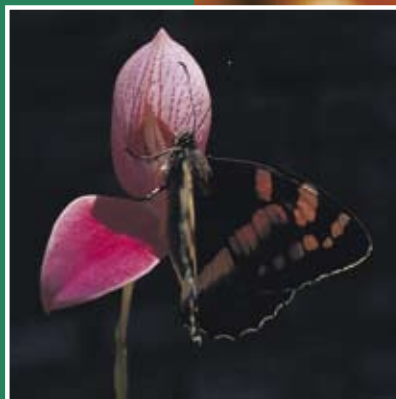




SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

ANNUAL REPORT 2005 - 2006

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August 2006

ISSN 1021-7460

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

Annual Report 2005 – 2006



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 symbolises 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.

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CHAIRPERSON'S REPORT



This Annual Report covers the period from April 2005 to the end of March 2006. During this period SANBI has been challenged with the continuing process of institutionalisation, following the enactment of the new Act and the appointment of the new Board.

At the Board level, the focus has been on developing a three-year high-level strategic plan that responds to the mandate of SANBI. The Board has reviewed its operational systems and structures in order to align its focus with the broader mandate of the Institute, and has also initiated a process to stabilise the Institute by developing a business case for SANBI and addressing the challenges with respect to organisational development.

The focus of the Board strategy has been on corporate governance, with the aim of putting in place clear Board governance procedures and systems and developing appropriate strategies to ensure alignment and full compliance with the PMFA. The second area identified for attention was developing a comprehensive strategy for attaining legislative coherence in support of the SANBI mandate. The main activities were research and analysis to establish the areas of potential overlap or conflict – more work and focus will continue into the coming year. A third area of focus was a critical analysis of SANBI's financing strategy, taking into consideration the complexity of its role as a producer of public goods, a partner in international research and a service provider through its facilities. This work led to the Board engaging in a process of developing a sound business case for the

work of SANBI into the future. In the coming year, we expect to engage more deeply with the Department of Environmental Affairs and Tourism to clarify and reach agreement on the long-term business case.

On the scientific front, the Board has agreed to use the managed network model as the primary model for developing the activation of the full scope of the mandate of SANBI. This is a complex set of relationships that need to be defined and structured and work will continue into the new financial year. With respect to the knowledge management role of the Institute, a two-year process was put in place that begins with a gap analysis of national capacity. Finally, the Board also identified the challenges of building scientific capacity and the transformation of SANBI. I am pleased to report that the Board has made substantial progress in the majority of these challenges, and we are confident that given the appropriate support we will complete the tasks we set out for ourselves.

Growth in the national economy, targeted for 6% in Government's Accelerated and Shared Growth Initiative, will require increasing levels of strategic decision support, to facilitate the use and management of our natural resources and biodiversity, especially if such growth is to be matched by environmental sustainability. SANBI is committed to contributing to this need by rapidly expanding its capacity, and that of the three tiers of Government, to ensure environmental health for all, as enshrined in the Constitution.

A fundamental shift in emphasis from classical research and nature protectionism to the active mainstreaming of biodiversity benefits across economic sectors and production landscapes, has brought relevance and vitality to SANBI's programmes. In reviewing the science strategy, the continuum of activities from discovery, inventory, assessment to conservation and sustainable use of biodiversity has been positioned in two main thrusts – biological systematics and collections, and conservation science and sustainable use research. These two research programmes have become increasingly integrated with SANBI's biodiversity policy and planning, and outreach programmes. While much has been achieved in the science programmes – with over 350 publications in the peer reviewed, electronic and popular literature – greater priority will be needed in the coming years to address the 'taxonomic impediment' that characterises zoological systematics in Africa.

This Annual Report illustrates how many such contributions by SANBI to good environmental governance have already been made in the past financial year. Particularly exciting has been the growth of the various bioregional programmes (CAPE, STEP, SKEP, Grasslands) and the societal as well as environmental benefits flowing from our many Extended Public Works Programme-funded activities within the Greening the Nation and Working for Wetlands projects. I hope as you read this report, you will both enjoy it and also have an opportunity to absorb the significance of this amazing public sector institution, and that you will emerge with an appreciation of the biodiversity challenges facing us as a country and a people.

I would like to congratulate and thank the CEO, Professor Brian Huntley, his management team and indeed the staff of SANBI for their hard work in the past year and acknowledge that without them this report, its content and form, would not have been possible.

Ms Bongiwe Njobe
Board Chairperson
South African National Biodiversity Institute
Pretoria
July 2006

CHIEF EXECUTIVE OFFICER'S OVERVIEW



South Africa has an exceptionally rich biodiversity. It is also globally unique in the innovative legislative framework that Parliament has provided for the conservation and sustainable use of our living natural resources. The National Environmental Management: Biodiversity Act of 2004 provided for the establishment of SANBI, the only institution in the world that has a national mandate embracing the discovery, description, inventory, monitoring, conservation, research, appreciation and sustainable use of an entire country's fauna, flora and their ecosystems.

Since its recent establishment, SANBI has rapidly redesigned and expanded the goals, strategic objectives and programmes of the previous National Botanical Institute to respond to the widened mandate of the Act. In particular, the development of broad-based networks in bioregional programmes, in biodiversity policy and in land use planning, has had a significant impact on national, provincial and local level capacity to mainstream biodiversity across socio-economic development programmes. The consolidation of the CAPE, STEP, and SKEP programmes, and the development of a National Grasslands Biodiversity Programme provides for the implementation of key elements of the Act and of the various draft regulations being developed by the Department of Environmental Affairs and Tourism. SANBI has played an increasing role in biodiversity planning in the Eastern Cape, Mpumalanga and Northern Cape where existing local capacity has been strengthened by SANBI support.

This Annual Report illustrates the close collaboration between SANBI and its many stakeholders at national, provincial and local government levels, strengthened through

partners in universities and research institutions throughout South Africa and abroad. The involvement of local communities and volunteer groups has been especially successful in the Greening the Nation Programme, and in the Threatened Species Programme, where both capacity building and job creation objectives are integrated to ensure the achievement of both societal and biodiversity goals.

The existing research programmes of SANBI have been given new focus by the Act, with restructuring within two main themes – systematics and collections, and conservation and sustainable use research. The inclusion of animal groups such as birds, reptiles, frogs, butterflies and spiders, is a first step towards fulfilling the expectations of the Act for SANBI to fully address both animal and plant diversity.

The need to grow a new generation of biodiversity professionals in this country has long been recognised by SANBI, and our robust internship programmes, with 84 young professionals currently participating, and our graduate studies programme utilised by 45 staff members, are key components of our capacity development programme.

The successful conclusion of the SABONET project, and the production of digital images of all South African plant type specimens for the African Plants Initiative, provide substantial foundations to addressing the need for more taxonomists in Africa. SANBI's experience is regularly sought by institutions throughout the continent seeking advice on initiating national and regional programmes in biodiversity science and capacity building.

A major achievement resulting from international collaboration has been the publication of the massive *Checklist of Flowering Plants of Sub-Saharan Africa*, for which SANBI's team of plant taxonomists deserves special credit. Similarly, the publication of the new *Vegetation Map of South Africa, Lesotho and Swaziland*, a ten-year project involving dozens of vegetation scientists under the leadership of SANBI, provides the most detailed vegetation classification and map for any similar sized country in the world.

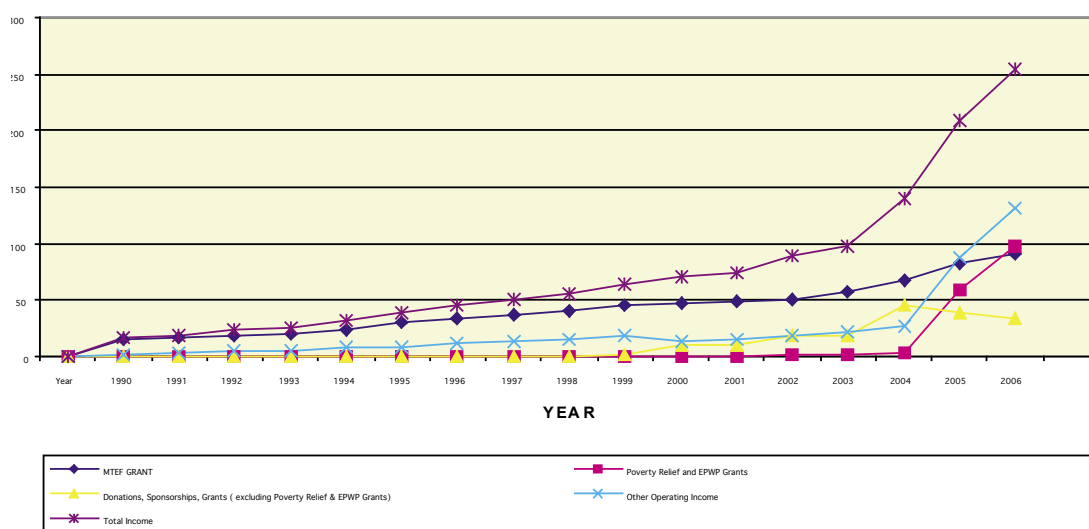
The achievement of the SANBI mandate is dependent on adequate resources, and towards this end both management and the Board have developed a new Business Case to be submitted by DEAT to Treasury in the coming fiscal year. The growth requested is significant, but in tune with the Institute's absorptive capacity for new funds, reflected in the dramatic increase in

funding and expenditure streams reported on in the Annual Reports of the past decade, illustrated in the graph below. Of singular significance was the attainment of financial self-sufficiency by Kirstenbosch, which in the period under review generated non-grant income of R18,900,000, against expenditure of R16,798,000, thus meeting the goal of financial sustainability set in 1990, and achieved through a range of strategic investments in visitor amenities and service facilities.

SANBI's programmes could not be achieved without very substantial grants from national and international sources. While the Global

Environment Facility (through the World Bank, United Nations Development Programme and United Nations Environmental Programme) remains the largest donor, very significant grants have been received in this year from Conservation International, the Andrew Mellon Foundation and the Government of Norway. The Rufford Maurice Laing Foundation made the largest grant ever received by SANBI from a private trust, establishing the Centre for Biodiversity Conservation which provides shared office and meeting facilities for our many conservation partners based in Kirstenbosch, through a donation of £1 million.

SANBI INCOME 1990 - 2006



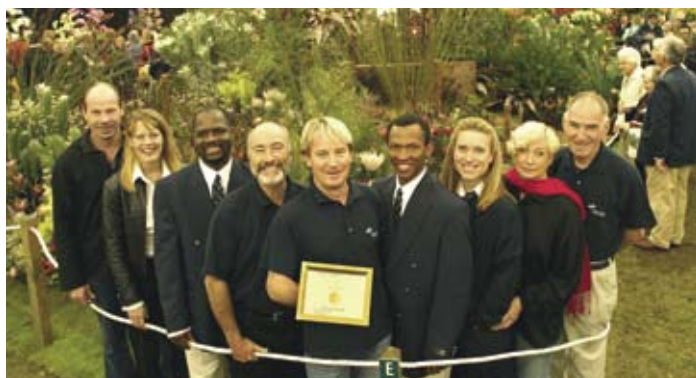
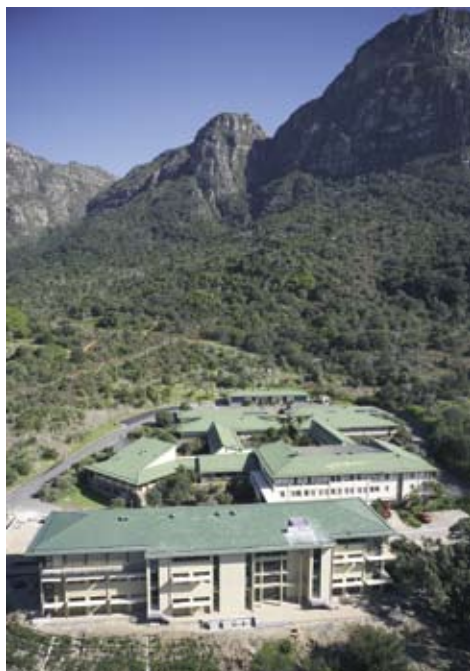
The official opening of the Rufford Maurice Laing Centre for Biodiversity Conservation: Ms Bongi Njobe (SANBI Chairperson), Mr Marthinus van Schalkwyk (Minister of Environmental Affairs and Tourism and Mr Terry Kenny (Rufford Maurice Laing Foundation).

The late Mrs Mary Mullins, a lifelong supporter of Kirstenbosch, added R1 million to her many earlier gifts to the garden in her will. The garden also received generous bequests of R316,000 from the estate of Mr MD Rayner and R250,000 in memory of Mr PLF Irvine – continuing examples of the deep affection South Africans have for this national treasure.

As in previous reports, it is a pleasure to acknowledge the continued support of the Department of Environmental Affairs and Tourism, from the Chair and members of the SANBI Board, and for the energy and enthusiasm of all SANBI staff.

Brian J Huntley
Kirstenbosch
July 2006





- The Rufford Maurice Laing Centre for Biodiversity Conservation opened at Kirstenbosch National Botanical Garden (NBG).
- 1,250,748 people visited the eight NBGs – the highest combined visitor number ever received. The Free State NBG received a record 46,846 visitors, a 78% increase on last year, while Kirstenbosch NBG reached a record 750,498 visitors, with over 100,000 visitors attending concerts.
- Direct, non-grant income generated by Kirstenbosch NBG was over R18,900,000, against expenditure of R16,798,000 reaching the goal of financial sustainability set in the 1990 Kirstenbosch Development Campaign.
- More than 1,900 people were employed in temporary situations through funded poverty relief projects in the gardens, with more than 130,000 temporary job days worked, of which more than 40,000 were worked by women.
- New environmental education facilities were completed in the Free State and Lowveld NBGs through the Department of Environmental and Tourism Affairs (DEAT)'s Expanded Public Works Programme (EPWP).
- *Checklist of the Flowering Plants of sub-Saharan Africa* was published – the first, comprehensive and authoritative list of the 50,000 species of African plants.
- SANBI taxonomists identified 15,398 plant specimens for the public and consultants, and answered 10,568 enquiries.
- Twenty-nine new plant species were discovered by SANBI researchers.
- *Plants of southern Africa*, a 1,231 page synthesis of the plants of five southern African countries, now updated every fortnight, is available on the SANBI website.
- The Millennium Seed Bank (MSB) project made 694 seed collections, of which 343 species were collected by the MSB (Cape), the most ever collected by any country since the programme started.
- Heavy flooding caused extensive damage to the Harold Porter NBG in April when 20% of the Garden's annual total rainfall fell within 24 hours.
- The first number in the new *SANBI Biodiversity Series* was published, synthesising South Africa's contribution to the 2010 biodiversity goals set out in the Global Strategy for Plant Conservation.

2005 – 2006



PLANTS OF SOUTHERN AFRICA
an online checklist

NEW SEARCH INTRODUCTION HELP

SPECIFY ANY COMBINATION OF SEARCH CRITERIA:

Family (Select from list) [select family] Show genera

Genus (Select or find genus) aloe Find genus

Species (Select from list) [select species]

LIFE HISTORY: (Use checkboxes to include taxa with incomplete details)

Lifecycle ☐ [select lifecycle]

Lifeform ☐ [select lifeform] ?

Plant height (m) ☐ Min. Max.

Altitude (m) ☐ Min. Max.

DISTRIBUTION: (use [Ctrl] for 2 or more)

B: Botswana
CP: Cape Province
EC: Eastern Cape
FS: Free State
G: Gauteng

- The number of learners from schools that visited as part of the Garden Based Environmental Education Programme in the Lowveld, Pretoria, Kirstenbosch and Walter Sisulu NBGs, either sponsored or at their own expense, was 46,580.
- The Outreach Greening Programme established 113 indigenous gardens in local schools.
- Information for over 4,500 plants used medicinally within the Flora of Southern Africa region has been recorded as part of the African Plants Initiative project.
- The Global Change Research Group led the production of a report *A status quo, vulnerability and adaptation assessment of the physical and socio-economic effects of climate change in the Western Cape*, the first such regional review in Africa.
- The wall-map version of the new *Vegetation Map of South Africa, Lesotho and Swaziland* was published, showing the 435 vegetation types at a scale of 1:1 million.
- SANBI staff publish 350 papers on biodiversity of South Africa and beyond.
- The Red Listing team of the Threatened Species Programme completed its assessment of 99.7% of the 4,681 plant taxa of known conservation concern and is poised to publish the new Red List of South African Plants.
- The Southern African Reptile Conservation Assessment (SARCA) received more than 1,000 'electronic' specimens of reptiles seen.
- Volunteers and staff of the Custodians of Rare and Endangered Wildflowers (CREW) programme re-discovered several rare plants in the Worcester area, including *Moraea worcesterensis*, *Polhillia obsoleta*, *Ixia mostertii*, and *Drosanthemum hallii*.
- The Working for Wetlands Programme provided 268,000 person days of work for 2,135 previously unemployed people, via 196 SMMEs, restoring 43 wetlands.
- The South African exhibit at the Chelsea Flower Show, entitled *Afrikan Dream*, was awarded its twenty-seventh Gold Medal at the Show.

BIOREGIONAL PROGRAMMES, POLICY AND PLANNING

The Bioregional Programmes, Policy and Planning Directorate is a relatively new business area that is growing rapidly in response to a suite of functions required of SANBI by the Biodiversity Act. A major focus of the directorate's work is supporting accelerated and effective environmental decision-making that contributes to socio-economic development and sustainable management of ecosystems and species. The Biodiversity Act provides a clear framework guiding this work. In a nutshell the Directorate is responsible for ensuring that SANBI:

- identifies national biodiversity priorities and provides policy advice on biodiversity management
- provides regular reports to the Minister on the status of biodiversity
- provides open access to value-added biodiversity information for South Africa

Interactive session at the 2006 Biodiversity Planning Forum.



Participants at the 2006 Biodiversity Planning Forum.



- develops guidelines and technical support for mainstreaming biodiversity across all production sectors and organs of state
- hosts and facilitates networks of partners and stakeholders in an arrangement that is optimum for biodiversity management within any given bioregion (e.g. CAPE, SKEP, STEP, Grasslands)
- and finally, demonstrates through development and implementation of strategic programmes and projects, the value of conserving biodiversity as well as the relevance of biodiversity to the improvement of quality of life for all South Africans.

The Directorate provides an interface between research enquiry and implementation. It utilises the research information and databases created by other directorates in SANBI as well as institutions outside SANBI, to develop tools and mechanisms used for biodiversity planning and implementation by a range of institutions. The directorate is increasingly geared to provide specialist capacity for bridging the gap between science on the one hand, and development and environmental policy on the other.

BIODIVERSITY PLANNING

The Biodiversity Planning Unit provides technical advice on biodiversity assessments. In September 2005, the unit expanded and relocated to the Biodiversity Centre at Pretoria. The unit provides training opportunities for young scientists through a successful internship and studentship programme. New staff were appointed and two students graduated during this period. At a national level, the unit contributed to the identification of priority areas for the National Grasslands Biodiversity Programme (NGBP), which focuses on the delivery of ecosystem services.

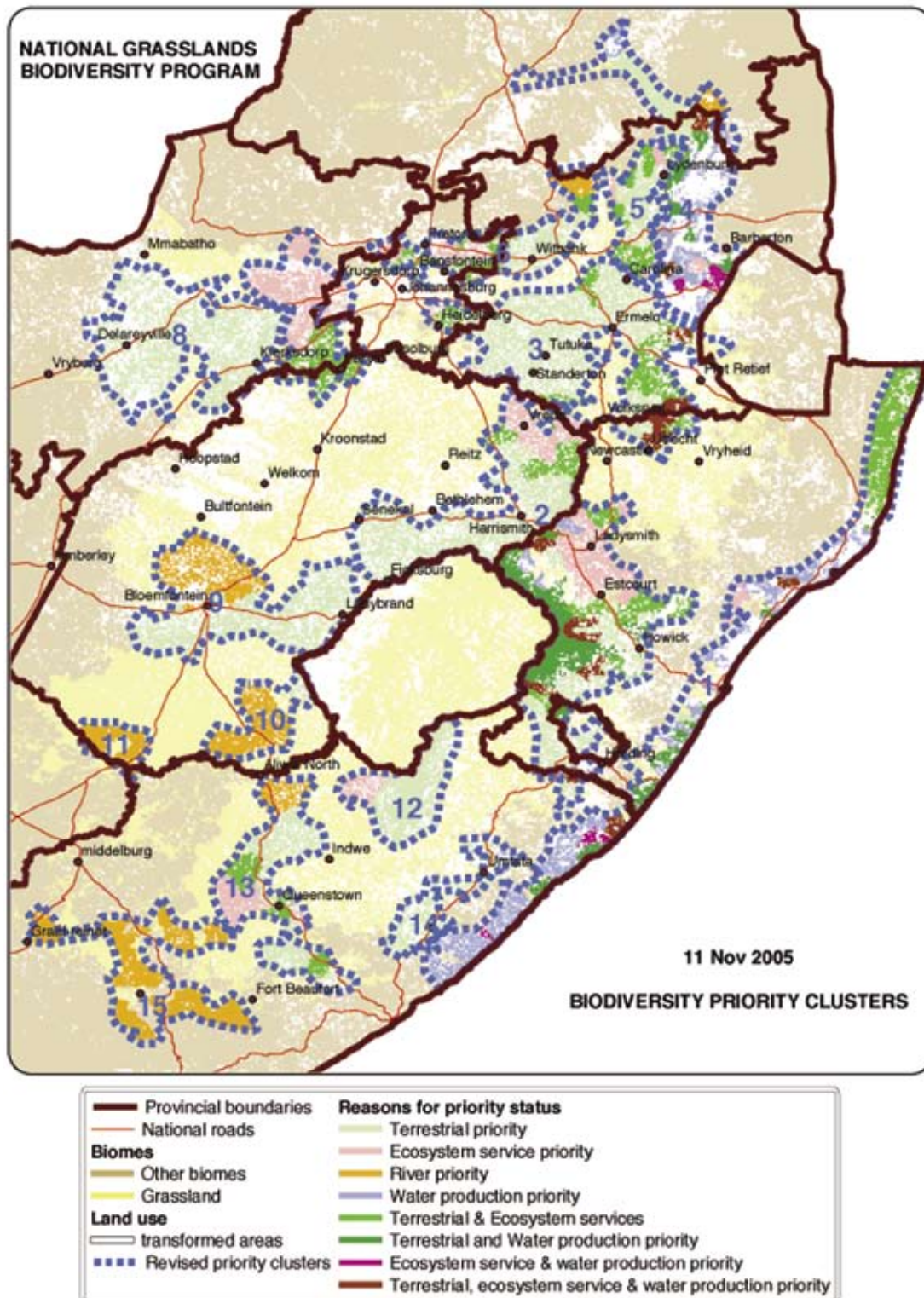
The unit, together with the Bioregional Policy and Monitoring Unit, continued to provide strategic and technical guidance to provincial biodiversity planning initiatives. Mpumalanga province was supported in their provincial biodiversity plan, which included the development of guidelines for land-use planning and decision-making to accompany the map of the biodiversity priority areas. New approaches for integrating freshwater and terrestrial biodiversity planning were pioneered during the planning process. Initial discussions on provincial biodiversity planning initiatives are underway with the North-West, Free State and Limpopo provinces.

The Biodiversity Planning Unit and the Bioregional Policy and Monitoring Unit provide guidance and advice to local-scale biodiversity planning initiatives undertaken as part of the Cape Action for People and the Environment (CAPE) and Succulent Karoo Ecosystem Project (SKEP) bioregional programmes.

