

FYNBOS FORUM

PROGRAMME

Theme :

Conservation through Education and Utilization

16 - 18 July 1997

Hester Dorothea Conference Centre
Genadendal

*Administrative support by the
Sustainable Environment Theme of the FRD*

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PROGRAMME

WEDNESDAY, 16 JULY 1997

- 15:00 Registration
 16:30 Field trip - Fynbos for Water Project
 19:00 Dinner

THURSDAY, 17 JULY 1997

- 08:15-08:45 Late Registration
 08:45-08:50 Welcome - C Marais
 08:50-09:10 Opening Address : Conservation into the Future: New developments and opportunities in nature conservation - JC Pauw *Natural Research Foundation*
- Ecology & Restoration** (Chairperson : Guy Palmer)
- 09:10-09:30 Guidelines for Fynbos restoration based on knowledge of regeneration, ecology, community structure and ecosystem function - P Holmes
 09:30-09:40 Poster: Waterhyacinth: New approaches to biological control - A den Breeyen *Alana*
 09:40-09:50 Poster: The effects of fire on fuel piles from alien clearing - W Foden
 09:50-10:10 The use of the Campbell Structural Classification of Mountain Fynbos for enhancing mapping of fynbos in the VEGMAP Project - DJ McDonald
 10:10-10:20 Poster: Core flora conservation areas on the Cape Flats - K Maze / B McKenzie / AG Rebelo

- 10:20-10:40 The landscape scale distribution of plant invasability and its threat to plant diversity - SI Higgins / DM Richardson *Steve*
 10:40-10:50 Poster: The use of grafting in Proteaceae - Z Soomar
 10:50-11:10 TEA / COFFEE *Social Function m.c. didn't know Fynbos.*
- 11:30 Education (Chairperson : Maryke Middelman)
- 11:10-11:20 ✓ Poster: Fynbos across the curriculum - WA Hitchcock *Woody*
 11:20-11:30 ✓ Poster: "Khula Nan" (Grow with me): A SAFCOL/Wilderness leadership school environmental education programme - K van Teylingen *Karin*
- 11:30-11:50 The new Voëlvelei Conservancy and Silwerfontein RDP educational project - B Muller / R van der Walt *tomorrow*
 11:50-12:05 ✓ Wolfgat - 2 years on - J Wood *Julia*
 12:05-12:15 Poster: The Protea Atlas Project - Conservation through education - AG Rebelo *Tony*
 12:15-12:35 What is Social Ecology? - R Selikowitz *erec* *N-Park Board*
Tsch.
 12:35-13:45 LUNCH
- Utilisation** - (Chairperson : Pat Holmes)
- 13:45-14:05 The Dryflower Industry - R Middelman
 14:05-14:25 Utilising pine plantations to produce Rumohra adiantiformis (Seven Weeks Fern or Rumohra Fern) - G Nieuwoudt
14:25-14:45 Mixing and matching genes - conservation hybridisation and utility of Proteaceae - GM Littlejohn

- 14:45-14:55 Poster: Foraging of Guineafowl in Fynbos - D Gibbs
- 14:55-15:05 Poster: Establishment of an indigenous flower industry in the rural areas - EJ Jefthas
- 15:05-15:15 Poster: The Fynbos Industry - M Middelman
- 15:15-15:45 TEA / COFFEE
- 15:45-17:30 Fynbos Forum Annual General Meeting *LOGO?*
- 17:30-18:00 Leisure Time
- 18:00-18:30 Cultural History of Genadendal - Dr Balie
- 19:00 Social Function

FRIDAY, 18 JULY 1997

Utilisation (continued) - (Chairperson : Penny Mustart)

- 08:30-08:50 National Accounting - Can Fynbos be valued? - J Turpie / B Heydenrych
- 08:50-09:10 A Fynbos ecotourism programme for the Southern Overberg - A Scott

Planning (Chairperson : Dave McDonald)

- 09:10-09:30 Producing a strategic plan for conservation of the biodiversity of the Cape Floral Kingdom - D Daitz *Paul Britton*
- 09:30-09:50 The Future Role of Cape Nature Conservation to achieve conservation priorities in the Western Cape - KCD Hamman

