

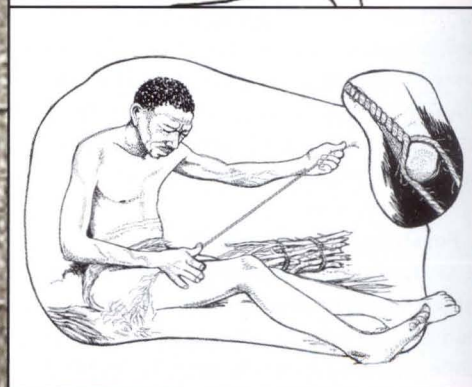
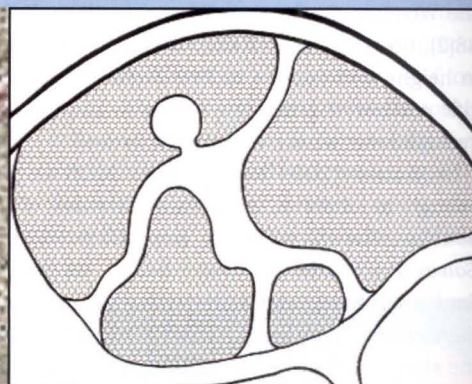
The Overberg Useful Indigenous Plants Project

The Harold Porter National Botanical Garden in the Kogelberg Biosphere Reserve lead the way with their innovative community environmental education programmes

by Phakamani M' Afrika Xaba, Harold Porter Garden National Botanical Garden, South African National Biodiversity Institute, Betty's Bay

Two and half years ago the then National Botanical Institute (NBI) board approved a community-focused pilot project, the Overberg Useful Indigenous Plants Project (OUPP). Initially the project fell under the South African National Biodiversity Institute's (SANBI's) Urban Conservation Programme and it was later moved to the Environmental Education Directorate. Based in the fynbos biodiversity 'hot spot', the Kogelberg Biosphere Reserve World Heritage Site (which was also the first UNESCO Biosphere Reserve in South Africa), our project operates from the only coastal botanical garden in South Africa: SANBI's Harold Porter National Botanical Garden (NBG). This ambitious pilot project is aimed at securing the sustained and meaningful involvement of historically disadvantaged communities in the conservation of the exceptionally rich biodiversity of the Overberg area.

The project has expanded into many 'sub-projects' all with the common objectives of conservation through awareness, education, skills training, job creation and promoting the sustainable use of the environment. These include the KhoiSan Useful Plants Garden at Harold Porter NBG, the Environmental Education Garden-based School Visits Programme, the establishment of the Vuk'zenzele Indigenous Community Nursery in Kleinmond, the development of indigenous, waterwise, useful plant gardens in domestic and public spaces in Kleinmond and Betty's Bay, the initiation of the Schools Outreach



ABOVE LEFT: Inspirational rock art from the Linton plate at the iZiko South African Museum.

ABOVE RIGHT, TOP: The landscape plan of the KhoiSan Useful Plants Garden at Harold Porter NBG. Picture courtesy of iZiko.

ABOVE RIGHT: A drawing on one of the storyboards in the KhoiSan Useful Plants Garden at Harold Porter NBG showing a KhoiSan man making string from *Struthiola myrsinites*. Drawing: Chris Burlock.

Greening Programme in the Overberg and the planting of indigenous street trees on Kleinmond Main Road.

The KhoiSan Useful Plants Garden

The first SANBI Useful Plants Garden began as a muthi garden (medicinal plants garden) at the KwaZulu-Natal NBG and was then expanded into a fully fledged, traditional useful indigenous plants garden with plants used by rural Nguni people for crafts, weaving, medicine, food and recreation (including beer). The concept was then developed on a much larger scale, with the

help of the WWF-SA, at Kirstenbosch NBG. Work started in 2004 on a similar garden at Harold Porter NBG, with plants that were used by the KhoiKhoi/Khoekhoe and San/SoaQuan people who earlier inhabited the area. (The term KhoiSan is a collective term used for both groups by anthropologists).

The KhoiSan Useful Plants Garden (KUPG) at Harold Porter NBG is used as an educational tool for a variety of programmes for schools and local residents including unemployed members of historically disadvantaged communities. The garden has certainly made

people aware of the fynbos and the need for its conservation. It has also shown how plants can be used sustainably for income generation, and has encouraged water conservation through the development of waterwise gardens. Roger Oliver, a horticultural student at Harold Porter NBG at the time, played a pivotal role in assisting with the research, planning and implementation of this project.

The landscape design of the useful plants garden is inspired by the Linton plate rock art painting which is on display at the iZiko South African Museum in Cape Town. The organic shapes used in the design continue the overall Harold Porter NBG theme. Wooden poles used for bed edging are laid out with gentle curves that slow the pace of the visitors, in order to enrich the visual and educational impact of the demonstration garden.

Different types of rocks used by the KhoiSan are arranged in the Garden to form the shape of the head of the KhoiSan man as designed in the landscape plan. The paths are arranged to resemble the body, torso, legs and arms.