The 4th annual Biodiversity Planning Forum was held in Mpumalanga from 14-17 February 2006. It was co-hosted and co-sponsored by SANBI, the Mpumalanga Department of Agriculture

and Land Affairs (DALA) and the Mpumalanga Parks Board (MPB). The Biodiversity Planning Forum provides an opportunity for individuals, agencies and departments involved in spatial biodiversity planning to share and synthesise valuable lessons from biodiversity planning projects across South Africa. The Forum has grown considerably since its inception in 2004 and this year there were 98 participants representing conservation agencies, provincial environment and conservation departments, national departments, NGOs, universities and

Priority areas in the grassland biome identified for the National Grasslands Biodiversity Programme.



research institutes, bioregional programmes, and independent consultants. All nine provinces were represented, and there was international participation from Lesotho, UK, Germany and Finland. The main themes of the 2006 Forum were freshwater conservation planning and the integration of terrestrial and freshwater assessments.

The unit published 11 papers in peer-reviewed journals and books on conservation planning and biological invasions and presented three papers at international conferences and two at local conferences.

MAINSTREAMING BIODIVERSITY PRIORITIES IN MULTIPLE SECTORS

In early October 2005, the Bioregional Policy and Monitoring Unit hosted the first annual forum on Mainstreaming Biodiversity in Land-Use Planning and Decision-Making. Decisions at the local and district level often determine whether biodiversity is appropriately managed and thus whether development is sustainable. Many of

the bioregional programmes and provincial conservation agencies are already engaging with municipalities around integration of biodiversity priorities in land-use planning and decision-making. Projects in the Eastern Cape, Gauteng, KZN, Mpumalanga, Northern Cape and Western Cape were represented at the workshop. This workshop provided an opportunity to share information and lessons learnt, to explore the challenges experienced and the need for simple biodiversity products, and to identify next steps for taking forward efforts to mainstream biodiversity in municipalities.

The unit provides support and guidance to pilot projects working on mainstreaming biodiversity in local government, including Putting Biodiversity Plans to Work in the Western Cape (led by the Botanical Society Conservation Unit, funded by the Critical Ecosystem Partnership Fund as part of the CAPE programme) and Mainstreaming Biodiversity in Planning and Development in the Eastern Cape (a partnership project between SANBI and the WESSA Biodiversity Conservation Unit, funded by the Development Bank of South Africa).

Putting Biodiversity Plans to Work: an example of a biodiversity priorities poster produced by the Botanical Society for the Swartland Municipality in the Western Cape province.



MONITORING AND REPORTING ON THE STATUS OF BIODIVERSITY

THREATENED SPECIES PROGRAMME

The Threatened Species Programme (TSP) continues to support SANBI in its drive to expand beyond plants. In May 2005, the South African Reptile Conservation Assessment (SARCA) was formally launched at Kirstenbosch. More information on the project, including how the public can participate, can be found on www.saherps.net. The TSP has received funding from SANBI and NORAD to start up two new projects, namely the Southern African Butterfly Conservation Assessment (SABCA), a partnership between the Avian Demography Unit, the Lepidopterist Society of Africa and SANBI (the TSP), and the Southern African National Survey of Arachnida (SANSA) with the Agricultural Research Centre.

The TSP once again took a high profile at this year's South African Association of Botanists (SAAB) congress in Port Elizabeth in January by hosting a symposium on Threatened Plants and their Conservation. Thirteen speakers presented work on topics including the genetics, ecology, demography and conservation of threatened plants and the sessions generated valuable questions and discussions.

Red Listing continues to be the programme's primary focus as the TSP counts down the last few months to the review and publication of the new Red List of South African Plants. The Red Listing team has now assessed 99.7% of the 4,681 plant taxa of known conservation concern. These taxa have been assessed in great detail and internal evaluations and quality checks are in their final stages. At this stage a scary 1,265 taxa (~6% of the total flora) are listed as 'Threatened' i.e. are facing a high risk of extinction. The race is on to double-check the last 19% of the 16,190 taxa that are not considered as of concern and ensure that they are really of 'Least Concern'. So far, 4% of those checked have needed to be moved to the list of 'Special Concern' species, often because no expert knowledge, literature or data exists for them. Lists of these 'Data Deficient' taxa will be published to help direct future research and monitoring priorities.

The Freshwater Biodiversity Assessment of Southern Africa was launched by the South African Institute of Aquatic Biodiversity (SAIAB) and the IUCN in May 2005. This programme is the first to take an ecosystem approach, rather than a taxonomic one, to Red Listing in South Africa, and experts on fish, molluscs, insects, crabs and plants are involved. The TSP team and

regional experts benefited greatly from an IUCN training course on the application of the Red List Criteria, which was presented in Grahamstown in May 2005. The TSP will be involved in the assessment of freshwater and wetland plants facing serious threats such as pollution, urban development and climate change.



*Critically Endangered
Aloe peglerae in the
Magaliesberg
(Photo: Allan Tait).*

SARCA HITS 1,000 REPTILES

In addition to having conducted 10 successful reptile collecting fieldtrips, the Southern African Reptile Conservation Assessment (SARCA) has received more than 1,000 'electronic' specimens from members of the public. The public are asked to take digital photos and GPS co-ordinates of any reptiles seen and email these to the programme. They are then identified by a panel of South Africa's top experts and are housed in the 'virtual museum' on SARCA's website. It is extremely encouraging that a significant proportion of records has been collected by botanists and SANBI staff.



*A moment of
discovery: SARCA is
successfully getting
the public involved
in monitoring
reptiles
(Photo: Marius Burger).*



Johlene Zietsman conducts cross-pollination experiments on Oxalis species as part of her TSP sponsored MSc at the University of Stellenbosch.

DIGITISING HERBARIUM SPECIMENS OF RARE AND THREATENED SPECIES

Enthusiastic staff at the McGregor, Compton, Bolus, Southern Cape, Selmar-Schonland, KwaZulu-Natal and University of Limpopo Herbaria are capturing information on over 24,000 existing specimens of rare and threatened species on labels and entering it on databases that will ultimately be added to SANBI's PRECIS and SIBIS information systems. By funding this work and training the herbaria staff in databases and georeferencing, the TSP is helping to set up a reliable and nationally compatible network of systems, as well as to establish solid baseline data on historical plant distributions. This data, which will be available online via SIBIS, is essential for providing the information on distribution and population declines needed for Red Listing and will play a vital role in conservation planning and research.

Right: Krishni Naidoo, our new Red List Officer, meets a coelacanth in Grahamstown.

Far right: The Harmony Flats CREW Group, monitoring populations of the threatened plants on their reserve in the Gordon's Bay/Strand area.



THE CUSTODIANS OF RARE AND ENDANGERED WILDFLOWERS PROGRAMME

Custodians of Rare and Endangered Wildflowers (CREW) is a programme that creates awareness of threatened plant species in South Africa and helps custodians – mainly private landowners and community groups – conserve and manage the habitats where these plants occur. CREW works with volunteer groups in the critically threatened lowland areas of South Africa.

The CREW programme started in the Cape Floral Region (CFR) and has been operating for almost three years. During this time 12 groups and over a hundred volunteers have been involved. In the Cape lowlands 411 sites have been surveyed and 1,333 special species records (endemic, rare and threatened species) recorded by CREW volunteers. These data have significantly contributed to updating the Red List for plant species, which will be published in August 2006. In addition, CREW volunteers have identified 21 sites as top priority for conservation and have helped convince landowners to formally conserve their land. These landowners are currently undergoing the process of contracting their land as part of Cape Nature's Stewardship programme.

As a result of the programme's success in the Fynbos region, SANBI decided last year to expand CREW nationally. A CREW office was set up at the Pretoria NBG and during 2006, CREW will focus on setting up new groups in KwaZulu-Natal, the Eastern Cape, the Northern Cape (particularly Namaqualand), and Mpumalanga. These groups of volunteers will monitor threatened plant species throughout the country. SANBI and the Botanical Society have also finalised a memorandum of understanding that formalises the partnership to jointly implement CREW.



Volunteers learning about veld management at a CREW workshop.



AN EXAMPLE OF A FIELD TRIP WITH CREW



The Critically Endangered Moraea worcesterensis.



The very scarce and beautiful Ixia mostertii.

On 18 September 2005, volunteers and CREW members set out to Worcester to try and find *Moraea worcesterensis*. This species is only known from the Worcester area and was first discovered in 1983. *Moraea worcesterensis* is about 12-25cm high with a solitary linear leaf that is most often twice as long as the stem. It has dark purple flowers with small yellow nectar guides on the inner and outer tepals. At the time of this discovery, the town of Worcester was expanding rapidly and the site where the plant was discovered was destined for development. Thus it was thought to have gone extinct shortly after its discovery. In 1999 this species was recorded in an area north of Worcester. The CREW mission was to try and relocate this population and survey other renosterveld patches around Worcester to find new populations: a challenging task since the species only flowers for one week in September and the flowers only last one day. Through extreme good fortune, the CREW team discovered not only an example of *Moraea worcesterensis* in flower at the first stop, but also a population of a very rare member of the pea family, namely *Polhillia obsoleta* as well as a beautiful bulbous plant, *Ixia mostertii*, also extremely rare. The team also stumbled across a strange looking mesem, *Drosanthemum hallii*, another Worcester endemic that is critically threatened.

BIODIVERSITY INFORMATION MANAGEMENT

SANBI'S BIODIVERSITY INFORMATION SYSTEM

Progress is being made with the SANBI Biodiversity Information System (SIBIS) Project, which aims to centralise SANBI's biodiversity information databases and provide a web-based interface to improve access to these resources. Tools such as online mapping and secure editing facilities will also be included. The project has successfully incorporated the TSP and CREW databases, and has almost completed the documenting and inclusion of the PREtoria Computerised Information System (PRECIS), which includes SANBI's holdings of plant taxonomic and herbarium specimen information, with close to a million herbarium specimen records and growing every day. The next phase of the project will extend the scope of the information to include horticultural and cultivation data for the plants found in the NBGs. It will also start to move outside the strictly botanical realm with the inclusion of bird atlas data and other information sets.

The South African Biodiversity Information Facility (SABIF) portal was successfully launched in June 2005 by the Department of

Science and Technology, and provides web-based tools to search for specimen data within a range of participating nodes. Data providers currently include the Albany Museum, the Avian Demography Unit (ADU) at the University of Cape Town, Iziko Museums of Cape Town and SAIAB. New data nodes are being added all the time, and SANBI will soon become one of these. SABIF also funds digitisation projects to encode the valuable specimen and other biodiversity-related information currently held in non-electronic form in a variety of collections. The management of the SABIF project is being transferred from the NRF to SANBI, enabling useful synergies with SANBI's other information management initiatives, in addition to providing a simple standardised platform for other regional biodiversity information holders to make their data more widely available.

Other information management initiatives have included work on the redevelopment of the SANBI website, as well as the inclusion of two new information resources on the web:

Plants of southern Africa: an annotated checklist (G. Germishuizen & N.L. Meyer (eds)) provides up-to-date taxonomic, distribution and life history information on all plants found in southern Africa. The site is updated every two weeks from the main PRECIS database.

A Zoo-Historical Gazetteer (C.J. Skead & M.J. Collins (eds)) provides a synonymy of place-names and the type-localities of all mammals and birds up to 1970. This resource is not updated, but includes useful search facilities for those unable to access the original document.

Jack Skead's Gazetteer
A zoo-historical gazetteer for southern Africa

Search: Search all

Places found: 286 Page << 1 >>

PLACE	COORDINATE
Aberfeldy, Harrismith, O	2813/2852
Mammal Types: <i>Pedetes capensis orangiae</i> , Wroughton, 1907 <i>Otomys sloggetti turneri</i> , (Wroughton), 1907	
Agulhas, Cape v. Cape Agulhas	
Algoa Bay, C	c.3350/2550
Synonyms: Baay Lagoa; Baya da Lagoa; Bay of Wolves; Baia da Lagoa; Baia da Roca (Dias); Baia dos Lobos (i.e. Wolves i.e. seals) 1554; Bahia da (or de) Lagoa; Golfo da Roca (1502); The Bay; Alagoa; Zwartkops Rivier Bay; Zwartkops Bay; Alagoa Bay; Lagoa; Agoa; Lagoa; Krakekamma Bay	

BIODIVERSITY GEOGRAPHICAL INFORMATION SYSTEMS

The Biodiversity Geographical Information Systems (BGIS) section is a CAPE project responsible for managing spatial biodiversity planning information and for making it available on the website. Since joining SANBI on 1 July 2005, it has now expanded its function to include publishing national spatial biodiversity information. The unit provides value-added services of facilitating access to the data and

information on compact disk and in hardcopy map format, data and information analysis, interpretation and application.

During the past year, the website was revamped to reflect the institutional change of the project and also updated with the spatial data and the reports of the National Spatial Biodiversity Assessment. Furthermore, a double volume CD set of all available spatial biodiversity data and reports were created, with over 200 CD sets already distributed. To complement the website

and CD sets, a series of four information sheets were produced, detailing the function of the unit, the products available on the website, the GIS tools available on the website and explaining the contents and purpose of the CD set.

The GIS Lab at Kirstenbosch was refurbished as the first step in creating synergy between the various users of GIS within SANBI. The lab will act as a biodiversity GIS hub of activity where GIS users can draw on the computer resources as well as interact with other staff members. A GIS working group was established to co-ordinate activities related to GIS between the various users within SANBI.

A two-day SANBI-CAPE GIS training session was held at the Kirstenbosch Research Centre. The aim was to provide GIS training to staff members from the CAPE partner organisations. Twenty-one people received training on how to use GIS, to manage spatial data and how to use the BGIS website.



SUPPORTING POLICY DEVELOPMENT

The Bioregional Policy and Monitoring Unit has contributed to the National Strategy for Sustainable Development, which is currently being developed by DEAT. The unit is supporting DEAT in the development of the National Biodiversity Framework (NBF), which is required in terms of the Biodiversity Act and will be published during 2006. The Biodiversity Act provides for the publication of bioregional plans, which will be used as spatial tools for ensuring that biodiversity is taken into account in land-use planning and decision-making that impacts on natural resources across the landscape. The unit has developed norms and standards for publishing bioregional plans in terms of the Biodiversity Act. These norms and standards will be gazetted together with the NBF. The unit is also in ongoing dialogue with provinces that already have a provincial biodiversity plan that could form the basis of a published bioregional plan. The work of the unit will be instrumental in moving towards more informed decision-making around land use.



CAPACITY BUILDING PROGRAMME

A key factor for the success of the Biodiversity Directorate is the development of core capacity to perform the full spectrum of functions with which the Directorate is mandated. Since its inception in 2003, the Directorate has undergone rapid growth and a key activity within all focal areas has been the development and implementation of targeted capacity building and skills development programmes.

A very active and successful mentoring programme aimed at increasing capacity in GIS and conservation planning among young scientists, with a focus on the previously disadvantaged, has been implemented. The mentorship programme includes both short-term (three- or six-month) internships and MSc or PhD studentships. To date, seven interns, eight MSc students and three PhD students have been supported through the programme. Financial support for the internships and MSc studentships is drawn from the SANBI training fund, whilst donor or project funding is used to support the PhD studentship programme and non-South African students. This mentorship programme is complemented by the provision of training to project staff, as needed, by SANBI's BGIS Unit.

The TSP has focused its capacity building effort on funding the research of eight postgraduate students, six of whom are from previously disadvantaged backgrounds, and on providing in-house mentorship to one MSc and one PhD student, each of whom is working on threatened plant issues. In total, the TSP has trained eight recently graduated young scientists to become Red List officers on the TSP staff. Similarly, CREW has a strong focus on capacity building and training of its own staff, as well as on training

Providing information for more informed future land use decision-making: Coastal development at Msikaba River Estuary.

Left: The GIS lab at the Kirstenbosch Research Centre.



Students and interns attending the 2006 Biodiversity Planning Forum.

some 120 volunteers who are working with the programme. Two of the CREW office team are young black biologists.

The Bioregional Programmes Co-ordination Unit in the Eastern Cape, although only recently formed, has also embarked on a capacity building initiative, through the provision of experiential training and mentorship to young black women interns. The first of these interns has gone on to work in the biodiversity management section of the Nelson Mandela Metro, and a second intern is currently receiving training as a bioregional programmes projects officer.

BIOREGIONAL PROGRAMMES THE EASTERN CAPE BIOREGIONAL PROGRAMMES CO-ORDINATION UNIT

The number of bioregional planning or conservation and development initiatives falling wholly or partly within the Eastern Cape has now grown to six – CAPE, SKEP, STEP, the Wild Coast Programme, the Grasslands Biodiversity Initiative and the Maloti-Drakensberg Transfrontier Project. This has resulted in the expansion of the high-level co-ordination

role played by the Bioregional Programmes Co-ordination Unit, with a concomitant growth in the number of staff to include a co-ordinator, a project developer, a projects officer (internship) and an administrator.

The Eastern Cape Implementation Committee for Bioregional Programmes (ECIC) is a co-operative governance committee that has been established through a process facilitated by SANBI's Bioregional Programmes Co-ordination Unit. The overall function of the ECIC is to ensure ongoing implementation and integration of bioregional plans and associated conservation and development programmes in the Eastern Cape and to promote co-ordination and co-operation between key implementing agencies responsible for biodiversity management in the province. Members are signatories to a Memorandum of Understanding, which was first launched in November 2004. During the past year, the number of signatory agencies has grown from 16 to 21 and now includes all key departments at national and provincial level and their associated public entities (such as SANBI, SANParks and the Eastern Cape Parks Board), key district municipalities, the two metropolises in the Eastern Cape, key environmental NGOs and the Development Bank of South Africa. Meetings of the ECIC were held quarterly during the year and have broached topics including coastal zone management and development issues, bioregional planning, co-operative governance in relation to protected areas, new legislation relating to the sustainable use of agricultural resources; building capacity for meaningful incorporation of biodiversity priorities into land-use planning and decision-making in the Eastern Cape, and community involvement in bioregional conservation and development programmes. The Bioregional Programmes Co-ordination Unit continues to provide secretariat support to the ECIC and is the focal point for Eastern Cape implementing agencies.

The Bioregional Programmes Co-ordination Unit has been working at community level to develop and implement the Fish River Biodiversity

The Umthathi Africulture Centre: an urban conservation project training session and the nursery.



Initiative, a suite of community-based projects that aim to secure the conservation of subtropical thicket in a priority corridor, through interventions that also address social and economic upliftment needs. The Unit works closely with stakeholders to identify, develop and catalyse these projects, using funds from the provincial Department of Economic Affairs, Environment and Tourism, supplemented by other donor funding, such as the UK-based Darwin Initiative and the National Lottery Fund. The projects form a part of the Integrated Development Plans of the relevant municipalities. The implementation of five of these projects has commenced during the current reporting year. These include a medicinal plant nursery with associated training programmes for traditional healers, traders and end-users (the Umthathi Africulture Centre); an urban conservation project (the Vukani Greenbelt, near Grahamstown), an eco-heritage tourism development project that builds on the scenic beauty and biodiversity of the Mhala valley and five community-managed heritage sites that provide a Xhosa perspective to the Frontier Wars; the establishment of a conservancy which includes five land-owners along the western bank of the Kap River; a community field guides training programme run through the Ndlambe municipality and a series of linked projects on the Bathurst Commons. The Unit provides ongoing implementation support to these projects.

NATIONAL GRASSLANDS BIODIVERSITY PROGRAMME

The grassland biome is the second largest biome in South Africa, occupying 29% of the country's land territory. The biome is a repository of globally significant biodiversity, providing a storehouse of floristic diversity and constituting an Endemic Bird Area, which has been accorded the highest global priority ranking. However, in common with other temperate grasslands across the globe, South Africa's grasslands are critically threatened. Some 30% of the area has already been irreversibly transformed by anthropogenic activities and only 2.8% is formally conserved but not representative of species and habitat diversity across these landscapes. Much of the remaining habitat is fragmented, and situated in production landscapes allocated to livestock production, agriculture and afforestation with fast growing exotic tree species. South Africa's largest urban and industrial centres are located within the grasslands.

In May 2005, the UNDP-GEF funded National Grasslands Biodiversity Programme (NGBP) was initiated and is currently in the design phase. The programme will complement existing conservation endeavours in the biome by seeking to mainstream conservation objectives



A working group at the Grassland Forum held in November 2005.

into agriculture, forestry, urban development and coal mining sectors. The programme will remove a number of critical barriers to conservation management, including amongst others, management know-how, market failure, and institutional capacity. These barriers will be addressed through development of new management tools geared to the needs of specific sectors that protect biodiversity as part of production processes, internalising the non-pecuniary values of ecosystem services in production, and strengthening capacity to address conservation imperatives as part of economic development.

Over the last year a number of studies have been done to assist in the programme design including a Grassland Biodiversity Profile and Spatial Biodiversity Priority Assessment. This assessment identifies and integrates priority



areas for terrestrial and river biodiversity, as well as ecosystem services for future conservation action in the grassland biome. The programme has established various strategic and implementation structures. The Grassland Forum, which provides the opportunity for all stakeholders to discuss key strategic issues facing the programme, met in November 2005 and involved 70 participants from seven provinces, the private sector and civil society. Other structures that meet regularly include the Urban Task Team, the Forestry Task Team, the Agricultural Task Team and the Conservation Planning and Scientific Advisory Team. Grassland Demonstration District Task Teams are currently being formed as co-ordination mechanisms to ensure effective implementation at the identified demonstration sites.

SUCCULENT KAROO ECOSYSTEM PROGRAMME

The Succulent Karoo Ecosystem Programme Co-ordination Unit (SKEP) joined SANBI in July 2005. SKEP is an overarching framework for conservation action and sustainable development of the Succulent Karoo Hotspot. The Succulent Karoo is a global biodiversity treasure with over 6,000 plant species, 250 species of birds, 78 species of mammals, 132 species of reptiles and amphibians and an unknown number of insects. It is the world's most diverse arid environment. Most impressive, however, is that over 40% of these species are found nowhere else on Earth. The programme seeks to address conservation issues, including pressures like mining, agriculture, and environmentally unfriendly development planning.

During the SKEP planning phase, stakeholders representing many sectors provided input and guided the programme into developing a twenty-year strategy for achieving the vision and targets.

SKEP Namaqualand team with the Mayor and officials from the Kamiesberg Municipality planning future developments and land-uses.



Nine priority areas were identified, namely Sperrgebiet, Greater Richtersveld, Bushmanland Inselbergs, Namaqualand Uplands, Central Namaqualand Coast, Knersvlakte, Hantam Roggeveld, Central Breede River Valley and the Central Little Karoo. In each of the priority areas an anchor project has been set up to ensure that conservation targets are achieved. These include the Bushmanland Conservation Initiative, which is implemented by the Botanical Society of South Africa, the Namaqua Wilderness Initiative implemented by Conservation International, Building Stewardship Capacity in the Northern Cape hosted by the Botanical Society, and the Gouritz Initiative, which is hosted by CapeNature. Each of these projects has established partnerships with various stakeholders in their areas, including government, municipal, private and non-governmental organisations. These partnerships have resulted in significant buy-in and support from the various statutory bodies, including municipalities, for guiding implementation.

In 2005, SKEP partnered with several academic, policy and research institutions to host the Namaqua Colloquium. The purpose of this event was to look back at 10 years of research including social, economic and biodiversity in the Namaqualand region and identify key lessons. Major issues addressed at this conference included the challenge of land reform, and the access of new land for both conservation and land reform purposes.

To date, the programme has been successful in implementing a total of 88 conservation and development projects. Of this, 59 projects have been funded through the CEPF block grant, with a total of US\$ 5.3 committed. As a result of CEPF funding alone, 73 new conservation and development jobs have been created, and there is potential for many new jobs as a result of the wide range of projects currently being implemented.

THE CAPE BIOREGIONAL PROGRAMME

The Cape Action for People and Environment (CAPE) Programme is a partnership programme aimed at addressing conservation and development priorities in the Cape Floristic Region, which extends from Nieuwoudtville and the Cederberg in the north-west to the Nelson Mandela Metropolitan Municipality in the east. The programme was founded in 2000 and is currently being driven by 23 partner organisations.

The CAPE Co-ordination Unit is housed within SANBI and provides co-ordination, oversight,

support, and communication functions, as well as promoting relations between partner organisations. The programme's management is also supported by several project management units, located in key biodiversity corridors across the regions, such as the Greater Cederberg Biodiversity Corridor (hosted by CapeNature), the Garden Route Initiative (hosted by SANParks), The Gouritz Initiative (hosted by CapeNature), and the Baviaanskloof Megareserve (hosted by the Wilderness Foundation and Eastern Cape Parks Board).