- 09:50-10:10 The Kogelberg Biosphere Reserve - Combining conservation and utilisation - R Pool
- 10:10-10:30 Proposed West Coast Biosphere Reserve - *B de Witt*
Guy Palmer
- 10:30-11:00 TEA / COFFEE
- 11:00-11:20 Developing a management plan for the Working for Water Projects in the Riviersonderend Catchment - C Gelderblom *Caroline CSIR*
- 11:20-11:40 An Electronic Management System for Nature Conservation - PW Hill *Pete Hill*
- 11:40-12:00 Picking up the pieces: A biosphere framework for the coastal lowlands of the Western Cape - CE Heijnis
- 12:00-12:10 Summary - D Macdonald *Charlotte*
- 12:10 Field Trip *Percy Fitzpatrick*
Veldsop area

P A P E R

A N D

P O S T E R

A B S T R A C T S

CONSERVATION INTO THE FUTURE
New developments and opportunities in nature conservation

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Recent national and international developments in conservation concepts will be highlighted, eg. globalisation of conservation, increasing animal rights activities, new government policies, politicisation of conservation, privatisation of conservation, changes in government funding, increasing role of industry, increasing emphasis on utilisation, increasing demand for cross-disciplinary skills and our understanding of natural systems functioning and its management.

The opportunities inherent to some of those developments should not be overlooked.

**GUIDELINES FOR FYNBOS RESTORATION BASED ON
KNOWLEDGE OF REGENERATION
ECOLOGY, COMMUNITY STRUCTURE AND ECOSYSTEM FUNCTION**

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Research in the fynbos biome during recent years has led to a fairly good understanding of community structure and dynamics and major ecosystem processes. In reviewing this work we identify the important ecological processes involved in assembling fynbos communities and we attempt to set out guidelines for restoring fynbos following different disturbances.

WATERHYACINTH: NEW APPROACHES TO BIOLOGICAL CONTROL
POSTER

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Waterhyacinth, *Eichhornia crassipes* (Mart.) Solms., is an important aquatic weed in South Africa including the fynbos area. It is a free floating weed that often forms dense mats covering waterbodies and increasing evapotranspiration approximately threefold. Attempts to control waterhyacinth by conventional methods either by mechanical or manual removal and chemical herbicides have only provided a temporary and often costly solution. Integrated management with biological control, using both insects and plant pathogens, playing the central role is possibly the only long-term and sustainable solution in waterhyacinth management. Several highly virulent plant pathogens occur in different parts of the world and some of them are at present receiving attention at the Weeds Research Division, Stellenbosch. Among them are *Acremonium zonatum*, *Alternaria eichhorniae*, *Cercospora piaropi*, *Myrothecium roridum* and *Uredo eichhorniae*. The first three already occur in South Africa but are not widespread. Their association with several of the insect biocontrol agents, already introduced into South Africa, are being studied with a view to optimizing their efficacy. *Uredo eichhorniae*, the waterhyacinth rust fungus, is still restricted to South America, the original home of waterhyacinth, but has been introduced into quarantine in South Africa where its lifecycle and host range are being studied with a view to establishing it here.

**THE EFFECTS OF INCREASED FUEL LOADS
ON A POST-FIRE FYNBOS COMMUNITY: POSTER
SEED GERMINATION AND SOIL WATER REPELLENCY**

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When alien vegetation is cleared from fynbos areas, large loads of wood and litter are often left behind. When these areas are burnt, fire intensities are often much greater than those of fynbos. Heat penetrates deeper into the soil causing greater seed mortality than normal. It is hypothesised that only seeds that are deeply buried will survive the fires and that of these, only those with large enough energy reserves to grow to the surface (i.e. large seeds) will germinate.

All pines in a 2.5 ha plantation in the Jonkershoek mountains of the south-western Cape were felled. Logs and litter were distributed unevenly around the site and 10 2X2m high fuel plots and 10 2X2m low fuel plots were selected. Biomass was measured for each plot. Small and large seeds were planted at depths of 2cm and 5cm in a 1X1m quadrat within each plot. The area was burned in early April. Measurements of fire intensity and soil water content at the time of burning were taken. There was a significant difference between fire intensity in high fuel and low-fuel sites ($t = 4.28; p = 0.1$). Although the experiment has not yet run to completion, preliminary results indicate that of the large seeds planted, more deep-planted seeds have germinated in high fuel plots and more shallow-planted large seeds have germinated in low fuel plots.

