



CITY OF CAPE TOWN Nature Reserves

A network of amazing biodiversity



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

THIS CITY WORKS FOR YOU



CITY OF CAPE TOWN NATURE RESERVES

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For the latest updates on entrance fees and opening hours, please visit www.capetown.gov.za/environment and click on 'Nature reserves' (fees and opening hours given in this book are subject to change).



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City of Cape Town Nature Reserves



Icons used in this booklet

These icons will guide you to the activities and facilities you can enjoy in the reserves.
Please contact the reserve management for more details and remember to enjoy responsibly.



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A network of amazing biodiversity

Cape Town is a remarkable city – a sophisticated urban centre of international importance, right in the middle of one of the world’s biodiversity hot spots.

In June 2004, the Cape Floristic Region (CFR) was declared a Natural World Heritage Site of “universal significance to humanity”. The CFR includes sections of the Eastern Cape as well as the Western Cape.

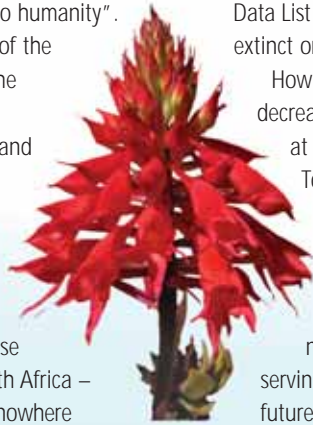
The CFR is the smallest and richest of the world’s six floral kingdoms, and its entire area is home to 9 000 plant species, of which about 80% are fynbos plants. Many of these plants are endemic to South Africa – in other words, they occur nowhere else on earth. About 1 700 of these species are threatened; 900 plants are endangered or critically endangered, and 29 plant species are already extinct.

The CFR does not merely surround Cape

Town; it is part of the city’s urban fabric, with critically endangered plants found on road verges, indigenous gardens, pavements, sports fields and public open spaces. Cape Town, with a third of the CFR’s plants, has 319 threatened and 13 extinct plant species on the IUCN’s Red Data List – a list of species that are either already extinct or at risk of extinction in the near future.

However, these remnant habitats are decreasing as Cape Town grows and develops at a rapid pace. To date, the City of Cape Town has set aside 31 areas within the metro boundary to be managed as nature reserves. Together with a number of private, provincial and national reserves in the region, these natural areas contribute towards conserving this biodiversity heritage for our and future generations’ enjoyment.

However, for more effective protection, the area under conservation needs to be doubled. Conservation of additional areas is therefore a priority in the City of Cape Town’s Biodiversity Network.



Cluster disa
(*Disa ferruginea*)



Open spaces and gardens with indigenous vegetation and wetlands are vital for any urban area.

Vegetation removes much of the carbon dioxide from the air. Carbon dioxide, produced by vehicle emissions, industries and even our own breathing, is one of the primary causes of climate change.

Wetlands help to control flooding, manage stormwater runoff, and clean river water.

These spaces also offer the opportunity for environmental education and recreation.

The city’s outdoors and tourism-based economy largely depends on Cape Town’s biodiversity and natural habitats.

Natural environments and urban open spaces offer valuable recreational areas, where adults and young people can relax, destress and play.

The conservation of our unique natural and cultural heritage is crucial to Cape Town.



Disa atricapilla



Aristea lugens

Conservation requires cooperation – we need your help ...

Residents and community organisations, along with national, provincial and local government, play an important role in ensuring that natural areas are identified, proclaimed and protected.

Friends of the reserves and other local interest groups help maintain and fund reserves. They participate in alien vegetation hacks, fire control, plant and animal monitoring, talks and walks, and also encourage others to care for nature.

Everyone can help tackle littering and waste dumping. By reducing the waste we produce, and reusing and recycling as far as possible, we can have cleaner and greener natural areas.

Anyone can plant and nurture an indigenous garden, no matter how small, which will offer a home to the insects, birds and other animals of the CFR.

THE VALUE OF BIODIVERSITY

We need to conserve biodiversity – not only for its own sake and for current and future generations, but because intact natural habitats offer many benefits to us, including an improved quality of life and health, through the many ecosystem goods and services they provide.

Well-managed natural areas offer recreational and educational, as well as sustainable harvesting and nature-based tourism, opportunities, and are known to enhance adjacent property values. In Cape Town, tourism is one of the most important industries to create jobs.

The conservation of natural and semi-natural areas has many benefits. Some of these include:

- reducing the force and effect of floods;
- filtering runoff and air pollution;
- replenishing groundwater;
- serving as an atmospheric carbon sink;
- producing oxygen;
- offering tourism, recreational and educational opportunities and cultural/spiritual spaces;
- providing food, raw materials, medicines and genetic stock for horticultural cultivars;
- controlling erosion; and
- future use (e.g. new research).

In addition, well-managed conservation and public open space areas are associated with improved urban community relationships and reduced levels of violent crime in adjacent areas.

ECOSYSTEMS AND BIODIVERSITY

A global biodiversity hot spot

The Cape Floristic Region (CFR) is richer in plant species than any other site of the same size in the world, with 70% of its plants being endemic to the area (in other words, they occur nowhere else on earth). The CFR is divided into five ecosystem groups: fynbos, strandveld, wetlands, renosterveld and forest. Each group is subdivided into vegetation types depending on soil type and rainfall.



The Biodiversity Network

In this first decade of the 21st century, more than 3,5 million people have made Cape Town their home, within the Cape Floristic Region.

Ecologically, this region is of such international value that it has been declared a United Nations World Heritage Site. All three tiers of South African government – local, provincial and national – therefore have the responsibility to preserve the region for future generations worldwide.

Yet, as more people are drawn here because of the city's biodiversity-based economic and recreational opportunities, less of this biodiversity remains. As more land is used for housing, facilities and farming, less of the natural vegetation can be found amid the urban and agricultural sprawl.

The City of Cape Town – as the local government responsible for this region – is determined to preserve this biodiversity to meet national and local conservation targets through a Biodiversity Network, a representative set of sites called Critical Biodiversity Areas and Critical Ecological Support Areas, the latter including corridors. The City of Cape Town's 31 nature reserves and natural areas form part of this network of representative sites.