The past year has seen the unit focus on the mobilisation of its grant from the GEF for the CAPE Biodiversity Conservation and Sustainable Development Project. Launched by the National Minister of Environmental Affairs and Tourism, this \$11 million investment directed through the World Bank and United Nations Development Programme catalyses the mainstreaming of biodiversity into production landscapes and provides support for strengthening protected area projects in priority areas.

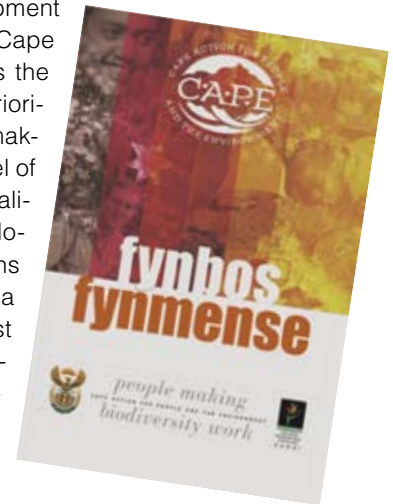
A key event during this period was the CAPE Partners' Conference 2005, which brought together relevant stakeholders, with an emphasis on community stakeholders, under the popular banner of 'Fynbos Fynmense'. The conference provided an opportunity to influence programme implementation. It also saw the introduction of the first CAPE Conservation Awards, presided over by the Western Cape Minister for Environmental Affairs and Development Planning, which recognises exceptional personal effort beyond the call of duty in support of the conservation of the CFR. Stewardship awards for landowners who have committed their properties through contractual agreements under the CAPE Conservation Stewardship programme were inaugurated and the first eight awards made.

During the year, three important workshops were held where programme partners could network and build capacity around technical and operational areas of their work. The CAPE Protected Areas Forum took place in October (in the Garden Route) and in February (on the Agulhas Plain) and focussed on sustainable tourism, world heritage and management effectiveness in the major conservation corridors supported by the CAPE Programme. The Fynbos Forum also provided an opportunity to showcase work by many CAPE Partners, and the first steps were taken to develop a 'virtual' knowledge network dubbed the Fynbos i-Forum that will make networking knowledge, literature, skills and lessons learned possible through a managed network approach being pioneered by SANBI.



Delegates to the CAPE Partners' Conference 2005

The year has seen a major step forward with the integration of biodiversity priorities generated by the CAPE Programme into the Western Cape's Provincial Spatial Development Framework launched by the Western Cape Premier in December 2005. This sets the stage for ensuring that biodiversity priorities underpin development decision-making throughout the province at the level of bioregional plans for district municipalities and for 'putting plans to work' in local municipalities. Several organisations under the banner of CAPE conducted a flight and site visit to the West Coast Sandveld region, to assess the over-use of water, soils and biodiversity resources. An action plan for presentation to the Minister is currently being prepared.



In addition to these activities supported by SANBI's CAPE Co-ordination Unit, significant achievements by CAPE partner organisations included:

- the launching of the first Biodiversity and Wine champions
- the handover of the indigenous forests of the Southern Cape to SANParks
- extensive work on upgrading of infrastructure in the Baviaanskloof through the EPWP
- the successful completion of the first offering of the CAPE Goldfields participatory course in conservation education
- the launch of the Western Cape Stewardship Association.

CONSERVATION AND SUSTAINABLE USE RESEARCH

The Kirstenbosch Research Centre (KRC) in Cape Town continued to develop as a centre of excellence for biodiversity science, focusing on the taxonomy of the winter rainfall flora, biodiversity responses to climate change, land use, and invasive species, the use of molecular (DNA) tools to understand relationships between organisms and to aid conservation actions, and the sustainable use of biodiversity. The past year has seen an expansion of the research programme to deal with the SANBI mandate, which has meant including a more diverse assemblage of organisms in the research programme as well as focusing on key issues identified in the Biodiversity Act and the National Biodiversity Strategy and Action Plan.

The KRC has consistently aimed to provide effective decision support to government through a robust biodiversity science programme. This year, the team produced 53 papers in peer-reviewed journals and books and a further 16 semi-popular publications. Building on the awards received in previous years, three KRC scientists were recognised for their contributions to science or for making information more accessible to civil society – Mr Barney Kgope was

awarded the Compton Prize by the South African Association of Botanists, Dr John Manning received the Marloth Medal from the Botanical Society of South Africa, and Dr Guy Midgley was a finalist in the NSTF awards for individual contributions to science and technology over the past five years.

Capacity building has been an important part of the KRC research programme for several years. Four students who were co-supervised by KRC staff graduated with higher degrees, two with PhDs and two with MSc degrees, and a further 11 are enrolled for higher degrees with various universities. The internship programme, which provides students from previously disadvantaged groups with exposure to research as a career option, ran for a fifth consecutive year and six students spent their summer vacations at the KRC participating in a range of research projects. One indicator of the success of the programme is the progression of interns to MSc studentships or research posts and, so far, seven interns have taken up positions in SANBI. This year a 2005 intern successfully applied for the vacant DNA bank manager post.

RUFFORD MAURICE LAING CENTRE FOR BIODIVERSITY CONSERVATION

The Centre for Biodiversity Conservation, a wonderful new building linked to the Kirstenbosch Research Centre, was made possible by a £1 million grant from the Rufford Maurice Laing Foundation. The purpose of this building is to provide office and meeting accommodation for SANBI's key partners engaged in conservation projects throughout southern Africa, most particularly in the biodiversity hotspots of the Cape Floral Region and the Succulent Karoo Biome.

The facility which provides several meeting rooms and a 150-seat conference venue, was opened on the first anniversary of the signing of the Biodiversity Act, by Minister Marthinus van Schalkwyk on 1st September 2005. To mark the event, a Biodiversity Time Capsule containing a range of items, from publications and CDs with data on the current state of biodiversity, to lists of most threatened species, and seeds of many plants that may be extinct in the wild in 50 years' time, like the Kokerboom, Silver Tree, a selection of Proteas and Vygies, was sealed and placed in the wall of the foyer, to be opened in 50 years time. The partners presently making use of the CBC are the Global Invasive Species Programme (GISP); Conservation International (CI); Cape Action for People and the Environment (CAPE); Succulent Karoo Ecosystem Project (SKEP); the World Conservation Union Species Survival Commission (IUCN-SSC), the Botanical Society of South Africa; and TRAFFIC East/Southern Africa. With the building linked by an enclosed walkway to the Kirstenbosch Research Centre, it offers a unique opportunity for interaction between SANBI scientists and the international NGO community.



GLOBAL CHANGE RESEARCH GROUP

This group, which came into being during the course of the year, broadens the scope of previous research on climate change and invasive species. This includes the development of a collaborative project on birds and environmental change, which capitalises on the publicity value of birds as well as their value as indicators of environmental change. In order to increase the group's visibility and improve public awareness, new website content was implemented, and several public lectures and media interviews were given over the year by staff members, including appearances on *The big question* and *Judge for yourself*.

The group was mainly responsible for the science programme of the National Conference on Climate Change held at Midrand in October 2005, involving key international speakers and resulting in the launching of new national efforts to assess risks, impacts and studies of adaptive strategies relating to climate change and biodiversity. Staff continued to participate in South Africa's negotiating team in international climate change talks, attending key meetings in Bonn (June 2005) and Montreal (December 2005). Policy inputs and assistance were also provided to the Western Cape Government through the Department of Environmental Affairs and Development Planning, including leadership in producing a report entitled *A Status Quo, Vulnerability and Adaptation Assessment of the Physical and Socio-economic Effects of Climate Change in the Western Cape*, and the leading of a regional workshop on climate change vulnerability, impacts, and adaptation in February 2006. This workshop led to a draft strategy for climate change adaptation in the Western Cape. Staff members also contributed

to the efforts of other national departments, such as Agriculture and Land Affairs and were involved in the drafting of the fourth global assessment by the Intergovernmental Panel on Climate Change (IPCC).

Research activities have been as productive as ever, with the publication of more than 25 scientific publications, one major report, participation in congresses around the country and internationally, and the completion of an MSc thesis (*cum laude*). Many national and international collaborations are underway, with major benefits to South African stakeholders. Field tests of succulent species' tolerances to high temperatures resulted in an important publication that engendered interested and critical comment around the world. Ongoing work has highlighted the importance of rising atmospheric CO₂ on plant growth, and its possible role in facilitating the phenomenon of 'bush encroachment', so important nationally and internationally as a form of land cover change.

THREATENED SPECIES AND ECOSYSTEMS RESEARCH

The wall-map version of the new *Vegetation Map of South Africa, Lesotho and Swaziland* was published at the end of 2005. The map shows the 435 vegetation types at a more detailed scale (1:1 million) than previous maps that typically included only about 70 vegetation types. Also included for the first time is an inset of the vegetation of the Prince Edward Islands (with five vegetation types) as well as an inset of the revised biomes of southern Africa. The map represents the best available information on the extent and structure of different vegetation types in South Africa and is a basic resource for



Barney Kgope uses an infra-red gas analyser to measure photosynthesis of proteas at Silvermine.

ecological research, conservation and land-use planning, resource assessments, and ecotourism. One of the requirements of the regulations for Biodiversity Act is the designation of threatened status to ecosystems and the vegetation map is a crucial tool for the development of methods for assigning threatened status.

The emphasis has now shifted to the production of the book that accompanies the map, a major tome that is now projected to exceed 800 printed pages. This has been a large collaborative effort between SANBI and many partner organisations, in particular Stellenbosch University. With the checking of about 10,000 different species names in the book, the final touches have taken longer than expected but the book is nevertheless expected to be published later in 2006. The book is well-illustrated and includes an atlas section of the vegetation map as well as a CD of the electronic version of the map.

The Protea Atlas database, developed over the past 12 years, has been an invaluable resource for conservation planning, climate change research, biodiversity mapping, and more esoteric research questions. The database has now been checked and cleaned, and is available to researchers wishing to use the data. Work is currently underway with collaborators from Connecticut and Duke universities to explore the fine-scale responses and vulnerabilities of proteas to climate change in the CFR. The IUCN Red Data List status of Proteaceae has also been completed and has profoundly influenced the assigning of Red List status to other taxa in the Cape Floristic Region. Work is underway on producing *The Protea Atlas*.

BIODIVERSITY, ECOSYSTEM SERVICES AND LAND USE RESEARCH

This is a new area of research that is required to provide decision support regarding thresholds for sustainable development based on the relationship between land use options, biodiversity, and ecosystem services. The main activity over the past year was the development of South Africa's contribution to a Global Environment Facility (GEF) project on the evaluation of pollination as an ecosystem service, together with partners in the Agricultural Research Council of South Africa (ARC), provincial agriculture departments, and the private sector. The proposal was submitted to the GEF in March 2006 but several important products were already produced during the development phase, including an assessment of insect-pollinated crops, a bibliography of existing literature, and a survey of traditional pollination systems.

Many of the products of the recently concluded Conservation Farming Project led by SANBI and funded by GEF support the intentions of this research programme. Four papers arising from the project were published this year and a PhD on the assessment of ecological goods and services in an arid region was successfully completed.

LESLIE HILL MOLECULAR SYSTEMATICS LABORATORY

The Laboratory experienced a shift in focus from being a purely botanical one to encompass biodiversity as a whole, reflecting the new SANBI mandate. Appropriately, the new head of the laboratory has a background of research on marine mammals, frogs and reptiles, and several new projects were initiated during her first few months. These include work on the phylogeography of dwarf chameleons, responses of reptiles to climate change, the genetics of figs and fig wasps, studies of invasive frogs, and research support for the South African Reptile Conservation Assessment. Most of these projects will be carried out by MSc students and they are all collaborative projects between the laboratory, IZIKO Museum, Stellenbosch University or the Global Change Group of SANBI.

The DNA bank continued to grow and now has 4,414 accessions, representing 3,102 species and 1,237 genera. The first phase of the Darwin Initiative funding for the project came to an end and the project outputs, including a manual on DNA banking, were well received by the funders. One of the objectives of the project was to explore the use of phylogenetic data from the DNA bank for conservation planning and the first Phylogenetic Diversity Workshop took place in Cape St. Francis in 2005 and brought together conservation and phylogenetic researchers from South Africa, Australia, USA and the UK. One of the outcomes of the workshop was a successful application for second phase funding from the

Dr Krystal Tolley has recently joined SANBI as research leader for the Leslie Hill Laboratory for Molecular Systematics.



Darwin Initiative to explore the use of the data for conservation planning.

The Lab has also been involved with the Consortium for the Barcode of Life (CBOL), a major international initiative to explore the potential use of DNA 'barcodes' in applied biodiversity projects. Laboratory staff attended the first CBOL meeting in London in February 2005 and were subsequently invited to participate in the successful Plant Working Group (PWG) proposal to the Sloane and Moore Foundations. Ten institutions from Europe, Latin America, South America, the US and South Africa will be running trials with the aim of identifying a standard barcoding system applicable to all land plants. CBOL also held a symposium on the role of barcoding.

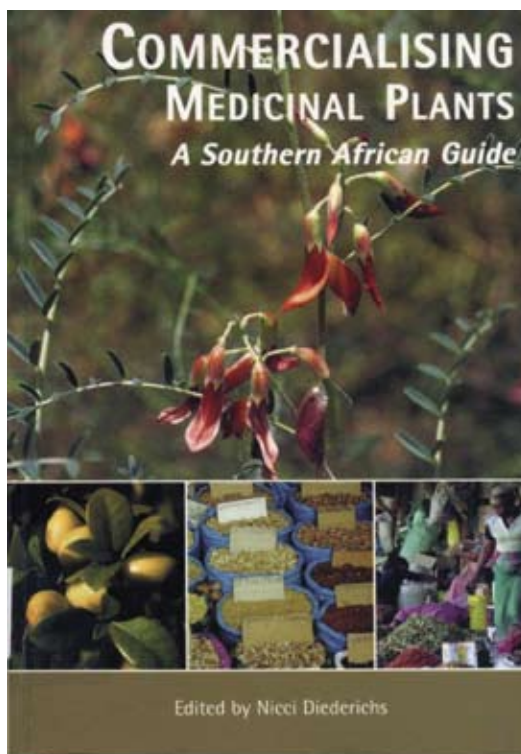
ETHNOBOTANY

The Ethnobotany Unit based at the KwaZulu-Natal Herbarium in Durban, has consolidated its research findings in the publication of 16 scientific papers and five chapters in books. Two chapters have appeared in a recent landmark volume on the commercialisation of medicinal plants in southern Africa. The guide is aimed at satisfying a wide readership, particularly entrepreneurs and those involved in developing and sustaining the traditional medicines industry. It presents knowledge and tools to address conservation challenges, as well as to capitalise on emerging business opportunities. Chapters cover subjects as diverse as the sustainable wild harvesting, propagation and farming of *muthi* plants, conservation and trade

regulations, chemical analyses, processing and packaging technologies, economics and marketing, business development and access and benefit-sharing in the context of recently enacted legislation. Contributors include policy analysts, social scientists, horticulturalists, ecologists, ethnobotanists, resource economists, conservationists, academics and businessmen.

Natural products chemistry collaborations have developed internationally, including with the School of Biomedical and Molecular Sciences at the University of Surrey, UK. Collaborative research in a similar vein is continuing at the School of Chemistry at the University of KwaZulu-Natal. In the course of work with the latter institute, one postgraduate scientist has been co-supervised at PhD level, while another has obtained his MSc with distinction for his project on bioprospecting methodology development. This work has supported the ongoing Novel Drug Development Platform project. The essential work of this project has been extended for at least a further year following a successful mid-term review by the National Research Foundation. Leads obtained for drugs against malaria, diabetes and tuberculosis have been deemed sufficiently promising to warrant pursuing research and industrial development.

Presentations were made by unit members at various local and international conferences, including the 1st CSIR Innovation and Research Conference in Pretoria and the 11th NAPRECA Symposium in Antananarivo, Madagascar.



Mr JJ Magadula harvesting roots as part of the KwaZulu-Natal research programme.

SYSTEMATICS RESEARCH AND COLLECTIONS MANAGEMENT

In response to the terms of the Biodiversity Act, which mandates SANBI to **undertake and promote research on biodiversity, its conservation and sustainable use**, the following focal areas have been identified under the Systematics and Collections programme:

- co-ordinating and promoting taxonomy,
- biological systematics research, and the dissemination of the results and outcomes,
- collections management, maintenance and expansion,
- support services required for research collections and information dissemination, and
- maintaining and expanding the data captured from specimens and other sources, deposited in accessible databases.

Broadly defined, the aims of all systematics endeavours in SANBI which are centred at the National Herbarium, Pretoria, the Compton Herbarium, Cape Town, and the KwaZulu-Natal Herbarium, Durban, are to discover, describe and document southern Africa's exceptionally rich biodiversity in monographs, revisions, catalogues and inventories. Such studies are prerequisites to understand and reflect species relationships that will lead to the production of

predictable classifications that are useful in a variety of derivative environmental thrusts, such as bioprospecting and conservation. In addition, the data generated in this way, and through databasing label information from preserved specimens, must be assembled into efficient databases that are easy to manipulate and interrogate for the benefit of various end-users. Collectively the SANBI herbaria house 1.8 million plant specimens, while the PRECIS database currently holds more than 970,000 plant and specimen records and is constantly being upgraded and expanded.

The documentation of the flora of southern Africa has received significant attention over the past year as taxonomists continue to record new species and to unravel the intricacies of relationships among plants through detailed studies. In addition, the herbarium collections are regularly expanded and improved through targeted field work, which in the last year resulted in the discovery of 29 species new to science. Such studies also enabled the production of an enriched catalogue of the plants of South Africa and the new year will see the publication of the first-ever in-country plant list with an indication of range-restricted species, and their distribution.

PLANTS OF SOUTHERN AFRICA ON-LINE

The voluminous *Plants of southern Africa*, a 1,231 page tome, was published in 2003 as part of SANBI's *Strelitzia* series. Apart from listing the 24,035 taxa occurring in five subcontinental countries, the publication also provided information on alternative names, growth forms, plant height, altitudinal range, and distribution by province. Since plant taxonomy is a dynamic science, plant names and related information constantly change. To keep the information in this publication current, and to disseminate it more freely, it became necessary to make this resource available electronically through SANBI's website. This resource became available towards the end of 2005. The database, which is updated bi-weekly, provides users with a number of search options, primarily of data categories provided in the hard copy. Plans to improve and expand this valuable resource are currently underway.

PLANTS OF SOUTHERN AFRICA
an online checklist

NEW SEARCH INTRODUCTION HELP

SPECIFY ANY COMBINATION OF SEARCH CRITERIA:

Family (Select from list) [select family] Show genera

Genus (Select or find genus) aloe Find genus

Species (Select from list) [select species]

LIFE HISTORY: (Use checkboxes to include taxa with incomplete details)

Lifecycle ☐ [select lifecycle]

Lifeform ☐ [select lifeform] ?

Plant height (m) ☐ Min. Max.

Altitude (m) ☐ Min. Max.

DISTRIBUTION: (use [Ctrl] for 2 or more)

B: Botswana
CP: Cape Province
EC: Eastern Cape
FS: Free State
G: Gauteng

The bumper rains in the Northern Cape enabled research staff to substantially increase the number of specimens collected and this has contributed to an increase in the knowledge of the biodiversity of the area. Focus by the scientific staff of the Compton Herbarium on the Aizoaceae, Amaryllidaceae, Campanulaceae, Colchicaceae, Hyacinthaceae, Hypoxidaceae, Iridaceae, Orchidaceae and the lycopods and ferns has led to the description of 11 new plant species and a new genus.

Shizoglossum umbelluliferum, an unusual milkweed, was re-collected in Pretoria after last having been collected in this area 109 years ago.

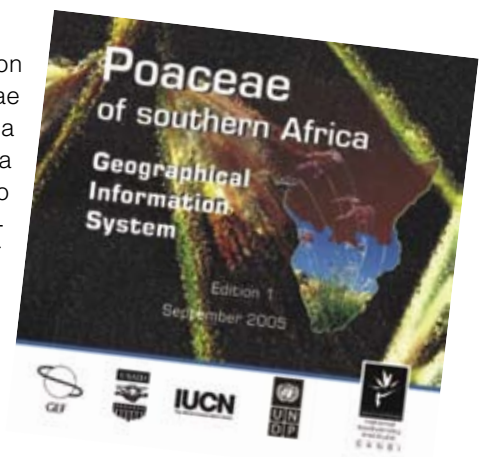
At an elevated level this inventorying work of SANBI's taxonomists is being expanded through the initiation of regional Flora projects for the Succulent Karoo, the Free State, KwaZulu-Natal, and the Eastern Cape. The end-products of these scientific endeavours will provide all these regions with detailed and descriptive catalogues of the plants that occur within their boundaries.

The active execution of systematics studies also facilitates the servicing of the commitments of the South African government to the United Nations Convention on Biological Diversity (e.g. the GTI and GSPC) by providing a platform for integrating the outputs from studies in systematics with those from conservation, ecology and sustainable use.

SANBI was well represented at the International Botanical Conference in Vienna and international collaboration was strengthened by visits by researchers to herbaria in Kew, Paris, Geneva and the 12th International Gondwana symposium in Argentina. The research work done by SANBI was promoted nationally in South Africa through participation in the SASOL Techno X Exhibition in Sasolburg and through 126 scientific and popular articles published by staff in the three herbaria.

To fulfil the responsibility of the support services to disseminate information to a broad variety of different stakeholders, scientific staff at all three of SANBI's herbaria have identified over 15,398 specimens during the past year and have dealt with approximately 10,568 enquiries from the public.

A Geographical Information System for the Poaceae (grasses) of southern Africa was completed by the Data Section and released to all herbaria who had participated in the SABONET project for use and testing. The product houses over 150,000 herbarium specimen records of grasses from the 15 SABONET herbaria.



A website for the Southern African Biodiversity Support Programme was developed with the assistance of the SANBI IT staff. The website

AFRICAN PLANTS INITIATIVE

The African Plants Initiative (API) Project, which has as its primary objective the creation of electronic images of as many type specimens of names published for African plants and making these images available electronically, hosted another workshop in February 2006 which was attended by 70 delegates from 23 countries. To complete this project, a further R2,872,000 was secured from the Mellon Foundation for the three SANBI herbaria. During the past year the API staff completed the scanning of 14,161 type specimens and have made considerable progress in the scanning of the art and slide collections.



As part of the API, a new and more comprehensive database of southern African medicinal plants is being developed, which represents an expansion of the original checklist of medicinal plants published in 2001. To date, information has been recorded for over 4,500 plants used medicinally within southern Africa.

domain is www.sabsp.net and contains a repository for documents on access and benefit-sharing and alien and invasive species and a discussion forum. National rosters of South African experts in the fields of access and benefit-sharing and alien and invasive species have been prepared and submitted for inclusion in the SADC Regional roster.

The Zulu Botanical Knowledge Project received funding from the National Research Foundation for a two-year period, to support fieldwork. The project got underway with the appointment of two fieldworkers and the purchase of a vehicle dedicated to the project, facilitating the initiation of field surveys.

The internship programme in the three herbaria was strengthened with the appointment of nine interns, four of whom have subsequently taken up appointments at SANBI.

Outreach activities during the year included a one-day herbarium course for horticulture students of the Durban Institute of Technology and a two-week training programme for undergraduate students from the Universities of KwaZulu-Natal and Zululand at the KZN Herbarium. Research staff presented a number of papers and posters at national conferences, lectures and courses at various institutions and gave talks to garden clubs and wild flower groups.

MILLENNIUM SEEDBANK PROJECT

The Millennium Seedbank (MSB) Project, enjoyed a very productive year, resulting in a total of 694 seed collections being made for the year, of which 343 collections were confirmed as new additions to the Millennium Seed Bank. This means that the South African component of the MSB project has once again recorded the best collecting figures of all the international partners participating in the MSB International Programme. This was an excellent start to Phase II of the project, which was officially launched in May 2005, with the signing of a new five-year Access and Benefit-sharing Agreement by SANBI and Royal Botanic Gardens, Kew.

