under-resourced schools to these gardens.

During the period under review the Environmental Education Directorate has experienced tremendous growth both in staffing and programmes offered. The Lotteries funding received has

increased the number of schools from previously disadvantaged communities that participate in SANBI's environmental education programmes. Funding from the DEAT's Extended Public Works Programme has enabled our environmental education activities to spread to other provinces such as Limpopo, the Northern and the Eastern Cape. Staff numbers have grown from 13 to 58, including interns, Lotteries funded and Greening the Nation funded posts.

Sponsorship of an additional R3.1 million from the National Lotteries Fund and R70 million over 30 months from the DEAT's Extended Public Works Programme was also received to expand the outreach school greening programmes run at the Walter Sisulu, Pretoria and Kirstenbosch NBG's. These NBGS will each have to green an average of twenty schools per year in order to reach a target of 60 schools for the duration of the Lotteries funded outreach greening programme (three-year programme). Outreach greening programmes have also been initiated in the Lowveld and Free State NBGs.

The quality and importance of the environmental education programmes offered by SANBI were confirmed by the awards won by the Pretoria and the Kirstenbosch education teams during the year. The Gold Fields team at Kirstenbosch received the Cape Times/Caltex environmental award for their outstanding contribution to environmental education and the Pretoria team received the 2004 Gauteng Department of Education Award for partners contributing towards the indigenous greening of schools.

School garden at West End Primary, Mitchell's Plain.



KIRSTENBOSCH NBG



*Grade 1 learners
looking at pond life
at Kirstenbosch.*

funded programme. The Gold Fields Centre now also offers a programme for LSEN schools (Learners with special educational needs).

Kirstenbosch's garden-based programmes were given a boost with the addition of two new Assistant Education Officers (AEOs). A particular effort was made to recruit Xhosa-speaking AEOs and currently five Xhosa first-language speakers are completing their AEO training.

Gold Fields staff facilitated three biodiversity teacher workshops for 15 local schools to introduce teachers to the Lotteries-funded biodiversity education programme and participated in teacher professional development workshops with educators from the Eastern Cape Education Department in Bizana. Gold Fields staff were also instrumental in training staff and volunteers of the Harold Porter NBG to facilitate their new garden-based school programme.

Gold Fields staff participated in a range of workshops, seminars, conferences and short courses including the Rhodes University/Gold Fields Participatory Environmental Education Course Certificate. Education interns also attended a week-

*Grade 10
learners from
Strandfontein High
at Kirstenbosch.*

The highlight of the year for the Kirstenbosch Environmental Education Programme was receiving a Caltex/Cape Times award for outstanding contribution to environmental education in November 2004. Not only has the programme grown tremendously, but also the capacity at the Gold Fields Centre following the appointment of a Deputy Environmental Education Director, Senior Environmental Education Officer (resource development), the transfer of the outreach greening staff from the Gardens directorate to the Education directorate, and the appointment of three education interns. The Gold Fields Centre also celebrated its 10th anniversary in October 2004.

During this period 5,414 learners visited Kirstenbosch on guided garden visits and a further 3,558 learners on self-guided visits. From February to April 2005 a total of 1,238 learners from 16 schools participated in the biodiversity education programme funded by the National Lotteries Trust. The Cape for Kids programme for foundation phase learners is accommodated at the Gold Fields Centre on Monday mornings and during this period a total of 1,142 learners attended the programme. A one-year contract has been offered to Our Bus Company (Mitchell's Plain Schools Learner Transportation Forum) to transport schools to the Garden as part of the National Lotteries funded programme.

A number of new learning programmes have been incorporated into the gardens-based school programme, including an Intermediate phase Biodiversity Education Learning programme specifically developed for use in the National Lotteries



long outreach greening orientation programme at Walter Sisulu NBG.

Education staff collaborated with outreach greening staff in facilitating a number of horticultural training workshops for teachers involved in the Kirstenbosch outreach greening programme. A project participant tour was held for all the schools on the outreach greening programme and four model schools at various stages of development were visited. A number of the schools on the outreach greening programme entered the SANBI/Pam Golding 'Gardens of Pride' competition, with Sonwabo Primary School coming first in the school gardens category and Isilimela and Mandela High Schools coming second and third respectively.

During the year starter indigenous gardens were developed at five new schools. The first special community indigenous greening projects were identified and started at a Khayelitsha police station, an HIV Aids Clinic in Guguletu and an Educare Resource Centre in Mitchell's Plain during 2004.

The Kirstenbosch Outreach Greening programme also received funding from the DEAT's Extended Public Works Programme for school greening as part of the Greening the Nation programme. Currently there are 30 schools participating in the Greening the Nation programme, of which 20 schools are new and the rest are schools selected from the Kirstenbosch Outreach Greening programme. New schools have been participating in the horticultural training workshops and preparing their school grounds for planting to start in winter 2005.

Planting at Zola Secondary School, Khayelitsha.



A number of community projects have also been identified for greening such as the Lavender Hill (Friends of Hope) community gardens project and street tree planting and community gardens in Mitchell's Plain and Khayelitsha.

PRETORIA NBG

The Pretoria NBG's environmental education programme has received funding of R630,000 from the National Lotteries Fund for its Garden-based programmes over the next three years. The funding includes transport, subsidized entrance to the Garden and the appointment of an education intern. The Lottery-funded programme kicked-off in February 2005 and to date 1,795 learners from 19 schools have visited the Pretoria NBG on guided garden visits through this programme.

Over the course of the year a total number of 7,015 learners came to the garden on guided garden visits, of which 2,268 learners were on sponsored garden visits and 4,747 learners on un-sponsored visits. The environmental education programme remains popular with schools that can afford to pay for guided garden visits and these un-sponsored programmes continue to grow. During the past year the pre-school programme was also incorporated into the mainstream Garden-based programme and 126 learners from five pre-schools visited the Garden.

The Environmental Education Centre at the Pretoria NBG celebrated its 2nd Anniversary and the International Day of Biological Diversity with an Open Day in May 2004 attended by 52 teachers and officials from the Gauteng Department of Education.

For the second year running the Pretoria Environmental Education Centre offered a holiday programme during the winter holidays. The two day programme was arranged with the Gauteng Department of Education (Tshwane South district) for learners from the Habitat Clubs and was attended by 65 learners and their teachers.

The annual celebration of Arbor Week in September was extended to 10 days this year and was attended by 530 learners and 18 educators who were taught about potting plants by the garden staff and classification of plants and plant uses by the National Herbarium staff. A special Water Week programme also took place in February 2005 during which 140 learners

from five schools were sponsored by the Gauteng Department of Education (Tshwane South & Tshwane North Districts) to visit the Garden.

A Careers Day was held for 18 learners, all gold and silver award winners at the Northern Gauteng Expo for Young Scientists. These learners were introduced to the various career options at the Garden and the National Herbarium. A weekend biodiversity camp in the Magaliesberg was also organized for 30 learners from Atteridgeville, all members of Green Teams involved with the school's outreach greening programme, in conjunction with the GDE.

Over the past year Pretoria education staff assisted the Walter Sisulu education staff in running a number of teacher development programmes, including 18 outreach greening workshops for teachers in Mamelodi, Atteridgeville, Eersterust and Kagiso. Other workshops presented during the year included a teacher workshop on Habitat Clubs for 62 teachers from Atteridgeville and Mamelodi, a workshop on using school gardens for teaching and learning for 17 teachers and three principals from Soshanguve and a *Greening the Nation* Teacher Capacity Course in Bizana attended by 100 teachers.

The Pretoria education staff compliment expanded with the appointment of a new Assistant Director for Environmental Education as well as five environmental education interns. These interns are funded by the DEAT's Extended Public Works Programme as part of the Greening the Nation programme and are on a two-year contract to the Garden to gain experiential learning in both garden-based and outreach greening programmes.



Weekend biodiversity camp in the Magaliesberg.

Currently there are five AEOs who assist with the presentation of the garden-based programmes. In order to cope with the large number of learners that will be sponsored by the National Lottery Fund more AEOs have had to be trained and a further eight AEOs are in the process of completing their training, including the education interns.

Pretoria education staff were also very instrumental in training the new environmental education staff and AEOs appointed at the Lowveld and Free State NBGs, as well as the training and mentoring of the education interns.

The Pretoria outreach greening programme was recognized with the 2004 Gauteng Department of Education (Tshwane South) Award for Partners for contributing towards the indigenous greening of schools. Currently there are 33 schools involved in the outreach greening programme: 15 schools in their first year of the programme cycle, eight schools in their second year



School holiday programme at Pretoria NBG.



The Principal and Green Team from Bajabulile Primary School, Mamelodi in their school garden.

and 10 schools in the third and final year. All of the second year schools entered the SANBI/Pam Golding Properties 'Gardens of Pride' competition and four of the schools were short-listed, with Mahlahle Primary School coming second place in the Gauteng region.

The outreach greening programme also received funding from the DEAT's Extended Public Works Programme for 'Greening the Nation' activities. In partnership with Tshwane Metro Council and various schools, communities and nurseries, four greening projects have already been completed. A community nursery is also in progress at the Mamelodi Teacher Centre.

WALTER SISULU NBG

The garden-based environmental education programme at Walter Sisulu NBG remains one of the most sought after environmental learning resources by schools in Gauteng. During the period under review a total of 6,161 learners visited the garden, of which 3,692 learners were on guided garden

visits and 2,469 learners on unguided visits. Despite the lack of a sponsor for guided visits for most of 2004 a number of under-resourced schools still managed to visit the Garden. In September 2004 sponsorship was received from the National Lotteries Trust for both garden-based environmental education programmes and outreach greening programmes, enabling the programmes to be expanded to the most needy schools. From February to March 2005 a total of 461 learners from 17 schools came to the Garden on guided visits that were Lotteries funded.

The Walter Sisulu NBG education staff of principal environmental education officer, outreach horticulturist and 12 assistant education officers (AEOs) were joined during the year by two education interns. These interns are funded by the DEAT's Extended Public Works Programme as part of the Greening the Nation programme and are on a two-year contract to the Garden to gain experiential learning in both garden-based and outreach greening programmes.

The introduction of the revised national curriculum statement in the intermediate phase, which demands the incorporation of environmental education into all eight learning areas, has increased the demand for environmental education programmes as well as for the development of educator capacity in this area. A number of teacher professional development workshops were presented by the Walter Sisulu NBG's education staff during the year including greening workshops for schools on the outreach greening programme as well as teacher workshops to discuss linking the school gardens to the curriculum. Garden staff also assisted with the training of 20 student interns from the Greening the Nation programmes based at the Walter Sisulu NBG, Kirstenbosch NBG, Free State NBG and the Eastern Cape.

In 2004 four new schools in Kagiso and Azaadville, including the Itireleng ELSEN school for the disabled, joined the outreach greening programme and starter gardens were planted at these schools during the year. Gardens at the seven schools in their second year of the programme were developed further. Two of these schools entered their school gardens into the SANBI/Pam Golding 'Gardens of Pride' competition and came first (Entuthukweni Primary) and third (Sandile Primary) in the Gauteng region. A further seven schools

School garden at W.D. Oliphant Primary School.



were taken onto the programme at the beginning of 2005.

The outreach greening programme also received funding from the DEAT for the 'Greening the Nation' programme. With this funding three school gardens were developed, 200 trees were planted in Mogale City and a shade house was erected at Walter Sisulu NBG to propagate plants in-house for the programme.

LOWVELD NBG

The initiation of an environmental education programme in the Lowveld NBG has been long overdue. Thanks to the efforts of both the Gardens and Environmental Education Directorates, and generous funding from the DEAT's Extended Public Works Programme for the construction of an environmental education centre, the Lowveld NBG's environmental education programme was at last able to get off the ground.

The new environmental education centre was fully equipped with sponsorship from the Botanical Society and Sappi sponsored all the equipment and books for the resource room. A principal environmental education officer, four assistant education officers (AEOs), an outreach environmental education officer, an outreach horticulturist and an education intern were appointed and trained during 2004 and the Lowveld NBG's new environmental education programme was up and running by February 2005.

The programme was marketed to the schools and educators in the area with the cooperation of the Mpumalanga Department of Education. The garden-based programme commenced in February 2005 and since then 1,839 learners from 30 schools have visited the Garden on guided school visits, of which 1,633 learners from 27 schools were sponsored by National Lotteries funding. Global Forest Products also assisted with the transport of learners from Sabie, Graskop and the surrounding areas to the Garden.

A number of teacher professional development workshops were held, including four outreach greening workshops, Greening the Nation workshops at Bizana in the Eastern Cape, and presentations on the Lowveld NBG's environmental education programme to the Heads of Departments from various schools in the Schoemansdal area.

After rigorous assessment, 20 schools qualified for the Lowveld NBG's outreach greening programme and were invited to attend the first outreach greening workshop in the Lowveld NBG which coincided with the celebration of World Wetlands Day. Three more outreach greening workshops have since been conducted at various schools on the programme. To date starter indigenous school gardens have been planted at seven of the participating schools.

The outreach greening programme has also been involved with Greening the Nation activities and to date outreach greening staff have assisted the Bambanani community project with the establishment of a nursery to cultivate indigenous and food seedlings for their food gardens.

The new environmental education centre at Lowveld NBG.

Learners from Tiboneleni Primary School outside the new environmental education centre at Lowveld NBG.



RESEARCH AND SCIENTIFIC SERVICES



PLANT SYTEMATICS

The SANBI herbaria continued to provide quality plant identification services with 16,596 plant identifications undertaken during the year. Researchers at SANBI's herbaria are currently busy with 63 research projects and produced 243 scientific, electronic and popular publications over the past year.

NATIONAL HERBARIUM (Pretoria)

The plant information services offered by the National Herbarium continue to be in

demand with staff handling 7,853 enquiries and identifying 11,241 plants over the past 12 months.

There are currently 30 research projects underway at the National Herbarium, including a conspectus of Succulent Karoo flora, projects on the Flora of the Eastern Cape and the Free State, and a checklist of South African plants, to name a few. These projects resulted in 80 scientific papers being published by Herbarium staff over the year. Herbarium staff also contributed weekly articles on indigenous plants to the Plant of the Week feature on SANBI's website.

Another major research project herbarium staff are involved in is the African Plants Initiative (API). The aim of this project is to digitize all the type specimens in the National Herbarium's collection. The project got off the ground during the year with the installation of the required equipment and the appointment of three project staff members. Staff were sent to Kew for training in scanning techniques and so far the project has made good progress, with 5,599 type specimens scanned to date.

A number of Herbarium staff attended the 31st SAAB Congress as well as the 3rd International Congress of Paleobotany. Herbarium staff also represented the National Herbarium with an exhibit at the Sasol Techno X 2004 expo in Sasolburg and the Sci Tech exhibition at the Tshwane Showgrounds, as well as assisting with the SANBI exhibit at the annual Star Getaway Show 2004. The Herbarium also participated in the City of Tshwane's 10 Years of Freedom celebrations in the Pretoria City Hall and at the University of Pretoria's Open Day.

Four students were hosted by the National Herbarium during the year to gain experience and training in herbarium work and another intern undertook a six-month internship in botanical art. The Herbarium also hosted another successful Arbor Week programme during which 530 learners were introduced to potential botanical careers.

Staff undertook numerous field trips during the year, including trips to collect plant material for SANBI's Bioprospecting and Antimalarials projects and seed for the Millennium Seed Bank (MSB) project.

Scanning type specimens for the African Plants Initiative Project.





On one such trip the only known population of *Aloe reitzii* var *vernalis* in flower was discovered.

The South African component of the MSB team made 461 collections during 2004, of which 338 species were confirmed as new additions to the Bank, making South Africa the top performer amongst all the countries participating in the project. A project coordinator was appointed for the Cape collecting team during the year and sent to Kew for training in seed processing, seed germination and viability testing and seed propagation. The MSB project collaborated with Cape Nature on their conservation project at Kenilworth Racecourse and gave a number of training sessions in seed collecting to Cape Nature staff. A presentation was also made to members of PE Environmental Services involved with plant rescue and restoration work at the Coega Harbour Development area. During the year a number of workshops were held throughout South Africa to introduce Phase II of the project, due to kick-in from mid-2005, to a variety of stakeholders.