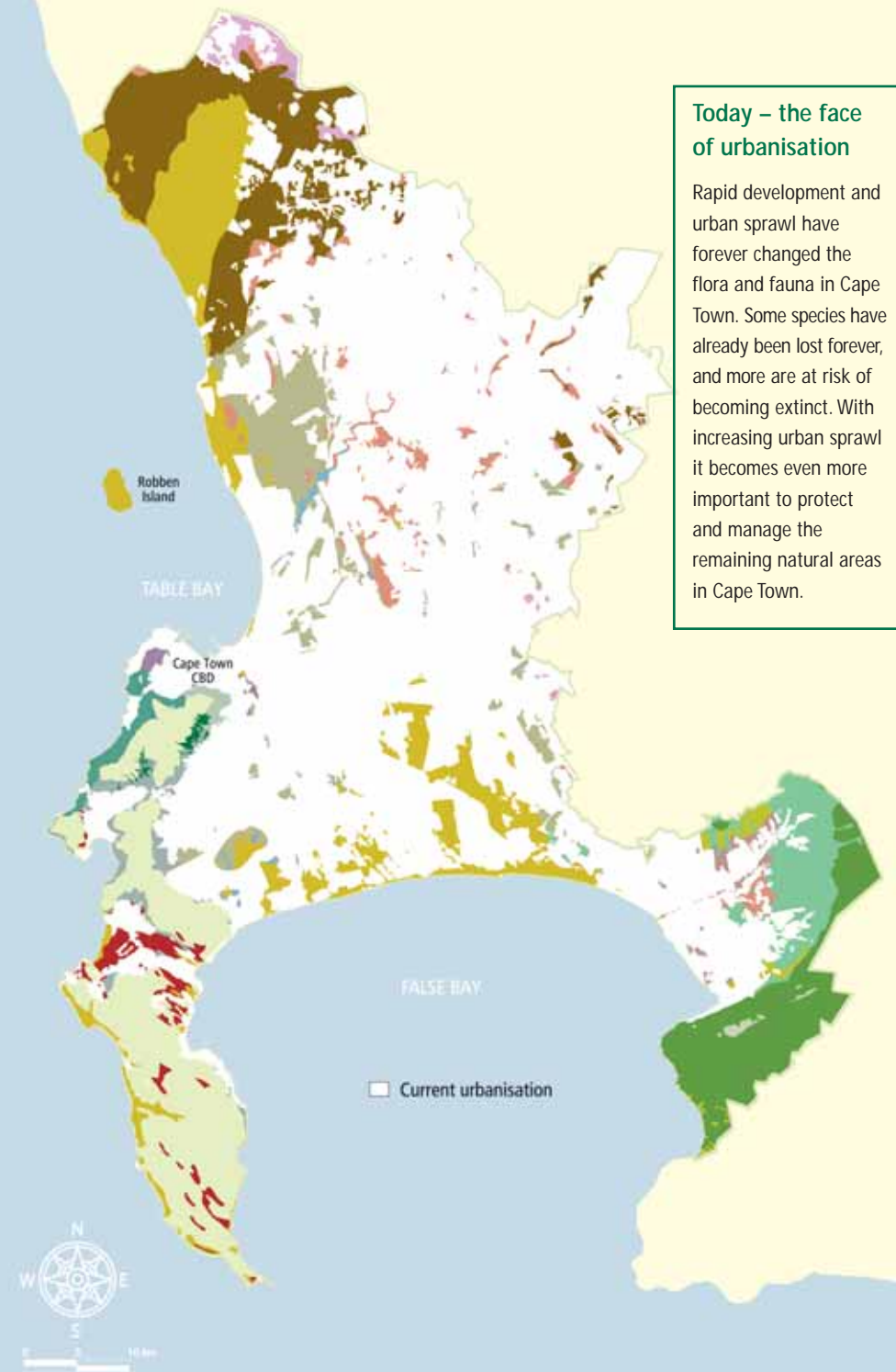
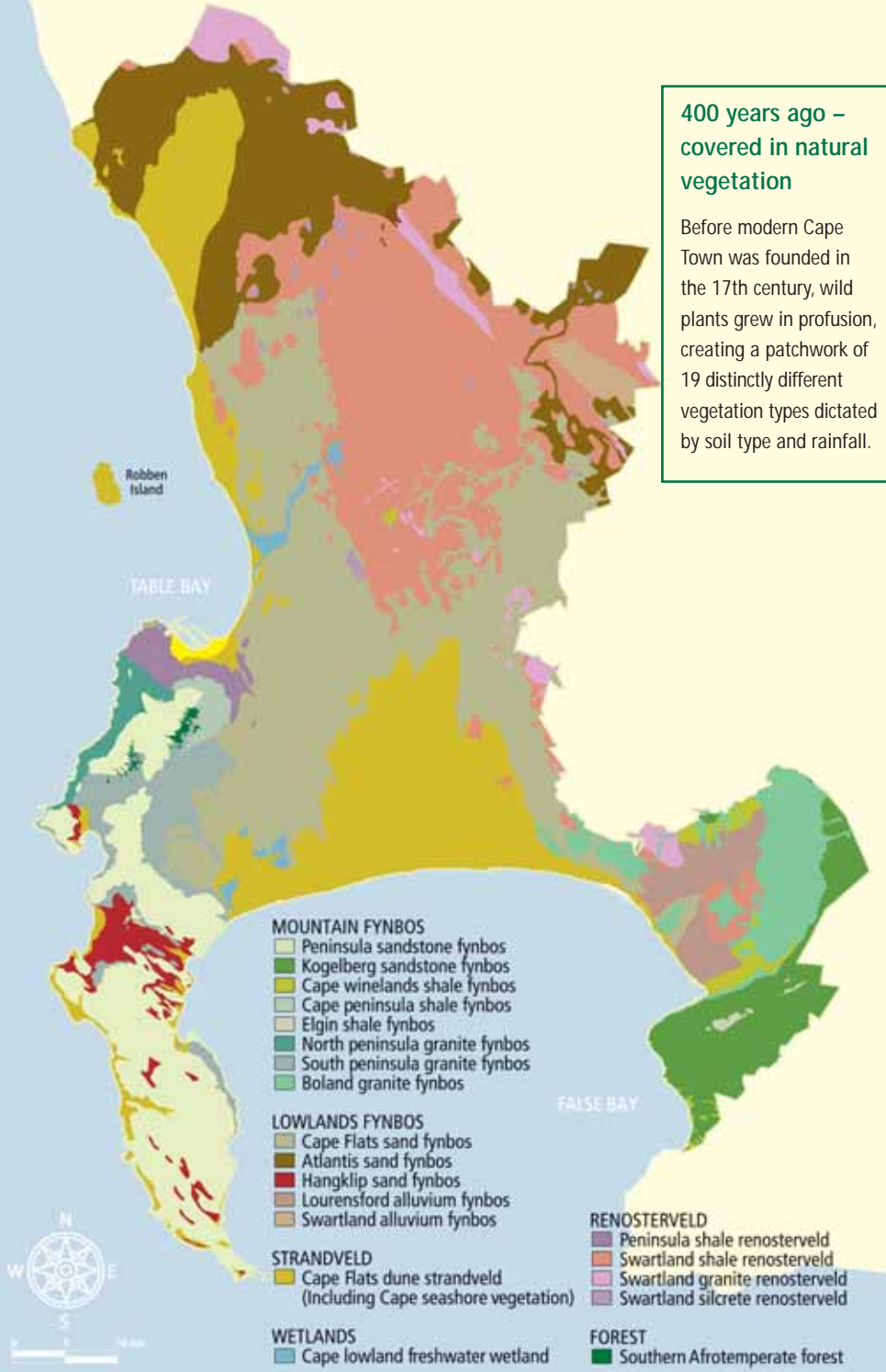
Corridors allow the movement of animals and the dispersal of plant seeds between the conservation areas, which will prevent the reserves from becoming genetically isolated. These corridors include indigenous remnants, commons, roadside verges, servitudes for power lines and undeveloped land on farms.