In July 2005, SANBI hosted two MSB Seed Conservation Techniques workshops, at Kirstenbosch and Pretoria National Botanical Gardens respectively, which were attended by 27 participants, some from partner organisations. The skills and knowledge obtained has strengthened the participants' capacity to contribute effectively to *ex situ* conservation programmes. The MSB project has also expanded collaboration with partner organisations and during the past year has signed agreements with De Hoop Nature Reserve, Klapmuts Conservancy and the Namaqualand Restoration Initiative. The involvement of the MSB with conservation activities at the Kenilworth Race Course has resulted in the successful re-introduction of two *Erica* species to the site. The MSB also prepared seed of 21 threatened plant species for inclusion in the 'time capsule' inserted in the wall at the opening of the new Research Centre at Kirstenbosch.

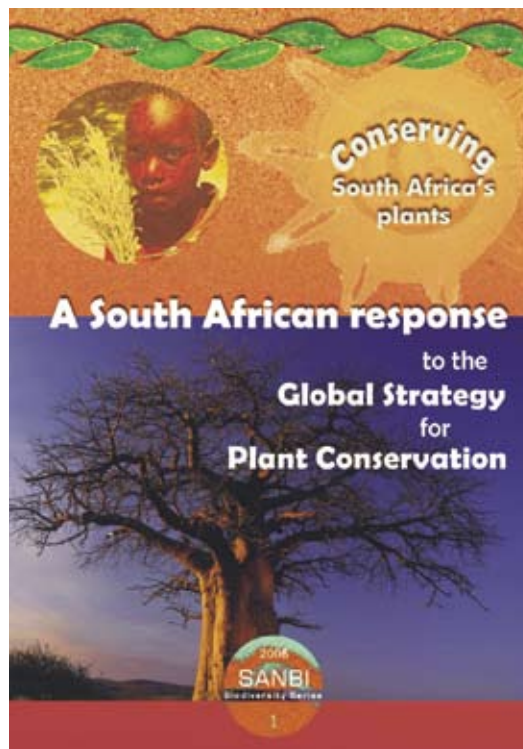


Publications

The past year saw the publication of the first volume of the *SANBI Biodiversity Series: Conserving South Africa's plants: a South African response to the Global Strategy for Plant Conservation*. The *Checklist of the flowering plants of sub-Saharan Africa: an index of accepted names and synonyms* was also published as part of the SABONET Series.

Other publications which appeared were *Bothalia* 35, 1 and 35,2; the Index to *Bothalia* 35; *Flowering Plants of Africa* Vol 59 and the 3rd and 4th *Conservation leaflets*. Sponsorship was obtained from Briza Publications to distribute the Tree of the Year Poster for 2005 to schools, tertiary institutions and libraries.

Publication of the jointly compiled *African Plants Checklist* resulted in the Dyer Award being presented to R Klopfer.



AFRICAN PLANT CHECKLIST AND DATABASE

The African Plant Checklist and Database, a joint project between SANBI and the Conservatoire et Jardin Botaniques of the city of Geneva (CJBG), Switzerland, strongly supports the spirit of NEPAD, which among other things aims to maximise Africa's environmental and natural resources advantages. A major milestone in the project is a once-off hardcopy publication of the first-ever *Checklist of the Flowering Plants of sub-Saharan Africa*. An additional output is a dynamic, up-to-date, searchable database that is freely accessible through the internet. Additional information available on the website, includes short descriptions, ecological notes and distribution maps, where available. The project, for the first time, gives accurate statistics for the angiosperm flora of sub-Saharan Africa and indicates that the region harbours just over 50,000 taxa, representing approximately 44,830 species of flowering plants. The website has now been significantly expanded to include the plants of North Africa and a thrust is under way to also include the gymnosperms for sub-Saharan Africa. In a parallel project, the lycopods and ferns (lower vascular plants) are being similarly compiled into an African level checklist.

NATIONAL BOTANICAL GARDENS

SANBI's network of eight National Botanical Gardens (NBGs) remains the Institute's public face, despite the breadth of its new mandate. As shop windows of biodiversity, the Gardens have a key role to play in communicating to the public the value and importance of biodiversity and the ecosystem services that they provide. As such, the Gardens are serving a critical role in our environmental education and outreach programmes. Equally, they are becoming significant income earners for SANBI and the regional economies in which they are located.

Fire on the eastern slopes of Table Mountain above Kirstenbosch in February 2006.



For the first time, income receipts at Kirstenbosch exceeded the full costs of running the garden, inclusive of staffing, maintenance and operational costs. Kirstenbosch is the only major public botanical garden in the world that is self-funding – an achievement that results from the strategic investment in capital developments over the past decade.

Floods caused severe damage in the Harold Porter NBG.

It can be anticipated that several of the other NBGs will rapidly increase their income-generating capacity as the investments in visitor facilities, mostly through EPWPs, come into full activity.

The numbers of people visiting the NBGs reached 1,250,748 for the 2005/6 financial year, the highest combined visitor number

ever received by the eight NBGs of the SANBI. This represents an overall 3% increase on the visitor numbers from the previous year. Visitor numbers received in the Kirstenbosch (750,498), Free State (46,846), Karoo Desert (38,164), Pretoria (87,990) and Walter Sisulu NBGs (184,437) for the period under review were the highest annual visitor numbers received in the history of these five NBGs.

The Gardens Directorate suffered the effects of both floods and fire during the year. The Harold Porter NBG suffered damaging effects of floods in April 2005 when over 200 mm of rain (20% of the Garden's annual total) fell within 24 hours. Damage impacted negatively on the visitor numbers during April and May. Both Disa Kloof and Leopard's Kloof were closed to the public for a few days after the flood, and remedial work was completed during the year.

A fire on the mountain slopes above Kirstenbosch on 23 February 2006 burnt 40 ha of natural fynbos, including an area that had last been burnt in 1973. The fire was brought under control the same day by four helicopters and a large number of fire fighters including a well-organised volunteer team.

After a mild and dry winter was experienced in all the northern gardens (the Walter Sisulu NBG experiencing its driest period between July and September since its establishment in 1982), all northern gardens received above average rainfall in the first three months of 2006.

Through a generous grant received from the Rufford Maurice Laing Foundation, a new Centre for Biodiversity Conservation, housing many of SANBI's partners and



NGOs, was built at Kirstenbosch. Other infrastructural projects completed during the year included a permanent concert stage in the Walter Sisulu NBG, upgrading of the National Herbarium Lecture Hall in Pretoria, a new lapa adjacent to the Biodiversity Centre in Pretoria, as well as the completion of tourism infrastructure sponsored by the DEAT under its EPWP in the Free State, Pretoria, Lowveld and the Walter Sisulu NBGs. This included new environmental education facilities in the Free State and Lowveld NBGs. SANBI now has environmental education programmes operational in five of its eight NBGs, in four of South Africa's nine provinces. Education programmes have still to be developed in the Harold Porter, Natal and Karoo Desert NBGs.

From March 2001 to date, SANBI has received R45 million from the EPWP for tourism infrastructure developments in SANBI's gardens. In addition, R17 million has been allocated towards upgrading the Grahamstown Botanical Garden where SANBI is assisting Rhodes University and the Makana Municipality. More than 1,900 people have been employed in temporary situations through funded poverty relief projects in SANBI's gardens to date with more than 130,000 temporary job days worked. More than 40,000 temporary job days were worked by women. Over 350 people employed were trained in various

skills. Significant improvements were made to the IT infrastructure in the various NBGs, enabling more efficient and cost-effective communication with various stakeholders.

Having completed the required Environment Impact Assessment (EIA) processes for new infrastructural developments in the Karoo Desert, Harold Porter, Natal and Walter Sisulu NBGs, work started on new visitor amenities in these gardens. As a result of delays due to the EIA process, these developments are scheduled for completion in the 2007/8 financial year. Work continued in the Grahamstown Botanical Garden with the clearing of old pathways and removal

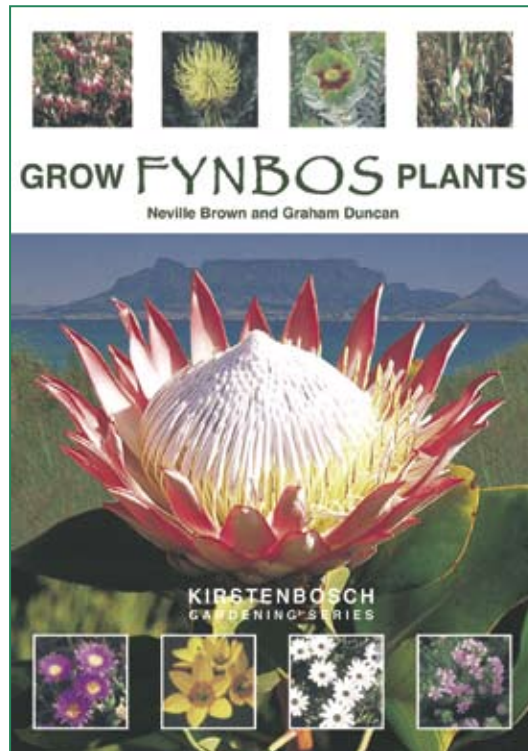


Construction begins on the new tearoom in the Karoo Desert NBG.



The new Environmental Education Centre and restaurant facilities in the Free State NBG.

This comprehensive 250 page guide, Grow Fynbos Plants, published in March 2006, is the latest title in the popular Kirstenbosch 'Gardening Series'.



of invasive alien plants, construction of new paths, upgrading of ponds, weirs and bridges. Negotiations are underway between SANBI, DEAT and Rhodes University as to the future management of the Grahamstown Botanical Garden.

The Gardens Directorate continued to play a leading role in networking with African botanical gardens. Support was provided by SANBI to the African Botanic Gardens Network (ABGN), with staff attending the ABGN Steering Committee meeting in Nairobi, Kenya, in 2005. Support and advice was also given to the University

Collecting seed for the Millennium Seed Bank project.



of the North-West Botanical Garden and the Lost City Botanic Gardens, both in the North-West province. SANBI and its eight NBGs have formally registered their commitment towards implementing the International Agenda for Botanic Gardens in Conservation.

Staff attended various conferences and workshops during the year where they made presentations, including at the annual Fynbos Forum meeting. SANBI was represented at the first conference of the Global Partnership for Plant Conservation (GPPC) held in the National Botanic Gardens, Glasnevin, Dublin, Ireland, in 2005. The GPPC was established at the seventh meeting of the Conference of Parties to the Convention on Biological Diversity in Kuala Lumpur, Malaysia, in 2004, and consists of member organisations, institutions, secretariats and other bodies worldwide with substantial programmes in plant conservation. The partnership represents a voluntary commitment by participating organisations to a common cause. An important role of the partnership will be to enhance communication and collaboration among members.

Various popular and scientific publications and articles were published by Gardens Directorate staff during the year. Regular contributions were made to the Plants of the Week section of the popular www.plantzafrica.com website, as well as to magazines, newspapers, local and international journals. Garden-specific web pages on the SANBI and Botanic Gardens Conservation International's website were updated on a regular basis. *Grow Succulents*, one of the popular *Kirstenbosch Gardening Series*, was revised and reprinted.

Collaboration with the Millennium Seed Bank (MSB) continued during the year with many collaborative field excursions between the MSB and SANBI staff. In collaboration with the MSB, CapeNature and City of Cape Town conservationists, Kirstenbosch NBG staff participated in the restoration of the threatened plants *Erica verticillata* and *Erica turgida* to the Kenilworth Race Course, Cape Town. An Open Day to Kenilworth, with good media exposure in local newspapers, was held in September 2005. Horticulturists and other relevant staff from all NBGs attended two Seed Conservation Techniques Workshops

(in Pretoria and Kirstenbosch) hosted and presented by the MSB, UK.

SANBI's corporate Employee Assistance Programme was implemented across all NBGs from May 2005. Two staff members from the Lowveld and Karoo Desert NBGs visited the Ball Horticultural Company in Chicago, USA, as part of the Ball Agreement internship programme, from May to July 2005. Permission was granted by DEAT to the SANBI Board to extend the existing Ball Agreement to 31 August 2006 to allow sufficient time for negotiation with stakeholders and ensure that renegotiation meets the requirements of the Biodiversity Act. Horticultural staff also participated, as part of the SANBI delegation, in the Chelsea Flower Show in May 2005. Trevor Adams, horticulturist in Kirstenbosch NBG, was invited as a speaker/trainer at a Botanic Gardens Conservation International (BGCI)-hosted training course in Queen Sirikit Botanic Gardens in Chiang Mai, Thailand in August 2005. The workshop was planned for staff of the southeast Asian botanic gardens and focussed on horticultural practices in botanic gardens in developing countries in southeast Asia. The 19th Garden Curators Week was held in the Karoo Desert NBG in September 2005.

A range of training courses were completed by garden staff, including courses on digital photography, accredited horticultural skills training (supervisory management; botanical garden maintenance; estate management; landscape maintenance and construction; machines for turf lawns; commercial plant production; horticultural mechanisation and irrigation installation), first aid; fire fighting; occupational health and safety; induction, assertive communication; invasive alien control; computer software; project management; SA Host Customer Service; plant identification; supply chain management and whistleblowing.

The NBGs hosted a variety of events, many of them sponsored, during the year, ranging from Carols by Candlelight; weddings; art exhibitions; puppet shows; flower shows to film shoots. Sponsored concerts and concert series were held in the Kirstenbosch, Free State, Lowveld, KwaZulu-Natal, Pretoria and Walter Sisulu NBGs, contributing significantly to increased visitor numbers and income generated through the year. Significant corporate support and

sponsorships for concert series continued to be received from Sappi (Lowveld and Walter Sisulu NBGs), Appletiser (Kirstenbosch NBG) and Pick 'n Pay (Pretoria and Walter Sisulu NBGs). In line with SANBI's broad biodiversity mandate, SANBI's gardens continued to offer natural history courses in a diverse range of subjects to interested members of the public.

Some 8.57 ha of natural land adjacent to the Walter Sisulu NBG was purchased through funds from DEAT and incorporated into the nature reserve area of the garden. The Walter Sisulu NBG now comprises 276 ha of land, of which ca 20 ha is developed, the rest being natural Bankenveld vegetation. Preliminary discussions and negotiations were held with

A safety training course for staff of the Harold Porter NBG.



various stakeholders to expand the Harold Porter NBG, incorporating adjacent rare and endemic coastal habitats and vegetation types, as well as to establish a new national botanical garden in the Northern Cape Province. Nieuwoudtville, the area chosen for the botanical garden in the Northern Cape, is known as the 'bulb capital of the world', with a spectacular diversity and displays of wild flowers, particularly bulbs, that flower in both autumn and spring. Consideration is also being given to expanding the nature reserve portion of the Walter Sisulu NBG to form the proposed Walter Sisulu Urban Wildlife Reserve extending along the natural ridges west towards the Cradle of Humankind. The ridge and its associated biodiversity are under constant threat from developers wanting to establish townhouse/residential complexes and associated services.

WESTERN CAPE KIRSTENBOSCH NATIONAL BOTANICAL GARDEN CAPE TOWN, Est. 1913

Visitor numbers at Kirstenbosch NBG once again reached a record level of 750,498 for the year, with over 100,000 visitors attending concerts held through the past summer season. The number of visitors received in July has increased from 27,000 to 47,000 over the last two years, which can be attributed to the very successful Winter Wonders programme where special events and attractions are provided for children by tenants and the garden. High profile visitors included the Latvian President and numerous Chinese and Japanese parliamentary and government delegations.

For the first time in the garden's 93-year history, the annual budget did not include a dedicated government grant through SANBI to make up the deficit between own income and expenditure. By the end of the financial year, a significant surplus had been achieved. Annual income generated by Kirstenbosch NBG was over R18,900,000, achieved through its varied activities. This figure represents 81% of the total income generated by the eight NBGs combined in the year. Over R2,900,000 of this income was generated through the various concerts. The Garden continued to be generously supported by the Kirstenbosch Branch of the Botanical Society and its associated members and volunteers.

Horticultural and landscape developments included the replanting of many beds in the protea, restio and erica sections. The vygie (mesem) banks were completely replanted

and an impressive spring flowering season is anticipated. The development of the 'Weeds South Africa Gave the World' demonstration garden was completed. This garden was landscaped using South African plants that have become invasive weeds around the world, in Australia and California in particular. Interpretive signage was provided to illustrate the environmental threats that can be created when plants are moved from one region of the world to another. A new Heritage Trail was developed to highlight numerous historical features of the Garden dating back to pre-colonial times.

The dog-free area of Kirstenbosch was extended from the 36 ha developed Garden to include an estimated 200 ha of surrounding natural estate. The decision has been well supported by the public and had an almost immediate positive effect on the presence of wild animals in the Garden. The caracal (*Felis caracal*) is seen on a regular

The recently constructed Heritage Trail starts at the new viewing deck at Rycroft Gate.



The garden has become a safe haven for wild animals since the ban on dogs was implemented.

This grysbok was pictured in the wetland near the Botanical Society office.



basis in the protea, restio and erica sections. Garden staff who had previously never seen caracal during 30 years of service, reported sightings of successful hunting of guinea fowl by caracal on two separate occasions. Adult grysbok are regularly seen in the middle of the Garden and have been photographed in the wetland close to the Botanical Society's Head Office.

The Garden's threatened plants programme continued its collaborative work with CapeNature and the City of Cape Town with the re-introduction of *Erica verticillata*, classified as Extinct in the Wild, to the Kenilworth Race Course. The project was highlighted on the BGCI website as a case study in the conservation of threatened plants. A large section of the old cut flower beds was transformed into threatened plant stock beds and a good representation of threatened species is growing well without irrigation.



Numerous collaborative collecting trips were undertaken by the Garden's horticulturists and members of the MSB project and Ball Project. Areas visited included Groot Winterhoek, southern and eastern Cape and De Hoop Nature Reserve. Ernst van Jaarsveld collected the first Namibian record of *Aloe catengiana* (Angolan species) from the Kaokoveld and a new cliff dwelling *Aloe challsii* species from Mpumalanga. Another new collection was the white-flowered *Strelitzia reginae* subsp. *mzimvubuensis* collected from the Mzimvubu River Valley. Another important collection of *Plumbago pearsonii* was made at Bullspoort in central Namibia.

The MSB (Cape) exceeded their annual collection target of 240 species by more than

a hundred species. The total of 343 species is the most ever collected by any country since the programme started.

The design and construction of a timber bollard path lighting system was completed, linking the concert area to the three entrance gates. The new lighting system was particularly effective during late night concerts that included Bryan Adams, Johnny Clegg, Watershed and the Carols by Candlelight event. The Sunday afternoon Summer Sunset Concerts, generously sponsored by Appletiser for the thirteenth time, were attended by over 60,000 visitors and generated over R1,900,000 for the Garden. Among the popular South African artists featured were Freshlyground, Arno Carstens, Karen Zoid, Robin Auld and Johnny Cooper.

The Freshlyground Concert attracted a record attendance in excess of 10,000 visitors.



International tourists continued to form an important part of the Garden's visitor numbers with more than 130,000 tourists arriving in coaches alone. Access for backpackers, in particular, was vastly improved by the introduction of the Hylton Ross 'hop on – hop off' bus. Kirstenbosch is one of the 13 stops around Table Mountain, with the bus visiting the Garden six times per day.

Kirstenbosch NBG continued to maintain its international links with botanical gardens overseas through a stream of students and horticulturists working as volunteers.

Garden staff were also invited to present papers at meetings held in Thailand and Austria on propagation and the Garden's Threatened Plants Programme respectively, as well as having the opportunity to be represented at the annual Chelsea Flower Show. The practical training of young black student horticulturists remained an important focus area.

Left: Kirstenbosch horticulturist, Trevor Adams, planting Erica turgida at Kenilworth Racecourse as part of the restoration programme.

KAROO DESERT NATIONAL BOTANICAL GARDEN

WORCESTER, Est. 1921

*The spring display
in the Karoo Desert
NBG.*



During the review period, DEAT, through its EPWP programme, approved new visitor facilities, including a new tearoom, palisade fencing and upgraded car park. Work commenced in mid-2005 and the new facilities are expected to be completed by December 2006. Work started with the propagation of plants to be incorporated within the new developments. Some of the paths on the estate were repaired after 50 mm rain fell in mid-April 2005, during the same storm that caused extensive damage to the Harold Porter NBG in Betty's Bay.

Visitor numbers (38,164) showed a 3% increase on the previous year, with the Garden hosting various local and regional groups, clubs and schools. 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. Garden staff provided support and assistance to CapeNature in efforts to prosecute foreign plant collectors found illegally moving succulents and geophytes in the Western Cape. Confiscated plants were donated to the Karoo Desert NBG, with the rare local endemic *Muiria hortenseae* being amongst the collection.

Garden staff also assisted CapeNature with their project on the sustainable harvesting of *Hoodia gordonii* in the wild. Sponsorship of €1,000 was received from the German Succulent Society for the rescue of the threatened plants *Lithops comptonii* and *Didymaotus lapidiformis* from the Ceres Karoo. For the third year in succession no seed was available of the threatened *Moraee worcesterensis*.

The 19th Curators Week was hosted by the Karoo Desert NBG in September 2005. The Karoo Desert NBG participated in both the annual Kirstenbosch Plant Fair and the SAA Cape Town Flower Festival (together with Kirstenbosch and the Harold Porter NBG) at Lourensford Estate in Somerset West, where a Gold Medal was awarded for the combined display.

The new Ashwell Mtetwa Glasshouse – named in recognition of all the construction work done by Ashwell Mtetwa in the Karoo Desert NBG – which was sponsored by the Kirstenbosch branch of the Botanical Society of South Africa, was officially opened in September 2005. Support was also received from the Boland Branch of the Botanical Society and the Worcester Rotary Club for



Colleagues take leave of Ashwell Mtetwa (centre) at his farewell function.

various garden projects and events. Lawn on Roux Road was removed in preparation for the planned hard landscaping and xeroscaping projects. Over 5,000 plants of the genera *Haworthia*, *Tylecodon*, *Senecio*, and *Othonna*, were rescued from the Worcester Dam development. Succulent plants were also rescued from the planned site for the new casino development in Worcester.

A site visit was made to Whitehill near Matjiesfontein, the original site of the Karoo Desert NBG where the Garden was established in 1921 before being moved to the present site in 1946. An article on the history of the Garden, which included some old photographs donated to the Garden, was published in the Botanical Society of South Africa's magazine *Veld & Flora*. Garden staff contributed monthly gardening articles to the local newspaper *Worcester*

Standard and gave numerous talks and guided tours to local schools, clubs and foreign visitors. The Seed Room in the Garden was renovated, and various security systems and infrastructure upgraded.

A course for groundsmen attached to museums in the Western Cape was presented at the Karoo Desert NBG. Garden staff attended various training courses and workshops during the year, including a three-month internship by one of the horticulturists to the Ball Horticultural Company in Chicago, USA.

Collaborative plant collecting trips were made to various parts of the Northern Cape and Mpumalanga with staff from the Walter Sisulu NBG. Garden staff made various seed collecting field trips to various parts of the Western Cape.



HAROLD PORTER NATIONAL BOTANICAL GARDEN

BETTY'S BAY, Est. 1959

*The local threatened species, *Mimetes hirtus*, being propagated for garden displays.*

The Harold Porter NBG received 221 mm of rain over 24 hours between 10-11 April 2005 – the equivalent of a fifth of the Garden's annual rainfall – resulting in flooding of the Dawidskraal River that flows through the Garden. Significant damage was caused to roads, buildings, pathways, irrigation infrastructure, nursery and parking facilities in the Garden. Various landslips appeared on the surrounding mountains due to the rainfall, with subsequent damage caused to the pathway along Disa Gorge. With support from the EPWP, the Kogelberg Branch of the Botanical Society of South Africa, Kirstenbosch NBG, the Working for Wetlands Programme and the Overstrand Municipality, the Garden staff and local volunteers spent several months repairing the damage. The flood damage impacted negatively on the Garden's annual visitor numbers, with 45,518 (8% decrease) visitors received during the year.