Millennium Seed Bank team collecting seed of Pavnica senegalensis in the Kalahari.

Left: National Herbarium exhibit at the SASOL Techno X 2004 expo.

Data management staff at the National Herbarium added a further 3,647 specimens to the PRECIS database and cleaned-up 13,597 entries during the year. Staff also travelled to a number of SABONET countries for computer support and training.

Staff of Research Publications and Support Services edited, designed and saw the following technical publications through the press: *Common names of Karoo plants* (*Strelitzia* 16), *Bothalia* 34,1 and 34,2, *Index to Bothalia* 34, *Flora of southern Africa* 5,1,2: Asphodelaceae (first part) *Kniphofia*. In the case of the *National Spatial Biodiversity Assessment 2004: priorities for biodiversity conservation in South Africa* (*Strelitzia* 17), their brief was to do away with a strict, formal design and have the book ready to be tabled in Parliament in early April 2005. They also assisted the Pretoria NBG to publish a full-colour *Bird list* for the Garden and edited and designed the second issue of the newsletter of SANBI's Plant Conservation Projects.

COMPTON HERBARIUM (Cape Town)

The Compton Herbarium, housed in the Kirstenbosch Research Centre, continued to deliver an efficient plant identification service to a broad clientele. Over the past year the Compton Herbarium responded to 1,564 queries from the public and received 632 local and international visitors. Compton Herbarium staff were kept busy identifying 4,186 plant specimens and adding 3,945 new specimens to the herbarium's collection. As part of the

Learners visiting the National Herbarium during Arbor Week.

API project, the bar-coding of herbarium specimens was initiated. Currently all new collections and outgoing loans are bar-coded and the collecting date entered into the PRECIS database.

Researchers at Compton Herbarium continued with systematics research into various southern African plant families, particularly those within the Cape floral region. Significant progress has been made on the Succulent Karoo Conspectus Project with species belonging to 17 families completed to date. Other projects include a taxonomic review

of *Dryopteris* in Africa and neighbouring islands, the preparation of a checklist of African lycophytes and ferns, systematic and pollination studies in various genera within the Iridaceae, Hyacinthaceae, Campanulaceae, Hypoxidaceae, Amaryllidaceae, Orchidaceae and Aizoaceae (Mesembryanthemaceae). The Interactive Mesembs

website was improved with the addition of advanced search facilities and interactive keys and the success of this project has prompted the French Embassy to commit to fund a further project on the trees of southern Africa. Interaction between herbarium staff and that of the Leslie Hill Molecular laboratory continues at various levels.

During the year all the equipment and programmes were put in place for the multi-national API project. A project coordinator was appointed in July 2004 and a staff member was sent to Kew for training in scanning techniques. The scanning of type specimens for the project is now progressing well with approximately 4,000 types having been scanned to date. The 2nd API technical workshop was held in January 2005 and was attended by 60 delegates from 11

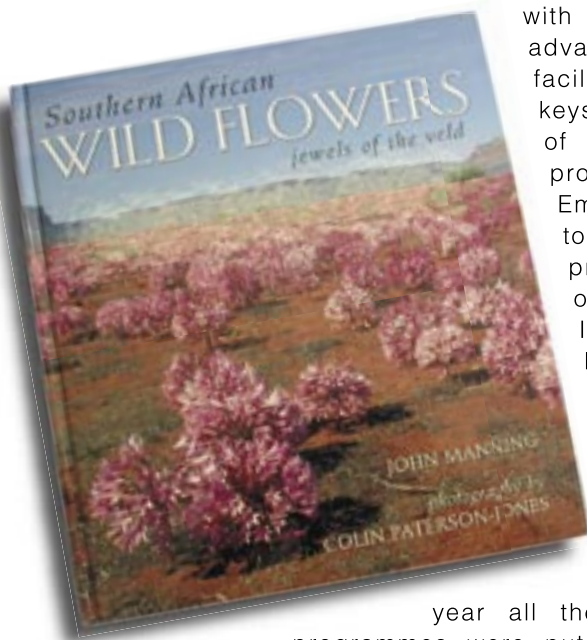
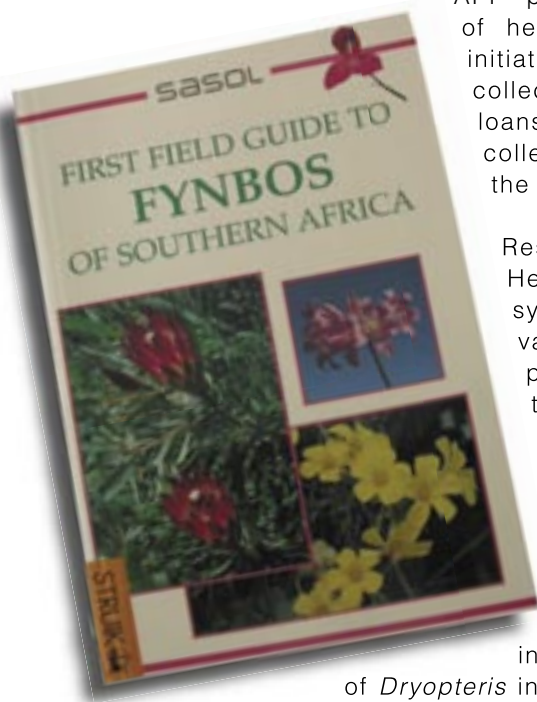
countries and participating institutions. A further grant of R2.9 million for this project was received from the Mellon Foundation. Representatives from Zimbabwe and Namibia were also hosted at the Compton Herbarium in order to get an overview of the API project and observe the scanning and data capturing process.

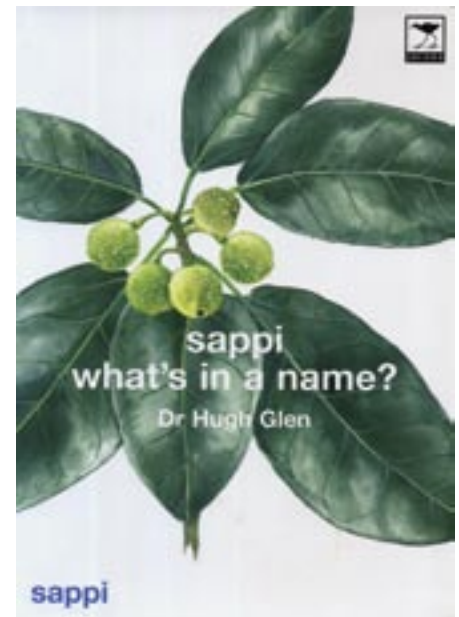
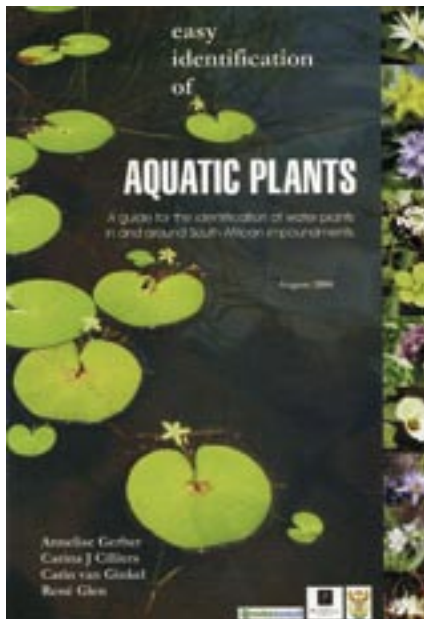
Compton Herbarium staff published 49 scientific and popular publications, among them the books *SASOL First field guide to Fynbos of Southern Africa* and *Southern African wildflowers: Jewels of the veld*. As part of an outreach programme to local communities and directorates within SANBI, herbarium staff presented several plant identification lectures and courses during the year to groups such as AEOs at the Gold Fields Centre and Custodians of Rare and Endangered Wildflowers (CREW) volunteers. Staff also presented a number of talks to various societies including the Cape Town Orchid Society, Disa Orchid Society of South Africa, Indigenous Bulb Growers Association of South Africa and the Cape Town and Hermanus horticultural societies.

The Compton Herbarium also hosted a student from the University of the North on a three-month internship focusing on identification of Asteraceae.

KWAZULU-NATAL HERBARIUM (Durban)

Research capacity at the newly renamed KwaZulu-Natal Herbarium was strengthened during the year with the transfer of two taxonomists from the National Herbarium in Pretoria. Three books which these newcomers have authored or co-authored have since appeared in print including two published by Jacana. *Sappi Tree Spotting: What's in a Name?* explains the meanings of both the genus and species names of trees, whilst *Sappi Tree Spotting: Lifer List* provides both an updated list of common names, and the opportunity for tree enthusiasts to keep track of their field sightings. An important aid to the identification of aquatic plants was produced in collaboration with the Agricultural Research Council's (ARC) Plant Protection Research Institute and the Department of Water Affairs and Forestry (DWAF) in Pretoria, and is titled *Easy Identification of Aquatic Plants*. Both exotic alien invaders and indigenous species are covered by this full-colour guide which is





expected to increase awareness of alien invasives along our watercourses.

trips to localities as diverse as Gibraltar and the Lebombo Mountains.

Herbarium staff identified 1,169 specimens during the year, and fielded 230 enquiries from the public. Twenty five publications were generated, including a reprint run of the popular *Ulwazi LwamaZulu Ngezimila: isingeniso / Zulu Botanical Knowledge: an Introduction*. Staff were also kept busy with the scanning of valuable type specimens from the herbarium's pressed plant collection for the API project, which will improve international access to high quality taxonomic research materials. Another new project staff are involved in is the KwaZulu-Natal Flora Project which aims to produce an electronic web-based guide to the trees of the province. Herbarium staff undertook a number of plant collecting

The herbarium once more placed emphasis on outreach activities. A one-day hands-on herbarium course was run for horticulture students of the Durban Institute of Technology, whilst the annual two-week student training programme was attended by learners from the Universities of Zululand and KwaZulu-Natal, and interns from the Durban Botanic Gardens. A course on the botanical data basing programme Lucid was presented by its Australian originator at the herbarium. This attracted participants from around the country, including staff based at three universities, as well as the Natal Museum, the Agricultural Research Council and the Northern Flagship Institution.

Left: Students learning to press plants during the annual student training programme.

Below: Fieldwork at Kranskop.



ETHNOBOTANY

*Engaging in
ethnobotanical
fieldwork in
KwaDedangendlale
near Durban.*



The Ethnobotany Unit in Durban has enjoyed a productive year, resulting in the publication of 20 scientific and popular publications. The most significant of these has been a photographic guide to the *muthi* markets of the eastern seaboard region of South Africa, published as a full-colour book. The guide has been eight years in the making and its publication was ultimately made possible through the generous financial support of the eThekweni City Council. It was produced by Indigenous Plant Trade Research Associates of Durban (IPTRAD), an alliance of the University of KwaZulu-Natal (UKZN), SANBI, Durban Parks Department, Ezimvelo KwaZulu-Natal Wildlife, as well as a prominent traditional healer.

Collaborations with the School of Chemistry at UKZN have been extended yet again, particularly on the phytochemistry of the southern African Rutales which is already yielding remarkable finds.

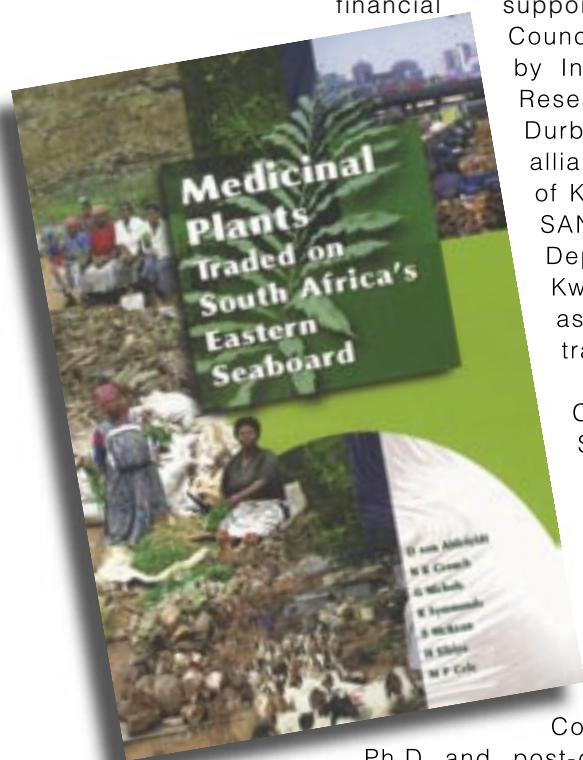
Co-supervision at M.Sc, Ph.D and post-doc levels has been ongoing, most usually of students from

previously disadvantaged backgrounds. Some of their research has been linked to that of the Novel Drug Development Platform (NDDP) in the ongoing search for novel medicines for neglected African diseases, including tuberculosis, diabetes and malaria.

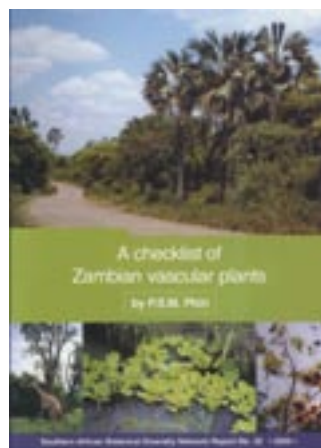
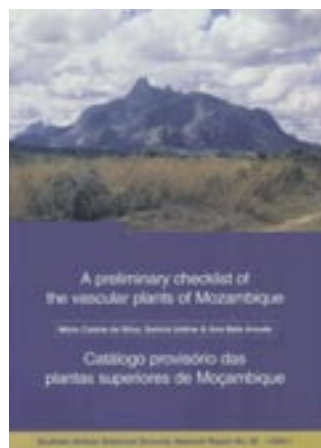
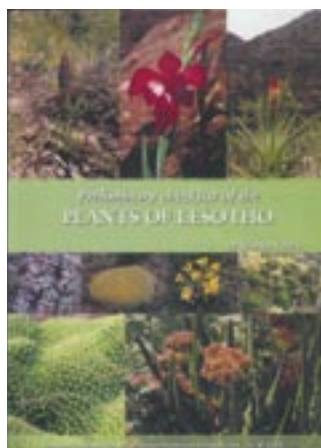
Two new staff members joined the Durban-based bioprospecting team during the past year to perform databasing, research and administration roles. An M.Sc student based in the Ethnobotany Unit has been researching bioprospecting methodology with a view to improving the already substantial discovery rate of the Novel Drug Development Platform.

Funding has recently been received from the Mellon Foundation to support the medicinal plants component of the API project, which will allow for an exciting expansion of the existing SANBI MEDBASE database system.

Presentations were made by Unit members or their collaborators at various international conferences including the International Congress on Natural Products Research, Arizona; Kew-King's College-Brunswick Square Meeting at the University of London; 3rd International Congress for Natural Products Research (ICNPR) in China; and the International Conference on Indigenous Knowledge and Bioprospecting in Sydney, Australia.



SABONET



SABONET (Southern African Botanical Diversity Network) is a Global Environment Facility (GEF) project implemented by the United Nations Development Programme (UNDP) and executed by SANBI. The project aims at developing human capacity in southern African national and university herbaria and botanical gardens. The ten participating countries are Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.

Computerization of southern African herbaria is a core activity within the SABONET project. Under the auspices of SABONET, the Compton Herbarium (SA) has computerized a total number of 71,352 specimens to date, the National Herbarium (SA) has computerized a total of 49,157 specimens, and the KwaZulu-Natal Herbarium (SA) has now computerized 39,912 specimens of their collections. To further improve this output all the data capturing computers were upgraded at the participating herbaria and subsequently

the computerization rate has increased substantially. Information technology support was also given to all participating countries during the year in the form of in-house training in the management of the MySQL version of the SPMN database which has now been installed on all the participating herbaria's computers.