Cape francolin (*Pternistes capensis*)

Strandveld spring flowers on the edge of a *Phragmites* wetland





Mountain Fynbos

Fynbos is the ultimate vegetation type for any water-wise gardener. It was so named because of one of its most important characteristics – its small, fine leaves, which are adapted to survive and flourish in hot, dry, windy summers. ('Fynbos' means 'fine bush' in Afrikaans and Dutch.)

Fynbos is also able to cope with fires – regular summer fires are in fact critical in ensuring that the vegetation remains healthy and species-rich. It is important that fynbos does not burn too frequently, though: An eight-year to 25-year fire cycle is considered normal for most fynbos types.

Fynbos types vary according to rainfall, aspect, elevation and soil type.

Mountain fynbos

Mountain fynbos comprises the following 7 types:

- Peninsula sandstone fynbos
- Kogelberg sandstone fynbos



A Proteoids – shrubs from the protea family, with large, waxy leaves, e.g. King proteas (*Protea cynaroides*), waboom (*Protea nitida*), sugar-bushes and pincushions. – are common.
 B Geophytes – bulbous plants, particularly from the iris, lily and orchid families
 C Silver trees (*Leucadendron argenteum*)

- Cape Winelands shale fynbos
- Elgin shale fynbos
- Peninsula granite fynbos
- Boland granite fynbos
- Cape Peninsula shale fynbos

SANDSTONE FYNBOS TYPES

The sandstone fynbos types are the best preserved of all vegetation types in the Cape Floristic Region because they grow in misty, mountainous areas, not suited to farming or urban development. Sandstone fynbos is so named because it grows on acid soil derived from Table Mountain sandstone.

Many species of protea, such as the tree pincushion (*Leucospermum conocarpodendron*), king protea (*Protea cynaroides*) and geelbos (*Leucadendron xanthoconus*), are a common feature of sandstone fynbos types. Shrubs with ericoid (small and sharply pointed) leaves are plentiful, and species of erica, and shrubs such as the blombos, are abundant.

GRANITE AND SHALE FYNBOS TYPES

Granite and shale fynbos vegetation types are not so well preserved, as they grow on lower mountain slopes more likely to be developed for human habitation or farmland.

Granite fynbos grows on the lower slopes on granite derived material. Wabooms (*Protea nitida*) and silver trees (*Leucadendron argenteum*) occur on the wetter slopes.

Two types of fynbos are found on shales in higher rainfall areas, Cape winelands shale fynbos (which includes peninsula shale fynbos) and Elgin shale fynbos. Shale fynbos is found on rolling plains and steep mountain slopes, and prefers acidic and moist clay-loams.

It largely consists of proteoid, asteraceous and closed-scrub fynbos, with ericaceous fynbos in the wetter sites.



Lions Head (granite fynbos), looking towards Signal Hill (shale renosterveld)

Lowlands Fynbos



Restionaceae sp.

Lowlands fynbos is the fynbos type most affected by human development. In fact, lowlands fynbos has more species threatened with extinction per area than anywhere else in the world. This fynbos comprises the following five types:

- Cape Flats sand fynbos
- Atlantis sand fynbos
- Hangklip sand fynbos
- Lourensford alluvium fynbos
- Swartland alluvium fynbos

Sand fynbos types

Sand fynbos grows on the deep, acid sands of the coastal plain. This habitat is low in nutrients, but it supports an amazing variety of plants, many of them endemic, that have adapted to the harsh conditions of summer drought and winter rain.



- A** Proteoids are shrubs in the protea family. They usually have broad, waxy leaves, e.g. the thistle sugarbush (*Protea scolymocephala*). Spider heads (*Serruria* sp.) are smaller members of the protea family, with finely divided leaves. The Cape Flats cone bush (*Leucadendron levisanus*) is critically endangered. **B** Ericoids are plants with fine leaves, such as this *Erica verticillata*. **C** Restioids are Cape reeds with small, scale leaves. **D** Geophytes are bulbous plants, which flower particularly in spring and after fires. These include many members of the lily and iris families.



Protea repens



Erica verticillata



Thistle sugarbush
(*Protea scolymocephala*)

Sand fynbos includes many different ericas and restios, but the once common Cape Flats erica (*Erica verticillata*) is now extinct in the wild.

Less than 1% of sand fynbos is conserved on the Cape Flats, and of the 208 threatened lowland fynbos species, at least 84 occur in Cape Flats sand fynbos. Its best protected habitat is the Kenilworth Racecourse, although roadside verges, commons and gardens could all house important species.

Hangklip sand fynbos occurs in the South Peninsula, in the valley linking Fish Hoek and Kommetjie. Atlantis sand fynbos is found along the West Coast in the Atlantis region. This area forms the southern core of the Cape West Coast Biosphere Reserve, and there is potential to further develop the conservation area.

Alluvium fynbos types

Alluvium fynbos occurs on fine sediment adjacent to mountains in wetter areas, and is associated with rivers and streams.

Lourensford alluvium fynbos, found at Harmony Flats and Helderberg Nature Reserve grows on soils derived from the granite and Malmesbury shale materials washed down by the river. It is dominated by restios and *Asteraceous* fynbos, and is especially rich in geophytes (plants with underground bulbs or corms).

Two small remnants of Swartland alluvium fynbos are found near Wellington and Paarl, but only 4 ha remains in the city.

Strandveld



The arum lily frog (*Hyperolius horstockii*) is often found in arum lily flowers.



Teeringbos (*Orphium frutescens*)

The Cape Flats dune strandveld ('strandveld' means 'beach scrub' in Afrikaans) covers the dunes that overlook the bays of Cape Town, and bursts into flower each spring.

The coastal dune sand is alkaline, and rich in phosphorus and calcium. Beneath the sand is a layer of limestone. In places such as Wolfgat, the

limestone is exposed as spectacular coastal cliffs. More than half of the strandveld vegetation has been lost to urbanisation during the last 30 years, leaving only about 14% conserved.