Female workers from the Expanded Public Works Programme assisting with flood damage repairs.



Far right: The new boardwalk facilitates wheelchair access through the wetlands in the Harold Porter NBG.

Subsequent to the flood, studies were made by professional engineers to ensure that the new tourism infrastructure facilities, namely the restaurant and conference venue, planned under the EPWP can withstand subsequent floods. After the necessary approvals had been received through the EIA process, work commenced on these new facilities. Completion is expected in early 2007.

Despite the disruptions caused by the floods to the normal maintenance programme, progress was made in the Threatened Plant Programme through collaborative work with Kirstenbosch NBG, Kogelberg Biosphere Reserve, CapeNature and local volunteers. The threatened *Mimetes hirtus* was successfully grown from cuttings and planted in the Fynbos Threatened Plants Garden section, part of the Garden's Four Ecosystems Trail. Other threatened fynbos plants displayed in this section include

Mimetes hottentoticus, *Erica patersonii* and *Nivenia stokoei*. The Khoisan/Heritage Garden was planted during the year.



The upgraded Wetland Garden and associated boardwalk was officially opened in March 2006 with generous sponsorships received for materials used and interpretive signage.



Despite the absence of a dedicated Environmental Education Centre, various schools and learners from the greater Overberg area made use of the Garden, and many guided tours were presented to local and international visitors. The general public was invited to night walks in October to view fireflies, spiders and some night-scented flowers. Special Saturday guided walks were held on the first Saturday of each month. Other events included the annual Carols by Candlelight Concert, a children's Nativity Play and a New Year's Eve Concert. Support was also provided to the Greening of the Nation Programme working with various communities and townships in the Overberg region.

The Garden participated in several horticultural exhibitions, including the Hermanus Flower Show at Fernkloof Nature Reserve and the SAA Cape Town Flower Festival (together with Kirstenbosch and the Karoo Desert NBG) at Lourensford Estate in

Somerset West. The Garden was generously supported by Kirstenbosch and its staff during the year.

Staff attended various accredited and non-accredited training courses, as well as local and regional conferences and workshops through the year. Students from both the University of Cape Town and Stellenbosch used the Garden as a study site for assessing invertebrate populations in local river systems. The Garden also hosted students from Green Futures, a horticultural training initiative at Grootbos Nature Reserve, for three weeks to complete their in-service training, and hosted two horticultural interns from the Cape Peninsula University of Technology.

Negotiations with the Overstrand Municipality were initiated to consider the possible extension of the Harold Porter NBG to incorporate rare and endemic surrounding natural habitats (coastal flats fynbos), plant



Green Futures students involved in practical in-service training at the Harold Porter NBG.

communities and vegetation types between the Kogelberg mountains and the coast. An independent study and report on the possible extensions was completed and submitted to the Overstrand Municipality and other relevant stakeholders for consideration and review.

MPUMALANGA

LOWVELD NATIONAL BOTANICAL GARDEN

NELSPRUIT, Est. 1969

Several new developments at the Lowveld NBG were completed and are now operational. These include a new environmental education centre, restaurant, new walkways, upgraded parking areas, pedestrian bridge, curio/book shop, information centre and visitors' centre. These developments have enhanced the Garden's position as an important nature-based tourism attraction for visitors to the greater Nelspruit area. The Garden received 51,433 visitors during the year which, although down on the previous year, emphasised the need for dedicated marketing personnel and associated resources. The good rains received in the latter half of the summer resulted in good visitor numbers due to the spectacular views of the Nelspruit Cascades from the new viewing platforms. The Garden was listed on the Lowveld Chamber of Commerce and Tourism's website.

Support for the Garden continued to be provided by the Lowveld Branch of the Botanical Society as well as the Friends of the Garden. Efforts were made during the year to amalgamate the two groups and form one Friends of the Garden group to support events and marketing in the Lowveld NBG. The Garden's awareness campaign 'Add a little green to your life – visit us today' was developed and promoted amongst a range of stakeholders.

The Garden participated in the annual Innibos Arts Festival and the Outdoor and Leisure Expo, and hosted various courses, workshops and functions, including an SOS Children's Village function hosted by the Emnotweni Casino. A launch function for the Heritage Research Manuscript for the Mpumalanga Provincial Government was organised in the Garden by the Office of the Mpumalanga Premier, Thabang Makwela. A pamphlet promoting the Garden was

The Nelspruit Cascades in the Lowveld NBG, seen from the new viewing platform, after good summer rains.





Visitors enjoying the Garden Festival.

produced and distributed at selected strategic points across the Lowveld, and the Garden featured in various television programmes. The Mpumalanga Plant Specialist Group continued to use the Garden's facilities for their monthly meetings.

Tovhowani Mukoma a young horticulturist from Lowveld NBG, spent three months as an intern at the Ball Horticultural Company, Chicago.

Right: New aerial walkway, sponsored by SAPPI, in the rainforest at the Lowveld NBG.

A new aerial boardwalk was developed in the African Rainforest section through a generous sponsorship received from Sappi. An additional sponsorship from Sappi was allocated to support the annual Garden Festival. Other development projects completed include new garages, upgrading of administration office security and the herbarium building, upgrading of the guest cottage, as well as renovations to the staff and nursery facilities. Permanent irrigation was installed in the cycad gene bank area, and the commercial nursery was converted into a production nursery for the Garden and the Education Directorate's outreach greening programme. A marquee tent area

was created in the Garden for use during functions.

Garden staff participated in several accredited and non-accredited training courses and workshops through the year, including a three-month internship by one of the horticulturists to the Ball Horticultural Company in Chicago, USA.

Garden staff spent much time landscaping around the new developments as well as removing alien invasive plants from the natural areas of the Garden. Lowveld NBG staff undertook a number of plant collecting excursions to various parts of the country, including a collaborative expedition to Namibia with staff from Kirstenbosch NBG and the University of Pretoria. A new species of acacia, *Acacia ormocarpoides*, was described by Garden staff from the Sekhukhuneland area. Horticultural research experiments with *Dioscorea sylvatica* and *Clivia miniata* continued.

Close co-operation was maintained with the MSB Project, with several joint excursions undertaken. Major progress was made with establishing the *Aloe* collection in the Garden. Thirty-six confiscated cycads (*Encephalartos horridus*) were planted in the Garden.



FREE STATE FREE STATE NATIONAL BOTANICAL GARDEN BLOEMFONTEIN, Est. 1967

Upgraded visitor facilities and the added attraction of the new Environmental Education Centre and new restaurant funded by the EPWP resulted in a record 46,846 visitors to the Free State NBG. This represents a 78% increase on the previous financial year. The new visitors' complex with its associated shop and plant sales nursery was completed during the year, as well as a new paved service road and parking area adjacent to the visitors' complex. The new facilities were officially opened by the Premier of the Free State Provincial Government, Ms Frances Beatrice Marshoff, and her MECs at a function hosted by the SANBI Board in November 2005. Garden staff were kept busy with landscaping and planting around the new developments and installing a new irrigation valve system in the Garden.

The Environmental Education Centre became fully operational and provided a service to thousands of learners and their teachers from surrounding schools through the year. An assessment of the Garden by the Association for People with Disabilities (APD) was conducted to review compliance of the Garden's infrastructure to standards required for people with disabilities.

Collaboration with and support from the Free State Branch of the Botanical Society and Bloem Vision continued through the year with various events and concerts, including a Carols by Candlelight event, presented in the Garden. The South African Nursery Association (SANA) held a spring exhibition, and various marquee functions were held through the year. Other events included plant displays at the waterfront complex in Bloemfontein, aimed at educating the community about the value of indigenous plants.

A dedicated Marketing and Communication Strategy was developed for the Free State NBG, scheduled for implementation in the new financial year. The Garden was marketed through distribution of pamphlets to the Mangaung Tourism Centre, museums and other local places of interest within Bloemfontein.

After many years of negotiations and meetings with the Mangaung Municipality, the Municipality awarded a contract to provide recycled sewerage water from the nearby Northern Waste Water Treatment Works to the Free State NBG. This water will be used to provide much-needed irrigation water to



the Garden without having to rely solely on purified municipal water. DEAT has committed additional funding to the Free State NBG from their EPWP to provide the water supply within the Garden, as well as upgrade the Garden's irrigation system. This project is expected to be implemented when the required funding is made available from DEAT in the next financial year.

Clearing of invasive alien plants from the Garden's estate continued through the year, with a focus on clearing species of *Opuntia*, *Echinopsis* and *Agave* along the Motshetshe Trail. After the dam had been dry for nearly three years, the above-average rains that were received in the Garden during January and February 2006 resulted in the dam filling again.

Garden staff attended a range of accredited and non-accredited training courses (including in-house training) through the year, with one of the horticultural staff members being represented at the Chelsea Flower Show in London, UK in 2005. Garden staff presented a number of guided tours and lectures on indigenous gardening topics to local schools and garden clubs. Garden staff also participated in several plant collecting trips to enhance the plant collections representative of the Free State Province in the Garden.

An aerial view of the new development node in the Free State NBG including an Environmental Education Centre, restaurant, lapa and Visitors' Centre.

Staff of the Free State NBG during the official opening of the new EPWP-funded facilities in November 2005.



Conservation of threatened plants continued to be a focal area of activities with emphasis on *Merwillia plumbea*, *Boophone disticha* and various *Hypoxis* species. A rescue operation was undertaken to remove indigenous plants from an area scheduled for townhouse development. The Free State NBG participated in Mangaung Municipality's Institute for Environmental and Recreation Management (IERM) Committee meetings, several of which were held in the Garden.

KWAZULU-NATAL NATAL NATIONAL BOTANICAL GARDEN PIETERMARITZBURG, Est. 1874

Work started on the rehabilitation of the wetland area on receiving positive approval through the EIA process. The EPWP also approved a new restaurant, curio/gift shop, upgraded parking area, rehabilitated wetland area and upgraded tea garden. Numerous plants were relocated in preparation for the construction of the new entrance buildings in the Garden. The new and upgraded facilities are expected to be completed in the first half of 2007. Storage tanks for borehole water were erected in the Garden.

assisted in organising the annual Indigenous Plant Sale promoting indigenous plants and gardening to the public. The Garden hosted a visit by the KwaZulu-Natal Midlands Mayors and regional councillors. *Bulbine* and *Carpobrotus* continued to be supplied to the Children in Distress Network (CINDI), a consortium of organisations that network in the interests of children affected by HIV/AIDS in the KwaZulu-Natal Midlands. Garden staff assisted in the regional judging for the Pam Golding/ABSA Gardens of Pride Competition in Pietermaritzburg and Durban.



Visitors enjoying a concert by the KZN Philharmonic Orchestra.

Right: John Roff, Senzo Khanyile and Siyabonga Ngiba collecting plants for the riverine forest project.

The Garden received 45,862 visitors during the year, and is proving a popular venue for wedding photographs on weekends. A number of concerts, events, guided tours and biodiversity-related talks were held. Close collaboration continued with staff members from the University of KwaZulu-Natal, such as supplying plant material to the University's Botany Department for student practicals and exams.

The Garden continued to be supported by the KwaZulu-Natal Inland Branch of the Botanical Society of South Africa, as well as numerous volunteers. Members of the Botanical Society



Garden staff attended various training courses and workshops, and conducted plant collecting trips to various areas in KwaZulu-Natal and Mpumalanga. Garden staff continued to clear invasive alien plants out of the Dorpspruit and from the estate section of the Garden. The removal of some of the exotic shrubs (including large plantings of azaleas)

and trees found in the Garden continued, and these were replaced with indigenous plants.

Conservation work on the threatened Hilton Daisy (*Gerbera aurantiaca*) continued, with a R16,000 sponsorship received from Botanic Gardens Conservation International (BGCI) UK through their HSBC Investing in Nature Small Grants Programme for the construction of additional nursery beds in the threatened plant section of the Garden's nursery. Horticultural research work on the Hilton Daisy included breeding system experiments and allozyme analyses of *in situ* populations.

Cabinet approved the proposed name change of the Garden to the KwaZulu-Natal National Botanical Garden in October 2005 and the Garden is awaiting formal publication of the name change in the *Government Gazette*.



*Senzo Khanyile
assisting with Hilton
Daisy research in the
field.*

GAUTENG

PRETORIA NATIONAL BOTANICAL GARDEN

PRETORIA, Est. 1958

Several new developments funded by the DEAT's EPWP were completed, including the new Mokha Restaurant, a new wetland, upgraded parking area and new paved pathways. These contributed to a record 87,990 visitors to the Pretoria NBG during the year, the highest annual visitor number received in the history of the Garden and a 29% increase on the previous year. Mokha Restaurant provided the venue for several functions, including the official launch of the book *Plants of the Nyika Plateau*, published by the SABONET Project that was launched by the DEAT Deputy Minister, Ms Rejoice Mabudafhasi. Other launches included the Pretoria NBG Bird List and SANBI's annual Trees of the Year Poster.



The new Auditorium and Board Room in the new Biodiversity Centre, adjacent to the National Herbarium, proved very popular as a workshop and training venue throughout the year. Other new capital developments completed included a new thatched lapa adjacent to the Biodiversity Centre and an upgraded National Herbarium Lecture Hall. The Environmental Education Centre continued to be in demand as a meeting venue in the Pretoria NBG, hosting thousands of learners and conference/workshop participants through the year.

During the year work continued with the development of an Enabling Garden for disabled people funded by the Pretoria branch of the Botanical Society and Jacaranda 94.2



*The Mokha
Restaurant in
the Pretoria NBG
became operational
In May 2005.*

*Garden staff
spent much time
landscaping around
the new tourism
infrastructure
facilities in the
Pretoria NBG.*

fm/Spar. The garden, which will feature raised flowerbeds and wheelchair-friendly pathways, will demonstrate how gardening can best be enjoyed by disabled people. Irrigation lines were installed in all the newly developed areas in the Garden. Other improvements included the upgrading and extension of the Medicinal Plant Garden, the Nursery area and its associated infrastructure, landscaping of the area around the new restaurant, parking area, wetland and enlarging of the concert lawn.

Another popular Pick 'n Pay-sponsored concert series was held during the winter months attracting thousands of visitors. Other events hosted were the Pretoria Sun Gardens Hospice Run for Life, Organ Donors Function, SAPS-hosted Women's Day Celebration, World Wetlands Day celebration and the annual Walk/Run for Life fun run.

Garden staff attended a range of accredited horticultural skills and other training courses during the year. A plant-collecting trip was undertaken by Garden staff to Verlorenvallei Nature Reserve in Mpumalanga. Collaborative projects on various threatened plant species

continued with both Mpumalanga Parks Board and Gauteng Nature Conservation. A Geological Map with associated text was prepared for the Garden by the Council for Geoscience.

The Pretoria NBG, together with the Walter Sisulu NBG, was promoted at the Getaway Show in September 2005. Various guided tours were presented in the Garden to both local and international visitors. A range of workshops and walks were offered to the public, from digital photography and tree identification to spider and bat walks. An insect survey that forms part of a greater research project in the Gauteng/Mpumalanga region was conducted by professional entomologists in the Garden. Results are expected in late 2006.

Due to their high numbers in the Garden as a result of the absence of natural predators, a rock hyrax (dassie; *Procavia capensis*) relocation programme was initiated with the assistance of Tshwane Nature Conservation. During the year 20 dassies were captured and relocated to the Groenkloof Nature Reserve in Pretoria.

WALTER SISULU NATIONAL BOTANICAL GARDEN

ROODEPOORT/MOGALE CITY, Est. 1982

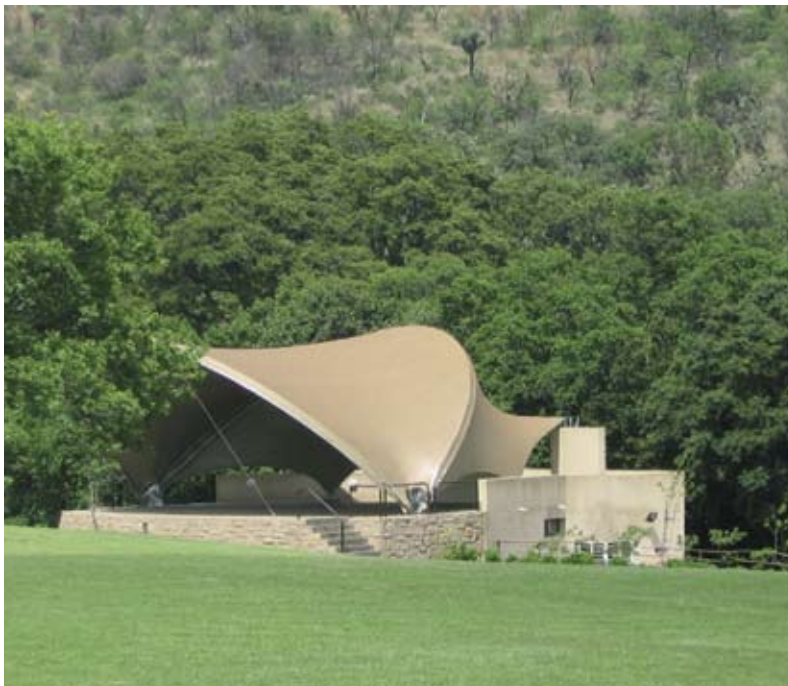
Following the completion of new EPW Programme-funded tourism infrastructure in 2004/5, the Garden received 184,437 visitors during the year, representing a 7% increase on the 171,697 visitors received the previous year. This represents the highest visitor number in the Garden's 24 year history. The Garden also generated an income of R2,344,897,

representing 10% of the Gardens Directorate's annual income.

A permanent concert stage was completed in the Garden, with a record total of 30,495 visitors attending the Sappi-sponsored Sunday Picnic Concert Series. Planning continued with the new tourism infrastructure project through DEAT's EPWP, comprising a new function/conference centre, upgraded roads and rehabilitation of the Crocodile River that runs through the Garden. Good progress was made with the development and landscaping of the Geological Garden and the Bird and Butterfly Garden. Security systems and infrastructure were also upgraded.

A Marketing Officer was appointed, who co-ordinated a Visitors' Survey as well as the Gauteng's Pam Golding/ABSA Gardens of Pride Competition. A draft Marketing Action Plan and Advertising Strategy was drawn up for the Garden. The emailing list of people who wish to receive notification of forthcoming events reached 7,000. The Garden hosted a number of functions and sponsored events through the year, including a Pick 'n Pay and Ceres-sponsored Teddy Bears Picnic, Pick 'n Pay-sponsored Carols by Candlelight concert (proceeds shared with Employability, a non-

The permanent concert stage in the Walter Sisulu NBG.



profit organisation working with people with disabilities), regular Art in the Garden events, Isitiya Book Club meetings, and musical and stargazing evenings in the Eagle's Fare Restaurant. The Garden's programme of events was distributed through various channels and placed on various websites. The Garden was used for a range of film shoots and television commercials, and hosted a live broadcast of E-TV's Morning Show on Spring Day 2005. Documentaries on the Garden's activities also appeared on SABC 1 and SABC 2. The Garden hosted members of the Parliamentary Portfolio Committee for a site inspection, as well as a function to celebrate Mrs Albertina Sisulu's birthday.



A detailed report recording all properties falling under the management of the Walter Sisulu NBG was prepared. Initial negotiations were undertaken to explore the possibility of establishing a Walter Sisulu Urban Wildlife Reserve extending west from the Garden along the ridge towards the Cradle of Humankind. The Gauteng Department of Agriculture, Conservation and Environment's (GDACE) Conservation Plan 2 (C-Plan 2) was launched. Garden staff spent considerable time representing SANBI in various public participation meetings and stakeholder discussions around proposed developments along the edges of the Garden's nature reserve area.

After a very dry and mild winter, exceptional summer rains, particularly during January and February, were received. The resident Verreaux's Eagles continued to breed, and can be viewed on a TV monitor in the Visitors'

Centre by means of a live video camera that is installed on the cliffs above the eagles' nest.

The Botanical Society of South Africa continued to provide support to the Garden through sponsorships and the organisation of regular natural history talks, walks and courses held both inside and outside the Garden. The Garden's Index Nursery was upgraded with sponsorship received from the Botanical Society.

Garden staff participated in various courses through the year, and undertook a plant rescue from a dam site near Roossenekal in Sekhukhuneland. The threatened plants programme continued with the cultivation and propagation of *Aloe albida* and *Orbea paradoxa*. Various projects on threatened plant species continued with Mpumalanga Parks Board and Gauteng Nature Conservation, with the Garden receiving various consignments of confiscated plants from GDACE. The University of Johannesburg assisted the Garden with the establishment of an indigenous fish tank in the Garden's Kitso EcoCentre. Regular assistance was given to the University of North West's Botanical Garden through the supply of plant material. Garden staff participated in various collaborative plant collecting expeditions during the year.

The Walter Sisulu NBG participated in various shows and exhibitions including the annual Getaway Show, the Krugersdorp Show, the Garden World's Herb and Natural Living Festival, the Beeld Holidaymakers Expo, the Garden World Spring Show, the Climate Change Conference at Gallagher Estate and the Yebo Gogga Yebo Amablomo arthropod and plant exhibition held at Witwatersrand University's Life Science Museum.

Mrs Albertina Sisulu, widow of Walter Sisulu, celebrated her birthday at the Walter Sisulu NBG.

The waterfall in the Walter Sisulu NBG in spate after heavy rains.



INTERPRETATION

Interpretation provides the communication link between a botanical garden and its visitors, and as such, our interpretation staff provide an essential role in inspiring visitors and providing them with a meaningful and enjoyable experience.

Right: An example of a permanent storyboard.

Below right: An example of an interlabel.

Below: Participants at an Environmental Interpretation workshop.

Work began in developing a database of SANBI's interpretive signs, as well as SANBI's interpretive theme. Web pages for the various gardens were updated throughout the year. A range of interpretive signage, both permanent and temporary, was developed and displayed in all the gardens. Specimen stands and display kiosks were developed in several gardens, highlighting, on a weekly basis, plants flowering in the particular NGB.

entrance, and various interpretive signage was developed for the new facilities and displays, as well as storyboards for the grassland section. Dedicated interpretive displays were developed to coincide with National Water Week.



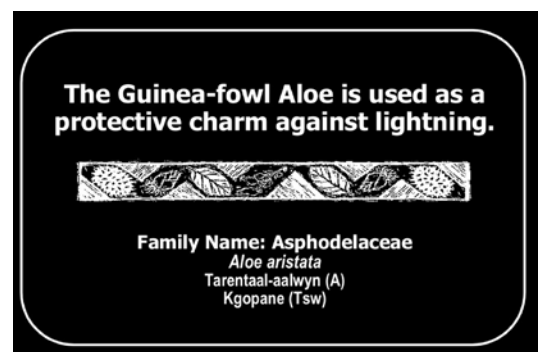
At the Harold Porter NGB interpretation staff were kept busy dealing with the flood damage, and also contributed to various local flower shows and festivals. New signage was developed for the upgraded wetland boardwalk and other sections of the Garden's Four Ecosystems Trail. Guided tours were presented to local and international visitors. New interpretive material included storyboards, posters, pamphlets, hang-tags (interlabels) and tick-labels.

At Kirstenbosch NGB, a dedicated interpretation officer post was created to handle the volume of interpretive work. Interpretive



The National Interpretation Co-ordinator presented a training course on interpretation theory and techniques to members of the South African Association for Marine and Biological Research, and participated in a WESSA/WWF project preparing training materials for a new Level 5 Environmental Education qualification. A course on environmental education for students was also presented at the Southern African Wildlife College, Limpopo Province. Interpretation staff from all gardens attended an Environmental Communication Workshop held at the Entabeni Environmental Education Centre in the Drakensberg. Assistance with an orchid survey in the Greater St Lucia Wetland Park was provided to KZN Wildlife.