Previous studies have shown that high intensity fires induce soil water repellency in lower soil layers and that this increases erosion of surface soil. Soil water repellency measurements were recorded before and after the fire. The effect of varying fire intensity on erosion is being tested in the Villiersdorp Nature Reserve. Silt traps have been set up and fire intensities at the respective sites estimated retrospectively using minimum remaining branch diameters.

Increased fire intensities as a result of high fuel loads from alien clearing are hypothesised to have marked effects on the regenerating post-fire fynbos communities. These and further results from this study may suggest that revisions in alien clearing methods and burning regimes are necessary.

**THE USE OF THE CAMPBELL STRUCTURAL
CLASSIFICATION OF MOUNTAIN FYNBOS FOR ENHANCING
MAPPING OF FYNBOS IN THE VEGMAP PROJECT**

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The Vegetation Map of South Africa Project (VEGMAP) requires floristic survey data for inclusion in a database. This data will be classified and will then be the basis for mapping the vegetation of the country. In the Fynbos Biome there is only a limited amount of floristic data available for a region with such a high diversity of flora and vegetation types. All possible sources of data must therefore be explored. In 1985 Campbell classified the mountain vegetation of the Fynbos Biome according to structure and 'higher taxonomic (floristic) characters'. Even though the floristic information is not comprehensive, Campbell's data should not be ignored. The proposal of how Campbell's data (as well as other data collected in a similar way from the Agulhas Plain and Riversdale Plain) can be incorporated into the VEGMAP project, to augment the available floristic data and enhance mapping of fynbos vegetation, will be discussed.

CORE FLORA CONSERVATION AREAS ON THE CAPE FLATS

POSTER

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(presented by Kristal Maze)

The natural remnants on the Cape Flats comprise habitats and individual species that are considered to be highly threatened. Since the Cape Flats priority conservation study of McDowell and Low in 1990, considerable botanical information has been collected. Furthermore a number of the sites identified by McDowell and Low as important have been obliterated, others have changed ownership status, some have partially been settled on by informal communities and others are to be possibly affected by proposed developments such as those associated with the Olympic Games. Due to these increasing pressures on what little natural area remains on the Cape Flats, as well as the threatened status of the habitats, it was felt that a more quantitative priority survey was required to determine conservation priorities in the area. The identification of a group of core conservation areas, should enable appropriate planning for conservation to be considered along with other development demands for the area.

The Botanical Society of SA recently undertook a priority survey of the Strandveld and Sand Plain Fynbos remnants on the Cape Flats based on 59 plant species lists from 49 sites. We analysed the data by means of eight different distribution scenarios and applied the iterative procedure as described by Rebelo (1994) to each of these scenarios. This process identifies which sites, in order of importance, are needed to ensure that all the species are conserved. A list of irreplaceable (i.e. its loss will result in the local extinction of a species) sites was produced. After analysing the results of each of the scenarios and in terms of criteria such as size, ownership, vegetation quality etc. we were able to identify 15 sites which we

recommend as core conservation sites. The results of how many sites needed and how many species would be conserved under the various scenarios is presented.

THE LANDSCAPE SCALE DISTRIBUTION OF PLANT INVASABILITY AND ITS THREAT TO PLANT DIVERSITY

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Invasive organisms pose a major threat to global biodiversity. The Cape Peninsula, South Africa, provides a case study of the threat of alien plants on native plant diversity. We aimed to identify where alien plants would invade in the landscape and what their consequent threat to plant diversity could be. This information is needed to develop a strategy for managing these invasions at the landscape scale. Logistic regression models were used to predict the potential distribution of six important alien plants in relation to several environmental variables. The predictions of the logistic regression models were overlaid on the distribution of native plant diversity for the Cape Peninsula. The results showed that over 89 percent of the Cape Peninsula could be covered by alien plants. *Acacia cyclops* and *Pinus pinaster* were the species that were predicted to cover the greatest area. The threat to native plant diversity, quantified as the number of plant species; rare and threatened plant species; and endemic plant species with their entire range covered by the predicted distribution of alien plant species, showed that *Pinus pinaster* posed the greatest threat to plant diversity of the Cape Peninsula. A null model of threat, where invaded sites are randomly selected, showed that most alien species threaten more plant species than would be predicted from the area they invade alone. *Pinus pinaster* threatens 340 more native species, 28 more rare and threatened species and 21 more endemic species than the null model would predict. The results emphasise the importance of adopting a spatially explicit approach for quantifying threats to biodiversity and

provide the information needed to prioritise the alien species and the sites which need urgent management intervention.