Fire is not as regular in strandveld vegetation as in fynbos vegetation, as the fleshy leaves are not as flammable as that of fynbos species.



A Thicket includes broad-leaved shrubs with berries that attract birds, insects and animals. Examples include bietou or tickberry, (*Osteospermum monilifera*), the white milkwood (*Sideroxylon inerme*) and the sea guarri (*Euclea racemosa*). **B** Succulents include sour figs (*Carpobrotus acinaciformis* and *Carpobrotus edulis*) and other vygies. **C** Restios **D** The rose-scented geranium (*Pelargonium capitatum*) **E** Masses of daisies grow from seeds in spring. These include purple wild cineraria (*Senecio elegans*), yellow senecio (*Senecio burchellii*) and white or salmon rain daisies (*Dimorphotheca pluvialis*).



Guided walk in Blaauwberg Conservation Area



View of Table Mountain from the coast of the Blaauwberg Conservation Area

Renosterveld



Flower crab spider (*Thomisidae* family) in a *Felicia* daisy

Today, however, some of this game (such as blue buck and quagga) is extinct.

Renosterveld is among the most threatened vegetation types in the world, with less than 3% of some types remaining. Far less than this is actually conserved, having been transformed into wheat, fruit and wine farms, or utilised for urban development. The little that remains has been overgrazed, leaving the unpalatable, low-growing grey renosterbos (*Elytropappus rhinocerotis*) as the dominant small shrub, along with grasses, geophytes and annuals.

Renosterveld, Afrikaans for 'rhinoceros scrub', used to be rich in grasses, and supported herds of livestock and game – hence its name.



A Low-growing grey bushes of renosterbos (*Elytropappus rhinocerotis*) B The iris, lily and orchid are geophytes.
C Wild rosemary (*Eriocephalus africanus*) and daisies belong to the aster family. D Wild olive (*Olea europea*, subsp. *africana*) and taalbos (*Rhus laevigata*) are examples of bushes with berries that attract birds.

Renosterveld grows on clay soils, which are fairly rich in nutrients, formed from the weathering of Malmesbury shale and Cape granite, in areas that receive between 250 mm and 600 mm of rainfall annually.

Swartland shale renosterveld

Swartland shale renosterveld, historically the most widespread form of renosterveld in Cape Town, grows on the West Coast lowlands of the Western Cape. Tall and open shrublands, interspersed with 'heuweltjies' (round hummocks created by termite mounds), are its most prominent feature.

Peninsula shale renosterveld

Peninsula shale renosterveld is found on the slopes of Signal Hill and Devil's Peak, and is very grassy due to frequent fires.



Oedera daisy

Swartland granite renosterveld

This vegetation type grows on granite outcrops, and is especially rich in geophytes and succulents.

Forest

In the fynbos biome, forests (areas with a continuous tree layer) are largely confined to mountain kloofs and valleys. While these forests might look beautiful, they are the most species-poor vegetation type within the city.

Forests are home to long-lived tree species, such as the true yellowwood (*Podocarpus latifolius*), Cape beech (*Rapanea melanophloeos*) and stinkwood (*Ocotea bullata*). The forests within Cape Town are found on shale, granite, or sandstone soils, and the largest examples are on the eastern slopes of the Peninsula, and above Hout Bay, at Orangetloof.

Many of the larger timber trees were exploited when the Cape was first colonised by the Dutch in the early 1700s. However, the extent of the forests within Cape Town are not thought to have been reduced by human activity, and in fact there is good evidence to show that the forests actually expanded in many areas due to a lack of fire in the neighbouring fynbos communities.

WHAT'S IN A NAME?

The system of protected areas in South Africa is regulated by the National Environmental Management: Protected Areas Act (NEMPAA). The five kinds of protected areas are as follows:

- Special nature reserves, national parks, nature reserves (including wilderness areas) and protected environments
- World Heritage Sites
- Marine Protected Areas
- Specially protected forest areas, forest nature reserves and forest wilderness areas
- Mountain catchment areas

Many of the sites in this booklet (nature reserves, conservation areas, etc.) are 'local protected areas' as defined by NEMPAA or 'local authority nature reserves' as defined by the Nature Conservation

Ordinance 19 of 1974, and they are managed by the municipality. Some are however managed as natural public open spaces by the City of Cape Town.

The sites' names (conservation area, sanctuary, wetlands reserve, satellite site, etc.) describe what the particular sites feature. Some of the names used to be legal definitions, but when the definitions later changed, the names remained.

Apart from the City of Cape Town's reserves, the Western Cape has other protected areas, which are either managed by provincial, national or private organisations. National parks situated in the province, e.g. Table Mountain National Park, are administered by South African National Parks (SANParks) and Driftsands Nature Reserve is managed by CapeNature. CapeNature also manages a Conservation Stewardship Programme, where private landowners are encouraged to maintain important biodiversity found on their land.

Wetlands



Groot stinkkruid (*Oncosiphon grandiflorum*)



Red-billed teal (*Anas erythrorhyncha*)

The term 'wetland' incorporates a wide range of wetland types, including rivers and their estuaries, and even shallow coastal marine areas.

The Convention on Wetlands of International Importance, also known as the Ramsar Convention, defines wetlands as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tides does not exceed 6 m. Wetlands

are areas where water is the primary factor controlling the environment, and therefore, wetlands develop in areas where soils are saturated or inundated with water for varying lengths of time and at different frequencies."

The impact of urban development (both through infill and new development) has transformed the majority of seasonal wetlands into permanent vleis. These vleis are now popular areas for fishing, boating and other water sports.

While these vleis do provide a home to a variety

of water birds and frogs, the wider range of species that relied on seasonal wetlands have been lost. Seasonal wetlands are dynamic, and provide a variety of habitats to a number of species, while permanent vleis create a uniform habitat, where a few common (often invasive) species dominate.

Wetlands provide a natural filter as silt settles out of water, and excess fertilisers are removed by reeds and floating water plants. However, wetlands are vulnerable to pollution and eutrophication (nutrient loading) as a result of runoff from the surrounding areas. This may lead to low oxygen levels, which kill fish and smother plant life. If the algae multiply and become toxic, the water could become unsafe for recreational use. The control of the invasive alien species, such as the water hyacinth (*Eichhornia crassipes*), is an ongoing task.

Rivers need to be managed by an entity such as a catchment management forum – from their source to where they enter the sea.