Over the past 12 months SABONET has published a number of reports in its *SABONET Report Series* including checklists of Botswana and Angola grasses, checklists of Zimbabwean and Zambian vascular plants, a checklist of Swaziland flora, a preliminary checklist of Lesotho plants, a preliminary checklist of Mozambique vascular plants and a southern African herbarium user's guide. A further seven reports are currently in production and due out before the end of 2005.

A terminal review of the SABONET project took place in February and March 2005 and the project closed officially at the end of March 2005.

CONCLUSIONS OF THE SABONET INTERNATIONAL REVIEW GROUP

During January 2005, the United Nations Development Programme appointed a team of reviewers to evaluate the performance of the SABONET project at the conclusion of its eight-year programme. The team comprised Ms. Stella Simiyu (team leader): National Museums of Kenya and Dr Jonathan Timberlake: Biodiversity Foundation for Africa, Zimbabwe.

- The SABONET project has provided an excellent model for networking at a regional level.
- At the regional and international level, the project was very effective in building linkages to the broader taxonomic and botanic gardens community.
- The SABONET project model was very well designed to meet its objectives and highly replicable. It is however important to stress that SABONET has some unique elements that were responsible for its huge success that may not be easy to replicate in other contexts, but could be up-scaled.
- SABONET was designed to be very cost-effective in delivering project objectives and exceeded expectations.

KIRSTENBOSCH RESEARCH CENTRE



*Kirstenbosch
Research Centre
interns.*

The Kirstenbosch Research Centre conducts a number of internationally recognized research projects in the areas of climate change, conservation in production landscapes (conservation farming), cycad conservation and conservation planning. The Kirstenbosch Research Centre also runs a ground-breaking internship and mentorship programme for young black scientists and 10 students from previously disadvantaged backgrounds did internships in molecular laboratory techniques, Geographic Information Systems (GIS) conservation planning and conservation biology over the past year.

CLIMATE CHANGE

SANBI runs a suite of research projects on climate change and its impacts on indigenous plants. Projects underway during the past year included investigations into the effects of global climate change on savanna ecosystems and the effects

of elevated atmospheric CO₂ on grassland ecosystems; examining the functional changes in the Cape Floristic Region in response to global change; corridor design for biodiversity conservation in the face of climate change; and the effects of alien grasses on South African biodiversity under current and future climate change scenarios.

Findings from research into the effects of global climate change on savanna ecosystems were presented at the 31st SAAB Congress in January 2005. The findings of this research project indicate that an increase in atmospheric CO₂ since the last glacial maximum has significantly enhanced photosynthesis and growth of African savanna trees as well as the resprouting rates of African savanna trees following fires. It was also found that the doubling of atmospheric CO₂ since the last glacial maximum has enhanced both the chemical and mechanical defenses of the African savanna trees, possibly explaining the currently observed bush encroachment. Researchers have concluded that a further increase in atmospheric CO₂ will transform current African savannas to dense woodlands and adjacent grassland to savanna-like vegetation.

The research project into the effects of elevated atmospheric CO₂ on grassland ecosystems concluded during the year. Follow-up experimental work and activities relating to modelling tree/grass interactions in savanna systems are now being undertaken in collaboration with the savanna ecosystems project.

KIRSTENBOSCH RESEARCH CENTRE WINS NATIONAL SCIENCE AND TECHNOLOGY FORUM AWARD

The Kirstenbosch Research Centre was selected as the joint winner of the organizational category in the 2004 National Science and Technology Forum (NSTF) Awards. The Kirstenbosch Research Centre was chosen for its consolidation and management of research on issues relating to the flora of South Africa,



especially the species-rich and highly threatened plant diversity of the winter rainfall areas of the country. The award was made in recognition of the high output from scientists based at the Kirstenbosch Research Centre, who have jointly produced more than 300 scientific publications over the past eight years, as well as their contribution to government initiatives to conserve biological diversity and combat desertification in South Africa. The award also acknowledged the contribution the Centre has made to national and international scientific programmes to document plant diversity and deal with crucial issues such as climate change, threatened species, and sustainable land use. The Centre was also singled out for its efforts to train students in biodiversity science which had resulted in the award of 15 M.Sc and seven Ph.D degrees as well as its initiatives to develop scientists from previously disadvantaged backgrounds.

The *Corridor design for biodiversity conservation in the face of climate change* project also came to an end during the year. This project aims to provide a predictive understanding of anticipated climate change and its impacts on plants and ecosystems and specifically to suggest concrete strategies for effective conservation. This study revealed that between 21% and 40% of Fynbos Proteaceae are committed to extinction by 2050 due to range reduction by climate change. Data from this study were also utilized in a M.Sc thesis contrasting the relative importance of land use and climate change on species range reduction by 2020 which concluded that climate change threats appear to rival those of land use change by 2020. The combined modelling and fieldwork study on *Aloe dichotoma* (Kokerboom or Quiver tree) was refined and strongly confirms agreement between expected patterns of population decline due to spatially coherent climate change.

The National Research Foundation extended its funding of the project looking at functional changes in the Cape Floristic Region in response to global change. This project aims to assess the differential vulnerabilities of different plant groups to predicted climate change, and forecast the consequences of modifications in diversity for ecosystem function. This project is primarily field-based at seven field sites at Jonaskop (Western Cape) but also on targeted laboratory and greenhouse-based ecophysiological work on key plant growth forms. A total of 81 species were sampled for above-ground structural and leaf traits, and a large subset for photosynthetic characteristics. Results revealed distinct patterns of growth in Fynbos functional types, and the data reveal a range of external climatic controls on growth in all species and functional types and apparent intrinsic controls (possibly cued by day length) in Proteaceae. Experiments have also shown a range of sensitivities to water stress in fynbos species, with some showing significant reductions on growth in response to 30% reduction in water supply during 2003/2004.

A new research project on the effects of alien invasive grasses under current and future climatic change scenarios on southern African biodiversity was begun during the year. This project aims to determine the geographical distribution of alien invasive grasses in southern Africa, quantify the frequency of occurrence



of alien invasive grasses in different southern African vegetation types and quantify the composition and abundance of rare and endangered indigenous taxa found amongst alien invasive grasses. The project also aims to experimentally determine the effects of alien invasive grasses on the growth, physiology and reproduction of rare and endangered taxa under current and future climate scenarios, as well as experimentally examine the cost effectiveness of different labour intensive strategies for managing alien invasive grass infestations to conserve biodiversity and alleviate poverty.

Research activities in this project over the past year included a study measuring the responses of alien invasive grasses and indigenous forbs and geophytes to labour intensive mechanical and chemical control measures applied in a Renosterveld reserve. A pilot greenhouse study examining interactions between alien invasive annual grasses and endangered Proteaceae under different conditions of warming and soil enrichment was also conducted. Provisional results indicate competition by alien annual grasses has no significant effect on the photochemical performance and pigment composition of endangered *Leucadendron* and *Protea* species. Potential distributions for 32 of the most common alien invasive annual grasses under current and future climate scenarios were also mapped using the distribution records of 56 species of invasive annual grasses in South Africa from the PRECIS, ACKDAT, and SAPIA databases as well as South African environmental records for current climatic conditions and those computed for low, intermediate and high global warming scenarios.

Visiting scientists and conservationists from the SADC region inspect field experiments at Jonaskop (Villiersdorp) as part of a training course co-hosted by SANBI's Climate Change Research Group.

Domitilla Raimondo
in a patch of
Sparaxis tricolor, a
threatened species
near Nieuwoudtville
(N. Cape).

SANBI has received funding from the Global Environment Facility (GEF) and the United Nations Environment Programme (UNEP) for a new project titled Ecosystems, Protected Areas and People (EPP). This project, begun in January 2004, aims to develop guidelines for protected area managers and policy makers to understand and prepare for the impacts and opportunities of global change. The project coordinated a four-day training course in the science of climate change and biodiversity for African scientists in August 2004.

During the course of the year climate change researchers also attended and contributed to the USA/Africa joint meeting organized by the National Science Foundation in Washington DC, USA in January 2005 and the 12th General Assembly of SCOPE in New Delhi, India in February 2005. SANBI scientists presented a lecture on Climate Change and Biodiversity in South Africa to the Parliamentary Committee on the Environment and to the DEAT MinMEC committee, and chaired the South African Scientific Committee for Global Change.

CONSERVATION FARMING

The Conservation Farming project has been extended to enable the publication of the results from this intensive five-year research study in book format. The aim of the project is to integrate ecological, social, and economic data in order to identify farming practices where there is a 'win-win' interaction between productive land use and conservation.

During this period 10 papers arising from the project were published and four chapters for the Conservation Farming Project book were completed. The project has also formed the basis for two Ph.D theses.

The GIS data from the Nieuwoudtville study area was incorporated into SANBI's Vegetation Map, and was used to develop a conservation map of the Nieuwoudtville area which will feed into conservation planning exercises. An attractive and informative conservation map of Nieuwoudtville was also produced for distribution to the public.



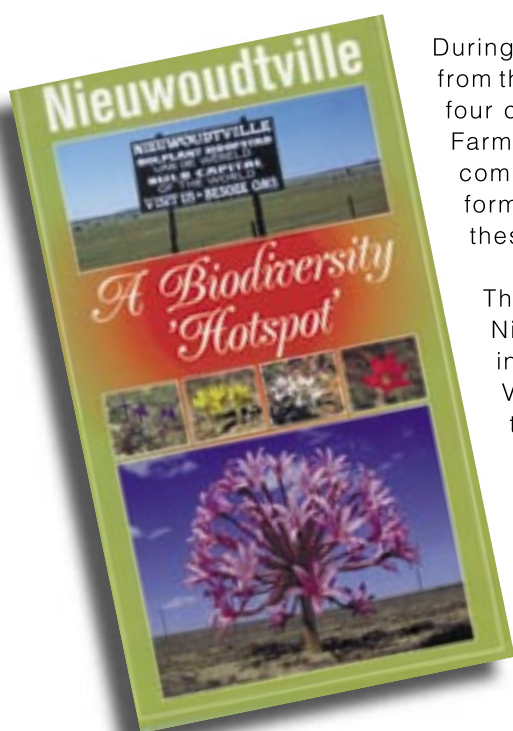
The project has also led to a number of exciting botanical discoveries over the past year. In Nieuwoudtville alone project staff have discovered nine new plant species, rediscovered one species (*Chenopodiopsis chenopodioides*) that has only ever been collected twice before, and extended the known range of a number of species.

Project findings were presented at a number of conferences during the year such as the Eurosoil International Soil Science Congress in Freiburg, Germany; the Ecoagriculture Conference in Nairobi; and the Society for Conservation Biology Congress in New York.

Experience with the Conservation Farming project has led to a request from the ARC for SANBI to lead the further development and implementation of a GEF project on the conservation and sustainable use of pollinators. The project is being developed by the United Nations Food and Agriculture programme and involves seven countries, i.e. Brazil, Ghana, India, Kenya, Nepal, Pakistan, and South Africa.

CYCAD CONSERVATION

SANBI staff continued to provide global leadership in the area of cycad conservation by chairing the IUCN Cycad Specialist Group as well as making key contributions to the development of a new national policy for cycads.





Amelia Mabunda collects leaf material from the Kirstenbosch cycad collection for DNA analysis.

techniques can be developed to aid law enforcement.

Several young researchers were mentored as part of cycad conservation projects and there are currently two students working on cycad projects, one of whom is on a SANBI Masters bursary. The projects are a molecular phylogeny of *Encephalartos* and the conservation genetics of *Encephalartos latifrons*.

VEGETATION MAP

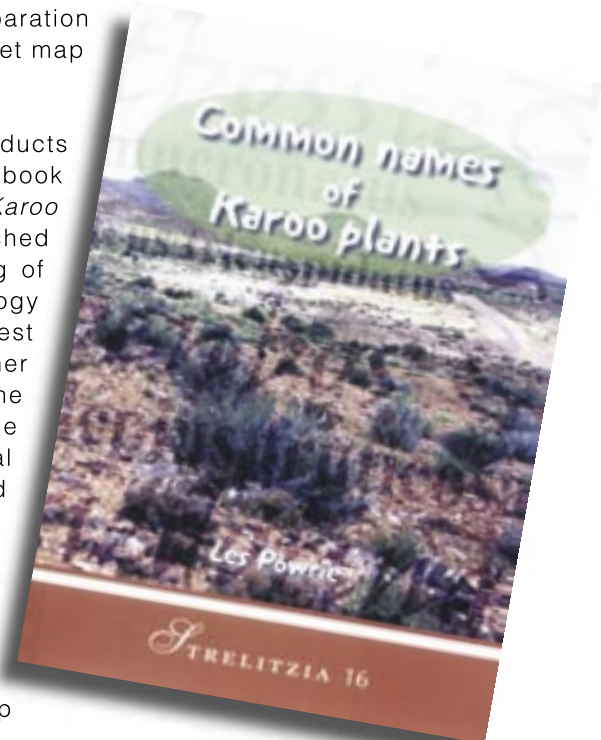
This SANBI-led initiative, known as the VEGMAP Project, aims to produce a definitive vegetation map of South Africa.

An early electronic version of the *Vegetation Map of South Africa, Lesotho and Swaziland* was launched in 2003 and this has been followed up by a now final version of the map. A printed wall map version will be launched later in 2005, followed by a book version due to be published at the end of 2005. Top up funding of R170,000 was received from the Norwegian Agency for Cooperation and Development (NORAD) to conclude the project.

Work continued during the year on refining and improving the VEGMAP book, wall map and electronic data. Topographical data (roads, rivers, railway lines, borders, dams) were added to the map and an extensive legend layout was prepared. The Centre for Geographical Analysis (Stellenbosch University) has been contracted for the preparation of the VEGMAP in sheet map and bound map form.

One of the by-products of the project is the book *Common names of Karoo plants* which was launched at the annual meeting of the Arid Zone Ecology Forum in Victoria West in August 2004. Another paper arising from the project published in the South African Journal of Botany was awarded the SAAB Compton prize.

Project staff also gave their input to the Important Plants Areas (IPA) workshop held in May 2004.



Following a meeting of the Cycad Specialist Group in January 2005 three South African taxa have been identified as priorities for species survival plans. Funding has been obtained from SANBI's Threatened Species Programme to compile species survival plans for these three species. The species survival plans will include joint projects with the University of California, Berkeley (USA) where there is a collection of rare South African cycads that were confiscated from traders who had illegally imported them into the USA.

Research activities during the year included the completion of an analysis of the genetic diversity of *Encephalartos latifrons* and the publication of three papers of research work regarding the pollination of Australia and African cycads. The DNA fingerprinting study of *Encephalartos latifrons*, in collaboration with Kirstenbosch NBG, has shown that there is greater genetic variation in the 20 plants in the Kirstenbosch *ex situ* collection than there now exists in the remaining plants in the wild. These findings place significant conservation value on the *in situ* collection - for both future breeding programs and rehabilitation of the species in the wild.

The Leslie Hill Molecular laboratory was also contracted by Gauteng Nature Conservation to produce DNA fingerprints for all remaining individuals of *Encephalartos middelburgensis* from the wild. This forms part of a project to determine whether DNA fingerprinting

GEOGRAPHIC INFORMATION SYSTEMS (GIS) & CONSERVATION PLANNING

UCT and UWC students on a molecular techniques training course at the Leslie Hill laboratory.

SANBI's GIS and Conservation Planning unit undertakes research on bioregional planning, manages GIS data and provides GIS and conservation planning advice to SANBI staff and conservation organizations.

Over the past year the unit played a leading role in compiling the National Spatial Biodiversity Assessment, a component of the DEAT's National Biodiversity Strategy and Action Plan and continues to manage the GIS data resulting from this assessment.

The GIS and Conservation Planning unit gave input to an international symposium on freshwater conservation planning approaches as well as advising provincial conservation organizations on the setting up of regional conservation plans. GIS staff published several papers during the year including a list of major and emerging plant invaders.