THE USE OF GRAFTING IN PROTEACEAE *POSTER*

Z Soomar / G Nieuwoudt
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Grafting, as a propagation method is used for various reasons in the Proteaceae. The problem of low rooting success in the vegetative propagation of certain species can be overcome by using grafting techniques.

Limited material of endangered species are also grafted on rootstocks. The use of rootstocks adapted to a wider range of soil conditions normally required for Proteaceae cultivation, enhances the possibilities for cultivation. A wide range of rootstocks are tested and compatibility studies for the various scions are undertaken. These research results are briefly indicated.

FYNBOS ACROSS THE CURRICULUM *POSTER*

WA Hitchcock
National Botanical Institute
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Environmental education is now an official part of the curriculum that must be included in lessons for all South African children. The new Outcomes Based Education approach (OBE) will be implemented as of 1998 in Grades 1 and 7 (Sub A and Std 5). Teachers are required to plan child-centred lessons that focus on the development of skills and attitudes as well as understanding content information. In addition, teachers will be required to develop regionally based curricula ie local environments and issues can be used as resources for lessons. In the

Western Cape, it is important for our children to learn about Fynbos.

The Kirstenbosch Plant Module Project has been initiated at the Gold Fields Centre, Kirstenbosch to provide a forum for teachers to share ideas and relevant resource material on plants and the environment. Activities are designed to make people think and go get them actively engaged in doing something eg making, talking, listening, observing, debating, working in groups, etc. The project is running for three years and aims to produce a total of ten modules on different topics and targeting different grades. Each module will be presented in a series of workshops for teachers who actively participate in the activities and provide valuable feedback. Modules will be published and be available for teachers to use in their classrooms.

The first module is 'Fynbos Across the Curriculum'. This poster elaborates on how fynbos can be 'unpacked' into different topics, enabling teachers to deal with different aspects of fynbos in the different learning areas. The variety of activities developed are explained, along with the skills and outcomes that would be achieved by children doing them.

Judging by the numbers who attended these workshops, teachers are extremely interested in gleaning up to date knowledge on fynbos. The link between science and education is being strengthened through these workshops, where new insights emerging from the work of the Fynbos Forum is being made available to teachers.

**"KHULA NAN" (GROW WITH ME): A SAFCOL/WILDERNESS
LEADERSHIP SCHOOL ENVIRONMENTAL EDUCATION PROGRAMME**
POSTER

K van Teylingen
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SAFCOL as a forestry company is committed to the sustainable use of resources, and to integrating commercial forestry and other land

uses with the conservation of natural resources. SAFCOL strives, through its conservation policy, to use, maintain and enhance the conservation areas of its plantations for the advancement of environmental conservation and the education and enjoyment of both SAFCOL employees and the public.

To this end SAFCOL has entered into a partnership with the Wilderness Leadership School, who coordinate the environmental education programme in three SAFCOL regions, namely Kruisfontein (Knysna and Plettenberg Bay), Witelsbos (Tsitsikamma area) and Longmore (Port Elizabeth and Humansdorp). The programme targets adults (teachers and the community) and school groups from local schools.

Children are introduced to the basic building blocks of their environment; soil, water and air, and the inter-relationships between the environment and man is explained. Pupils are given an opportunity to visit Fynbos and forest systems and the difference between these systems and commercial forests is explained. Concepts of conservation, sustainability and recycling are also discussed.

As an environmentally concious landowner, SAFCOL is becoming actively involved with environmental education within the organisation and among role-players and the public around plantation areas.

THE NEW VOëLVLEI CONSERVANCY AND THE SILWERFONTEIN - RDP - ENVIRONMENTAL EDUCATION PROJECT

B Muller
Farmer

R van der Walt
Cape Nature Conservation
Porterville

Part 1 - (B Muller)

1. What is a Conservancy?
2. Primary Objectives.
3. How many conservancies in the Western Cape?

4. Secondary Objectives.
5. Members.
6. Natural Resources.
7. Scenic values.
8. Base Camp)
9. Hiking Trail) Existing
10. Environmental Education for local schools
11. Educational Training of teachers by UCT staff.