In the Free State NGB a new specimen stand and display kiosk was developed at the new



signage was developed for several demonstration gardens including the Garden of Extinction, Garden of Weeds and the Useful Plants Garden. An inventory and archive of all interpretive signs and boards at Kirstenbosch NGB was regularly maintained. A new Heritage Trail was developed comprising a range of the Garden's cultural and heritage features such as Van Riebeeck's Hedge, the Dell, Useful Plants Garden and Mandela's Tree. A specimen stand and display kiosk was maintained by interpretation staff and horticultural students.

At the Lowveld NBG interpretation staff assisted with adjudication at the annual Young Scientists Expo held at Penryn College and supported Garden staff participating in various local festivals and shows. Interpretation staff participated in several marketing workshops hosted by the Lowveld Chamber of Business and Tourism, and prepared various promotional materials for inclusion in the local media. Groups visiting the Garden included an educational tour group from Réunion Island. Interpretive material and infrastructure in the Information Centre were upgraded with support provided from the Botanical Society. A range of interprelabels was developed and included along the route from the Visitors' Centre to the main Garden.

At Natal NBG flute-making workshops and flute walks were held. The Natal NBG's tree and bird lists were updated with new common names, and interpretation staff adjudicated in the annual Pietermaritzburg and Inland Schools Science Association (PINSSA) Competition. Interpretation along the Turraea Trail was reviewed and revised.

At the Pretoria NBG signboards were upgraded and storyboards prepared for the new wetland. A new bird list for the Garden was published, and various articles and advertisements on the Garden and its events prepared for inclusion in the local media. Illustrations were also prepared for a new school greening poster for the Environmental Education Centre. Biodiversity surveys as well as courses and walks were co-ordinated through the interpretation office. Guided tours were presented to local and international visitors, including Dr Peter Raven from Missouri Botanical Garden, USA.

At the Walter Sisulu NBG interpretive material was developed at the upgraded entrance to the Garden, as well as in the Kitso EcoCentre. A new flower display cabinet was developed in the EcoCentre. Interpretation staff also contributed to the numerous flower shows and displays presented by the Garden staff at various venues around Johannesburg.

Interpretation staff attended various courses during the year, and conducted a diverse range of guided tours, walks and workshops in the gardens supported by volunteer guides. With support from Botanic Gardens Conservation International's Investing in Nature Programme, SABONET's publication on environmental interpretation in botanical gardens entitled *Making your garden Come Alive!* (2000) by

Marÿke Honig was translated into Portuguese for use mainly by botanical gardens in Brazil. The translated report, published in Rio de Janeiro in 2005, was entitled *Como dar vida ao seu jardim!*

URBAN CONSERVATION

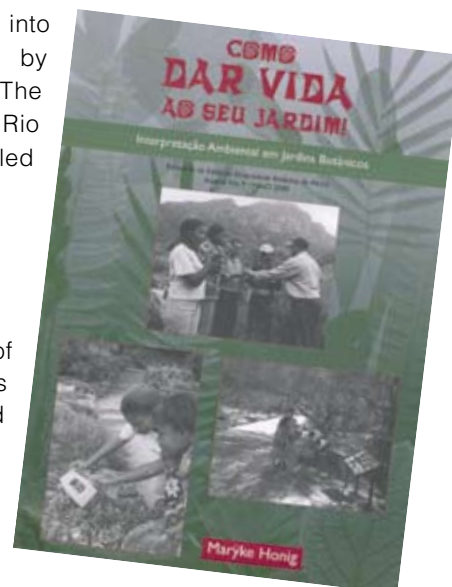
There is a growing awareness of the role that urban communities need to play in the care and management of biodiversity. This is true not only for cities like Cape Town with its high-profile natural attributes such as Table Mountain and Kirstenbosch, but also in other urban centres in South Africa and around the world. During the review year, Urban Conservation contributed to a number of initiatives that are exploring this growing dimension of nature conservation.

Two ongoing projects provide impetus to the Programme. The first is Cape Flats Nature, a community conservation project premised on the importance of developing local leadership for biodiversity protection. The other is the Peninsula Project for Wetland Restoration, which is a component of the broader Working for Wetlands Programme.

These two initiatives are served by a third project, Urban Conservation Media. This is a video production facility aimed at promoting communication between projects and their stakeholders, and which also seeks to articulate the voice of community participants and their perspective of biodiversity as an accessible resource. At another scale, Urban Conservation links experience gained through on-the-ground project work with the broader constituency of urban biodiversity practitioners and local government decision-makers. This is done nationally through the network of South African local authorities, and internationally through work with agencies such as IUCN, UNESCO-MAB, and ICLEI (Local Governments for Sustainability). These wider initiatives are being organised under the rubric of Urban Nature.

CAPE FLATS NATURE PROJECT

Cape Flats Nature has now completed its first three-year cycle (2002 to 2005) in terms of a partnership between the City of Cape Town, SANBI, the Botanical Society of South Africa, and the Table Mountain Fund of WWF. All these partners have revisited the agreement



The cover of the Portuguese edition of Making Your Garden Come Alive, now also available in French.

Prof Brian Huntley, SANBI CEO, with Charline MacKie, Lewine Walters and Luzann Hendricks – three young women representing the new generation of nature conservators in the City of Cape Town.

and re-committed themselves to ongoing collaboration in drawing communities of the Cape Flats into the process of caring for their biodiversity heritage, and to broadening and deepening local leadership for the work that this entails.

This re-affirmation of the original partnership took place at a vibrant spring event at the Edith Stephens Wetland Park (ESWP) to celebrate the handover of *Isoetes Vlei* to Kirstenbosch by Ms Stephens 50 years ago. (*Isoetes Vlei* is the SANBI-owned portion of this growing City facility.) Coincidental celebration of South Africa's Freedom Charter also brought home the role that urban nature conservation can play in realising democracy, improving living environments for the poor, and marking biodiversity as a common public heritage. The ceremonial activities were complemented by a Heritage Day community festival, when people from surrounding communities descended on the Park to participate in activities, among which was a biodiversity treasure hunt along the nature trails through the Park.

Extensive community interaction also occurred at the other sites linked to Cape Flats Nature. In addition to ESWP, Wolfgat Nature Reserve, Macassar Dunes and Harmony Flats are all managed by a team of nature conservators and student interns. This team was initially established with a grant from the Critical Ecosystems Partnership Fund. It represents a cadre of 'next generation' conservators who were mentored along the road from fresh graduates to fully operational managers by the City's then small but dedicated team of Nature Conservation Officers. The positions of these Cape Flats conservators have now

Cheryl Carolus presents the Impumelelo Gold Award to Zwai Peter and Tanya Goldman (partially obscured) of Cape Flats Nature.



been fully and permanently incorporated into the City's Nature Conservation Branch. As a project designed to support local government in delivery of the essential service of biodiversity management, the Cape Flats Nature partnership was recognised by the Impumelelo Innovations Trust, receiving a Gold Award at its 2005 ceremony in November.

WORKING FOR WETLANDS: PENINSULA PROJECT

The review year was the second in a three-year cycle for the Working for Wetlands: Peninsula Project. It is managed on a contract basis by wetland rehabilitation specialists, and is governed by the conditions of the national Expanded Public Works Programme for poverty alleviation and job creation. During the course of the year the project progressed according to agreed business plans that outlined restoration work at a number of wetland sites within the Cape Town metropole. While the clearing of alien vegetation and the reshaping of drainage channels provided poverty alleviation for teams of workers recruited from surrounding poor communities, it also provided significant scope for the development of business and management skills for emerging contractors. A chain of indigenous plant nurseries, which also propagates material for revegetation at restoration sites, is also an important vehicle for skills development.

During the year, this project generated over 15,000 person days of employment. A further 750 person days of training covered issues such as numeracy, life skills, business management, environmental awareness and vocational skills. [INSERT PHOTO 5]. A total of 10 SMMEs were used, contributing to job creation in the poorer sectors of Cape Town's population. The project marked World Wetlands Day, 1 February 2006, with an outing of all workers and contractors, who convened at Kirstenbosch for an information tour of this



A group of Working for Wetlands trainees outside the "Winter Palace", offices of the Urban Conservation Programme.

world famous garden, which for many people from the poorer communities of the Cape Flats remains inaccessible. This outing included a guided tour of the nursery facilities for the plant propagation team.

Urban Conservation is also providing an operational platform for the Western Cape Wetlands Forum. This is an open membership group for all stakeholders in the conservation and management of wetlands in the Western Cape Province, from conservation authorities, through civil society interest groups, to the private sector. Working for Wetlands also uses this forum as a reference group for prioritisation of wetland rehabilitation in the Province.

URBAN CONSERVATION MEDIA PROJECT

This project focuses on the production of short videos (approx five to 10 minutes), of which it compiled four during the course of the year. These were: 1. *Harmony Flats: Past and Future*, which presents the history, hopes, visions and achievements of the local community working-group with respect to their local biodiversity open space; 2. *Source-to-Sea*, an account of the Sand River system in the southern Cape Peninsula and work on its restoration as a system of wetlands along an important vegetation corridor, seen through the eyes of the Friends of the Tokai Forest and an emerging SMME contractor to Working for Wetlands; 3. *Where is Blouville?*, a student-

directed production to document community perceptions of their school's project and its efforts to restore an adjacent wetland; and 4. *Fynbos Fynmense*, a documentary of the CAPE Partners' Conference at Kirstenbosch in June 2005. All have been screened on several occasions at different events.

URBAN NATURE PROJECT

Urban Nature is an interface between Urban Conservation and the broader community of urban biodiversity practitioners. The most significant achievements in this field were the organisation of two workshops, both convened at Kirstenbosch. Urban Nature 2005 was a national two-day get-together of over 50 representatives from a range of South African local governments and other relevant agencies. Urban Nature 2006 was an international workshop that attracted 75 delegates. This latter workshop was held as a pre-event to the Cape Town hosted ICLEI World Congress 2006, and contributed a recommendation to that forum for biodiversity to be included as a fundamental consideration in local governance for sustainability. A pilot project, Local Action for Biodiversity, was launched as a result.

Much of the work of the Urban Conservation Programme is referred to on the project partnership website, www.capeflatsnature.org, which in turn can be referenced via www.sanbi.org.

MARKETING THE NBGs

Promoting the country's NBGs as preferred tourist attractions and as centres of learning for all of South Africa's communities and foreign visitors requires consistent and strategic positioning. A modest but effective generic advertising campaign, targeting consumer and trade markets was maintained. Advertisements placed in local and international publications raised the profile of the eight NBGs, as did participation in the annual tourism Indaba in Durban. Relations with national, provincial and local tourism authorities were renewed at Indaba. The Western Cape NBGs were showcased at the Cape Outdoor Adventure Expo and at the Cape Town Flower Show. The Getaway Show in Johannesburg and the Beeld Holidaymaker's Expo in Midrand provided an opportunity for the northern NBGs to be promoted.

Below: The SANBI Western Cape Garden Getaways exhibit for the SAA Cape Town Flower Show at Lourensford Estate in Somerset West.

Right: The winning Langa garden in the Township category of the Gardens of Pride competition.



The Gardens of Pride competition, held in association with Pam Golding Properties and ABSA Homeloans, was extended to the Eastern Cape, and another category called Township Gardens was added. The competition, which enjoys extensive media coverage, aims to encourage the use of indigenous plants, and promotes water-wise gardening.

Siphiwe Magodonga (Free State NBG), Cherise Viljoen (Kirstenbosch NBG) and Elliot Lithudzha (Pretoria NBG) at the Kirstenbosch-South Africa exhibit at the Chelsea Flower Show 2005.



ENVIRONMENTAL EDUCATION

SANBI's environmental programmes operate within both a national and global legislative framework. We base our mandate on international environmental policies to which South Africa subscribes, such as Agenda 21 and the Convention on Biological Diversity, as well as on the rights derived from South Africa's national Constitution relating to an environment that is not harmful to its citizens' health or well being, and the protection of the environment for the benefit of present and future generations. SANBI's vision is for an environmentally literate and active population that is working towards sustainable living, a healthy environment, conservation of our natural resources, environmental protection and stewardship and responsible development. Specifically, in terms of environmental education, SANBI aims to promote educationally relevant, responsive and accessible programmes for educators and learners.

Staff of the Environmental Education Directorate were extremely active during the period under review, with outreach programmes running in five of the eight NBGs, namely Walter Sisulu, Kirstenbosch, Lowveld, Free State and Pretoria. A grant of R3.2 million from the National Lotteries Distribution Fund made to SANBI in 2004 for environmental programmes that promote biodiversity education and education for sustainability enabled SANBI to extend its reach so as to include many more schools and learners from previously disadvantaged communities. A R70 million grant from DEAT's EPWP also made it possible for environmental education programmes to be extended into provinces such as Limpopo, and the Northern and Eastern Cape.

The five NBGs with dedicated education services all offer programmes aimed at both educators and learners, although Garden staff have the discretion to tailor-make their programmes to suit the community they serve. The school programmes are crafted to comply with the Outcomes-based model of education and are fun-filled, practical, hands-on sessions where learners engage with indigenous plants and ecology by touching, smelling, observing, recording and analysing information about the plants. The Gardens offer a selection of topics that learners can cover during their visits, such as 'Fun with ecology and food webs'; 'Precious water – every drop counts'; 'Soil is life'; 'Conservation starts at home'; 'Weird and wonderful'; 'Life in the leaves' and 'Birds'. The programmes correspond to the different ages and grades of learners, and are offered in at least two local languages.



Young learners enjoying a Teddy Bears' Picnic in the KZN NBG.

To enable educators to continue the learning once back at their schools, the NBGs also offer programmes aimed at educators. These include topics such as 'Integrating Environmental Education into the Revised National Curriculum'; 'Using the Botanical Garden as a Resource for Teaching and Learning'; 'Ideas for Environmental Calendar Days' and 'Greening South Africa's Schools'.

Educators are encouraged to use the Gardens as a practical resource to enhance teaching and learning, to conduct real-life project work where they can do investigations, record data and evaluate their findings. Assistance is provided with the structuring of projects with an environmental or ecological focus.

Programmes are timed to coincide with important world environmental days or weeks, such as National Water Week, National Environment Week and National Arbor Week.

The Environmental Education Directorate is currently engaged with three major programmes, the Garden Based Environmental Education Programme, the Outreach Greening Programme and The Greening Of The Nation Programme.



A facilitator conducts an Environmental Education Programme in the Lowveld NBG.

GARDEN BASED ENVIRONMENTAL EDUCATION PROGRAMME



Learners attending an Environmental Education session at the Gold Fields EE Centre at Kirstenbosch.

This programme has expanded rapidly since April 2005 through funding received from the National Lotteries Distribution Trust Fund (NLDTF) for a period of three years. The Lowveld, Pretoria, Kirstenbosch and Walter Sisulu NBGS benefit from these funds.

The programme offers hands-on education on issues of biodiversity and sustainability. Over the course of three hours, learners spend time in the Gardens, learning about plants, the animals associated with them and the ecosystems of

Learners on a spider hunt in the Lowveld NBG.



which they are a part. Sweaty but happy, they return to the environmental centres to continue their learning through interactive presentations and discussions.

EE national staff and AEOs in Kirstenbosch during Educators' Week attending the Biodiversity Programme.

In the Lowveld NBG, 127 schools and 7,788 learners visited the Garden for environmental education programmes, while the Walter Sisulu NBG hosted 140 schools with a total of 8,911 learners. The Pretoria NBG saw 109 schools with 8,416 learners visiting for sponsored

environmental education programmes as well as 44 schools comprising 2,319 learners who visited the Garden unsponsored, making a total of 153 schools and 10,807 learners. Although the Free State NBG does not benefit from the NLDTF for Garden based environmental education programmes, 77 schools with 3,189 learners visited this Garden at their own expense. The Gold Fields EEG at Kirstenbosch received 4,064 learners who attended sponsored guided tours, 3,960 learners who attended the unsponsored guided tours and another 7,861 learners who were sponsored by the NLDTF grant to attend environmental education programmes. The total number of learners that visited this Garden during this period is 15,885.

The **Gold Fields Environmental Education Centre** at Kirstenbosch began its first educator workshop with a picnic in a beautiful shaded area of the garden. As they enjoyed a delicious light lunch, the educators filled in an audit sheet which helped staff at the centre to assess their environmental knowledge status, and to plan the workshops that followed. During the second workshop, educators grappled with concepts like 'environmental education', 'sustainability' and 'biodiversity'. By the third and final workshop, confident educators were creating solid and exciting lesson plans around biodiversity and sustainable development, ready to take back to the learners at their schools.



OUTREACH GREENING PROGRAMME



Left: Labourers in a community indigenous garden.

Far left: A school indigenous garden developed through the GoN.

This programme aims to develop ecological awareness that can lead to an understanding of the relationship between people and their environment. Specifically, as a way of applying classroom-based knowledge about the environment to the outside world, the programme establishes school gardens. Participating learners are coached on how to plan their garden, prepare the soil, propagate plants and basic maintenance techniques. They then plant indigenous, water-wise plants that occur naturally in the area. As they plant and care for their gardens, the learners develop an understanding of environmental issues, such as water conservation, catchment areas and the uses of plants.

The Outreach Greening programme is currently operating in the Pretoria, Lowveld, Free State, and Walter Sisulu NBGs. The programme is also funded by the NLDTF, and spans three years. During the period under review, the Lowveld NGB worked with 20 schools to establish indigenous gardens. This is excellent progress considering that there was no environmental education programme in the Lowveld NGB until towards the end of 2004 when the education team was established. The Walter Sisulu NGB continued its excellent outreach, working with 38 schools to develop indigenous gardens, while 35 gardens were developed in schools working with the Free State NGB.

GREENING OF THE NATION PROGRAMME

The Greening Of The Nation Programme (GoN) was initiated in December 2004 and is funded through DEAT's EPWP, whose aims are job creation, poverty alleviation and capacity building. The grant extends over a 28-month period, of which 14 months have been covered. Greening activities are initiated using labour intensive methods to ensure that job opportunities are created for a maximum



number of unemployed individuals in the areas where programme activities are implemented.

A huge capacity building component that involves academic training, experiential learning and on-the-job skill provision for labourers has ensured that people obtain skills that will lead to permanent employment opportunities. The programme also has an internship component, with 24 learners from various regions throughout the country becoming multi-skilled in order to enhance their employability in the biodiversity, horticulture, landscaping and environmental education fields. All nine provinces benefit from this grant allocation.

A cultural village greened through the Greening of the Nation Programme.



A vegetable garden developed at the Mathwebu school in Bizana, Eastern Cape.

The GoN has specific deliverables as outlined in the table below.

Deliverables	Quantity December 2004/ March 2005	Quantity April 2005/ March 2006	Quantity April 2006/ March 2007	Total	Actual progress to date	% Completed
Temporary job person days	54,323	209,384	225,208	488,915	275,856	56.4%
Number of actual people employed	236	911	979	2,126	1,265	59.5%
SMMEs utilised	4	10	10	24	15	62.5%
Training days provided	5,433	20 938	22,521	48,892	30,774	62.9%
Community Greening project in m ²	2,976m ²	11,473m ²	12,340m ²	26,789m ²	15,225m ²	56.8%
Number of indigenous trees planted	536	2,065	2,221	4,822	9,210	191%
Number of schools greened	9	36	40	85	65	76.5%
Number of community indigenous and medicinal plants nurseries established	2	4	4	10	4	40%
Number of people trained to assist with implementation of programme	4	10	10	24	24	100%
Number of sites rehabilitated	2	3	4	9	7	77.8%



Greening of the Nation Programme employees working in a school indigenous garden in the Eastern Cape.



Local unemployed community members help to build the new facilities at the Harold Porter NBG.



School indigenous gardens developed by the Walter Sisulu team using a NLDTF grant.

ECOSYSTEM REHABILITATION PROGRAMMES

WORKING FOR WETLANDS



An eroded streambed prior to rehabilitation.

Wetlands. Recognising the potential of SANBI to play such a cross-cutting and integrating role, the Biodiversity Act confers on the Institute a mandate to co-ordinate and implement programmes for the rehabilitation of ecosystems, with the necessary involvement of civil society. This approach also allows SANBI to integrate EPWP-aligned outputs within a broader set of co-ordinated and coherent activities related to the conservation and sustainable use of wetlands. In this way, an ecosystem approach is promoted that does not pursue rehabilitation in isolation of other activities, and in turn contributes to strengthening the sustainability of interventions undertaken through Working for Wetlands.

The year under review was a successful one for the Working for Wetlands Programme, with almost all its targets being achieved, and some targets exceeded.

Working for Wetlands focuses on the rehabilitation, protection and sustainable use of South Africa's wetlands, and since 2004 has been managed by SANBI on behalf of the departments of Environmental Affairs and Tourism, Water Affairs and Forestry, and Agriculture. Through its 'managed network' model of operating, SANBI is ideally placed to tackle the challenges of securing the vital collaboration between relevant players, in order to bring about the outcomes desired by all the partners in Working for



A retaining weir, built by Working for Wetlands, reduces erosion of a montane stream during summer flooding.

	Target	Actual	% achieved
Jobs created	1,610	2,135	133%
Person days	279,400	268,772	96%
Training days	25,100	25,437	101%
SMMEs	106	196	185%
Gabion structures built	12,000 m ³	13,632 m ³	114%
Concrete structures built	4,750 m ³	5,235 m ³	110%
Earthen structures built	32,000 m ³	16,547 m ³	52%
Earthworks	119,200 m ³	132,089 m ³	111%
Revegetated areas	125,700 m ²	147,135 m ²	117%
Cleared areas	934 ha	1,136 ha	122%
Eco-logs built	43 m ³	22 m ³	51%
Firebreaks	1,000 ha	1,000 ha	100%
Wetland plants propagated	80,000	101,076	126%
Fencing of structures	4,300 m	3,500 m	81%
Boardwalk construction	400 m	572 m	143%
Waste removal	240 m ³	132 m ³	55%
Rock packs	440 m ³	1,862 m ³	423%

This year saw a budget increase of 63% in the funding received from DEAT, which significantly expanded the programme's reach into new catchments and rehabilitation sites. This also allowed the programme to increase the number of workers employed, thereby contributing further to the employment creation and skills development objectives of the EPWP. The programme's 43 rehabilitation projects, spanning state, communal and private land in all nine provinces, implemented a range of interventions aimed at improving the ecological and hydrological functioning of the target wetlands.



A Working for Wetlands team member celebrates the successful completion of her project.

Working for Wetlands and the Directorate for Biodiversity Programmes, Policy and Planning have been joined by the Water Research Commission in driving the national wetland inventory project. Specific wetland mapping and modelling was commissioned as part of the National Landcover 2000 project, and this data is being used as a baseline for further mapping and cataloguing of South African wetlands. The inventory will have numerous applications, including measuring future change in wetland area, function and values, and as a key tool for integrating wetlands into planning, management and monitoring frameworks. DEAT, provincial environment and conservation authorities, Department of Water Affairs and Forestry, and Department of Agriculture are all major partners in the project.

A comprehensive research programme on wetland rehabilitation, co-funded by the Water Research Commission and Working for Wetlands, delivered its first substantial products, including tools for assessing wetland health and identifying ecosystem services provided

by wetlands. Research on the origin, evolution and degradation of wetlands in southern Africa has identified erosion, frequently accelerated by human activities, as a primary threat to many wetlands.

During 2005, Working for Wetlands explored mechanisms for compensating for the loss of wetlands. A rehabilitation project, funded by Anglo Coal and implemented through the programme, is the result of Anglo Coal being granted a licence to open a new mine on condition that it compensates for the destruction of wetlands due to mining, by rehabilitating equivalent wetlands elsewhere in the catchment. This concept of offsite mitigation is new in South Africa, but has been applied for years in other countries as a tool to offset the loss of wetlands. Working for Wetlands implemented this project in the same way as its other projects, thereby generating additional job and training opportunities that were reported to the EPWP. The project is also being treated as a pilot for exploring the desirability and feasibility of adopting offsite mitigation as a more widespread policy option for reducing biodiversity and wetland loss in South Africa.