The type of management depends on the impacts on the river higher up in the catchment (i.e. water quality or silt). At the estuary, where the river water mixes with the ocean, salt marshes line the shores, and wading birds probe for food on the mud banks exposed at low tide. While many marine fish breed in the ocean, their juveniles enter estuaries, where they can grow and mature in relative safety, before returning to the sea.

Historically, estuaries in Cape Town were closed

during the dry season, and only broke open to the sea after heavy rain. It is important to manage water flow and silt build-up, so that estuaries continue to function. Nowadays, most estuaries are artificially opened to reduce the risk of floods.



WESTERN LEOPARD TOAD – A FLAGSHIP FOR URBAN CONSERVATION

The Western leopard toad (*Amietophrynus pantherinus*), which occurs only in the coastal region from the Cape Flats to the Agulhas Plain, is in danger of extinction. It is particularly vulnerable because many toads die crossing busy roads on their annual migration to wetlands, vleis and rivers to breed.

You can play an important part in protecting these toads. If you are driving (or a passenger), be on the lookout for them on the roads during breeding season (usually spring).

If you have a garden, make sure it is 'toad-friendly' by growing indigenous plants, avoiding pesticides, and creating 'escape routes' from your pool or garden wall. Visit www.leopardtoad.co.za, or e-mail leopard.toad@capetown.gov.za for more information.



A Reeds and bulrushes B Floating water plants C Frogs D Water birds, pelicans, flamingos, ducks, coots, herons, etc E Crabs and water insects, such as dragonflies and midges



The City of Cape Town's Nature Reserves

Cape Town is unique amongst world cities due to its high concentration of species found only within the city boundaries and nowhere else in the world. A visit to the City's nature reserves and natural areas will take you through a diverse network of spectacular flora and fauna, all part of the daily lives of Cape Town's citizens and visitors.



1 CITY OF CAPE TOWN NATURE RESERVES Mamre Nature Garden



Cape grysbok (*Raphicerus melanotis*)



Small spotted genet (*Genetta genetta*)

The Mamre Nature Garden is not only rich in biodiversity, but has an interesting cultural history. In the past, the people of Mamre called this area 'Geelvlei' ('Yellow Vlei') after the small, yellow flowers – 'Boesman myre' – which grew around a dam that was located there. The flowers grew so abundantly around the dam, that the whole area appeared yellow. The dam no longer exists, and the flora has since changed.

The locals used the Mamre Nature Garden to collect wild flowers for the annual Mamre Moravian Church 'Kinderfees' ('Children's Festival') and the Spring Flower Festival, which takes place in September each year.

The Mamre Nature Garden is 254 ha in extent, with a core area of 13 ha.

The vegetation type on the reserve is the endangered Atlantis sand fynbos, and more than 150 plant species have been recorded. These



include vleibloem (*Lachnia capitata*), rotstert (*Babiana ringens*), suikerkan (*Protea repens*), blouppie (*Gladiolus gracilis*), rooisalie (*Salvia lanceolata*) and klokkesheide (*Erica decora*).

Small mammals, such as the bat-eared fox (*Otocyon megalotis*), Cape grysbok (*Raphicerus melanotis*), Cape dwarf chameleon (*Bradypodion pumilum*), caracal (*Felis caracal*), small grey mongoose (*Galerella pulverulenta*) and porcupine (*Hystrix africaeaustralis*), can still be found roaming around, as well as a host of birds, reptiles and amphibians.

Mamre was established in 1701, when Cape Governor Willem Adriaan van der Stel sent a group of soldiers to set up a military post. The area was then known as Groenekloof. In 1806, a Moravian mission was established here, and the first sermons were held at Louvskloof, which is at the base of the Dassenberg hills.



Serruria faciflora & common metallic long horns (*Promecetes longipes*)

ADDRESS: Head Office: Cnr. of R27 and Dassenberg Drive, Atlantis
 OPENING HOURS: By prior arrangement only
 SIZE: 254 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Picnic site, short trail, 1,5-hour hiking trail to Louvskloof - a National Heritage Site (by prior arrangement only), alien clearing, woodcutting (alien trees)
 ENVIRONMENTAL EDUCATION: By prior arrangement only
 CONTACT: Tel 021 577 5000/2/3/4; fax 021 577 5001
 E-MAIL: witzandsnature.reserve@capetown.gov.za



Witzands Aquifer Conservation Area



White-tailed mouse (*Mystromys albicaudatus*)

Witzands Aquifer Conservation Area includes the Atlantis Dunefields and the Silwerstroomstrand Conservation Area. Both are priority nature sites located about 50 km north of Cape Town, and form part of the City of Cape Town's Biodiversity Network.

The conservation area protects not only the Atlantis Aquifer, the main water supply for Atlantis, Mamre and Pella, but also more than 163 plant species and a rich natural and cultural heritage.

The mobile dunes (without vegetation and therefore unstable) and the rocky outcrops are the two outstanding features of Witzands Aquifer Conservation Area, whilst Silwerstroomstrand also features rocky shores and a sandy beach.

Cape Flats dune strandveld and Atlantis sand fynbos are the two main vegetation types. More than 50 species of water birds roost, breed and feed in the many natural and artificial wetlands found here. Lizards, amphibians, and mammals

such as steenbok (*Raphicerus campestris*), Cape grysbok (*Raphicerus melanotis*), the small grey mongoose (*Galerella pulverulenta*), Cape mole rat (*Georchus capensis*) and caracal (*Felis caracal*) have all been recorded in the area. Of special significance is the globally threatened black harrier (*Circus maurus*), which is successfully conserved in both the Atlantis Dunefields and Silwerstroomstrand Conservation Area.

ADDRESS: Corner of R27 and Dassenberg Drive, Atlantis
 OPENING HOURS: For activities in the Atlantis Dunefields: 07:00-19:00 (with pre-arranged permits)

SIZE: Approximately 3 000 ha

ENTRANCE FEE: R9.00 per person on foot, R100.00 per 4X4 vehicle (incl. 4 people), R60.00 per quad-bike/motorcycle (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)

PUBLIC TRANSPORT: Taxi

ACTIVITIES AND FACILITIES: Sand-boarding, beach-walking, rock pools, filming, 4x4 driving, camping (caravans, chalets & tents), picnic sites, braai areas, birdwatching, whale watching and fishing (permit required). Guided hikes are available upon request.

ENVIRONMENTAL EDUCATION: Formal programmes by appointment
 FILMING: Small companies (still shoots) with a maximum of ten vehicles and 25 people pay one rate, with a higher rate applying for commercials and film shoots

CONTACT: Tel 021 577 5000/2/3/4; fax 021 577 5001

E-MAIL: witzandsnature.reserve@capetown.gov.za



Common dotted border (*Mylothris agathina*) on *Senecio burchellii* flower



Brunsvigia orientalis



Cape weed (*Arctotheca calendula*)

Blaauwberg Conservation Area



Ixia dubia

The Blaauwberg Conservation Area (BCA) was proclaimed a local and provincial nature reserve in 2007. The reserve has a spectacular view down fynbos slopes, across the city, to 7 km of rocky, sandy coastline, the ocean and beyond. It is the only viewpoint in the world from where you can see two proclaimed World Heritage Sites, namely Table Mountain and Robben Island.