Part 2 - (R van der Walt)

1. Conservancy.
2. Valuable Natural Assets.
3. Proteas and Plants.
4. Mammals.
5. Reptiles.
6. Fish.
7. Renosterveld and Birds.

Conclusion - (B Muller)

WOLFGAT 2 YEARS ON

Julia Wood
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Wolfgat, a dynamic community project?
In 1995, Paul Britton, then of the Cape Town City Council, presented a paper on Wolfgat Nature Reserve and the initiatives around formalising a partnership with the local community whereby the reserve is run as a joint asset. This short paper is a report back on the process and updates the members of the Fynbos Forum as to where the process stands at present.

THE PROTEA ATLAS PROJECT
CONSERVATION THROUGH EDUCATION POSTER

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National Botanical Institute
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The Protea Atlas Project was initiated in 1991 to get laymen interested in botany, by getting amateurs to record proteas where and when they saw them on their walks, at work and as a hobby. To date we have received some 110 000 records of proteas from 25 000 localities. Almost two thirds of species have had significant range extensions or new localities added to our existing knowledge. Atlassers have discovered 5 new species: *Paranomus sp.* (Grabouw Valley), *Leucospermum harpagonatum* (Riviersonderend Mnt), *Se lacunosa* (Gifberg), *Leucadendron osbornei* (Anysberg) and *Leucadendron sp.* (Touwsrivier), and have mapped the distributions of several other known, but undescribed taxa. Protea atlassers have also been active in recording the destruction of our resources, as exemplified by the recent *Protea odorata* story.

We welcome anyone who would like to use the Protea Atlas Data for research. Data can be provided in electronic or paper format. The data are currently being used to help design the reserve system for the West Coast Biosphere Reserve, by Cape Nature Conservation in their conservation and management planning, and by pure researchers. We are hoping that ecotourism will increasingly start to use the data to plan trips.

The project is also being used to train field rangers in mapwork, plant identification and atlassing. Cape Nature Conservation, Natal Parks Board and Mapumalanga Parks Board have active atlassing programmes in certain nature reserves. To date we have data for 285 conservation areas containing proteas.

We are currently producing our Interim Distribution Maps to highlight areas and protea species which require additional attention by atlassers. Most of these are our localized endemics and Red Data Book plant species. If you wish to contribute to this endeavour, please contact the Protea Atlas Co-ordinator, Botany Dept, UCT.

WHAT IS SOCIAL ECOLOGY?

R Selikowitz
Table Mountain Project, National Parks Board
PO Box 44562
CLAREMONT 7735

This talk will discuss the concept and practice of Social Ecology in National Parks.

Social Ecology as a discipline within the National Parks Board (NPB) was established in 1994. The genesis of the Social Ecology Unit coincided with the political transformation in South Africa and concomitantly with the transformation of the NPB. While the concept is still being unravelled, the central tenets underlying it's definition and practice are:

- * it is interdisciplinary - integrating conservation and socio-economic development to promote sustainable management of natural and cultural heritage;
- * it is participatory - empowering people to make decisions to take responsibility for ensuring that SA's natural and cultural heritage is managed in a sustainable manner;
- * it is inclusive and people driven - seeking to facilitate mutually beneficial partnerships between parks and adjacent local communities;
- * it is educational - seeking to build institutional and community driven capacity to effectively participate in managing our natural and cultural resources.

THE DRYFLOWER INDUSTRY

R Middelmann
Honingklip Dryflowers
Private Bag X10
BOTRIVER 7185

An overview of the Industry with insights into marketing, the role of the exporter, the role of the producer, production and harvesting.

This short talk does not cover production figures, but rather methods applied.

UTILISING PINE PLANTATIONS TO PRODUCE *RUMOHRA ADIANTIFORMIS* (SEVEN WEEKS FERN OR RUMOHRA FERN)

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SAFCOL is continually searching for ways to use its resources on a sustainable basis as well as integrating conservation principles with production. One example of this is the commercial production of *Rumohra adiantiformis* under pine trees.