The GIS and Conservation Planning unit continues to train young scientists in conservation planning and hosted a number of students in short-term (three months), medium term (six months) and long-term (one year) internships in conservation planning over the past year.

Kholiwe Balele, manager of the DNA Bank at the Leslie Hill laboratory.



LESLIE HILL MOLECULAR SYSTEMATICS LABORATORY



The Leslie Hill Molecular Systematics Laboratory has made significant progress in the DNA Banking project during the past year. This project, funded by the Darwin Initiative, aims to have each of the circa 2,200 South African plant genera represented in the SANBI gene bank by 2006. To date 3,840 samples have been added to SANBI's DNA bank, representing 1,101 genera and 2,797 species of the South African flora, and a new database was written for the DNA bank with full taxonomic referencing. During the year project participants met for the third DNA bank workshop held at the Kirstenbosch Research Centre in September 2004, followed by a further project workshop on Phylogenetic Diversity for Conservation held in Port Elizabeth.

The laboratory had a number of students working on molecular systematics research projects during the year including projects on the conservation genetics of the critically endangered cycad species *Encephalartos latifrons* and a project on the molecular systematics of *Encephalartos*. The laboratory also received funding from the National Research Foundation for a research project in collaboration with Stellenbosch University to reconstruct phylogenetic relationships in *Erica* using DNA sequence data.

A funding proposal was submitted to the Innovation Fund to establish a Conservation Forensic facility at the laboratory. The aims of the facility will be to aid law enforcement in the protection of CITES listed plant species.

Laboratory staff attended the 'Consortium for the barcode of life' (CboL) meeting in Washington DC in May 2004. There is potential for SANBI to take a lead role in the development of genetic barcodes for

plants and this was pursued further at the first CboL conference in London in February 2005.

Presentations on the work of the laboratory were made at the Evolution 2004 conference in Colorado, USA; Recent Radiations in the Cape Flora conference 2004 in Zurich; the VII International Cycad Conference in Xalapa, Mexico; and a Student Conference on Conservation Science in Cambridge, UK. A presentation was also given to the Parliamentary Portfolio Committee on Environmental Affairs and Tourism on DNA-based approaches to biodiversity science and conservation in South Africa. The laboratory took on two Honours graduates from UWC as interns during this period and presented a one-week course in molecular techniques to 13 students from UWC and UCT.

MARY GUNN LIBRARY

The Mary Gunn Library, housed in the National Herbarium in Pretoria, had a busy year responding to 8,938 enquiries from staff, local and international institutions and members of the public. Library staff added 863 new books and 978 pamphlets to the online catalogue.

Recent SANBI publications published in the past year were supplied to exchange institutions worldwide and 3,241 books and photocopies of articles were supplied to other libraries through national interlibrary loans. Library staff also continued to provide library services to institutions in the SABONET network by requesting articles through interlibrary loans and to market the Library via the Internet.

HARRY MOLTEÑO LIBRARY

The Harry Molteno Library, housed in the Kirstenbosch Research Centre in Cape Town, handled 2,357 enquiries from staff and members of the public during the year. Following the purchase of Web of Science software for the SANBI network users, the library is now able to provide on-line products for its clients.

The South African Rand retained its value which enabled the library to retain all its journal subscriptions as well as purchase material from overseas publishers. During the year library staff completed the reclassification of material and the conversion of the maps database from ACCESS to the library DBTEXT software. A comprehensive Library Manual detailing all procedures was also developed.

SANBI WEBSITES

The NBI/SANBI websites continue to show an increase in usage, with an average growth of 65% over this period. The sites together receive well over one million hits per month and close to 100,000 visits per month were recorded for March 2005. The change in name of the Institute necessitated considerable updating of the corporate site which has changed its domain name/url from www.nbi.ac.za to www.sanbi.org

Visitors to the plant information website www.plantzafrica.com continue to outnumber those to the corporate site. Statistics reveal that the majority of the users of this site are based in the USA, followed by South Africa and then a cluster of countries including Australia, Europe and the UK.

The three plant profiles added weekly to the infobase on the www.plantzafrica.com site continue to attract users to this site and generate favourable comment by way of emails. This site has now also been selected to host the Medicinal Plant Monographs developed by the Pharmacopoeia Monographs Project.



Tsepang Makholela examining Struthiola ciliata, a moth pollinated plant.

BIODIVERSITY PROGRAMMES, POLICY & PLANNING SERVICES

BIODIVERSITY PLANNING

In April 2005 the Minister of Environmental Affairs and Tourism, Mr. Marthinus van Schalkwyk, launched the results and recommendations of South Africa's first National Spatial Biodiversity Assessment (NSBA). The NSBA, published by SANBI, is the first ever comprehensive spatial assessment of biodiversity throughout the country and covers the terrestrial, freshwater, estuarine and marine environments. One of the findings of the NSBA is that the country's river ecosystems are under severe pressure, more so than terrestrial, estuarine and marine ecosystems. Although the NSBA is a national-scale assessment,

some of the spatial information, especially for terrestrial ecosystems, is at a fine enough scale to be relevant and useful at the provincial and district level, and even at the local municipal level. The NSBA Summary Report and four technical volumes are available on the SANBI web site (www.sanbi.org).

SANBI also hosted the annual Biodiversity Planning and Implementation Forum held at Didima Camp in the uKhahlamba Drakensberg Park World Heritage Site in KwaZulu-Natal. The Forum was established in 2004 to provide an opportunity for individuals, agencies and departments involved in spatial biodiversity planning

to share and synthesize valuable lessons learnt from biodiversity programmes in southern Africa. It includes national and provincial conservation agencies and departments, NGO's, implementation coordinators and other product users.

SANBI was also invited to provide strategic and technical guidance to the Mpumalanga and North West provinces regarding the development of their provincial biodiversity plans. SANBI currently serves on the steering committee for the Wild Coast Conservation and Sustainable Development Project.

In conjunction with Working for Wetlands, this Directorate initiated a National Wetlands Inventory Programme with funding from DEAT. This programme will build on the Wetlands modeling pilot that formed part of the National Landcover 2000 Project and will result in an accurate map of wetlands in South Africa. The project will also contribute to the establishment of a national wetlands classification system.

The C.A.P.E. programme provides resources for fine scale spatial biodiversity planning in five critical lowland habitats (Riversdale Coastal Plain, Nieuwoudtville, North West Sandveld, Saldanha Peninsula and Upper Breede River). SANBI led the design of the three-year project plan and catalyzed the initiation of this component of the C.A.P.E. programme.

The biodiversity planning unit and the threatened species programme continue to run a successful capacity building programme based on internships, student supervision and bursaries. Twelve young black researchers and junior programme officers have participated in this programme over the past year.

MONITORING AND REPORTING ON THE STATUS OF BIODIVERSITY

In February 2005 SANBI hosted a workshop to review lessons learned and best practices for species Red Listing and Atlasing in South Africa. Sixteen delegates shared their valuable experiences and insights from working on South Africa's Red Listing projects over the last 10 years and these are being distilled into a list of guidelines for current and future



The annual Biodiversity Planning and Implementation Forum was hosted by SANBI at Didima Camp in the uKhahlamba Drakensberg Park World Heritage site.



SOUTHERN AFRICAN REPTILES CONSERVATION ASSESSMENT (SARCA)



The Avian Demography Unit (UCT) has been contracted by SANBI to implement a conservation assessment of South Africa's reptiles. The project will run over four years and is budgeted at R2 million. A conservation assessment describes the status of species and identifies those species which are threatened with extinction. Conservation assessments are carried out according to internationally accepted criteria, developed by the World Conservation Union (IUCN). They provide the baseline information needed to do conservation planning and to prioritize particular species for conservation action. Reptiles are the only group of vertebrates that have not recently undergone a conservation assessment in South Africa. The previous conservation assessment for reptiles was done in 1988, and is now very out of date.

programmes. The workshop revealed that biodiversity groups such as the mammals, birds and amphibians are well covered by other conservation organisations, but several significant conservation assessment gaps exist, especially in the invertebrate groups as well as marine groups such as fish, molluscs, corals and seaweeds.

SANBI is entering the final year of a three-year NORAD (Norwegian Agency for Cooperation and Development) funded Threatened Plant Species (TSP) programme. The key output of this project is the publication of a new Red List of South African plants. To date, 70% of the ~20 000 plant taxa have been assessed, using the globally accepted IUCN Red List criteria. Experts and the public will review the assessments during 2005 and the publication should be on the shelves by April 2006.

The TSP also hosted a symposium on Threatened Plants at the SAAB congress in Bloemfontein in January 2005. The TSP sponsored three students to attend the congress and they joined other scientists and conservationists in presenting talks on a broad range of plant conservation related subjects. In addition the TSP has contributed funding to 10 student projects (M.Sc & Ph.D) at universities across the country.

CUSTODIANS OF RARE AND ENDANGERED WILDFLOWERS (CREW)



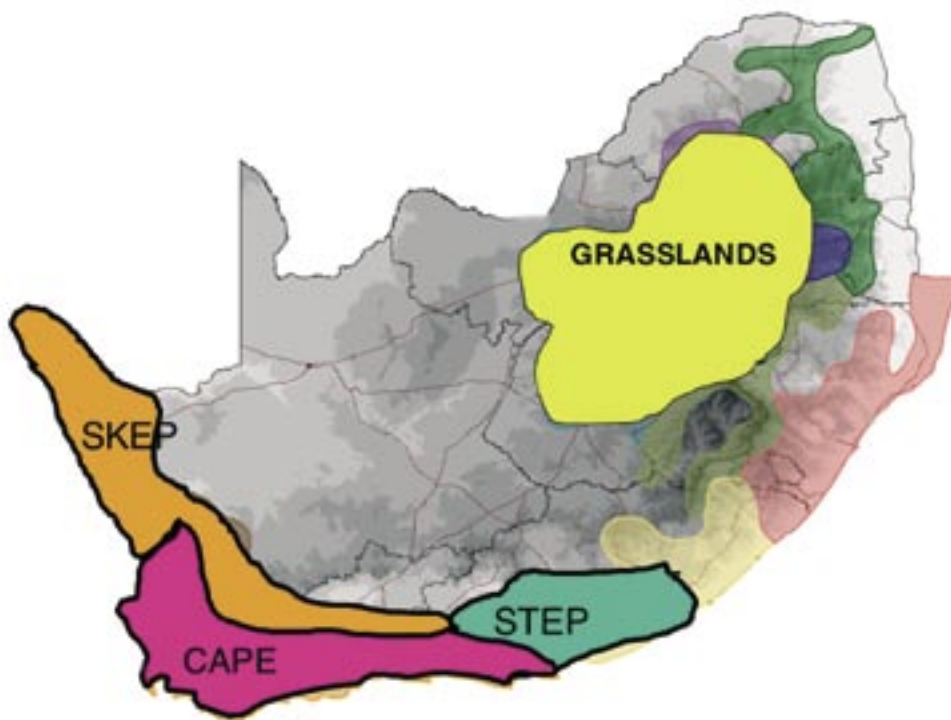
The Custodians of Rare and Endangered Wildflowers (CREW) programme is the Cape-based component of SANBI's Threatened Species Programme that focuses on involving civil society volunteers in the monitoring and conservation of threatened plant populations. Eight different groups of volunteers from a range of socio-economic and cultural backgrounds are currently working in the lowlands of the Cape Floral Region to locate and monitor populations

of range-restricted endemic and threatened plant species. Creating awareness amongst farmers and municipalities who have threatened plants on their land is a high priority for CREW and many of the CREW groups are working to convince landowners to conserve important fragments via Cape Nature's (formerly Cape Nature Conservation) Stewardship Programme.

CREW has also recently begun targeted field trips to find populations of Critically Endangered and Endangered plants in areas where there are no CREW groups. So far 41 populations of endangered species have been monitored. These field trips are open to anyone interested in helping and CREW is constantly recruiting new volunteers.

CREW achievements over the past year include a new population of 300 plants of the endangered orchid *Satyrion hallackii* Bolus subsp. *hallackii* discovered by the Fourcade Botanical Group based in St Francis. A new population of 10 plants of *Cyclopia longifolia* was found on a south-facing slope of the Lady Slipper peak bringing the total number of known individuals of this species to 44. In the lower Breede River valley area, CREW volunteers have helped to find many populations of endangered members of the Pea Family (Fabaceae) such as *Liparia striata*, *Polhillia canescens* and *Xiphotheca guthriei*. Quite possibly the most exciting find was that of *Lachenalia sargeantii*, a species that was thought to be extinct and had not been found since 1971.

SANBI BIOREGIONAL PROGRAMMES



programme is to ensure that by 2020 the rich biological heritage of the CFR is protected, while delivering significant benefits to the people of the region.

Sub Tropical Ecosystem Programme (STEP)

The STEP programme covers the Subtropical Thicket Biome and spans parts of both the Western and Eastern Cape provinces. The STEP planning phase began in 2000 with implementation beginning in 2003. The vision of the programme is that the people of the Thicket Biome take custodianship of their unique living landscape and together

Bioregional programmes are biome-wide biodiversity initiatives that incorporate an agreed vision, measurable targets and an action plan for coordinating a range of multi-stakeholder projects integrating biodiversity conservation with development and social priorities. The programmes involve a systematic conservation planning process and implementation of these plans through projects with participating stakeholders.

SANBI is mandated in terms of the Biodiversity Act to coordinate programmes that involve civil society in the conservation and sustainable use of indigenous biological resources. One of the ways this is achieved is through the provision of an institutional home, technical and administration support for the coordination units of bioregional programmes. Four programmes are currently situated within SANBI including Cape Action for People and the Environment (C.A.P.E), the Sub Tropical Thicket Ecosystem Programme (STEP), the Succulent Karoo Ecosystem Programme (SKEP) and the National Grasslands Biodiversity Programme.

Cape Action for People and the Environment (C.A.P.E)

C.A.P.E spans the Cape Floristic Region (CFR) of South Africa and is currently in the implementation phase. It is a partnership programme involving the implementing agencies and projects that address priority sub-regions within the CFR. C.A.P.E is a programme of the South African Government, with support from international donors. The goal of the

conserve, enhance and use their natural resources to ensure sustainable ecological processes and livelihoods, now and into the future.

Succulent Karoo Ecosystem Programme (SKEP)

SKEP is a bi-national programme stretching from the Klein Karoo along the arid western side of South Africa into southern Namibia. It is a large-scale, multi-stakeholder 20-year programme aimed at achieving people-focused biodiversity conservation through the development of strong partnerships. The goal is to provide an opportunity for the people of the Succulent Karoo to take ownership of and enjoy their unique living landscape in a way that maintains biodiversity and improves livelihoods now and into perpetuity.

National Grasslands Biodiversity Programme

The National Grasslands Biodiversity Programme is being developed to conserve the biodiversity within the grassland biome, which extends into six provinces in South Africa. The goal is to ensure that the ecological services provided by grasslands are sustained and that they contribute to economic development and poverty alleviation. The programme is being approached by mainstreaming biodiversity into production sectors and the four sectors that have been identified include agriculture (both rangeland and cultivation), forestry and urban development.

The signing of the \$11 million GEF (Global Environment Facility) grant agreements for the Cape Action for People and the Environment (C.A.P.E.) took place in June 2004. This funding will support the rolling out of the C.A.P.E. Bioregional programme over the next five years.

In October 2004 SANBI secured US\$350,000 from the GEF to design a National Grasslands Biodiversity Programme. The grasslands form the biggest of South Africa's biomes, covering about a third of the country and is also one of the most threatened biomes in South Africa. The grasslands host a high diversity of indigenous species, second only to the Cape Floristic Region, and contain several endemic fish species, high numbers of threatened mammal species, 10 of the 14 globally threatened bird species and 52 of the 122 Important Bird Areas in South Africa.