The BCA conserves three threatened vegetation types: Cape Flats dune strandveld (endangered), Swartland shale renosterveld (critically endangered), and Cape Flats sand fynbos (critically endangered). The rich biodiversity embraces a wetland, 558 plant species, 42 mammals (including whales, dolphins and seals), 140 bird species, 28 reptiles and five amphibians. The BCA is the only City of Cape Town nature reserve where you can still find the white-tailed mouse (*Mystromys albicaudatus*), the ant bear ('aardvark'; *Orycteropus afer*) and a bird known as Layard's titbabbler (*Parisoma layardi*).

The BCA will eventually conserve about 2 000

hectares, and will be stocked with larger animals, such as eland and red hartebeest.

Within the current 953 ha is evidence of early human occupation – with shell middens dating back 15 000 years.

The reserve also conserves the site of the 1806 Battle of Blaauwberg, when the British took possession of the Cape from the Dutch for the second time. On Blaauwberg Hill, several buildings were constructed during World War II. These include a radar station, a lookout and a mess room.

Since the BCA's proclamation, conservation in the area has progressed rapidly. Simple bollards at the coastal parking areas have stopped 4x4s from driving on the beach, and already, the endangered vegetation is recovering and the black oystercatchers (*Haematopus moquini*) have returned. Illegal vehicles had not only endangered the vegetation and black oystercatchers, but had destroyed a number of the shell middens.

Management is limiting the population of Cape gerbils (*Tatera afra*), whose population exploded following alien vegetation clearing. Conservationists encourage the introduction of barn owls (*Tyto alba*), which eat the gerbils, by providing barn owl nesting boxes. The owl pellets are however carefully monitored to ensure that they are not



White-tailed mouse (*Mystromys albicaudatus*)



April fool (*Haemanthus coccineus*)



Strandroos (*Afrolimon perigrinum*)



Cape cobra (*Naja nivea*)

eating the endangered white-tailed mice.

An initiative of the Friends of BCA, involving the closure of 4x4 tracks and the judicious clearing of alien vegetation, has shown that the strandveld vegetation can be restored.

Partners of the BCA include CapeNature, the Western Cape Provincial Government, the Cape West Coast Biosphere Reserve, the Table Mountain Fund, the Botanical Society of South Africa, the South African Heritage Resources Agency, the Development Bank of South Africa, the Critical Ecosystem Partnership Fund, C.A.P.E., the Wildlife & Environment Society of South Africa, and the Friends of BCA.

ADDRESS: Bloubergstrand and Eerstestein Resort, Otto du Plessis Drive, Blouberg
 OPENING HOURS: Coastal section: Sunrise to sunset (seven days a week); Eerstestein braai and picnic facility: 08:00-19:00 (Nov-Apr), 08:00-17:00 (May-Oct)
 SIZE: 953 ha
 BLAAUWBERG HILL: By prior arrangement only
 ENTRANCE FEE: For Eerstestein Resort only: adults R 10.00, children (3-13 years) and senior citizens R5.00, children under 3 years free (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Picnic sites, braai areas, hiking trails, historic buildings, surfing, windsurfing, birdwatching, whale watching and fishing (permit required)
 ENVIRONMENTAL EDUCATION: Classes on history, archaeology, geography and geology, as well as on the plants and animals in the local ecosystems (booking essential)
 FRIENDS GROUP: The Friends of BCA host monthly activities
 CONTACT: Tel/fax 021 554 0957
 E-MAIL: bca@capetown.gov.za
 WEBSITE: www.bca.org.za



NEW LIZARD FIND ADDS TO BCA'S ALLURE

In 2002, two Americans discovered the first specimen of a new lizard species in the Blaauwberg Conservation Area (BCA).

Given the spectacular views of Table Mountain from the reserve, the animal was named *Scelotes montispectus*. 'Montispectus' means 'to behold the mountain' and 'Scelotes' refers to the genus of dwarf burrowing skinks to which this animal belongs.

The presence of this species within the BCA is of immense conservation importance, and to date, only six specimens of this enigmatic lizard have ever been found. The fact that this lizard was so long undiscovered while occurring so close to Cape Town, emphasises the need for more intensive and detailed sampling.



Suurvy (*Carpobrotus acinaciformis*)

Diep River and Fynbos Corridor



Sun spider

The Diep River and Fynbos Corridor is a tract of land running north from the Blaauwberg Road Bridge, between Parklands and Du Noon informal settlement, all the way to Blaauwberg Hill. The river part of the corridor is owned by the municipality and is a unique example of a natural floodplain in the city. The terrestrial area consists of privately owned land, which has been set aside to connect the Rietvlei Wetland Reserve with the Blaauwberg Conservation Area. When the corridor is completed, it will become a valuable scenic feature in the Parklands landscape, as well as a vital ecological linkage between the two nature reserves. The Diep River and Fynbos Corridor protects remnants of the critically

endangered Cape Flats sand fynbos and the endangered Cape Flats dune strandveld vegetation types.

Challenges

The corridor is often exposed to too frequent and unseasonal fires, illegal waste dumping and littering, unauthorised off-road driving, cattle grazing and invasive alien vegetation. The foot-paths are also frequently used to access the rapidly developing Parklands suburb.

ADDRESS: Gie Road, Parklands
 OPENING HOURS: Not applicable
 SIZE: 216 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES: By prior arrangement
 ENVIRONMENTAL EDUCATION: None
 CONTACT: Tel 021 550 1086
 E-MAIL: diepriver.fynboscorridor@capetown.gov.za



Steenbok (*Raphicerus campestris*)



Malgaslelie (*Ammocharis longifolia*)



Sacred ibis (*Threskiornis aethiopicus*)



Milnerton Racecourse Nature Reserve



The Milnerton Racecourse Nature Reserve is situated to the east of the residential area known as Royal Ascot. Similar to the Kenilworth Racecourse Conservation Area, it is primarily surrounded by a horseracing track. The area is approximately 19,4 ha in extent, and is divided into two portions that are separated by a residential development. A boardwalk and a pathway system make the smaller northern area accessible to the public. The larger southern area is enclosed by the racetrack, and not open to the public.