This fern grows naturally from Polynesia through Australasia and the Indian Ocean Islands to South Africa, across the Atlantic Ocean between Paragonia and the West Indies. In South Africa it is found mainly in the forests of the Southern Cape. The exceptional long vase life of this fern makes it a popular product with florists the world over.

The bulk of the material produced in South Africa is harvested under contract in the indigenous forest areas managed by the Department of Water Affairs & Forestry. These harvesting operations are closely monitored to prevent damage to the fern population in particular and the forest in general.

Commercial growing of Rumohra is seen as a method to prevent damage to the natural populations and the indigenous forests. Pine plantations are used to supply the natural shady environment benefiting Rumohra. Rootstocks are harvested from pine compartments before clearfelling and planted in well prepared beds. Fertilisers are applied according to deficiencies pointed out by soil chemical analyses. Irrigation is applied to produce the best quality of frond.

This project benefits the natural populations as this more fairly inexpensive way of producing the fronds would make it economically less viable to harvest from the indigenous areas. Jobs are created in rural areas, mostly for women who are generally finding it difficult to be employed.

MIXING AND MATCHING GENES - CONSERVATION, HYBRIDIZATION AND UTILITY OF PROTEACEAE

GM Littlejohn / LM Blomerus / A Robyn / S Gertse /
F Cookson / GJ Britz
ARC - Roodeplaat (Western Cape)
Private Bag X1
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We, as South Africans, are justifiably proud of our Proteaceae. They constitute the basis of a flourishing indigenous flower export industry, provide a national symbol and occasionally grace our gardens. Yet, Proteaceae remain awkward partners in cultivation, never quite outgrowing their reputation of being difficult to grow.

Mixing and matching genes, to speed the process of adaptation to cultivation is the purpose behind breeding attempts, however, once again "Proteus" shows his form in providing more questions than answers to the dynamics of reproduction and hybridization.

Data is presented and questions relating to achieving - "mix - match" genotypes are discussed.

FORAGING OF GUINEAFOWL IN FYNBOS *POSTER*

D Gibbs / C Dorse
 Rondevlei Nature Reserve
 Fisherman's Walk
ZEEKOEVLEI 7945

Guineafowl have been introduced and have naturalised in the South western Cape. The effect of their foraging behaviour is analysed.

**ESTABLISHMENT OF AN INDIGENOUS INDUSTRY
 IN THE RURAL AREAS** *POSTER*

EJ Jefthas / C Coetzee
 ARC - Fynbos Unit
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With the rural areas, the indigenous flower industry forms an important part of the economy. Due to the large and continuously growing demand of high quality cut flowers on the international market it is not feasible to pick fresh flowers in the rural habitat for the export market. However, the production in the natural veld is low and ecologically cannot sustain the continuously picking as depletion of seedbanks occur. This will contribute to the future unemployment rate in South Africa. The primary objective of this project is the identification of the traditional veld pickers and informal discussion explain and demonstrate the advantages and disadvantages of indigenous flower cultivation in rural areas.

THE FYNBOS INDUSTRY *POSTER*

M Middelmann
 SAPPEX
 Private Bag X12
BOTRIVER 7185

The Fynbos industry interacts with various organisations to ensure progress in the industry.

Cultivation for export quality flowers for the cut flower trade is encouraged. For dried flower production we rely on the scientific community to assist us in ensuring sustainable harvesting practises of the natural resource. The opening of international marketing requires both industry and scientific interaction on international level.

NATIONAL ACCOUNTING - CAN FYNBOS BE VALUED?

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National Accounting systems measure a country's capital and its economic growth. Current accounting methods, however, do not reflect the value of "natural capital" - or the rate at which natural resources are depleted or degraded. Ecological economists world-wide are urging nations to rectify this situation by developing more holistic or "green accounting" systems.

This paper forms part of a pilot research project to examine the value of selected ecosystems with the aim of eventually including such values in the South African National Accounts. A preliminary desk-top study, using available data and key interviews, was undertaken. An attempt was made to estimate the existing "stock" of fynbos available. Available economic data were extrapolated to estimate the value of fynbos in terms of consumptive use values (e.g. wildflower harvesting) as well as non-consumptive and non-use values.