A coordination unit for bioregional programmes operating in the Eastern Cape has been established in Port Elizabeth. The objective of this Unit is to coordinate and integrate the implementation of bioregional programmes and finer scale projects in the Eastern Cape (with a particular emphasis on STEP) and to facilitate the establishment and maintenance of appropriate institutional arrangements for the ongoing implementation and integration of the programmes. Funding of R1.3 million was secured from the Development Bank of Southern Africa to implement a capacity building programme for Eastern Cape land use planners and decision-makers. This project (implemented in partnership with a local NGO, WESSA) seeks to promote sustainable development through ensuring the integration of biodiversity priorities into land use planning and decision-making.

The Implementation Committee for bioregional programmes in the Eastern Cape province was launched at a high level event hosted by the MEC for Environment in November 2004. Several government departments, statutory bodies and NGO's signed a memorandum of understanding in support of bioregional programmes in the province.

Agreements and funding arrangements were also finalized during the year for the migration of SKEP from Conservation International (CI) to SANBI. The SKEP coordination unit will be housed in SANBI with effect from July 2005.



BIODIVERSITY INFORMATION MANAGEMENT

Delegates at the Red Listing and Atlasing workshop.

Following a detailed user needs review as well as a review of past and current initiatives, SANBI is in the process of designing a new SANBI Integrated Biodiversity Information Management System (SIBIS) due to be ready by July 2005. This system will be a key component of the SANBI knowledge management system and a central component of the SANBI managed network. It will bring together existing SANBI databases as well as those residing in other biodiversity institutions such as natural history museums, university departments, institutes and research units in a virtual, user-friendly system.

SANBI has also developed BGIS, an internet tool for SANBI and other participating institutions to 'publish' their spatial (mapped) products on the web. The public will be able to access spatial data and perform basic GIS analysis on this web site. BGIS evolved as a national programme out of CapeNature's CPU project which was initiated under the CAPE programme to provide these services for the Western Cape Province. The BGIS unit will be functional from July 2005 and will provide a key service to provinces, bioregional programmes and municipalities.

A decision was taken that the South African Biodiversity Information Facility (SABIF), a project to establish a Global Biodiversity Information Facility (GBIF) Portal in southern Africa initiated by the Department of Science and Technology and managed by the National Research Foundation be transferred to SANBI over the next year. The project aims to provide a single access point to certain standard biodiversity information held by organizations in the region.

*Biodiversity
planning staff.*

SUPPORTING POLICY DEVELOPMENT

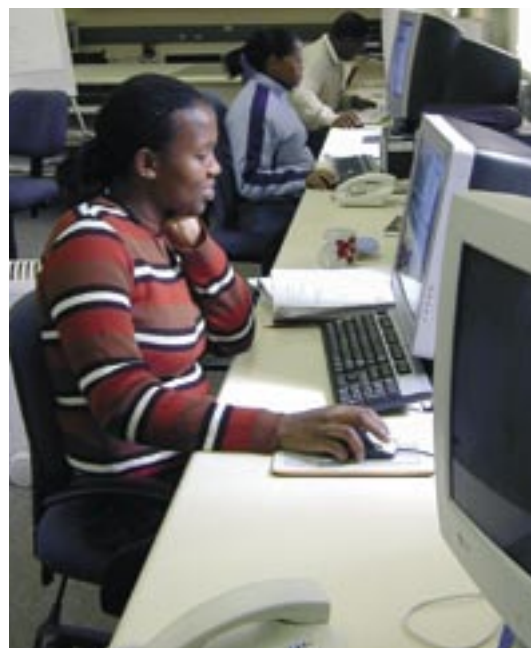
Over the past year SANBI staff have provided extensive support to DEAT for the development of South Africa's National Biodiversity Strategy and Action Plan (NBSAP). The results of SANBI's National Spatial Biodiversity Assessment have also fed into this strategy. A final draft of the NBSAP has been circulated for public review and is due to be published by June 2005.

SANBI staff have also advised DEAT on the listing of ecosystems in terms of the NEM: Biodiversity Act and it is likely that a joint programme, led by SANBI, to develop scientifically based criteria for the listing of ecosystems will be initiated later in the year. SANBI also provided input into the drafting of a joint policy for biodiversity planning for South Africa's rivers in conjunction with DEAT, DWAF (Department of Water Affairs and Forestry) and CSIR (Council for Scientific and Industrial Research).

MAINSTREAMING BIODIVERSITY PRIORITIES IN MULTIPLE SECTORS

SANBI co-hosted a two-day South African Mining and Biodiversity workshop in conjunction with the Chamber of Mines and IUCN to develop an action plan to improve the performance of the mining sector in terms of biodiversity management. Discussions were also held with the South African Local Government Association to initiate the development of a countrywide Municipal Biodiversity programme and a draft project concept was submitted to DEAT. This programme will build on

*Strong stakeholder
participation in
planning and
implementation
forms the basis
for the SKEP
programme.*



the pilots currently being implemented in the C.A.P.E. and STEP Bioregional programmes.

The Scientific and Technical Advisory Panel (STAP) of the GEF requested SANBI to host a workshop on mainstreaming biodiversity in production landscapes in September 2004. By mainstreaming we mean the incorporation of explicit (conscious) biodiversity priorities into the policies, decisions and actions of the full and diverse range of organizations involved, so that conservation targets for living landscapes are achieved. The workshop targeted key members of the CBD, GEF, STAP, IUCN, WWF, CI and other similar conservation organizations and project leaders with experience in implementing mainstreaming. The main output of the workshop was an improved conceptual framework and working model for the achievement of strategic priorities II and IV of the GEF III programme of work on mainstreaming.

PARTNERSHIPS

SANBI is also participating in the development of a national freshwater collaborative network which aims to support the conservation of biodiversity of inland waters through provision of relevant scientific information, communication and collaboration in partnership with the National Research Foundation (NRF), the Water Research Commission (WRC), the Council for Industrial and Scientific Research (CSIR), the Department of Science and Technology (DST) and DWAF.

ECOSYSTEM REHABILITATION PROGRAMMES

WORKING FOR WETLANDS

This year was the Working for Wetlands programme's first full financial year in SANBI, having been transferred to the Institute from DEAT in January 2003. The past year saw the establishment of management systems, project planning, monitoring and financial control tools; recruitment of six staff; and appointment, monitoring and evaluation of eleven external implementers for rehabilitation projects.

Funding to the amount of R1.6 million was secured from DEAT for the completion of the national wetland inventory project. This project is being implemented jointly by Working for Wetlands and SANBI's Biodiversity Policy, Planning and Programmes Directorate.

The Working for Wetlands programme continues to enjoy the support and meaningful involvement of DEAT, DWAF and the Department of Agriculture (DoA). These departments exercise high level oversight of the programme through a steering committee, which is also starting to function as a clearing house and cooperative governance structure for wetlands issues at national level, and is thus playing the role of *de facto* national wetlands committee.

A close working relationship has been built with the WRC, and through this relationship Working for Wetlands is rapidly assuming a central role in wetland-related research in South Africa. The relationship has also contributed to strengthening the wetland inventory project, with WRC partnering SANBI in co-funding elements of the project.

Successful events were held around the country in February 2005 to celebrate World Wetlands Day. In addition to a media trip to rehabilitation sites in Golden Gate National Park and a high-profile event at The Swamp near Underberg in KwaZulu-Natal, almost all Working for Wetlands projects held their own events involving workers, local stakeholders and surrounding communities, or participated in provincial celebrations.

The Community Agency for Social Enquiry (CASE) completed a rapid evaluation, funded by the WWF-International, of the

socio-economic impact of the programme. Although the results are qualitative and cannot be extrapolated beyond the three projects that comprised the case studies, the study concluded that the projects had resulted in meaningful improvement in the quality of the lives of their beneficiaries.

Negotiations with two mining houses have begun with the intention of formalizing offsite mitigation projects, to be implemented by Working for Wetlands. These projects are groundbreaking in South Africa, in that they take an offsite approach to mitigating unavoidable damage to wetlands from mining operations. Working for Wetlands is providing a vehicle through which such rehabilitation can be done to the satisfaction of government.

Overall, the programme demonstrated effective, efficient and economical expenditure of its conditional grant from DEAT. On the whole, actual delivery far exceeded the targets as outlined in the grant. DEAT has indicated its satisfaction with the programme, and has demonstrated its confidence in our ability to deliver by increasing the programme's budget for 2005/6 from R40 million to R65 million, an increase of 63%.

The Zoar wetland near Piet Retief in Mpumalanga, before and after. This is a wetland rehabilitation project piloted with the Mondi Wetlands Project.



GREENING THE NATION

The DEAT's Extended Public Works Programme has allocated R70 million for community and school greening to be managed by SANBI in a programme called 'Greening the Nation'.

Programme activities are gradually taking off and being implemented throughout the country. Staff, including a programme manager, programme coordinator and training manager, and regional coordinators are in the process of being appointed. In support of the programme and as a contribution to capacity building

20 interns were recruited in December 2004 and placed in the Eastern Cape, Gauteng (at Pretoria and Walter Sisulu NBG), Mpumalanga (at Lowveld NBG), Free State (at Free State NBG) and the Western Cape (at Kirstenbosch NBG).

To date 14 country-wide greening projects have been identified with a total budget of R62.8 million. SANBI's education staff have facilitated the identification of projects and will be monitoring the progress of the projects but the actual execution of the projects has been put to tender and outsourced to various BEE companies.

GREENING THE NATION PROJECTS 2004/2005

1) Nelspruit – Mbombela Municipality

Greening of the town (road islands and entrances) and greening of the 10 surrounding schools with 600m² of indigenous gardens, and 30 trees per school, and greening of three cemeteries.

Budget: R6,000,000

Status: Contract signed and project underway

2) Burgersfort – Tubatse Municipality

Greening of the town and greening of the 10 surrounding schools with 600m² of indigenous gardens, and 30 trees per school.

Budget: R1,750,000

Status: Contract signed and project underway

3) Mbizana greening – Mbizana Municipality

Greening of the town, greening of the O.R. Tambo Heritage site, a cemetery, developing a community nursery, greening a cultural village and greening of the 20 surrounding schools with 600m² of indigenous gardens, and 60 trees per school.

Budget: R11,825,688

Status: Contract signed and project underway

4) Greening Khayelitsha

Budget: R4,760,000

Status: Tender in process

5) Greening Cradock

Greening of the town (streets and entrances), two cemeteries, a soccer stadium, 10 schools with 600m² of indigenous gardens and vegetable garden.

Budget: R4,100,000

Status: First phase completed

6) Greening Ehlanzeni

Greening KwaThekwane South and Tonga residential areas, 15 schools with 600m² of indigenous gardens and 60 trees per school.

Budget: R2,650,000

Status: Service provider selected

7) Greening Butterworth

Greening the town and 15 schools.

Budget: R5,000,000

Status: Service provider selected



Interns after planting at Mogale City.

8) Greening in Mogale City

Development of a Mogale City Regional Park, development of a community nursery and greening of 15 schools,

Budget: R3,000,000

Status: Service provider selected

9) Randfontein and Merafong Greening

Greening of five crèches and developing a community nursery in Randfontein, greening two clinics and 10 schools and developing one community nursery in Merafong.

Budget: R2,000,000

Status: Service provider selected

10) Greening the Mangaung

Planting street trees, greening of two police stations, greening of two day care centers and developing Mangaung Community Park.

Budget: R5,000,000

Status: Service provider selected

11) Greening Pretoria and Environs

Greening schools and planting trees in Mamelodi, Hammanskraal, Mabopane, Eersterus, and Atridgville.

Budget: R2,800,000

Status: Service provider selected

12) Greening of Mfundisweni Multi-purpose Centre

Greening of the Mfundisweni Multipurpose Centre and greening of five schools.

Budget: R1,500,000

Status: Service provider selected

13) Greening the Northern Cape

Details not available as yet.

Budget: R10, 000,000

Status: Pending

14) Greening in the Alfred Ndzo District Municipality

Designing, landscaping and greening 23 schools in Umzimkihulu, two community greening projects and developing a community park in Mt Ayliff.

Budget: R2,500,000

Status: Pending

Total Projects: 14 Projects
Total Budget: R62,885,688.00

MARKETING AND COMMUNICATION SERVICES



Phakamani Xaba chats to a Chelsea pensioner at the 2004 Chelsea Flower Show, London.

The Marketing & Communication Directorate continued its strategic, generic advertising campaign targeted at the trade and consumer tourism industries as well as other consumer markets, both in South African and international publications. The aim has been to increase awareness of the existence of the eight NBGs as part of the same national network. SANBI also participated in the Getaway Consumer Travel Show in Johannesburg where the main focus was to promote the northern NBGs.

SANBI exhibited at the annual Chelsea Flower Show in London where its display was awarded a gold medal. The exhibit, entitled 'Under an African Sun', celebrated South Africa's 10 Years of Democracy and was sponsored by Old Mutual, the City of Cape Town and the Western Cape Provincial Government. SANBI also participated in the Pacific Flora Expo in Japan for the first time with two exhibits, one themed 'Bridal Flowers' which won two awards, and the other a display of South Africa's wild flowers.

The Marketing and Communication Directorate was also involved with arranging the SANBI launch function which was held at the new Biodiversity Centre in Pretoria. This event was well attended by dignitaries from DEAT, other government institutions, environmental organizations, schools and local communities. Marketing staff also assisted with the coordination and promotion of the Kirstenbosch Biennale, the only botanical art exhibition of its kind featuring exclusively indigenous plants,

which took place in September 2004 and showcased the work of 50 artists from South Africa, United Kingdom, Australia and Kenya.

Another event coordinated by this Directorate was the Garden's of Pride competition held in association with Pam Golding Properties and Mortgage SA. The aim of this competition is to encourage people to grow indigenous plants, and to promote water-wise gardening methods and this year saw the competition being extended to include the Gauteng and KwaZulu-Natal regions.

Marketing staff also maintained relations with other strategic organizations through participation in the Tourism Indaba, science communication forum groups and other provincial tourism bodies.

Teachers and learners from Etuthukweni School at the SANBI/ Pam Golding 'Gardens of Pride' prize-giving at the Walter Sisulu NBG.



HUMAN RESOURCES SERVICES

Thabisile Mlombo was the first female to be appointed as a foreman in the history of the NBG's.

To meet the demands of a fast growing SANBI, the Human Resources Directorate has expanded and now has offices in Pretoria and Cape Town. The Directorate focused primarily on the following key areas:

- Maintaining good and sound employment relations.
- Introducing organizational development interventions to ensure workforce development.
- Facilitating transformation in order to have a workforce that reflects the South African demography.
- Supporting all cost centres in all Human Resources functions.
- Promoting a safe and healthy working environment.
- Facilitating training and development interventions to ensure a capacitated workforce.

In April 2004 an Employee Assistance Programme (EAP) was launched as a Pilot Project in Pretoria and Kirstenbosch NBGs. Due to the success of the EAP, it will be extended to all other centres from May 2005. HIV Voluntary Counselling and Testing mobile clinics were available at our KZN, Pretoria, Walter Sisulu and Lowveld NBGs. Peer educators facilitated regular discussions centered on a 48-week education programme. World AIDS Day was commemorated in December



2004 with the theme "Women, Girls, HIV & AIDS". The Western Cape centres commemorated the day by organizing an industrial theatre presentation called "Open Secrets" which combined physical comedy with an honest examination of the stigma and fear surrounding HIV testing.

Employment relations within SANBI are healthy. The revised Recognition Agreement between SANBI and NEHAWU was signed in October 2004. During the year under review, the Institute did not witness any internal industrial action at any of the centres.

Employment equity targets were partially met. In terms of staff recruitment, preference was given to candidates from designated groups.

Lizanne Steeneberg, one of the horticulture students doing a six-month internship at Kirstenbosch.