Its unusual geology, consisting of neutral to slightly acidic sand on ferricrete, makes the area suitable for Cape Flats sand fynbos and Cape Flats dune strandveld, both of which can be found here. As such, the reserve offers an excep-

tionally high diversity relative to the size of the conservation area. There are 232 recorded plant species on the site, and of these, 12 have Red Data status, including *Cliffortia ericifolia*, *Hermannia procumbens* sp. *procumbens*, *Leucadendron levisanus* and *Acrolophia bolusii*. The reserve also features the largest known population of *Lampranthus stenus*. Milnerton Racecourse Nature Reserve conserves the largest number of succulents (*Mesembryanthemaceae* and *Aizoaceae*) per unit area for any remnant of a similar size on the Cape Flats or the Cape Peninsula.

Two small permanent wetlands are also found on the site, and during winter, much of the area is inundated by water. This provides habitat for a variety of birdlife, and more than 70 species have been recorded. Thus far, at least ten species of butterflies and moths have been observed, and a number of grysbok can also be seen in both the northern and southern areas.

ADDRESS: Grand National Boulevard, Royal Ascot
 OPENING HOURS: Not applicable
 SIZE: 19,4 ha
 ENTRANCE FEE: None; only northern area accessible
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES AND FACILITIES: 20-minute walking trail in the northern area, birdwatching
 ENVIRONMENTAL EDUCATION: By prior arrangement
 CONTACT: Tel 021 550 1086
 WEBSITE: www.royalascot.co.za
 E-MAIL: milnertonracecourse.naturereserve@capetown.gov.za



Flowering *Watsonia meriana* bulbs following a fire in Cape Flats sand fynbos

6 CITY OF CAPE TOWN NATURE RESERVES Rietvlei Wetland Reserve



Cape River Frog (*Amietia fuscigula*)

Rietvlei is a large wetland in the floodplain of the Diep River between Milnerton and Table View. This 663,27 ha reserve comprises mainly permanent and seasonal wetlands surrounded by Cape Flats dune strandveld vegetation, with more than 220 plant species having been recorded. The vlei drains into Table Bay via the Milnerton Lagoon.

The reserve offers a variety of habitats, including a permanent freshwater lake, shallow marshes that flood in winter, reed beds, a river, and an estuarine lagoon with salt marshes that is open to the sea. A strip of coastal dunes separates the reserve from Table Bay.

This is a birder's paradise, especially in spring and summer, when migrant birds arrive from the northern hemisphere. Some 180 bird species are listed, including pelicans, flamingos, ducks, coots, herons, plovers, weavers and swallows. There are two bird hides that offer views of the southern water body and the large seasonal pan. Four times a year, a water bird census is taken, and often thousands of birds are counted. SANCCOB



– the coastal bird rehabilitation centre, where oiled penguins and gannets are cleaned – is adjacent to the reserve.

Many small mammals, reptiles and insects live here, along with several frog species. The lagoon acts as a nursery to several coastal fish, such as harder and mullet which occur in safety alongside freshwater fish. From the coastal dunes, dolphins and whales are visible in season.

Challenges

Water pollution and invasive alien plants, especially Port Jackson (*Acacia saligna*), rooikrans (*Acacia cyclops*) and kikuyu grass (*Pennisetum clandestinum*), are a challenge. People who live nearby can help by planting indigenous gardens, getting rid of the kikuyu, and preventing oil, poison and fertiliser from running into the vlei.

ADDRESS: Grey Avenue, Table View
 OPENING HOURS: 07:30-17:30 (daily); water sports hours 10:00-17:00 (weekdays), 09:00-17:00 (weekends)
 SIZE: 663,27 ha
 ENTRANCE FEE: Adults R 10.00, children (3-13 years) and senior citizens R5.00, children under 3 years free (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Boating, picnic and braai areas, fishing, hiking and two bird hides
 ENVIRONMENTAL EDUCATION: Rietvlei Education Centre
 FRIENDS GROUP: Friends of Rietvlei, www.friendsofrietvlei.co.za
 CONTACT: Tel 021 557 5509 & 021 550 1086; fax 021 550 1003
 E-MAIL: rietvlei.wetlandreserve@capetown.gov.za



Aerial view of Rietvlei Wetland Reserve



Winter rains swell the Rietvlei Wetlands

Zoarvlei Wetlands

Zoarvlei Wetlands are situated between the Paarden Eiland Industrial Centre and the suburbs of Rugby and Brooklyn. Most of the 140 ha of wetland is a dense mat of tall reeds, with a small stretch of open water near Brooklyn Chest Hospital. Here, 87 plant species and many birds are protected, and a great many water birds and gulls congregate.

The open water can be reached along a sandy path from Donegal Road, Rugby – look out for giant molehills, a selection of spring flowers and many annual flowers.

Challenges

Zoarvlei has the potential to be an attractive area, as it is home to so many plant and bird species. At present, though, it is not visitor-friendly and further spoiled by illegal waste dumping. However, funding from CoastCare has been obtained, and the area is being rehabilitated. Also, the West Coast Field Studies Centre runs popular environmental education programmes at Zoarvlei to enhance the area's value to the public.

ADDRESS: Between Donegal Street, Rugby; and Milner Street, Metro Industrial Township
 OPENING HOURS: Not applicable
 SIZE: 140 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES: Walking, birdwatching
 ENVIRONMENTAL EDUCATION: West Coast Field Studies Centre. For bookings, contact Frank Wygold on 021 511 2384, 083 338 9319 or jamaica@stonedragon.co.za.
 CONTACT: City Parks Tel 021 689 8935 / 021 689 4184
 E-MAIL: koos.retief@capetown.gov.za



Sacred ibis (*Threskiornis aethiopicus*)



Kelp gull (*Larus dominicanus*)

Raapenberg Bird Sanctuary



Grey heron (*Ardea cinera*)

The Raapenberg Bird Sanctuary is a section of the Liesbeek River between the Hartleyvale football ground and the South African Astronomical Observatory. This stretch of the river is parkland, with grassy picnic sites and shady trees along the busy Liesbeek Parkway. The sounds of seagulls, sacred ibis (*Threskiornis aethiopicus*) and Egyptian geese (*Alopochen aegyptiacus*) compete with the noise of traffic as they squabble over scraps of food. The more secretive herons, coots, ducks and smaller birds hide in the reeds across the river. Raapenberg is recognised as an important breeding site for many duck species.

Raapenberg Bird Sanctuary is part of the new Two Rivers Urban Park (TRUP), which is destined to be an important open space within the city. The

park is located at the confluence of the Liesbeek and Black River, and is managed by the City of Cape Town. All the landowners and stakeholders within the TRUP will work together to integrate the sensitive river and wetland systems, rich cultural background and developed areas of the parkland to make it a people's place of note.