A FYNBOS ECOTOURISM PROGRAMME FOR THE SOUTHERN OVERBERG

A Scott / M Scott / P Mustart
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A unique fynbos ecotourism programme is being established in the southern part of the Cape Overberg. The venture involves landowners, conservationists and the tourism sector in a special partnership in the Stanford/Gansbaai/Elim/Wolwegat area. The project has been launched by the newly established Fynbos Ecotourism Forum for the area, under the auspices of Western Cape Tourism Board (WCTB), the Cape Overberg Tourism Association (COTA), Cape Nature Conservation and Overberg Conservation Services.

The vision for the programme is to promote responsible travel in small groups, interacting with the natural fynbos environment and learning more about it, to the benefit of landowners and the local community, tourists and conservation. The venture is regarded as a pilot project which may serve as a model for further programmes throughout the Overberg and other parts of the Western Cape, as part of WCTR's Cape Floral Kingdom Project.

A workshop to promote communication between 25 potential role players took place at Stanford in October 1996. The most important findings were that there is great potential for fynbos-based ecotourism in the area; there is a need for cooperation between landowners, conservationists and the tourism sector to make the venture a reality, and for information on fynbos and the development of suitable tourism facilities. Landowners wish to control access to their properties themselves, for small, pre-booked groups, and in many cases are prepared to offer personalized guiding services to little-known but spectacular fynbos ecotourist destinations.

A second, two-day fynbos ecotourism workshop was attended by some 40 participants at Gansbaai in February 1997. The programme included talks by fynbos and ecotourism specialists and local landowners, and a

workshop session to formulate an ecotourism plan. Field trips to four of the venues of the proposed fynbos route were included. Ecotourists were highlighted as the fourth group of participants in this cooperative venture.

The forum has compiled a plan for the Stanford/Gansbaai/Elim/Wolwegat Fynbos ecotourism programme, with projects for the three working groups; the landowners, conservationists and the tourism sector. Together with this plan, a joint marketing brochure for the route was produced in April 1997. The route will be launched at the start of the fynbos season in July 1997.

PRODUCING A STRATEGIC PLAN FOR THE CONSERVATION OF THE BIODIVERSITY OF THE CAPE FLORAL KINGDOM

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Table Mountain Project
National Parks Board
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CLAREMONT 7735

RM Cowling
Botany Department
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An application for a funding grant from Global Environmental Facility (GEF) has been prepared by the National Parks Board (Table Mountain Project) for approximately US \$14 million. A final decision on this application will be made by the GEF Council in November, 1997. The main application includes US \$5 million for the Table Mountain Fund of WWF-SA, US \$250 000 for the development of a Strategic Plan to save the biodiversity of the Cape Floral Kingdom, and US \$8.5 million for incremental management activities on the Cape Peninsula. The focus of the talk is on the development of the strategic plan for the CFK and future funding arrangement for the implementation of this strategic plan.

The objectives of the strategic plan are to :

1. Address the strategic conservation needs of the three conservable lowland fynbos areas outside of the Cape Peninsula, viz Agulhas Plain, De Hoop and the West Coast Biosphere Reserve.

2. To provide a coherent framework for the management and land-use practises of the matrix¹ in which the above reserves are located.
3. To limit the framework for the matrix to issues of institutional, legal and financial arrangements which could realistically be implemented in the short to medium term (5 years) in order to encourage conservation friendly land-use practises.

THE FUTURE ROLE OF CAPE NATURE CONSERVATION TO ACHIEVE CONSERVATION PRIORITIES IN THE WESTERN CAPE

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It is now common knowledge that Cape Nature Conservation (CNC) recently experienced a severe drainage of expertise as part of the national process to *right size* the civil service. In addition to this, due to short-term priorities and critical social needs, Nature Conservation is consequently funded as a low priority by the Local Provincial Government. It is also public knowledge that CNC is at present actively engaged in a process to transform itself into a Statuary Board. Through this transformation process, CNC hopes to secure and build out its ability to fulfil its role as the provincial conservation agency in the Western Cape. Central and Provincial Government will, however, always have a pertinent role to play with regard to policy and core function funding.

To effectively address conservation priorities in the Western Cape, such as mountain catchment, lowland and coastal areas, a concerted effort will have to be made to consolidate initiatives and actions in this regard. Cape Nature Conservation, as one of several active partners in this field, would certainly like to play a positive role in the sustainable conservation of all components of the fynbos biome.