Staff diversity [01/04/2004 - 31/03/2005]

Occupational Level	Male				Total Male	Female				Total Female	Total Filled	Total Vacant
	A	C	I	W		A	C	I	W			
Top management	0	0	0	1	1	0	0	0	0	0	1	0
Senior management	1	0	0	6	7	1	0	0	2	3	10	1
Professionally qualified and experienced specialists and mid-management	6	4	4	35	49	0	3	1	25	29	78	11
Skilled technical and academically qualified workers, junior management, supervisors and foremen	18	6	0	7	31	12	13	3	25	53	84	9
Semi-skilled and discretionary decision making	83	68	1	3	155	26	30	0	13	69	224	42
Unskilled and defined decision making	94	40	2	0	136	16	6	0	0	22	158	65
TOTAL	202	118	7	52	379	55	52	4	65	176	555	128

Human Resources capacity [01/04/2004 - 31/03/2005]

The data reflected below represents the flow of staff appointed to permanent posts.

Termination of service could be due to resignation, retirement, disciplinary actions or medical reasons.

Occupational level	Male												Total Male
	Appointed				Promoted				Services Terminated				
	A	C	I	W	A	C	I	W	A	C	I	W	
Top management	0	0	0	0	0	0	0	0	0	0	0	0	0
Senior management	0	0	0	0	1	0	0	1	0	0	0	0	2
Professionally qualified and experienced specialists and mid-management	4	0	2	1	2	2	0	11	0	0	0	0	22
Skilled technical and academically qualified workers, junior management, supervisors and foremen	7	0	0	0	3	0	0	0	5	0	0	0	15
Semi-skilled and discretionary decision making	1	2	0	0	15	13	0	0	2	5	0	0	38
Unskilled and defined decision making	11	1	2	0	2	2	0	0	2	0	1	0	21
TOTAL	31				52				15				98

Occupational level	Female												Total Female
	Appointed				Promoted				Services Terminated				
	A	C	I	W	A	C	I	W	A	C	I	W	
Top management	0	0	0	0	0	0	0	0	0	0	0	0	0
Senior management	0	0	0	0	0	0	0	0	0	0	0	0	0
Professionally qualified and experienced specialists and mid-management	0	0	0	2	0	3	1	6	0	0	0	0	12
Skilled technical and academically qualified workers, junior management, supervisors and foremen	1	1	1	2	4	3	2	1	0	1	0	0	16
Semi-skilled and discretionary decision making	4	1	0	3	7	3	0	3	1	1	0	3	26
Unskilled and defined decision making	3	1	0	0	0	0	0	0	2	0	0	0	6
TOTAL	19				33				8				60

Staff development [01/04/2004 - 31/03/2005]

SANBI invested 4% of its labour cost on staff and student development. Training included informal learning opportunities, formal courses and on-the-job coaching. Training in Occupational Health and Safety focused on legal duties and responsibilities for employees and management.

In the past year there was a steady growth in horticultural skills training. Courses offered included: Botanical Gardens Maintenance, Commercial Plant Production, Horticultural Equipment and Alien Vegetation Removal.

The table below reflects staff training per occupational level.

Occupational Level	Male				Female				Total
	A	C	I	W	A	C	I	W	
Top management	0	0	0	0	0	0	0	0	0
Senior management	0	0	0	0	1	0	0	0	1
Professionally qualified and experienced specialists and mid-management	1	1	0	6	0	2	1	2	13
Skilled technical and academically qualified workers, junior management, supervisors and foremen	10	2	0	2	5	3	0	5	27
Semi-skilled and discretionary decision making	30	20	0	0	13	10	0	0	73
Unskilled and defined decision making	35	15	0	0	5	2	0	0	57
TOTAL	76	38	0	8	24	17	1	7	171

The table below reflects staff studies per qualification level.

Qualification level	Male				Female				Total
	A	C	I	W	A	C	I	W	
Diplomas	6	1	1	0	2	2	0	0	12
BA, BTech, BSc	2	2	0	0	3	3	0	0	10
Honours	0	0	0	0	0	0	1	0	1
Masters	0	2	0	3	1	1	0	2	9
Doctorate	0	1	0	0	0	1	1	4	7
TOTAL	8	6	1	3	6	7	2	6	39

Student support

SANBI supports the training of young graduates to ensure that sufficient scientists and horticulturists are trained and mentored to take up future positions in the biodiversity sector.

The table below reflects the number of students supported.

Directorate	Male				Female				Total
	A	C	I	W	A	C	I	W	
Gardens & Horticultural Services	7	4	0	1	7	1	1	3	24
Research & Scientific Services	6	1	0	1	10	1	1	3	23
Environmental Education Services	10	1	0	0	13	0	0	0	24
TOTAL	23	6	0	2	30	2	2	6	71

Capacity development

The Directorate is dedicated to assisting and supporting other Directorates to attract and retain competent staff - in particular scientists and horticulturists. The Directorate undertakes to facilitate the talent management within the organization to ensure that internal resources are available as and

when vacancies occur particularly in the middle and senior management categories. Career development will also receive serious attention. Focus will be directed at the management of HIV/AIDS and any other life threatening diseases as well as minimizing work-related injuries. The Directorate will also manage all Human Resources Risks.

FINANCIAL SERVICES

The Institute's primary source of funding remains the government grant, funded by the DEAT. The operating grant this year increased by R10.3 million (18%) to R 67.8 million (2003/04: R57.5 million – 9.7%), enabling SANBI to continue with its ongoing operations until initiating some of the priorities in its expanded mandate.

The DEAT and the DEAT managed Extended Public Works Programme have allocated funding of R59.6 million (2003/04: R36.4 million) for capital development in the Gauteng, Free State and Mpumalanga Gardens. The Institute also generated R31.1 million (2003/04: R20.8 million) of foreign funding for southern African botanical and environmental projects. This includes a major donation of approximately R12 million from the Rufford Maurice Laing Trust (UK) for the construction of a new Centre for Biodiversity Conservation at Kirstenbosch.

Overall the total of operational, project and capital expenditure rose by 57% to R195 million (2003/04: R124 million – 26%) for the financial year, and we expect a similar or greater rise in the coming year. Funds on hand to meet these objectives amount to R65.5 million (2003/04: R42.7 million).

In order to comply with corporate governance best practices appropriate to the Institute, a corporate compliance officer was appointed to oversee corporate governance mechanisms within the Institute. Outputs include a risk management plan, a corporate compliance statement and codes of conduct for the Board and staff.

The Institute has reviewed its insurance cover to ensure that we are adequately insured in terms of public liability and overall asset cover for the major assets as well as fiduciary cover.

Donation, Grants and Sponsorships from 1 April 2004 to 31 March 2005

Corporate	R	Foreign	R
Appletiser SA (Ltd)	564 300.00	Rufford Maurice Laing Foundation	11 626 950.00
Sappi Ltd	175 000.00	The World Bank	11 564 833.80
Ceres Fruit Juices Ltd	26 500.00	Andrew Mellon Foundation	2 943 626.00
Pick 'n Pay Ltd	11 000.00	Conservation International	1 289 422.96
Sasol Ltd	7 500.00	Royal Botanic Gardens	1 182 671.63
		Bank Netherlands Partnership Programme (BNPP)	562 751.22
Trust		The World Conservation Union (IUCN) (Asia)	268 949.68
Estate Late MN Roddy	437 174.00	The World Conservation Union	204 961.50
HR Hill Trust	48 729.64	United Nations Environment Programme (UNEP) (Nairobi)	195 352.41
Feather Brooke Estate	35 000.00	United Nations Development Programme (UNDP)	177 506.05
Dr Sunshine Trust	16 155.20	Ball Horticultural Company (USA)	161 742.50
The Green Trust	12 900.00	Conservation International	123 058.00
Syfreys Trust (Legacy of Yvonne Parfitt)	14 697.28	United Nations Environmental Programme	118 563.00
		Embassy of France	104 267.72
Individuals and Organisations		The World Conservation Union (IUCN) (Germany)	100 826.70
National Lotteries Fund	2 684 344.00	United Nations Development Programme (Harare)	86 926.50
Tsogo Sun Ltd refund expenses	619 210.57	Namibian Nature Foundation	84 000.00
Table Mountain Fund	327 702.50	Alexander S Onassis PBF	79 328.00
Old Mutual Ltd (Cape Town SA)	307 017.54	The World Conservation Union (IUCN) InWEnt	54 082.70
Botanical Society of SA	269 268.00	National Institute for Public Health and the Environment (RIVM) Netherlands	39 774.94
Western Cape Nature Conservation Board	250 000.00	The World Conservation Union (IUCN)	34 022.19
SA World Wide Fund	142 388.00	National Fish and Wildlife Foundation (US)	33 601.50
University of Natal	30 000.00	University of Hamburg (Germany)	31 002.77
Peace Parks Foundation	20 000.00	Conservation International (USA)	26 500.00
Development Bank of SA	17 850.00		
Friends of Helderberg Mainstream	15 200.00		
University of Cape Town (Botany Department)	10 000.00		
World Wide Fund for Nature (WWF Stellenbosch)	7 000.00		
Bench Donations	236 000.00		
		Other	
Government		Sundry donation	16 975.58
Department of Environmental Affairs and Tourism – Working for Wetlands	42 262 297.00		
Department of Environmental Affairs and Tourism – Poverty Relief	17 291 286.77		
Medical Research Council	422 037.75		
Department of Agriculture	299 993.00		
City Of Cape Town	175 000.00		
Destination Marketing Organisation (Provincial Administration Western Cape)	153 508.77		
National Research Foundation	84 000.00		
		Total	R 98 084 757.37

CORPORATE GOVERNANCE STATEMENT

GOVERNANCE STRUCTURE

This report for the 2004/2005 financial year covers the period during which the National Botanical Institute, established in terms of the Forest Act 1984, became the South African National Biodiversity Institute, in terms of Chapter 2 of the National Environmental Management: Biodiversity Act No. 10 of 2004.

In terms of Section 104 of the Biodiversity Act, all assets and liabilities and all rights and obligations of the National Botanical Institute (NBI) are vested in the South African National Biodiversity Institute (SANBI) as from the date of repeal of the Forest Act, 1984. The Forest Act was repealed by proclamation in the Government Gazette of 8 October 2004 and effective on 1 September 2004.

In reporting on the governance of the two institutions, details of their separate structures will be provided within the main section of this chapter. The 'Institute' or the 'Board' will be used to indicate identical

and continuing processes or policies through the NBI/SANBI transition.

The Institute subscribes to and is committed to complying with the principles and standards of integrity and accountability expressed in the King Report on Corporate Governance. The Board is furthermore committed to providing timely and meaningful information on its activities.

Composition of the Boards of the National Botanical Institute and South African National Biodiversity Institute

National Botanical Institute:

The appointment of the members of the Board for the NBI was done in terms of Section 59 of the Forest Act 1991. The Board consisted of 15 members appointed by the Minister of Environmental Affairs and Tourism. Members were appointed for a three-year term. The membership of the Board during the period 1 April to 31 August 2004 comprised:

1 April 2004 to 31 August 2004

Mr MS Fakir (Chairperson)	Mr M Makgoba
Ms E Buis	Dr B McKenzie
Prof RM Cowling	Ms AM Phaliso
Mr GJ Dladla	Ms R Segoale
Prof J Glazewski	Ms SL van Damme
Dr J Jay	Dr R Wagiet
Ms NN Jezile	Ms JR Yawitch
Dr CT Johnson	

South African National Biodiversity Institute:

Members of SANBI Board are appointed in terms of Section 15 of the National Environmental Management: Biodiversity Act, 2004. The Board consists of not fewer than seven and not more than nine members appointed by the Minister of Environmental Affairs and Tourism. The Board further includes the Director-General, or an official of the Department (DEAT) designated

by the Director-General, and the Chief Executive Officer of the Institute. The Minister must appoint a member of the Board as Chairperson. Board members are appointed for a term of three years.

The membership of the Board during the period 1 September 2004 to 31 March 2005 comprised:

1 September 2004 to 31 March 2005

Ms B Njobe (Chairperson)	Ms V Mahlati
Prof SL Chown	Dr MLD Mayekiso
Mr MS Fakir	Ms M Pyoos
Dr PE Hanekom	Mr T Vosloo
Prof BJ Huntley (Acting CEO)	Ms PB Yako (DEAT)
Dr MD Mabunda	

The Board of the Institute fulfils the same function as the Board of Directors of any other organisation on behalf of its stakeholders, with responsibility and accountability for all decisions of the Institute. The Board meets quarterly. The Board monitors the executive management by ensuring that all material matters are subject to Board approval. The Chief Executive Officer is a member of the Board. Other members of the executive management attend Board meetings by invitation.

The roles of the Chairperson and Chief Executive Officer do not vest in the same person and the Chairperson is a non-executive member of the organisation. The Chairperson and Chief Executive Officer provide leadership and guidance to the Board. All advisory committees of the Board are chaired by non-executive members of the Board.

The Board shall as soon as practical after the end of each financial year submit:

- An annual report for the Minister's approval and tabling in Parliament, and
- Any other matter that the Minister may request the Board to deal with in the report.

The effective functioning of the Board is largely dependent on the preparation, for its consideration, of the Institute's Corporate Strategic Plan, its annual Business Plan, policy proposals, Medium Term Expenditure Framework (MTEF) and other such documents that require the Board's approval.

All Board members are subject to and accept the provisions of the Biodiversity Act and the PFMA in terms of responsibility and accountability.

Executive Management

The Executive Management Committee comprises the Chief Executive Officer (as Chairperson) and the Directors of the functional areas of the Institute. This Committee meets bi-monthly or more frequently if necessary. The role of the Committee is to ensure the co-ordinated and efficient execution of all functions delegated to it by the Board, in particular to ensure that its decisions, strategies and objectives are implemented. The Executive Management retains full and executive control over the organisation.

National Botanical Institute:

The following persons served on the Executive Management of the National Botanical Institute during the period 1 April to 31 August 2004:

Prof BJ Huntley	Chief Executive Officer
Mr WSG Hughes	Chief Financial Officer
Prof GF Smith	Chief Director: Research
Mr CK Willis	Chief Director: Gardens & Horticultural Services
Dr J Donaldson	Director: Kirstenbosch Research Centre
Ms K Maze	Director: Biodiversity Programmes, Policy & Planning Services
Dr MM Wolfson	Director: Research Services
Mr M Netshiombo	Director: Human Resources
Ms M Molokwane	Director: Marketing
Ms N Qwathekana	Director: Education
Mr P le Roux	Curator: Kirstenbosch NBG
Mr J Dini	Project Coordinator: Working for Wetlands
Mr T Sandwith	Project Coordinator: CAPE

South African National Biodiversity Institute:

With the exception of Ms Molokwane (Director: Marketing), the above members served on the Executive Management Committee for the period 1 September 2004 to 31 March 2005.

Audit Committee

In keeping with Treasury Regulation 27 of the PFMA 1999, the Board appoints an Audit Committee to assist the Board in the discharge of its duties by reviewing and reporting on the governance responsibilities of the Board and the Institute. The terms of reference of the Audit Committee, its duties and functions, its composition and its *modus operandi* have been approved by the Board. The committee meets three times per year.

National Botanical Institute:

Membership of the Audit Committee during the financial year for the period 1 April 2004 to 31 August 2004 comprised:

Prof J Glazewski (Chairperson)

Mr A Dlamini

Mr GJ Dladla

Prof BJ Huntley (*ex officio*)

Mr WSG Hughes (*ex officio*)

South African National Biodiversity Institute:

Membership of the Audit Committee from 1 September 2004 to 31 March 2005 comprised:

Dr PE Hanekom (Chairperson)

Mr A Dlamini (Non-Board member)

Mr GJ Dladla (Non Board member)

Mr MS Fakir

Prof BJ Huntley (*ex officio*)

Mr WSG Hughes (*ex officio*)

Advisory Committees

For operational effectiveness, the Board has instituted Advisory Committees for each of the functional areas of the Institute. The Advisory Committees comprise one or more members of the Board and several additional members who are recognised leaders in the functional areas. Members are appointed for a term concurrent with that of the Board. Any Board member may request or be requested to attend an Advisory Committee meeting.

The role of the Advisory Committees is to advise the Board on:

- The mandate given to the Institute by Parliament.
- The strategic direction and emphasis of the Institute.
- The efficient implementation of those facets of the Corporate Strategic Plan that are relevant to the functional area.
- The evaluation of individual activities, personnel, budgeting requirements and the initiation of new or termination of existing activities.
- Budget and infrastructure needs.
- Service to the community.