The KhoiSan Useful Plants Garden features plants that were used for food, medicine, craft, construction, tools and charms. Plants include katstertjie (little cat's tail) *Struthiola myrsinites* which is used to make string and rope, water mint *Mentha aquatica* used to cure colds and flu, oval-leaf buchu *Agathosma serratifolia* used to alleviate stomach complaints, fever and colds, and aasbossie (bait bush) *Coleonema album* the aromatic leaves of which are used for potpourri and by fishermen to remove the smell of bait and fish from their hands, hence the common name. Other popular plants include isiCakathi *Agapanthus africanus* which is used for postnatal disorders, Kaapse bergaalwyn *Aloe succotrina* used as a purple dye, and the brown wild sage *Salvia africana-lutea* which is used to alleviate coughs, colds and fever. The garden includes fynbos plants that were used by the early European settlers, such the waboom (wagon tree) *Protea nitida*, the roots of which were used to make ink. Useful indigenous 'filler plants' demonstrate how to add colour or shape to create an aesthetically pleasing garden.

Our information on the plants was sourced from publications and through interviews with local people who still use the plants. Jane Forrester (horticulturist and part-time interpretation officer



ABOVE: Lesley-Ann Williams conducting an Environmental Education Garden-based Programme at Harold Porter NBG. Photo: P. Xaba.

at Harold Porter NBG) co-ordinated the collective efforts to develop an interesting and informative interpretation of the garden. There are eleven 'storyboards' with information about biodiversity and the KhoiSan way of life, delightfully illustrated by Chris Burlock, a local environmental activist. Individual plant labels also contain information about individual plants, including scientific, family and common names in isiXhosa, Afrikaans and English. The garden also displays a rusting steel statue of a San man done by Simba, a Zimbabwean artist. The interpretation of this garden was sponsored in memory of Malcolm and Terry-Ann Chapman by their family and friends.

But beware! Many of the plants are highly toxic and we highly recommend that people contact a qualified medical practitioner before using any of the plants.

The Environmental Education Garden-based Programme

This programme makes use of the Harold Porter NBG and all its resources to inspire and enable people to take responsibility for their environment. The Harold Porter NBG has three garden-based Environmental Education

Learning Programmes: Forest Ecology, Useful Plants and Map Orientation. The 2005 April floods delayed the development of the programme, but all three are up and running now and further programmes are being developed. Admirably assisted by the Goldfields Environmental Education Centre staff at Kirstenbosch NBG, we are also training assistant education officers, all recruited from the local community, who will be able to run the programmes in three local languages: isiXhosa, Afrikaans and English.

Our two-year intern Lesley-Ann Williams is currently developing a new learning programme for the KhoiSan Useful Plants Garden as part of her studies with Rhodes University's Environmental Education Participatory Certificate Course.

The Vuk'zenze Indigenous Community Nursery

A partnership between the Kleinmond community, Overstrand municipality and SANBI was forged to establish a community indigenous nursery in the historically disadvantaged community of Kleinmond. This project hopes to expose the community to the rich fynbos biodiversity on their doorstep, and



to help unemployed people, through skills development and training, to develop a viable nursery business.

From the beginning the community nursery was designed and implemented by staff members chosen by the Vuk'zenzele development committee. All facilities in the nursery were constructed with the help of staff members as part of the training and empowerment process. The nursery is the proud owner of a potting shed, potting bench, a 'hardening-off' shade structure, a large cold frame (for cuttings) and media storage bays. The project is funded by SANBI's Greening the Nation Programme*.

SANBI staff mentor project participants, from teaching them to identify plants, passing on horticultural skills and assisting with marketing, to general exposure in the horticultural industry.

LEFT TOP: Members of the Vuk'zenzele Community Nursery. From left to right: Neziswa Tiwana, Luleka Booi, Nonyaniso Sineli, Nontembeko Snell, Noludwe Ndzandzeka, Xolelwa Bebe, Mzwadile Sono, partially hidden at the back: Sikhumbuzo Phete, not in the photo: Ronny Zilindile Tabana.

LEFT ABOVE: Before the Vuk'zenzele Community Nursery development.

LEFT: After the development of the Vuk'zenzele Community Nursery. Photos: P. Xaba.

The Durban University of Technology (DIT) provides structured and accredited horticultural and business skills training for project participants. BC Landscaping is also providing further horticultural training.

The Vuk'zenzele committee have registered a Section 21 Company to facilitate management and administration and eventually the Vuk'zenzele team hopes to support sustainable economic initiatives that also conserve the environment.