¹ The matrix is defined as being all the land surface around and between the potential protected areas

THE KOGELBERG BIOSPHERE RESERVE - COMBINING CONSERVATION AND UTILIZATION

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A biosphere reserve is proposed for the greater Kogelberg region from Gordon's Bay to the Bot River, including the Kogelberg Nature Reserve, Houw Hoek mountain and the Groenlandberg.

The application is being done jointly by Cape Nature Conservation and the Kogelberg Biosphere Association (KOBIO), which is a community based organisation consisting of members throughout the region. In order to achieve the objectives of the registration process, the Kogelberg Sub Committee was formed with representatives of all the government departments and local authorities. The Sub Committee falls under the provincial Advisory Committee for biosphere reserves.

A biosphere reserve is about combining conservation, development and sustainable utilization. Biosphere reserves are registered with UNESCO under its Man and the Biosphere programme, and are protected terrestrial and coastal environments of international conservation importance. Currently there is a global network of more than 330 biosphere reserves.

A biosphere reserve consists of three interrelated zones, viz a core area, buffer zones and transition zones. The different zones are dedicated to different degrees of conservation, utilization and development. The core area is devoted to strict protection according to conservation objectives. Within the delineated buffer zone only activities which are compatible with the conservation objectives of the core area will be permitted. The transition zone is a zone of cooperation with local populations and in this zone sustainable resource management practises will be encouraged.

A biosphere reserve aims to link conservation and development in a specific region, contributes to the welfare of the region through sustainable use of natural resources and allows local communities to

become stakeholders in the conservation and development of the areas in which they live and work.

DEVELOPING A MANAGEMENT PLAN FOR THE WORKING FOR WATER PROJECTS IN THE RIVIERSONDEREND CATCHMENT

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The Working for Water Programme was started in October 1995 to clear catchment areas and river courses of invasive alien plants. The programme was initially started rapidly in areas where capacity is available. There is now a drive to develop systematic long term management plans for the control of aliens in areas where the Working for Water Programme is operational. The plans are catchment based and aim to address alien control as one aspect of integrated catchment management.

The management plan for the Riviersonderend catchment will be discussed and will detail the effect invasive alien plants are having on this catchment in terms of water yield and area invaded. The proposed project to utilize the wood produced by the Genadendal Working for Water Project will also be briefly discussed.

AN ELECTRONIC MANAGEMENT SYSTEM FOR NATURE CONSERVATION

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An Electronic Management System has been developed for Cape Nature Conservation using Microsoft Access. This system is based on a

management plan approach with the use of an Annual Plan of Operations (APO). Projects are identified, prioritized and described. They are then budgeted for. All stages of actions on these projects are then recorded and costs assigned. Further actions are also planned.

PICKING UP THE PIECES: TOWARDS A BIOSPHERE RESERVE FOR THE COASTAL LOWLANDS OF THE WESTERN CAPE

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The coastal lowlands of the western Cape form part of the Cape Floristic Region and fall within the fynbos biome, an area known for its high levels of plant diversity and endemism. The remaining vegetation has been severely fragmented and is currently under threat from agricultural, pastoral and coastal resort development; and alien plant invasions. In addition, the existing system of reserves does not adequately protect that which does remain. This talk, outlines the study which represents the first phase of a detailed area selection process which aims to formulate a comprehensive framework for a biosphere reserve in part of the coastal lowlands of the western Cape. Areas which could comprise core areas and buffer zones were selected using GIS techniques. Initially, available existing data were used to make a broad-scale identification of land suitable for conservation and to select specific areas that could comprise actual core areas and buffer zones of such a reserve system. These prioritised areas formed the set from which areas were selected for inclusion within the final selection of areas for core areas and buffer zones. Actual selection of areas was performed using a stepwise heuristic algorithm, developed specifically for the selection of habitat remnants for inclusion within a contiguous protected area system. The areas selected comprised approximately 25% of the study area and some 14% of the total extent of the three vegetation types. It is suggested that this area system be used as a blueprint for the proposed biosphere reserve. This study identified areas solely on the basis of biological criteria, non-biological factors, e.g.

socio-economics, are being considered by other researchers and will be collated with the findings of this study. It is only through this interaction of disciplines that a truly representative biosphere reserve will be established for the coastal lowlands of the western Cape.

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