Research undertaken earlier this year on the socio-economic impact of Working for Wetlands was showcased in a publication launched globally by WWF-International in September. The publication, *Freshwater and Poverty Reduction: Serving People, Saving Nature*, was launched to coincide with the United Nations World Summit in September 2005. The report presents an economic analysis of the livelihood impacts of four freshwater conservation initiatives from around the world. The South African case study focused on the potential of the Working for Wetlands model to enhance the ability of wetlands to support sustainable livelihoods.

SANBI and the global non-governmental organisation Wetlands International are planning to co-host an international workshop on Wetlands, Water and Livelihoods in St Lucia, KwaZulu-Natal in February 2006. Drawing on a hundred participants from 40 countries, the workshop will focus on pro-poor approaches in the management of wetlands. The programme will expand its focus in the next year to explore sustainable use of wetlands, particularly with regard to how they can contribute to sustainable livelihoods. Attention will also be paid to improving the programme's systems for planning, monitoring and evaluating wetland rehabilitation, and to building capacity at all levels in the programme.

HUMAN RESOURCES MANAGEMENT

As it continues to grow, SANBI requires ongoing strategic support from the Human Resources Directorate. The Directorate focused on the following matters during the financial year 2005/2006:

- introducing organisational development interventions to ensure workforce development
- managing performance and improving the merit reward system
- promoting healthy employment relations within the institute
- attracting and retaining qualified staff reflecting South Africa's demographics
- facilitating and supporting the transformation process
- ensuring continuous learning, training and development opportunities to ensure staff development and growth
- promoting organisational and employee wellness in SANBI.

In support of SANBI's transformation goals, the Human Resources Directorate launched a diversity management programme in 2005. The programme aims to increase employee productivity by utilising their talents well, creating a work environment that allows everyone to reach his or her full potential, attracting a diverse population to SANBI and increasing overall job satisfaction.

Employment relations continued to be healthy, with no industrial action. Good relationships between management and staff continued, including with members of the union NEHAWU.

SANBI's two geographically separated Employment Equity Committees were replaced by one designated Employment Equity/Training Committee. The focus of the newly formed committee is to monitor Employment Equity and Training matters in order to facilitate and support the implementation of the transformation programme in SANBI.

PROFILE OF PERMANENT STAFF

SANBI continued to attract and retain suitably qualified staff reflecting South Africa's demographics. The table below reflects the profile of permanent staff on 31 March 2006.

Occupational Level	Male status					Female status					Total filled	Designated group	Non-designated group
	A	C	I	W	Total	A	C	I	W	Total			
Top management	0	0	0	1	1	0	0	0	0	0	1	0%	100%
Senior management	1	0	1	5	7	1	0	0	2	3	10	50%	50%
Professionally qualified and experienced specialists and mid-management	8	3	3	33	47	1	3	1	32	37	84	61%	39%
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	14	7	0	6	27	11	12	2	24	49	76	92%	8%
Semi-skilled and discretionary decision-making	86	68	1	3	158	26	26	2	15	69	227	99%	1%
Unskilled and defined decision-making	96	38	2	0	136	17	7	0	0	24	160	100%	0%
TOTAL	205	116	7	48	376	56	48	5	73	182	558		

APPOINTMENTS TO PERMANENT POSTS

The Human Resources Directorate continued to facilitate and support the transformation process in SANBI. The Directorate is currently facilitating the implementation of the Employment Equity Plan. The table below reflects the appointments of staff to permanent positions in SANBI during the period under review.

Occupational Level	Male Status					Female Status					Total Filled
	A	C	I	W	Total	A	C	I	W	Total	
Top management	0	0	0	0	0	0	0	0	0	0	0
Senior management	0	0	1	0	1	0	0	0	0	0	1
Professionally qualified and experienced specialists and mid-management	1	0	1	1	3	1	0	0	6	7	10
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	0	0	0	0	0	2	0	0	2	4	4
Semi-skilled and discretionary decision-making	9	4	0	1	14	2	0	2	1	5	19
Unskilled and defined decision-making	11	0	0	0	11	3	2	0	0	5	16
TOTAL	21	4	2	2	29	8	2	2	9	21	50

STAFF TRAINING AND DEVELOPMENT

SANBI continued to invest in the development of its human resources. In the year under review SANBI spent R1,6 million on training of its permanent staff. There has been significant growth in the investment in training at cost centre level. The table below reflects staff training courses attended 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	0	0	0	0	0
Professionally qualified and experienced specialists and mid-management	3	2	1	1	0	0	0	7	14
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	12	2	0	0	9	5	0	4	32
Semi-skilled and discretionary decision-making	57	37	0	0	17	10	0	0	121
Unskilled and defined decision-making	61	26	0	0	12	2	0	0	101
TOTAL	133	67	1	1	38	17	0	11	268

STAFF BURSARY PROGRAMME

SANBI's staff bursary programme has shown a significant increase in the number of black employees registering for formal qualifications. The aim of the programme is to develop staff potential to meet the future human resources needs of SANBI and in some cases, to develop individuals beyond the immediate and foreseeable needs.

The table below reflects support provided to staff during this period.

Qualification Level	Male				Female				Total
	A	C	I	W	A	C	I	W	
Diplomas	5	1	0	0	3	2	0	0	11
BTech, BSc, etc.	4	2	0	0	3	3	0	0	12
Honours	4	0	0	0	1	0	1	0	6
Masters	1	2	0	1	0	3	0	2	9
Doctorate	2	0	0	0	1	1	1	2	7
TOTAL	16	5	0	1	8	9	2	4	45

CAPACITY BUILDING AMONGST YOUNG PROFESSIONALS

SANBI provides students with the opportunity to build a career record and gain hands-on experience and develop an early understanding of the business world through professional internships. This opportunity also improves the intern's employability on qualification. Moreover, internships can engender interest in particular areas of work or study, fulfilling the need in South Africa to promote the study and practical application of science, horticulture and conservation throughout the economy.

The table below reflects the number of interns supported during the year under review.

Directorate	Male				Female				Total
	A	C	I	W	A	C	I	W	
Gardens & Horticultural Services	8	3	0	2	10	5	1	5	34
Research & Scientific Services	8	1	1	1	4	5	1	5	26
Environmental Education Services	10	1	0	0	13	0	0	0	24
TOTAL	26	5	1	3	27	10	2	10	84

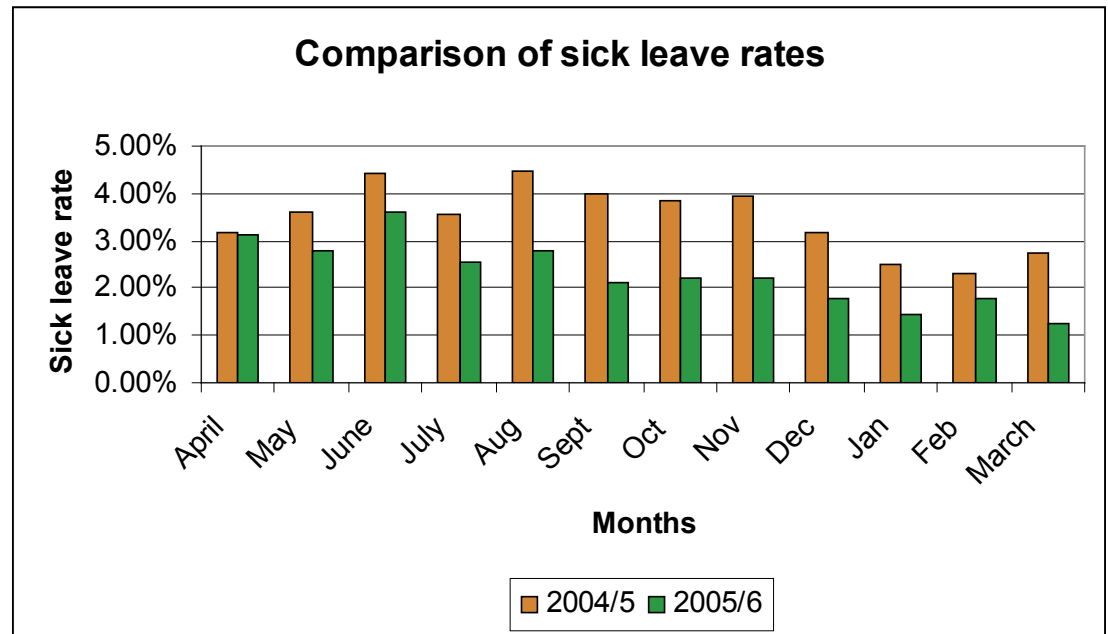


Student interns form a key component of SANBI professional development programmes. Interns from the 2005 intake.

REDUCING ABSENTEEISM

The Human Resources Directorate closely monitored absenteeism and the utilisation of sick leave throughout the Institute. In 2005 the Directorate embarked on a 'road show' and encouraged staff to minimise the utilisation of sick leave. The graph below shows that the utilisation of sick leave has dropped drastically. Various changes and monitoring mechanisms have been introduced to our management system to assist managers and staff manage their sick leave.

The Human Resources Directorate is faced with one of the most exciting challenges of positioning itself and building capacity to provide continued strategic support to all SANBI Directorates and Programmes during this period of growth and development.



The Kirstenbosch estate team train Garden staff on bed edging installation in the Khoisan Garden.



FINANCIAL SERVICES

For the year under review, the Institute's primary source of operational funding remains the government grant, funded by DEAT. The total grant this year increased by R7.6 million (9.2%) to R90.4 million (2004/05: R82.8million), enabling SANBI to continue with its ongoing operations until initiating some of the priorities in its expanded mandate by obtaining approval from National Treasury for the SANBI Business Case.

The Institute's financial performance was ahead of the budget for 2005/06. Operating income of R110.3 million exceeded the budget of R102.8 million by R7.5 million (7.3%). Actual operating expenditure increased to R110.2 million and exceeded the budget of R102.8 million by R7.4 million (7.2%), resulting in a slight surplus of R39,995 for the year.

The DEAT and DEAT-managed Extended Public Works Programme (EPWP) have allocated funding of R97.6 million (2004/05: R59.6 million) for capital development in the Gauteng, Free State and Mpumalanga Gardens and for Working for Wetlands and Greening the Nation projects. The Institute also attracted R26.5 million

(2004/05 R31.1 million) of foreign funding for southern African botanical and environmental projects. This further highlights the Institute's dependence on EPWP and local/foreign donor funding for its operations.

Overall the total of operational, project and capital expenditure rose by 27.6 % to R250 million (2004/05: R195 million) for the financial year, and we expect a similar or greater rise in the coming year. Funds on hand to meet project commitments amount to R74.7 million (2004/05: R65.5 million).

In order to comply with corporate governance best practices appropriate to the Institute, a corporate compliance officer oversees 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 major assets as well as fiduciary cover.

DONATION, GRANTS AND SPONSORSHIPS FROM 1 APRIL 2005 TO 31 MARCH 2006

Corporate	R	Foreign	R
Cape Town Flower Show (Pty) Ltd	33,600	Andrew Mellon Foundation	2,872,032
Ceres Fruit Juices Ltd	24,000	Ball Horticultural Company	194,676
First National Bank Ltd	350,000	Birdlife International	119,381
Nampak Ltd	39,012	Conservation International	4,274,186
Pam Golding (Pty) Ltd	10,463	Global Environment Facility	132,200
Pick 'n Pay Ltd	12,000	International Maritime Organisation	138,837
Sappi Ltd	809,051	International Tropical Timber Association	50,083
		InWent Capacity Building International, Germany	60,823
		Norwegian Government	100,000
		Plantlife International	28,000
		Rijks Instituut, Netherlands	78,664
		Royal Botanic Gardens, Kew	1,158,607
		The World Bank	10,036,567
		The World Conservation Union	482,496
		UNESCO	52,346
		United Nations Development Programme	3,207,256
		United Nations Environmental Programme	3,438,243
		Universidad de Sevilla	9,840
		University of California	15,019
		University of Hamburg	43,779
		Wildlife Conservation Society	37,385
		Other	
		Bench Donations	180,000
		Sundry Donations	211,815
		Total	130,756,581
Trusts			
DM Mullins Family Trust	1,000,000		
Dr GP Marx	15,000		
Dr Sunshine Trust	8,024		
Estate Late MD Rayner	316,488		
Fitzroy Charitable Trust	220,000		
Graaff's Trust	1,129		
HR Hill Trust	68,286		
The Green Trust	80,000		
Individuals and Organisations			
Botanical Society of SA	458,333		
Mr. J Batley	25,000		
Mrs. P Irvine	250,000		
SA World Wide Fund for Nature	878,631		
Table Mountain Fund	121,498		
University of Kwa-Zulu Natal	43,050		
Western Cape Nature	250,000		
Government			
Mogale City Municipality	12,000		
Department of Environmental Affairs and Tourism–Greening the Nation	25,196,857		
Department of Environmental Affairs and Tourism–Other	4,610,697		
Department of Environmental Affairs and Tourism–Extended Public Works Programme	11,052,702		
Department of Environmental Affairs and Tourism–Working for Wetlands	56,735,283		
Department of Science and Technology	200,000		
Department of Water Affairs and Forestry	30,000		
Destination Marketing Organisation, Provincial Administration, Western Cape	175,000		
Medical Research Council	494,143		
National Research Foundation	314,100		

CORPORATE GOVERNANCE STATEMENT

GOVERNANCE STRUCTURE

SANBI 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 timeous and meaningful information on all of its activities.

Composition of the Board

Members of SANBI Board are appointed in terms of Section 15 of the National Environmental Management: Biodiversity Act of 2004.

The Board consists of not fewer than seven and not more than nine members who are 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 April 2005 to 31 March 2006 comprised:

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

The Board has adopted formal terms of reference regulating its functions. 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 and 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 to DEAT on funding needs from the 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 10 of 2004 and the PFMA in terms of responsibility and accountability.

Executive Management

The Executive Management Committee comprises of 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.

The following persons served on the Executive Management of the South African National Biodiversity Institute during the period 1 April 2005 to 31 March 2006:

Prof BJ Huntley	Chief Executive Officer
Mr S Singh	Chief Financial Officer
Prof GF Smith	Chief Director: Research
Mr CK Willis	Chief Director: Gardens & Horticultural Services
Mr M Netshiombo	Chief Director: Human Resources
Dr J Donaldson	Director: Kirstenbosch Research Centre
Ms K Maze	Director: Biodiversity Programmes, Policy & Planning Services
Dr MM Wolfson	Director: Research Services
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
Dr L Jackson	Director: Global Invasive Species Programme
Mr O Henderson	Programme Manager: SKEP

Audit Committee

In keeping with Treasury Regulation 27 of the PFMA 1999, the Board appointed an Audit Committee to assist 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. Membership of the Audit Committee from 1 April 2005 to 31 March 2006 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 S Singh *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	1 April 2005-31 March 2006	
Governance Advisory Committee	Mr T Vosloo	Chairperson
	Mr S Fakir	
	Ms B Njobe	
	Dr M Mayekisa	
	Mr GJ Dladla	Non Board member
	Prof B Huntley	<i>ex officio</i>
	Mr S Singh	<i>ex officio</i>
	Mr M Netshiombo	<i>ex officio</i>
Science Programmes Advisory Committee	Prof S Chown	Chairperson
	Ms M Pyoos	
	Dr M Mayekisa	
	Ms S Brownlie	Non Board Member
	Ms B Reyers	Non Board Member
	Dr H Magome	Non Board Member
	Ms L Sello	DEAT Representative
	Prof B Huntley	<i>ex officio</i>
	Dr G Midgley	<i>ex officio</i>
	Prof G Smith	<i>ex officio</i>
	Ms K Maze	<i>ex officio</i>
Outreach Advisory Committee	Dr D Mabunda	Chairperson
	Dr R Wagiet	Non Board member
	Prof H Lotz-Sisitka	Non Board member
	Dr B McKenzie	Non Board member
	Mr D Lindley	Non Board member
	Prof BJ Huntley	<i>ex officio</i>
	Ms M Qwathekana	<i>ex officio</i>
	Mr C Willis	<i>ex officio</i>
	Mr J Dini	<i>ex officio</i>

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 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 South African General Accepted Accounting Practice (SA GAAP) and GRAP 1, 2 & 3.

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 risks include segregation of duties, transaction authorisation, supervision, monitoring and financial and managerial reporting. Where the risk management workshop identified weaknesses in the systems of the Institute, they are addressed.

The Institute has adopted a Fraud Prevention Policy and plan which incorporates a whistleblowing system and procedure. The whistleblowing hotline is administered by the South African Corporate Fraud Management Institute (SACFMI).

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, that 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 Institute has a comprehensive network of compliance officers who submit quarterly reports on cost centre/project compliance in terms of recommendations made by the internal auditors.

All compliance officers have a duty to ensure that controls and systems are put in place to mitigate possible risks from materialising.

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

SANBI is committed to building an inclusive workforce, fostering an environment that respects the individual and offering the opportunity for all staff to develop to their full potential in the pursuit of SANBI goals. In support of SANBI's transformation process, a diversity management programme was launched in 2005. The programme aims to increase employee productivity by utilizing talents, creating a work environment that allows everyone to reach his or her full potential, attract a diverse population to SANBI and increase job satisfaction.

Employment Equity

Since Employment Equity and Skills Development have the same point of departure, SANBI's two geographically distant Employment Equity Committees were dissolved and one designated Employment Equity/Training Committee was established. The focus of the newly formed committee is to monitor Employment Equity and Training matters in order to facilitate and support the transformation programme in the Institute. The Employment Equity policy of the Institute seeks to achieve:

- Successfully execute the employment equity strategy and attain specific employment equity targets.
- Ensure compliance with the provisions and legal requirements of the EE Act.
- Promote diversity.
- Modify and adjust physical working environments to accommodate disabled people.
- attract, attain, develop and retain staff that are representative of all groups.

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

SANBI acknowledges the seriousness of the HIV/AIDS epidemic and commits itself to provide support for employees who are infected or affected. In order to maximise support to employees, it was decided to integrate the workplace HIV/AIDS programme with other workplace health-related programmes such as Occupational Health and Safety, the Employee Assistance Programme and Incapacity Management.

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 wellbeing. This programme has been successfully implemented in all regions and centres of the Institute and is closely monitored. With the implementation of EAP, the Institute demonstrates its commitment to ensure the emotional and social wellbeing of all 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. It is a standard annexure to all letters of appointment to ensure that new staff are adequately informed about this upon commencing duty.

A Code of Conduct for Board members has also been developed, approved and implemented and all Board members are subject to these prescripts.

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.

Supply Chain Management

During this financial year the Institute has aligned all procurement systems, policies, processes and practices with PFMA and Treasury requirements concerning Supply Chain Management.

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.

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 Practice (GAAP).
- Compensation for Occupational Injuries and Diseases Act No. 180 of 1993.
- Promotion of Access to Information Act, No. 2 of 2000.

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 relative 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 set materiality at R1,251,592. This has been determined by applying 0.5% to the actual gross operating expenditure for the year excluding 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.

STATEMENT OF RESPONSIBILITY OF THE BOARD

The South African National Biodiversity Institute (SANBI) was established in terms of the National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004) and is subject to the provisions of the Public Finance Management Act, Act no. 1 of 1999 (PFMA).

The members of the SANBI Board are responsible for the presentation of Annual Financial Statements in compliance with generally accepted accounting practice, the maintenance of accounting records, internal control and risk management, and the consistent use of appropriate accounting policies supported by reasonable judgements and estimates.

The Board believes that, for the year under review, the Institute has largely met its strategic obligations under the National Environmental Management Biodiversity Act

(NEMBA), that it complies with the fiduciary duties and general responsibilities of Accounting Authorities as stated in section 50 and 51 of the PFMA and that it is a going concern for the foreseeable future.

The Annual Financial Statements for the year ended 31 March 2006 were approved by the Board on 4 August 2006 and are signed on its behalf by:



MS Bongiwe Njobe
Chairperson



Professor Brian J. Huntley
Chief Executive Officer

REPORT OF THE AUDIT COMMITTEE for the year ended 31 March 2006

1 Report of the Audit Committee

We are pleased to present our report for the financial year ended 31 March 2006.

2. Audit Committee Members and Attendance

The Audit Committee consisted of four external members listed hereunder and held three meetings for the financial year under review:

Name of Member	Meetings Attended
Trish Hanekom	3
Saliem Fakir	2
Able Dlamini	2
Gjima Dladla	2

3. Audit Committee responsibility

The Audit Committee reports that it has complied with its responsibilities arising from section 38(1)(a) of the PFMA and Treasury Regulation 3.1.13. The Audit Committee has adopted appropriate formal Terms of Reference as its Audit Committee Charter, has regulated its affairs in compliance with this Charter and has discharged all its responsibilities as contained therein.

4. The effectiveness of internal control

The system of internal controls is designed to provide cost effective assurance that assets are safeguarded and that liabilities and working capital are efficiently managed. The Audit Committee has evaluated all significant and material issues raised in reports issued by the Internal Audit Function, the Audit Report on the Annual Financial Statements, and management letter of the Auditor-General, and is satisfied that they have all been, or are being, appropriately resolved. In line with the PFMA and the King II Report on Corporate Governance, the Internal Audit Function and other assurance providers provided the Audit Committee and management with assurance that the internal controls are appropriate and effective for those areas included in the annual operational

plan. This is achieved by means of the risk management process, as well as the identification of corrective actions and suggested enhancements to the controls and processes. The Audit Committee has evaluated the work performed by the Internal Audit Function and other assurance service providers. Based upon this evaluation, the Committee reports that the systems of internal controls for the period under review were effective and efficient.

5. Evaluation of Financial Statements

The Audit Committee is satisfied with the content and quality of monthly and quarterly reports prepared and issued by the Accounting Officer and entity during the year under review.

The Audit Committee has:

- Reviewed and discussed the audited annual financial statements to be included in the annual report with the Office of the Auditor-General and the Accounting Officer;
- Reviewed the Auditor-General's management letter and management's response thereto;
- Reviewed accounting policies; and
- Reviewed significant adjustments resulting from the audit.

The Audit Committee concurs and accepts the Auditor-General's conclusions on the annual financial statements and is of the opinion that the audited annual financial statements be accepted and read together with the report of the Auditor-General.



Trish Hanekom (Ms)
Chairperson: Audit Committee
Date: 17 August 2006

SUMMARY OF KEY PERFORMANCE INDICATORS

This Annual Report serves not only to meet the fiduciary compliance requirements of the Public Finance Management Act (PFMA) but also to inform our many stakeholders of the goals, strategies and activities of the Institute.

In terms of the PFMA, the Institute annually prepares and has approved by the Board, a three-year Corporate Strategic Plan and a one-year Business Plan. Both the Corporate Strategic Plan and the Business Plan set goals, strategic objectives and

describe outputs, milestones and performance indicators (see SANBI website www.sanbi.org). Performance against the goals is reported on at each quarterly meeting of the Board.

Key high level goals and outputs are summarized below, with more specific details contained in the reports of each directorate.