Committee	National Botanical Institute 1 April – 31 August 2004	South African National Biodiversity Institute 1 September 2004 – 31 March 2005
Finance Advisory Committee	Mr GJ Dladla (Chairperson) Dr CT Johnson Prof J Glazewski Mr MS Fakir	Mr T Vosloo (Chairperson) Mr S Fakir Mr GJ Dladla (Non Board member) Mr T Bouwer (<i>ex officio</i>) Mr WSG Hughes (<i>ex officio</i>)
Biodiversity and Research Advisory Committee	Prof RM Cowling (Chairperson) Ms JR Yawitch Dr B McKenzie Mr MS Fakir	Prof S Chown Mr MLD Mayekiso Ms M Pyoos Ms S Brownlie (Non Board member) Ms B Reyers (Non Board member)
Gardens and Marketing Advisory Committee	Mr M Makgoba Dr J Jay Ms SL van Damme	Dr D Mabunda (Chairperson)
Human Resources Advisory Committee	Ms AM Phaliso Dr CT Johnson Ms SL van Damme Mr MS Fakir	Ms V Mahlati (Chairperson)
Education and Interpretation Advisory Committee	Dr R Wagiet (Chairperson) Ms ER Buis Ms SL van Damme	Ms P Yako (Chairperson)

Management Structure of the Institute

The management structure of the Institute is geographically decentralised because of the wide geographical spread and activities of its various units. The head of each unit is called a 'Head of Cost Centre'.

Implicit in the concept is a substantial measure of delegation of both responsibility and authority, which in turn requires effective control and evaluation systems. Both financial and management responsibilities are delegated and clearly communicated to such Head. These officers are actively involved in the budget development cycle and must assume responsibility for the disciplined management of their centre budgets within clearly defined policies, procedures and delegations of authority.

GOVERNANCE PRINCIPLES

Framework

Corporate Governance is a system by which organisations are directed and controlled. Basically it is a set of checks and balances that give assurance to stakeholders that the organisation is run according to sound corporate governance standards and principles. These standards and principles are based on international best practice.

The Institute's Board and the Executive Committee believe that the Institute has applied and complied with these principles.

Financial Statements

The Institute's Board and Executive Committee confirm that proper records were kept and that they fairly represent the financial state of affairs of the Institute. The financial statements are prepared in accordance with generally accepted accounting practices.

External auditing is conducted by the Office of the Auditor General.

Risk Management

Effective risk management is integral to the Institute's objective of consistently adding value to the business. Management is continuously developing and enhancing its risk and control procedures to improve the mechanisms for identifying and monitoring

risks. Detailed risk management planning workshops are held at the start of each financial year to improve risk management capacity.

Key policies and procedures that are in place to manage operating risk, involve segregation of duties, transaction authorisation, supervision, monitoring and financial and managerial reporting. Where the risk management workshop identifies weaknesses in the system of the Institute, they are addressed.

The insurance and risk management policies adopted are aimed at obtaining sufficient cover to protect the Institute's asset base, earning capacity and legal obligations against possible insurable losses.

All buildings are insured. The following, *inter alia*, are not insured: roads, bridges, fencing (perimeter and other), dam walls and content, driveways, pavements, outdoor recreation surfaces, outdoor parking surfaces, animals and plants of whatever nature.

Internal Control Systems

To meet its responsibility with respect to providing reliable financial information, the Institute maintains financial and operational systems of internal control. These controls are designed to provide reasonable assurance that transactions are concluded in accordance with management authority and that these assets are protected against material loss or unauthorised acquisition, use or disposition, and that transactions are properly authorised and recorded.

The system includes a documented organisational structure and division of responsibility, established policies and procedures and the careful selection, training and development of people.

Internal auditors monitor the operation of the internal control system and report findings and recommendations to management and executive management. Corrective actions are taken to address control deficiencies and other opportunities for improving the systems, as they are identified. The Board, operating through its Audit Committee, provides oversight of the financial reporting process and internal control systems.

The accounting policies and procedures have been presented and approved by the Board. All other operational policies have been revised, edited and approved by the Board during this financial year.

Transformation

The Institute values and acknowledges that its staff is one of the most precious assets of the organisation. The Institute is therefore committed to ensure that the workforce is dedicated, capable and able. Transformation is one of the strategic focus areas of the Institute. Currently the Institute is striving to build a diverse and representative workforce throughout the organisation.

Employment Equity

The role of the Employment Equity Committee is to monitor, evaluate and advise the Institute's management on the implementation of the employment equity plan and programme. The Institute is currently giving special attention to the appointment, training, development and promotion of staff members from the designated groups. The EE Committee of the Institute has the role of supporting the Institute to achieve the following goals viz.:

- To successfully execute the employment equity strategy and attain specific employment equity targets.
- To ensure compliance with the provisions and legal requirements of the EE Act.
- To promote diversity.
- To modify and adjust physical working environments to accommodate disabled people.
- To attract, train, develop and retain staff that are representative of all groups.

The committees representing the northern and southern regions meet separately on a quarterly basis under the chairmanship of the Chief Director: Human Resources.

Safety, Occupational Health and Environmental Management

The Institute acknowledges its obligation to its employees and stakeholders to comply in its operations with safety, health and environmental laws and internationally accepted standards and practices.

Its commitment to provide a safe and healthy workplace is demonstrated by having established Safety Committees in all its Gardens and centres. The role of the Safety Committees is to ensure that the Institute complies with legal requirements of the Occupational Health and Safety Act. Safety Committees meet once a quarter or more frequently if required.

Legal compliance audits are also being conducted on an ongoing basis to identify gaps and training needs in the Health and Safety Programme of the Institute to ensure the investigation of all time loss incidents due to accidents or injuries.

HIV/AIDS

The Institute acknowledges the seriousness of the HIV/Aids epidemic and commits itself to provide support for employees who are infected or affected as well as the resources and leadership to implement an HIV/AIDS programme in the workplace.

Our workforce programme is aimed at preventing new infections, providing care and support and to manage the impact of the epidemic on the organisation. The Institute is investing in HIV/AIDS education on a continuous basis.

Employee Assistance Programme (EAP)

An EAP is a work-site-based programme, which assists in the identification and resolution of personal and productivity problems of our work force, which may adversely affect employee performance and general well-being. This programme is closely monitored and has been successfully piloted. During this financial year it has been extended to other regions and centres of the Institute. With the implementation of EAP, the Institute demonstrates its commitment to ensure the emotional and social well-being of its employees.

Employee Participation

Employee participation is encouraged in the Institute by putting best practices in place to foster good and co-operative relationships and employee participation at all levels of the organisation. Union representation, leadership development programmes, communication forums, focus groups and task teams and surveys are all instrumental in facilitating such a process.

Code of Conduct

A Code of Conduct has been developed for all staff of the Institute. The Code has been translated into the various languages that are used in the Institute. All staff members were consulted and given the opportunity to make comments and recommendations to the Code. The Code of Conduct facilitates sound business ethics in the Institute and plays an important role in defining the organisational culture and governing effective discipline within the organisation.

A Code of Conduct for Board members has also been developed, approved and implemented.

Legislative Framework

The Institute, being a Section 3A Public Entity, has to comply with a variety of legislation, viz.:

- National Environmental Management: Biodiversity Act, No. 10 of 2004.
- Labour Relations Act No. 66 of 1995.
- Basic Conditions of Employment Act No. 75 of 1997.
- Employment Equity Act No. 55 of 1998.
- Public Service Act No. 103 of 1994 (together with its regulations) — subject to ministerial approval.
- Decisions reached at the Central Bargaining Chamber — subject to ministerial approval.
- Public Finance Management Act No.1 of 1999 (PMFA).
- Occupational Health and Safety Act No. 85 of 1993.
- Generally Accepted Accounting Practices (GAAP).
- Compensation for Occupational Injuries and Diseases Act, No. 180 of 1993.
- Promotion of Access to Information Act No. 2 of 2000.

Delegation of Authority

The Board has approved the delegation of certain authorities for effective operational purposes. These are contained in the Finance and Accounting: Policies, Procedures and Delegations Manual.

Statement of Materiality

In terms of the PFMA Treasury Regulation 28.1.5, the Accounting Authority must develop and agree a framework of acceptable levels of materiality and significance with the relevant executive authority (the Minister of Environmental Affairs and Tourism) in consultation with the external auditors.

Supply Chain Management

During this financial year the Institute embarked on a programme to align its procurement processes with SCM requirements and prescripts in order to conform to PFMA and Treasury requirements.

Conflict of Interest

As part of the appointment protocol, all new staff members of the Institute are obliged to complete a "Declaration on Conflict of Interest" when they are appointed. All Board members are, in keeping with the PFMA, required to complete a "Disclosure of Interest" declaration.

MATERIALITY AND SIGNIFICANCE FRAMEWORK

Treasury Regulation, s28.3.1 requires that the accounting authority must develop and agree a framework of acceptable levels of materiality and significance with the relevant executive authority.

South African Auditing Standard 320 paragraph 3 defines materiality as "information is material if its omission or misstatement could influence the economic decision of users taken on the basis of the financial statements". Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement.

Quantitative aspects:

In setting the materiality figure the Institute considered the following:

- The relationship of the amount of an item to the financial information as a whole or in total from which the item comes is the important factor.
- Elements of the financial statements i.e. expenditure, capital, assets, income and liabilities when considered.
- Financial statements must be free of any misstatements.

Qualitative aspects:

Qualitative characteristics to assess materiality included the following aspects:

- Public accountability and disclosure requirements in terms of legislature
- Compliance with legislation
- Disclosure requirements
- Sensitive situations, including transactions with officers, irregularities and questionable transactions
- Importance of information to users, especially donors

Taking the above into consideration the Institute has a material amount as being R850,000. This has been determined by applying 1% on the gross annual expenditure of R85 million excluding expenditure on projects.

Significant aspects:

Any significant transaction or circumstances that may have a significant impact on the Institute regardless of the monetary value is considered significant for the purpose of the framework.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE BALANCE SHEET AS AT 31 MARCH 2005.

STATEMENT 1

	March 2005 R	Notes	March 2004 R
ASSETS			
Non-current assets			
Property, plant and equipment	117 700 494	7	100 446 768
	<u>117 700 494</u>		<u>100 446 768</u>
Current assets	70 097 620		48 724 179
Inventories	96 362	8	237 425
Trade and other receivables	4 477 512	9	5 737 533
Cash and cash equivalents	65 523 746	10	42 749 221
	<u>187 798 114</u>		<u>149 170 947</u>
EQUITY AND LIABILITIES			
Capital and reserves	118 253 276		98 889 555
Income fund	2 216 783		538 788
Capital fund	116 036 493	3	98 350 767
Non-current liabilities	2 147 630		1 664 000
Interest bearing borrowings	1 232 000	4	1 664 000
Post-retirement benefits	915 630	14	-
Current liabilities	67 397 208		48 617 391
Unspent committed project funds	53 045 044	2	37 020 996
Trade and other payables	11 362 493	5	4 837 054
Provisions	2 557 671	6	6 327 341
Current portion of interest bearing borrowings	432 000	4	432 000
	<u>187 798 114</u>		<u>149 170 947</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE
INCOME STATEMENT FOR THE PERIOD ENDED 31 MARCH 2005

STATEMENT 2

	March 2005 R	Notes	March 2004 R
INCOME			
Government grant	82 772 000		67 454 000
Other grants, sponsorships and donations	98 084 757		48 782 431
Investment income	3 395 868		2 718 516
Sales	2 042 619		2 016 259
Admission fees	13 297 148		11 515 788
Rent received	4 182 542		3 780 616
Disposal of fixed assets	-		140 089
Other income	5 084 637		3 407 991
	<u>208 859 571</u>		<u>139 815 690</u>
Less: Attributable to Projects and Capital funds	121 746 910	2	67 370 336
Operating income	<u>87 112 661</u>		<u>72 445 354</u>
EXPENDITURE			
Personnel costs	71 129 117		61 091 941
Operating expenses	36 585 169		28 518 622
Audit fees: Regulatory audit (AG-SA)	245 952		189 545
Audit fees: Internal audit (PWC)	340 218		303 852
Irrecoverable debt and other losses	548		3 445
Loss on exchange	101 795		263 288
Loss on disposal of fixed assets	5 554		-
Interest paid	175 937		288 478
Depreciation	5 297 691		4 921 766
Direct project expenditure	82 228 009		28 489 621
	<u>196 109 990</u>		<u>124 070 557</u>
Less: Borne by Projects and Capital funds	110 675 324	2	49 765 277
Operating expenditure	<u>85 434 666</u>		<u>74 305 280</u>
Net surplus / (deficit) for the year	1 677 995		(1 859 926)
Accumulated fund at beginning of year	538 788		2 398 714
Net surplus / (deficit)	<u>2 216 783</u>		<u>538 788</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005

1. ACCOUNTING POLICY

Unless otherwise shown, the financial statements have been drawn up on a historical cost basis in accordance with the policy below, which has been consistently applied in all material aspects.

1.1 Income fund

This Fund relates to the accumulated surplus of income over expenditure after transfers to or from other funds.

1.2 Project funds

This Fund comprises temporary funds, which are project specific in terms of agreed terms between the Institute and funders as well as funds earmarked for major capital projects and also for projects of a non-capital nature. Funding is derived from donations, grants, transfers from the Income fund, and interest on the investment of temporary surpluses in this fund. The balance in the project fund at the end of the year is reflected under Unspent committed project funds because the entire funds will be expended during the course of the year.

1.3 Capital fund

This Fund shows the cumulative value of funds in fixed assets after revaluation and depreciation are brought into account.

1.4 Acknowledgement of income in general

Income is acknowledged on the accrual basis.

1.5 Government grants received

Government grants are accounted for in the period to which each grant applies.

1.6 Fixed assets and depreciation

Fixed assets prior to 1 April 1992 and on hand as at 31 March 2005 are reflected at 50% of their estimated replacement value at 1 April 1992 less depreciation since that date. Unless otherwise indicated fixed assets acquired after 1 April 1992 are reflected at cost and where appropriate are depreciated at rates which will result in the asset concerned being written off over its useful life. Buildings reflect improvements to property occupied on long-term leases or on state land managed by the Institute. Items costing less than R2000 are written off in the year of acquisition. Depreciation is calculated at 20% per annum on vehicles and equipment and 33.3% per annum on computers and 2.5% on buildings on the straight-line basis.

1.7 Inventories

Inventories are valued at the lower of cost or net realisable value after making allowance for free issues of publications. Expenditure on unsold publications is written off after one year. Expenditure on inventory not intended for resale, on plants and seed inventory is written off in the year of occurrence.

1.8 Investments

Short-term deposits are shown at cost.

1.9 Financial Instruments

Financial Assets

Trade and other receivables

Trade receivables are stated at cost as reduced by appropriate allowances for estimated irrecoverable amounts, which approximate their fair value due to the short-term nature thereof.

Bank balances and cash

Cash on hand is stated at face value, which is its fair value. Deposits held on call are stated at amortised cost, which approximate its fair value due to the short-term nature thereof.

Foreign currency contracts

No forward exchange contracts are entered into. However, unrealised gains and losses arising on fair valuing of foreign currency from donor funding are charged to the income statement as income or an expense.

Financial Liabilities

Trade and other payables

Trade and other payables and advances received are stated at cost, which approximates their fair value due to the short-term nature thereof.

Credit Risk

Financial assets that could subject the Institute to credit risk consist principally of bank balances and cash, trade and other receivables. The Institute's bank balances and cash are placed with high credit quality Institutions. Credit risk with respect to trade receivables is limited due to the large number of customers comprising the Institute's dispersion across different industries and geographical areas. Accordingly the Institute does not have significant concentration of credit risk. The carrying amounts of financial assets included in the balance sheet represent the Institute's exposure to credit risk in relation to those assets. The Institute does not have any significant exposure to any individual customer or counter party.