Plants cultivated by Vuk'zenzele are sold to Harold Porter NBG's sales nursery, schools in the Outreach Greening Programme and to commercial and private organisations and individuals. The nursery also produces vegetables and seedlings for sale at low prices to the community. Some of the plants they grow include the cancer bush or uNwele *Lessertia frutescens*, pigs ears *Cotyledon orbiculata*, broad-leaf featherbush *Aulax umbellata*, bietouboos *Chrysanthemoides monilifera*, iPhahla *Brachylaena discolor*, *Euryops virgineus* and bloublommetiesalie *Salvia chamaelaeagnea*. Most of the plants propagated are useful plants and link up with the plant list of the KhoiSan Useful Plants Garden at Harold Porter NBG. For more information contact us at Ronnie Tabane 072 231 3827 or email xaba@sanbi.org.

Community and Domestic Gardens

The Community and Domestic Gardens Project is aimed at raising awareness of the diversity of indigenous plants in the natural environment of the Kogelberg Biosphere Reserve and the transferring of practical horticultural skills. This project is run in Mooiuitsig in Betty's Bay and Protea Village in Kleinmond. Interested community members can attend hands-on horticultural workshops that culminate in the development of an indigenous waterwise and useful plants garden. Participating community members choose to either establish their own demonstration gardens at home or to assist in greening a public area. This project was supported by the World Wide Fund for Nature (WWF-SA) and the Roland and Leta Hill Trust administered by BOE bank.

Schools Greening Programme

Five schools in the Overberg have been participating in the Schools Greening Programme: Kathleen Murray Primary in Grabouw, Kleinmond Primary, Hawston Primary, Lokhanyo Primary in



ABOVE: June Adonis and Percy Solomons attending one of our hands-on community horticultural workshops at Mooiuitsig in Betty's Bay.

BELOW: Community participants planting a waterwise garden at the Community Hall at Mooiuitsig, Betty's Bay. Photos: P. Xaba.



Hermanus and Masakhane Primary in Gansbaai. The schools' environmental clubs, learners, teachers, school caretakers and temporary community workers all attended five hands-on horticultural workshops and went on to establish their own indigenous waterwise, useful plant gardens at their schools. The Greening the Nation Programme* sponsored the initial labour, plants, compost, mulch and tools to enable schools to start their gardens.

Planting trees in Kleinmond Main Road

Another exciting project for the residents of Kleinmond is the street tree planting. SANBI and the Overstrand municipality identified two indigenous tree species, the wild plum *Harpephyllum caffrum* and the Cape ash *Ekebergia capensis*, as suitable street trees as they are hardy and well adapted to local conditions. The trees were planted along the main road, the R44 through the town of Kleinmond and in Protea Village and Overhills. As the street trees grow, the town's main road will be transformed from a hard, grey thoroughfare to a welcoming main street where people participate in maintaining a green environment. This project is also part of the Greening the Nation* Programme.

A socially relevant conservation ethic

South Africa, like many developing countries, needs to alter (both conceptually and practically) the economic perceptions of biodiversity and the need to conserve it. There is an urgent need to alleviate poverty and create jobs, and an equally urgent need to conserve our rich and highly threatened biodiversity, especially within the Cape Floral Kingdom. Many innovative environmental conservation methods and strategies are evolving in response to these needs. Conservation must be socially and economically relevant to all, especially amongst historically disadvantaged communities. No longer do we conserve for the people, we are now learning to conserve with the people for a sustainable future. Through our programmes at the Harold Porter NBG, we promote environmental awareness, education and the value and importance of our indigenous biodiversity, and transfer practical horticultural skills to enable marginalized communities to realize the economic and social benefits of a healthy environment. ♻️



ABOVE: Mr Z. Thobela from Lukhanyo Primary in Hermanus, with visiting pupils and teachers from Overberg schools attending a hands-on horticultural workshop at Kleinmond Primary School. The schools all established their own indigenous waterwise, useful plants gardens soon after. Photo: P. Xaba.

Acknowledgements

This project would have not been possible without the support of the following organisations and people: the staff of Harold Porter NBG, the Overstrand Municipality especially Mike Baartman and Cecelia Jonkheid, Monique van Wyk (Working for Water Programme), the Kogelberg Branch of the Botanical Society, KOBIO, from SANBI: Dr. George Davis, Donovan Fullad, Alice Notten, Christopher Wills, Malta Qwathakana and Wiston Coe, the Goldfield Environmental Education team at Kirstenbosch NBG, Alison Coughlam (Hangklip-Klienmond Tourism bureau), Ronny Zilindile Tabane, Pricilla Erasmus of the Grail Programme (Klienmond), Jan Voster (TABITA), Sean Privet (Green Futures Horticultural College), EPWP implementer: Lukhlo Training Development Services, Graham Avery of iZiko SA Museum, Cape Town, WWF-SA and the Roland and Leta Hill Trust administered by BOE bank. Thank you to Prof. M. Jadezweni of Stellenbosch University, Mrs Alida and Prof. Johan Bekker of Betty's Bay and to Ms Emsie du Plessis of SANBI, Pretoria for help with translations.

*SANBI's Greening the Nation Programme is part of the Department of Environmental Affairs and Tourism (DEAT) Extended Public Works Programme (EPWP), a poverty relief programme that creates short-term employment and skills training.