Goals	Outputs
1. Be the preferred national resource for knowledge management and information dissemination on biodiversity and its status and trends in South Africa.	■ GIS website for online access to biodiversity information (http://bgis.sanbi.org) established. ■ First number in the <i>SANBI Biodiversity Series</i> published, providing a status report on South Africa's response to the Global Strategy for Plant Conservation. ■ <i>Plants of Southern Africa</i> available electronically on SANBI website (http://posa.sanbi.org/) ■ <i>Checklist of the Flowering Plants of sub-Saharan Africa</i> published – the first, comprehensive and authoritative list of the 50,000 species of African plants.
2. Be a centre of excellence for co-ordinated research on the composition, value, status, functioning and dynamics of South Africa's biodiversity.	■ New Centre for Biodiversity Conservation at Kirstenbosch opened, accommodating 40 staff of ten partner conservation organisations. ■ New research plans for conservation and systematics developed, in alignment with Biodiversity Act. ■ SANBI staff published 350 papers, including several books, on the biodiversity of South Africa and beyond. ■ Approval by GEF of international research project on pollinators, with SANBI as African co-ordinator.
3. Establish a national network of bioregional programmes implementing priority components of the NBSAP, effectively mainstreaming biodiversity in development processes.	■ Succulent Karoo Ecosystem Programme co-ordination unit established within SANBI. ■ National Grasslands Biodiversity Programme co-ordination unit established within SANBI and programme design completed. ■ Convened the 1st National Bioregional Programmes Forum.
4. Provide support to government on biodiversity related obligations and opportunities in SADC, NEPAD and multilateral environmental agreements.	■ Compiled the 3rd Country Report for submission to the Convention on Biological Diversity secretariat via DEAT. ■ DEAT delegation at the CBD COP 8 meeting in Curitiba, Brazil provided with technical support. ■ Provided technical support in the drafting of the biodiversity section of the Presidency's National Spatial Development Perspective. ■ Biodiversity Chapter for the National Sustainable Development Strategy compiled. ■ Co-hosted the Western Cape Regional Workshop on Climate Change Impacts ■ SANBI's Global Change Research Group organised the science component of the National Climate Change Conference at Gallagher Estate. ■ Hosted the third successful African Plants Initiative meeting in South Africa, with 75 delegates, mostly from Africa, attending. ■ SANBI provided expert advice on addressing access and benefit-sharing and alien and invasive species under the Southern African Biodiversity Support Programme.

Goals	Outputs
5. Develop and manage a system of national botanical gardens representative of the South African flora.	■ Visitor numbers to Gardens reach record total of 1.25 million, an increase of 3% on the previous year. Free State NBG up 78%, Pretoria NBG up 29% and Walter Sisulu NBG up 7%. ■ Permanent concert stage completed in the Walter Sisulu NBG. New visitor facilities completed in the Lowveld, Pretoria, Free State and Walter Sisulu NBGs.
6. Monitor and report on the status of biodiversity in South Africa and be the preferred national resource for guidelines, tools and information on best practices relating to the identification and conservation of threatened species and ecosystems, the sustainable use of biodiversity, and the impact of invasive alien species.	■ The South African Reptiles Conservation Assessment programme launched. ■ National Wetlands Inventory Programme initiated. ■ The Cape Floral Region based volunteer plant-monitoring programme expanded to a national programme. ■ Agreement extending the Millennium Seedbank Project for another five years was signed by SANBI and Royal Botanic Gardens, Kew. ■ Agreements drafted with BirdLife South Africa and Avian Demography Unit on birds and environmental change. ■ Draft MOU developed with South African Ecosystems Observation Network (SAEON). ■ Published a comprehensive response to the Global Strategy on Plant Conservation, reporting on progress towards global 2010 biodiversity goals.
7. Implement rehabilitation programmes that systematically target threatened ecosystems while supporting the goals of the Expanded Public Works Programme. (Invasives, Poverty Alleviation, Greening, Working for Wetlands, Desertification).	Working for Wetlands outputs for the year under review: ■ 2,135 job opportunities provided (133% of target), with a total of 268,772 job days (96%) and 25,437 (101%) training days ■ 43 wetlands rehabilitated ■ 196 SMMEs used in rehabilitation projects (185%) ■ 13,632m³ of gabions installed (114%) ■ 132,089m³ earthworks completed (111%) ■ 101,026 wetland plants propagated and planted in wetlands undergoing rehabilitation (126%). The Greening of the Nation Programme outputs include: ■ 275,856 person days ■ 1,265 people employed ■ 15 SMMEs created and used; 30,774 training days provided ■ 9,210 indigenous trees planted ■ 65 schools greened with indigenous trees and plants ■ 4 community indigenous and medicinal plants nurseries developed ■ 24 internships with beneficiaries trained on academic qualifications and experiential learning ■ 7 sites rehabilitated and 15,225m² area greened in community projects.
8. Inspire and empower people to take responsibility for conservation and sustainable use of our biodiversity. (gardens, environmental education, outreach programmes) from all walks of life.	■ New environmental education centre completed and operational in the Free State NBG. National interpretation programme operational with natural history courses presented on various biodiversity-related subjects. ■ Garden- and community-based outreach programmes operational. ■ Expanded CREW project into northern parts of South Africa. ■ The National Lotteries funded Garden Based Environmental Education Programmes benefit 46,580 learners ■ The Lotteries and DEAT funded Outreach Greening programme completed greening projects in 113 schools and community groups in urban and rural areas.

Goals	Outputs
9. Be a vibrant organisation, building national professional capacity in biodiversity that closely reflects the demography of South Africa.	■ The Institute's bursary scheme supports 45 staff registered for postgraduate studies. ■ SANBI launches a diversity management programme aimed at building an inclusive workforce for people to develop to their full potential in the pursuit of SANBI goals. ■ Intern programme showed an increase of 19% to 84 participants. ■ Collaboration with the Mellon Foundation expanded to fund PhD training programme for young black scientists.
10. Be financially sustainable with an expanding diversity and volume of income streams and increased cost efficiency and effectiveness, to meet the expanded institutional mandate.	■ Total operating grant from DEAT increased to R90.4m (9.2%) from R82.8m previously. ■ Grants, sponsorships and donations up to R130.8m (33.3%) from R98.1m. ■ Own income increased to R32.9m (17.8%). ■ Operating expenditure of R110.2m in line with operating income (R110.3m).
11. Maintain effective accounting, financial, risk and governance systems and make changes where appropriate.	■ Board and Audit Committee ensured reliability of quarterly financial reporting to DEAT. ■ Comprehensive quarterly project reporting to Exco and Board. ■ Effective internal audit function established. ■ Quarterly Corporate Compliance reports submitted to DEAT and National Treasury.

REPORT OF THE AUDITOR-GENERAL

TO PARLIAMENT ON THE FINANCIAL STATEMENTS OF THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE FOR THE YEAR ENDED 31 MARCH 2006

1. AUDIT ASSIGNMENT

The financial statements as set out on pages 1 to 10, for the year ended 31 March 2006, have been audited in terms of section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), read with sections 4 and 20 of the Public Audit Act, 2004 (Act No. 25 of 2004) and section 30 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004). These financial statements are the responsibility of the accounting officer. My responsibility is to express an opinion on these financial statements, based on the audit.

2. SCOPE

The audit was conducted in accordance, with International Standards on Auditing read with General Notice 544 of 2006, issued in Government Gazette no. 28723 of 10 April 2006 and General Notice 808 of 2006, issued in Government Gazette no. 28954 of 23 June 2006. Those standards require that I plan and perform the audit to obtain reasonable assurance that the financial statements are free of material misstatement.

An audit includes:

- examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements,
- assessing the accounting principles used and significant estimates made by management, and
- evaluating the overall financial statement presentation.

I believe that the audit provides a reasonable basis for my opinion.

3. BASIS OF ACCOUNTING

The entity's policy is to prepare financial statements on the basis of accounting determined by the National Treasury, as described in note 1 to the financial statements.

4. AUDIT OPINION

In my opinion, the financial statements present fairly, in all material respects, the financial position of the South African National Biodiversity Institute at 31 March 2006 and the results of its operations and its cash flows for the year then ended, in accordance with the basis of accounting determined by the National Treasury of South Africa, as described in note 1 to the financial statements, and in the manner required by the Public Finance Management Act, 1999.

5. APPRECIATION

The assistance rendered by the staff of the South African National Biodiversity Institute during the audit is sincerely appreciated.



Z Abrams for Auditor-General

Cape Town
19 July 2006



AUDITOR - GENERAL

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

STATEMENT OF FINANCIAL POSITION AS AT 31 MARCH 2006

STATEMENT 1

	March 2006 R	Notes	March 2005 R
ASSETS			
Non-current assets			
Property plant and equipment	142 120 074	7	117 700 494
	<u>142 120 074</u>		<u>117 700 494</u>
Current assets	77 131 520		70 097 620
Inventories	122 111	8	96 362
Trade and other receivables	2 303 468	9	4 477 512
Cash and cash equivalents	74 705 941	10	65 523 746
	<u>219 251 594</u>		<u>187 798 114</u>
EQUITY AND LIABILITIES			
Capital and reserves	141 959 596		118 253 276
Income fund	2 256 780		2 216 783
Capital fund	139 702 816	3	116 036 493
Non-current liabilities	800 000		2 147 630
Interest bearing borrowings	800 000	4	1 232 000
Post-retirement benefits	-	14	915 630
Current liabilities	76 491 998		67 397 208
Projects Fund :Unspent committed	65 666 618	2	53 045 044
Trade and other payables	7 873 512	5	11 362 493
Provisions	2 519 869	6	2 557 671
Current portion of interest bearing borrowings	432 000	4	432 000
	<u>219 251 594</u>		<u>187 798 114</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31 MARCH 2006

STATEMENT 2

	March 2006 R	Notes	March 2005 R
INCOME			
Government grant	90 371 000		82 772 000
Other grants sponsorships and donations	130 756 581		98 084 757
Investment income	4 387 357		3 395 868
Sales	2 288 828		2 042 619
Admission fees	15 917 144		13 297 148
Rent received	6 016 002		4 182 542
Disposal of fixed assets	174 825		-
Other income	4 371 398		5 084 637
	<u>254 283 135</u>		<u>208 859 571</u>
Less: Attributable to Projects and Capital funds	143 854 300	2	121 848 705
Operating income	<u>110 428 835</u>		<u>87 010 866</u>
EXPENDITURE			
Personnel costs	83 376 330		71 129 117
Operating expenses	46 444 975		36 585 169
Audit fees: Regulatory audit (AG-SA)	318 510		245 952
Audit fees: Internal audit (PWC)	407 907		340 218
Irrecoverable debt and other losses	34 207		548
Loss on exchange	205 272		101 795
Loss on disposal of fixed assets	-		5 554
Interest paid	126 100		175 937
Depreciation	7 259 708		5 297 691
Direct project expenditure	111 467 679		82 228 009
	<u>249 640 688</u>		<u>196 109 989</u>
Less: Borne by Projects and Capital funds	139 251 850	2	110 777 119
Operating expenditure	<u>110 388 838</u>		<u>85 332 870</u>
Net surplus / (deficit) for the year	39 997		1 677 995
Accumulated fund at beginning of year	2 216 783		538 788
Net surplus / (deficit)	<u>2 256 780</u>		<u>2 216 783</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

STATEMENT OF CHANGES IN NET ASSETS FOR THE YEAR ENDED 31 MARCH 2006

STATEMENT 3

	Notes	Income Fund R	Capital Fund R	Total R
Balance at 31 March 2004		538,788	98,350,767	98,889,555
Income		87,010,866	-	87,010,866
Expenditure		(85,332,870)	-	(85,332,870)
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
Correction of Fundamental Error	11		4,500,000	4,500,000
Restated Balance at 31 March 2005		2,216,783	120,536,493	122,753,276
Income		110,428,835	-	110,428,835
Expenditure		(110,388,838)	-	(110,388,838)
Fixed Assets		-	26,000,190	26,000,190
Depreciation			(7,259,708)	(7,259,708)
Transfer: (to) from Projects Fund		-	425,841	425,841
Balance at 31 March 2006		2,256,780	139,702,816	141,959,596

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

CASH FLOW STATEMENT FOR THE YEAR ENDED 31 MARCH 2006

STATEMENT 4

	March 2006 R	Notes	March 2005 R
Cash flows from operating activities			
Net surplus / (deficit) for the year	39 997		1 677 995
Adjustments for:			
Depreciation	7 259 708		5 297 691
Investment income	(4 387 357)		(3 395 868)
Interest paid	126 100		175 937
Disposal of fixed assets	(174 825)		-
Attributable to Projects Fund	36 287 897		33 709 774
Operating surplus before working capital changes	39 151 520		37 465 529
Working capital changes	(2 294 118)		4 136 933
(Increase) / decrease in inventories	(25 749)		141 063
Increase /(decrease) in trade and other receivables	2 174 044		1 240 101
Increase / (decrease) in trade and other payables	(4 442 413)		2 755 769
Cash generated from operations	36 857 401		41 602 462
Interest received	4 387 357		3 395 868
Interest paid	(126 100)		(175 937)
Net cash inflow from operating activities	41 118 659		44 822 393
Cash flows from investing activities	(31 504 463)		(22 531 497)
Purchase of fixed assets	(31 685 447)		(22 638 188)
Proceeds from sale / disposal of fixed assets	180 984		86 771
Decrease / (increase) in director's vehicle scheme	-		19 920
Cash flows from financing activities	(432 000)		483 630
Post-retirement benefits	-		915 630
Repayment of loan	(432 000)		(432 000)
Net increase / (decrease) in cash and cash equivalents	9 182 195		22 774 525
Cash and cash equivalents at beginning of period	65 523 746		42 749 221
Cash and cash equivalents at end of period	74 705 941		65 523 746

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2006

1. ACCOUNTING POLICY

Unless otherwise shown, the financial statements have been prepared on a going concern basis in accordance with South African Statements of Generally Accepted Accounting Practices (SA GAAP) including any interpretation of such Statements issued by the Accounting Practices Board, and the prescribed Standards of Generally Recognised Accounting Practices (GRAP) issued by the Accounting Standards Board replacing the equivalent GAAP Statements as follows:

Standard of GRAP	Replaced Statement of GAAP
GRAP 1: Presentation of financial statements	AC 101: Presentation of financial statements
GRAP2: Cash Flow Statements	AC 118: Cash Flow Statements
GRAP3: Accounting policies, changes in accounting estimates and errors	AC103: Accounting policies, changes in accounting estimates and errors

The recognition and measurement principles in the above GRAP and GAAP Statements do not differ or result in material differences in items presented and disclosed in the financial statements. The implementation of GRAP 1,2 &3 has resulted in the following significant changes in the presentation of the financial statements:

Terminology Differences:

Standard of GRAP	Replaced Statements of GAAP
Statement of financial performance	Income statement
Statement of financial position	Balance sheet
Statement of changes in net assets	Statement of changes in equity
Net assets	Equity
Surplus/deficit	Profit/loss for the period
Accumulated surplus/deficit	Retained earnings
Reporting date	Balance sheet date

The cash flow statement was prepared in accordance with the direct method.

Specific information such as:

- (a) receivables from non-exchange transactions, including taxes and transfers;
- (b) taxes and transfers payable;
- (c) trade and other payables from non-exchange transactions; must be prepared separately on the statement of financial position.

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 as these funds are expected to be spent 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 Revenue

Revenue is recognised on the accrual basis.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2006

(continued)

1.5 Government grants received

Government grants are accounted for in the period to which the grant applies. Capital grants related to assets are recognised as income over the life of depreciable assets.

1.6 Property, plant and equipment

Property, plant and equipment are shown at cost and written off on a straight line basis over its useful life at the following rates: Vehicles and equipment at 20% p.a., computers at 33.3% p.a. and buildings at 2.5% p.a.. 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.

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 Provisions

Provisions are recognised when the Institute has a present obligation as a result of a past event and it is probable that this will result in an outflow of economic benefits that can be reliably estimated.

1.10 Financial Instruments

Financial assets and liabilities are recognised when the Institute has become party to contractual provisions of the instrument.

Financial Assets**Trade and other receivables**

Trade receivables are stated at their nominal values as reduced by appropriate allowances for irrecoverable amounts.

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, as appropriate.

Financial Liabilities**Trade and other payables**

Trade and other payables are stated at their nominal value.

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.

1.11 Retirement Fund

Retirement benefits are provided for employees through separate pension and provident funds to which both employer and employee contributes. The funds are regulated by the Pension Funds Act and is operated as defined contribution plan, and is managed by an independent board of trustees. Retirement benefits are determined by the contributions to the fund and contributions are charged against income in the year in which they become payable.

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2006

(continued)

	March 2006 R	Notes	March 2005 R
2. Projects Fund: Unspent Committed Income			
Government grants	10 000 000		17 000 000
Other grants sponsorships and donations	127 094 858		97 329 584
Investment income	2 964 880		1 346 329
Sales	349 470		250 409
Admission Fees	199 110		872 127
Rent received	165 676		651 445
Other income	3 080 306		4 398 810
	<u>143 854 300</u>		<u>121 848 704</u>
Less: Expenditure			
Expenditure capitalised	30 500 190		22 638 188
Expenditure not capitalised	100 101 423		82 739 445
Loss on exchange	205 272		101 795
	<u>13 047 415</u>		<u>16 369 276</u>
Book value of disposed assets	6 159		86 771
Loan repayments	(432 000)		(432 000)
	<u>12 621 574</u>		<u>16 024 048</u>
Unspent committed project funds at beginning of the year	53 045 044		37 020 996
Unspent committed project funds	<u>65 666 618</u>	1.2	<u>53 045 044</u>
3. Capital Fund			
Asset Revaluation Fund			
Balance at beginning of year	116 036 493		98 350 767
Project expenditure capitalised	30 500 190		22 638 188
Amount funded by loan	432 000		432 000
Net disposals and write-offs	(6 159)		(86 771)
Depreciation	(7 259 708)		(5 297 691)
	<u>139 702 816</u>	1.3	<u>116 036 493</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	800 000		1 232 000
Amount reflected under current liabilities	432 000		432 000
	<u>1 232 000</u>		<u>1 664 000</u>
5. Trade and other payables			
Trade and other payables	7 616 441		10 935 957
Unidentified deposits	257 071		426 535
	<u>7 873 512</u>		<u>11 362 492</u>
6. Provisions			
Provision for leave pay	2 519 869		2 557 671
	<u>2 519 869</u>		<u>2 557 671</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 2006

(continued)

7. Property, plant and equipment

Board valuation

On hand at start of financial year
 Demolished / disposals / write-offs
 On hand at end of financial year

Cost

On hand at start of financial year
 Purchases
 Demolished / disposals / write-offs
 On hand at end of financial year

Accumulated depreciation

Accumulated depreciation at start of financial year
 Depreciation for the year
 Depreciation on disposals / write-offs
 Accumulated depreciation

Net book value at end of financial year

Total	Land & Buildings	Vehicles	Equipment
March 2006			
19 143 181	16 705 632	338 335	2 099 214
(29 886)	-	(1 335)	(28 551)
19 113 295	16 705 632	337 000	2 070 663
122 563 498	101 355 890	5 192 104	16 015 504
31 685 447	24 034 827	1 777 257	5 873 363
(888 593)	-	(337 583)	(551 010)
153 360 352	125 390 717	6 631 778	21 337 857
24 006 185	7 008 602	4 315 221	12 682 362
7 259 708	3 440 449	679 927	3 139 332
(912 320)	-	(338 918)	(573 402)
30 353 573	10 449 051	4 656 230	15 248 292
142 120 074	131 647 298	2 312 548	8 160 228

Board valuation

On hand at start of financial year
 Demolished / disposals / write-offs
 On hand at end of financial year

Cost

On hand at start of financial year
 Purchases
 Demolished / disposals / write-offs
 On hand at end of financial year

Accumulated depreciation

Accumulated depreciation at start of financial year
 Depreciation for the year
 Depreciation on disposals / write-offs
 Accumulated depreciation

Net book value at end of financial year

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

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE
NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2006

(continued)

	March 2006 R	Notes	March 2005 R
8. Inventories			
Net realisable value	122 111		96 362
Carrying value	207 588		163 815
Write-down value in inventory	85 477		67 453
9. Trade and other receivables			
Trade debtors	1 013 016		1 557 066
Provision for irrecoverable debt	(50 000)		(50 000)
Receiver of Revenue (VAT)	17 202		1 686 980
Accruals	576 386		476 778
Other	746 864		806 689
	<u>2 303 468</u>		<u>4 477 513</u>
10. Cash and cash equivalents			
Short term deposits	50 801 111		42 217 487
Cash on hand	147 047		152 203
Bank balances	23 757 782		23 154 056
	<u>74 705 941</u>		<u>65 523 746</u>
Attributable to Projects fund	65 666 618		53 045 044
Attributable to Income fund	9 039 323		12 478 702
	<u>74 705 941</u>		<u>65 523 746</u>
11. Fundamental Error			
Correction of fundamental error relating to purchase of land which was treated as a non-capital expense in terms of SANBI's accounting policy as it is in conflict with statements of SA GAAP. The acquisition has been incorporated into the fixed assets and capitalised accordingly.	4 500 000		-
	<u>4 500 000</u>		<u>-</u>
12. Capital commitments			
Approved and contracted:			
Kirstenbosch Centre for Biodiversity	-		7 021 229
Land Acquisition: Walter Sisulu NBG	-		4 500 000
Poverty Relief Funded Developments	19 250 000		-
DEAT Funded Developments	8 759 687		4 966 882
	<u>28 009 687</u>		<u>16 488 111</u>
13. Contingent liabilities			
Staff housing guarantees estimated maximum	7 005		27 344
Post-retirement benefits	-	14	1 623 351
	<u>7 005</u>		<u>1 650 695</u>

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2006

(continued)

14. Board Members' and Executive Directors' Emoluments

Board Members' Emoluments

Fees for the board and board sub-committee meetings for the period 1 April 2005 to 31 March 2006 were as follows:

Board Members	01 April 2005 to 31 March 2006	Honoraria	Travel and other costs	Total
		R	R	R
* Ms Bongiwe Njobe (Board Chairperson)		-	13 550	13 550
Prof Steven Chown		8 845	2 715	11 560
Mr Saliem Fakir		9 877	11 248	21 125
* Dr Patricia Hanekom (Audit Committee Chairperson)		-	4 697	4 697
Dr David Mabunda		3 538		3 538
Ms Vuyo Mahlali		4 570		4 570
Dr Monde Mayekiso		-	3 789	3 789
* Ms Marjorie Pyoos		-	2 583	2 583
Mr Ton Vosloo (Governance Committee Chairperson)		6 339		6 339
Ms Pam Yako		-		-
* Ms L Sello (DEAT)		-	-	-
* Mr Fundisile Mketeni		-	-	-
* No Honoraria paid - State employee		33 169	38 582	71 751

Executive Directors' Emoluments

	Salary	Benefits	Total
	R	R	R
Prof BJ Huntley (CEO)	433 388	232 837	666 225
Mr WSG Hughes (CFO) (April to June 2005)	106 751	48 205	154 955
Mr S Singh (CFO) (July 2005 to March 2006)	270 560	142 736	413 296
CK Willis (Chief Director: Gardens)	394 551	189 030	583 580
GF Smith (Chief Director: Research)	377 311	188 939	566 250
MJ Netshiombo (Chief Director: Human Resources)	377 311	188 939	566 250
K Maze (Director: Biodiversity)	333 924	160 406	494 330
M Wolfson (Director: Research North)	298 714	160 482	459 197
J Donaldson (Director: Research South)	333 924	160 406	494 330
M Qwathekana (Director: Education)	298 714	160 484	459 198
J Dini (Working for Wetlands Project)	275 015	183 343	458 358
T Sandwith (CAPE Project)	350 623	215 957	566 580
L Jackson (GISP Project)	275 015	183 343	458 358
	4 125 801	2 215 107	6 340 908

Above denotes actual costs as at 31 March 2006

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

NOTES TO THE ANNUAL FINANCIAL STATEMENTS AT 31 MARCH 2006

(continued)

15. 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 in 2008, with the last valuation undertaken in June 2005.

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

R

Assets and liabilities to be recognised in the Balance sheet at 31 March 2006

Present value of defined benefit obligations (wholly funded)	117 556 000
Fair value of assets	(120 166 465)
Net actuarial gains (losses) not recognised	2 610 465
Past service cost not yet recognised	-
Unrecognised assets	-
Fair value of any reimbursement right recognised	-
Net liability	0

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

Opening net liability at 31 March 2005	915 630
Expense recognised in the income statement	6 295 298
Contributions paid	(7 210 928)
Closing net liability at 31 March 2006	-

Income Statement

Current service cost	3 842 782
Interest cost	8 940 281
Expected return on assets	(8 860 073)
Actuarial gains (losses) recognised	2 372 308
Past service cost	-
Effect of any curtailment or settlement	-
Expense to be recognised in the income statement	6 295 298

Actual return on assets	22.0%
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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 raised with the Department of Environmental Affairs and Tourism and National Treasury 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.

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