1.10 Retirement Fund

Retirement benefits are provided for employees by means of separate pension and provident funds administered by the Institute and by the State, to which both employer and employees contribute. 100% of gains (losses) above the corridor are recognised; no gains (losses) below the corridor are recognised. It is the policy of the Institute to fund any actuarial deficit of the South African National Biodiversity Institute Retirement Fund by making additional contributions sufficient to eliminate such deficit. The Retirement funds are valued on a three year cycle basis to ensure that any deficit or surplus is highlighted, timeously. Further details are provided in note 14.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE **NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005 [continued]**

	March 2005	Notes	March 2004
	R		R
2. Projects Fund			
Income			
Government grants	17 000 000		11 500 000
Other grants, sponsorships and donations	97 329 584		48 639 975
Investment income	1 346 329		778 801
Sales	250 409		299 162
Admission Fees	872 127		2 805 201
Rent received	651 445		710 464
Other income	4 398 810		2 900 023
	<u>121 848 704</u>		<u>67 633 626</u>
Less: Expenditure			
Expenditure capitalised	22 638 188		26 319 321
Expenditure not capitalised	82 739 445		18 524 190
Loss on exchange	101 795		263 290
	<u>16 369 276</u>		<u>22 526 825</u>
Book value of disposed assets	(86 771)		(31 747)
Loan repayments	432 000		432 000
	<u>16 024 048</u>		<u>22 126 572</u>
Unspent committed project funds at beginning of the year	37 020 996		14 894 424
Unspent committed project funds	<u>53 045 044</u>	1.2	<u>37 020 996</u>
3. Capital Fund			
Asset Revaluation Fund			
Balance at beginning of year	98 350 767		76 552 960
Project expenditure capitalised	22 638 188		26 319 321
Amount funded by loan	432 000		432 000
Net disposals and write-offs	(86 771)		(31 748)
Depreciation	(5 297 691)		(4 921 766)
	<u>116 036 493</u>	1.3	<u>98 350 767</u>
4. Interest bearing borrowings			
Loan was sourced from the Industrial Development Corporation (IDC)			
Terms: Repayable over eight years in monthly installments ending January 2008			
Amount reflected under non-current liabilities	1 232 000		1 664 000
Amount reflected under current liabilities	432 000		432 000
	<u>1 664 000</u>		<u>2 096 000</u>
5. Trade and other payables			
Trade and other payables	10 935 957		4 735 757
Unidentified deposits	426 535		101 297
	<u>11 362 492</u>		<u>4 837 054</u>
6. Provisions			
Provision for audit fees	-		72 946
Provision for motor vehicle accident claims	-		3 975 630
Provision for leave pay	2 557 671		2 278 765
	<u>2 557 671</u>		<u>6 327 341</u>

Provision for leave pay consists of leave commitments in respect of staff who qualify for retirement during the following financial year.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005 [continued]

7. Property, plant and equipment

Board valuation

On hand at start of financial year	19 290 898
Demolished / disposals / write-offs	(147 717)
On hand at end of financial year	19 143 181

Cost

On hand at start of financial year	100 581 511
Purchases	22 638 188
Demolished / disposals / write-offs	(656 201)
On hand at end of financial year	122 563 498

Accumulated depreciation

Accumulated depreciation at start of financial year	19 425 641
Depreciation for the year	5 297 691
Depreciation on disposals / write-offs	(717 147)
Accumulated depreciation	24 006 185

Net book value at end of financial year

Total	Buildings	Vehicles	Equipment
March 2005			
19 290 898	16 810 632	359 335	2 120 931
(147 717)	(105 000)	(21 000)	(21 717)
19 143 181	16 705 632	338 335	2 099 214
100 581 511	84 240 294	4 509 557	11 831 660
22 638 188	17 337 555	682 547	4 618 086
(656 201)	(221 959)	-	(434 242)
122 563 498	101 355 890	5 192 104	16 015 504
19 425 641	4 460 332	3 746 144	11 219 165
5 297 691	2 789 202	590 077	1 918 412
(717 147)	(240 932)	(21 000)	(455 215)
24 006 185	7 008 602	4 315 221	12 682 362
117 700 494	111 052 920	1 215 218	5 432 356

Board valuation

On hand at start of financial year	19 343 145
Demolished / disposals / write-offs	(52 247)
On hand at end of financial year	19 290 898

Cost

On hand at start of financial year	74 545 776
Purchases	26 319 321
Demolished / disposals / write-offs	(283 586)
On hand at end of financial year	100 581 511

Accumulated depreciation

Accumulated depreciation at start of financial year	14 807 960
Depreciation for the year	4 921 766
Depreciation on disposals / write-offs	(304 085)
Accumulated depreciation	19 425 641

Net book value at end of financial year

March 2004			
19 343 145	16 810 632	384 835	2 147 678
(52 247)	-	(25 500)	(26 747)
19 290 898	16 810 632	359 335	2 120 931
74 545 776	60 551 467	4 163 801	9 830 508
26 319 321	23 688 827	390 074	2 240 420
(283 586)	-	(44 318)	(239 268)
100 581 511	84 240 294	4 509 557	11 831 660
14 807 960	1 934 054	3 271 830	9 602 076
4 921 766	2 526 277	523 302	1 872 187
(304 085)	-	(48 988)	(255 097)
19 425 641	4 460 331	3 746 144	11 219 166
100 446 768	96 590 595	1 122 748	2 733 425

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE **NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005 (continued)**

	March 2005 R	Notes	March 2004 R
8. Inventories			
Net realisable value	96 362		237 425
Carrying value	163 815		339 296
Write-down value in inventory	67 453		101 871
9. Trade and other receivables			
Trade debtors	1 557 066		1 456 247
Insurance	-		3 000 000
Provision for irrecoverable debt	(50 000)		(50 000)
Receiver of Revenue (VAT)	1 686 980		524 576
Amounts accrued	476 778		543 523
Directors' vehicle scheme	0		19 920
Other	806 689		243 267
	<u>4 477 513</u>		<u>5 737 533</u>
10. Cash and cash equivalents			
Short term deposits	42 217 487		20 000 000
Cash on hand	152 203		99 947
Bank balances	23 154 056		22 649 274
	<u>65 523 746</u>		<u>42 749 221</u>
Attributable to Projects fund	53 045 044		37 020 996
Attributable to Income fund	12 478 702		5 728 225
	<u>65 523 746</u>		<u>42 749 221</u>
11. Capital commitments			
Approved and contracted:			
Kirstenbosch Centre for Biodiversity	7 021 229		11 855 407
Land Acquisition: Walter Sisulu NBG	4 500 000		-
Poverty Relief Funded Developments	-		12 225 058
DEAT Funded Developments	4 966 882		18 782 675
	<u>16 488 111</u>		<u>42 863 140</u>
Approved and not yet contracted:			
Poverty Relief Funded Developments	35 591 706		18 900 000
	<u>35 591 706</u>		<u>18 900 000</u>
12. Contingent liabilities			
Staff housing guarantees, estimated maximum	27 344		111 768
Post-retirement benefits	1 623 351	14	3 277 000
	<u>1 650 695</u>		<u>3 388 768</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE **NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005 [continued]**

13. Board Members' and Executive Directors' Emoluments

Board Members' Emoluments

Fees for the board and board sub-committee meetings for the period 1 April 2004 to 31 March 2005 were as follows:

Board Members (NBI) 01 April 2004 to 31 August 2004		Honoraria	Travel and other costs	Total
		R	R	R
	Mr Saliem Fakir (Board Chairperson)	10 443	8 847	19 290
*	Ms Elmarie Buis	-	7 292	7 292
	Prof Richard Cowling	3 096	10 036	13 132
	Mr Gijima Dladla (Finance Committee Chairperson)	14 332	14 289	28 621
	Prof Jan Glazewski	6 192	11 988	18 180
	Dr Jenny Jay	2 064	4 949	7 013
*	Ms Nosipho Jezile	-	2 926	2 926
	Dr Colin Johnson	10 633	22 694	33 327
	Mr Matome Makgoba	5 160	1 864	7 024
	Dr Bruce Mc Kenzie	6 192	8 428	14 620
	Ms Angie Phaliso	8 256	1 866	10 122
*	Ms Rebone Segoale	-	1 137	1 137
*	Ms Sibongile van Damme	-	1 791	1 791
*	Dr Razeena Wagiet	-	-	-
*	Ms Joanne Yawitch	-	434	434
	Mr Abel Dlamini (Audit Committee Chairperson)	1 032	1 427	2 459
		67 400	99 968	167 368

* No Honoraria paid - State employee

Board Members (SANBI) 01 September 2004 to 31 March 2005		Honoraria	Travel and other costs	Total
		R	R	R
*	Ms Bongiwe Njobe (Board Chairperson)	-	-	-
	Prof Steven Chown	1 032	-	1 032
	Mr Saliem Fakir	1 032	3 597	4 629
*	Dr Patricia Hanekom (Audit Committee Chairperson)	-	927	927
	Dr David Mabunda	1 032	4 132	5 164
	Ms Vuyo Mahlati	1 032	3 717	4 749
	Dr Monde Mayekiso	1 032	191	1 223
*	Ms Marjorie Pyoos	-	-	-
	Mr Ton Vosloo (Finance Committee Chairperson)	1 032	-	1 032
	Ms Pam Yako	-	-	-
*	Mr Fundisile Mketeni	-	-	-
		6 192	12 564	18 756

* No Honoraria paid - State employee

Executive Directors' Emoluments

	Salary	Benefits	Total
	R	R	R
Chief Executive Officer	410 592	220 441	631 033
Chief Financial Officer	331 834	178 854	510 688
Chief Director: Gardens	333 345	178 968	512 312
Chief Director: Research	331 834	178 854	510 688
Chief Director: Human Resources	305 218	163 495	468 713
Director: Biodiversity	301 834	151 844	453 678
Director: Research North	283 003	151 972	434 975
Director: Research South	281 721	151 844	433 565
Director: Education	283 003	151 940	434 943
Working for Wetlands Project Manager	260 346	173 564	433 910
CAPE Project Manager (Jul' 04 to Mar' 05)	231 125	154 084	385 209
GISP Project Manager (Jan' to Mar' 05)	67 972	45 315	113 287
	3 421 825	1 901 176	5 323 000

Above denotes actual costs as at 31 March 2005

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2005 [continued]

14. Post Retirement Benefits

1. The National Botanical Institute Retirement Fund (NBIRF) consists of the National Botanical Institute Provident Fund and the National Botanical Institute Pension Fund. The names of the above funds are in the process of being changed to the South African National Biodiversity Institute Provident Fund and Pension Fund, respectively.
2. Membership of the Funds are a prerequisite on all permanently employed staff employed as from the 1 December 1994.
3. The Funds are administered by the South African Mutual Life Assurance Society (Old Mutual Ltd), which is registered in terms of the Pension Fund Act 24 of 1956.
4. The Funds are a defined benefit fund with certain minimum guarantee commitments to members in service on or before 30 November 1995 and a defined contribution fund for members in service thereafter.
5. The policy is to provide retirement benefits for employees by means of separate pension and provident Funds to which both employee and employer respectively, contribute in equal proportion.
6. The employer contribution to the funds are 20.61% (20.88%) of salaries. In November 1999 the Institute's Board resolved to reduce the age for normal retirement for all employees to 60 without penalty, in line with the State and other organisations similar to the Institute, and to extend the period of deficit contributions to fund the additional costs.
7. The next valuation will be at 30 June 2005 and every third year thereafter.

Type of plan: The plan is defined contribution with a defined benefit underpin.

Assets and liabilities to be recognised in the Balance sheet at 31 March 2005

Present value of defined benefit obligations (wholly funded)	100 951 981
Fair value of assets	(98 413 000)
Net actuarial gains (losses) not recognised	(1 623 351)
Past service cost not yet recognised	-
Unrecognised assets	-
Fair value of any reimbursement right recognised	-
Net liability	915 630

Change in net liability (or asset) recognised in the Balance sheet

Opening net liability at 31 March 2004	3 277 000
Expense recognised in the income statement	3 819 851
Contributions paid	(6 181 221)
Closing net liability at 31 March 2005	915 630

Income Statement

Current service cost	2 904 750
Interest cost	8 328 961
Expected return on assets	(7 413 860)
Actuarial gains (losses) recognised	-
Past service cost	-
Effect of any curtailment or settlement	-
Expense to be recognised in the income statement	3 819 851
Actual return on assets	17.2%

Assumptions

Discount rate	9.0%
Expected rate of return on assets	9.0%
Expected rate of salary increases	6.0%
Inflation	5.0%

Post Retirement Health Care

SANBI's conditions of employment and staff establishment conform with the Public Service conditions of employment and are subject to Ministerial approval. In terms of these procedures it is the practice to account for post retirement health care costs in the year of entitlement, that is, on a cash basis. The State is at present investigating the whole question of medical aid benefits. SANBI has no control over this. SANBI estimates that the exposure in terms of the current practice is of the order of 40% of personnel costs, or approximately R20 million. This matter will be investigated further and possibly raised with the Department of Environmental Affairs and Tourism in the coming year.

SANBI is currently providing approximately 5.6% of basic monthly salaries towards the retirement fund deficit. Actuarial estimate is that this retirement fund deficit will be cleared in approximately two years, as detailed in the note above. Post retirement health care costs amount to about 2% of basic salaries. SANBI will continue with current practices, and in due course allocate the 5.6% towards covering this exposure.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE
STATEMENT OF CHANGES IN EQUITY FOR THE PERIOD ENDED 31 MARCH 2005. STATEMENT 3

	Income Fund R	Capital Fund R	Total R
Balance at 31 March 2003	2 398 714	76 552 960	78 951 674
Income	72 445 354	-	72 445 354
Expenditure	(74 305 280)	-	(74 305 280)
Fixed Assets	-	26 319 321	26 319 321
Depreciation	-	(4 921 766)	(4 921 766)
Transfer: (to) from Projects Fund	-	400 252	400 252
Balance at 31 March 2004	538 788	98 350 767	98 889 555
Income	87 112 660	-	87 112 660
Expenditure	(85 434 665)	-	(85 434 665)
Fixed Assets	-	22 638 188	22 638 188
Depreciation	-	(5 297 691)	(5 297 691)
Transfer: (to) from Projects Fund	-	345 229	345 229
Balance at 31 March 2005	2 216 783	116 036 493	118 253 276

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE **CASH FLOW STATEMENT FOR THE PERIOD ENDED 31 MARCH 2005.**

STATEMENT 4

	March 2005 R	Notes	March 2004 R
Cash flows from operating activities			
Net surplus / (deficit) for the year	1 677 995		(1 859 926)
Adjustments for:			
Depreciation	5 297 691		4 921 766
Investment income	(3 395 868)		(2 718 516)
Interest paid	175 937		288 478
Disposal of fixed assets	-		(140 089)
Attributable to Projects Fund	33 709 774		43 924 380
Operating surplus before working capital changes	37 465 529		44 416 093
Working capital changes	4 136 933		3 735 340
(Increase) / decrease in inventories	141 063		(132 943)
Increase /(decrease) in trade and other receivables	1 240 101		(1 093 468)
Increase in trade and other payables	2 755 769		4 961 751
Cash generated from operations	41 602 462		48 151 433
Interest received	3 395 868		2 718 516
Interest paid	(175 937)		(288 478)
Net cash inflow from operating activities	44 822 393		50 581 471
Cash flows from investing activities	(22 531 497)		(26 035 384)
Purchase of fixed assets	(22 638 188)		(26 319 321)
Proceeds from sale / disposal of fixed assets	86 771		171 837
Decrease / (increase) in director's vehicle scheme	19 920		112 099
Cash flows from financing activities	483 630		(432 000)
Post-retirement benefits	915 630		-
Repayment of loan	(432 000)		(432 000)
Net increase / (decrease) in cash and cash equivalents	22 774 525		24 114 087
Cash and cash equivalents at beginning of period	42 749 221		18 635 134
Cash and cash equivalents at end of period	65 523 746		42 749 221