The park includes the Provincial Heritage Sites of the South African Astronomical Observatory (erected in 1827), Valkenberg homestead (1830) (now the Courtyard Hotel), Valkenberg Hospital (1899), the Nieuwe Molen windmill, and the Oude Molen farmhouse complex. Large sporting facilities, such as Hartleyvale, Malta Park and the River Club, are also part of the TRUP.

Challenges

Management priorities are to rehabilitate the polluted rivers for recreational activities, to control alien vegetation, and create walkways along the rivers.

ADDRESS: Between Liesbeek Parkway and Station Rd, Observatory
 OPENING HOURS: Not applicable
 SIZE: 10 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi, bus or train
 ACTIVITIES: Birdwatching, walking, picnicking
 FRIENDS GROUP: Friends of the Liesbeek, www.fol.org.za
 CONTACT: City Parks Tel 021 689 9141



9 CITY OF CAPE TOWN NATURE RESERVES

Rondebosch Common

Rondebosch Common has a long history as an open space for public use.

This valuable 40 ha block lies in a built-up area surrounded by established homes, schools and hospitals. The area supports a natural remnant of the critically endangered Cape

Flats sand fynbos, with patches of renosterveld, and is also a seasonal wetland.

Over 300 plant species have been verified on the site, of which nine appear in the Red Data List, whilst 110 different bird species have also been recorded.

The common is very popular among locals, who can be seen jogging, walking their dogs, exercising and enjoying the open space every day.

ADDRESS: Park and Campground Roads, Rondebosch

OPENING HOURS: Not applicable

SIZE: 40 ha

ENTRANCE FEE: None

PUBLIC TRANSPORT: Taxi, bus or train

ACTIVITIES: Spring flower-spotting, history rambles, running, dog-walking

ENVIRONMENTAL EDUCATION: No formal programmes, but suitable for nature and history lessons

FRIENDS GROUP: The Friends of Rondebosch Common keep the area clean, safe and free from litter and fire. The group controls the spread of alien vegetation, organises spring walks, keeps information boards updated, and has compiled a book on the common's history, fauna and flora.

CONTACT: City Parks Tel 021 689 9141



A rundown on Rondebosch Common

When the Dutch settled in the Cape in the 1600s, they noted that the early inhabitants, the Goringhaiqua, migrated through the area every year with their herds, using the vegetation for animal grazing.



In 1805 to 1806, the common was a rallying place for the Batavian (Dutch) farmers before the Battle of Blaauwberg, and for the conquering British forces after the battle. Troops also used the area during the Anglo-Boer War in 1899, and World War I and II.

In 1855, the rector of St Paul's Church was given permission to graze his cattle on the land, on the condition that it would remain open for public use. Over the years, bits and pieces of the land were lopped off and put to various uses, for example the building of the Red Cross Children's Hospital. Pine trees were planted to surround patches of land used for cemeteries. Today the cemeteries are gone, but the pine trees remain.

Rugby, football, cricket and golf have all been played in Rondebosch Common, starting as far back as 1860. Today, formal sports have moved to better facilities, but cricket pitches, raised golf greens and a grassy rugby field can still be found near the car park.

In 1961, Rondebosch Common was proclaimed a National Monument.

Today, this large stretch of common land enjoys conservation status, and is administered by the City of Cape Town.



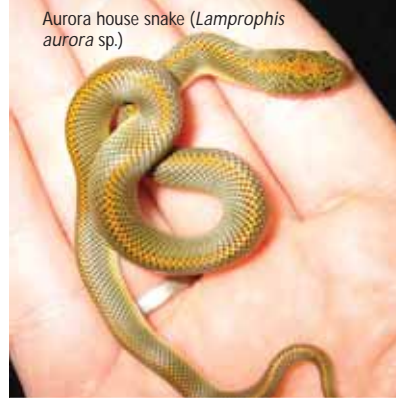
African pipit (*Anthus cinnamomeus*)



Heliophila sp.



Heady maidens (*Syntomis* sp.)



Aurora house snake (*Lamprophis aurora* sp.)



Bobartia indica with spotted blister beetles (*Ceroctic capensis* sp.)



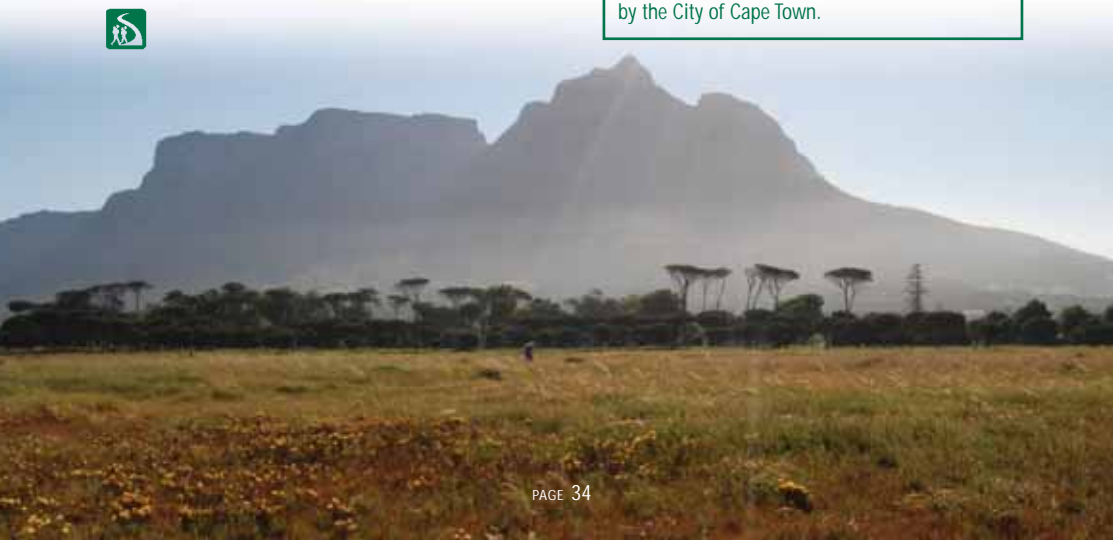
Ixia monadelphica



Kukumakranka (*Gethyllis afra*)



Cape dune mole rat (*Bathyergus suillus*) mound



Kenilworth Racecourse Conservation Area



Felicia daisy The Kenilworth Racecourse Conservation Area (KRCA) consists of approximately 52 ha, and is considered the best protected example of Cape Flats sand fynbos in the Cape Peninsula. Due to its location – in the middle of a racecourse – the vegetation has not been disturbed for over 100 years, and it was identified as a core botanical site and established as a conservation area in 1985.

The KRCA is the largest stretch of natural vegetation remaining in Cape Town's southern suburbs, with 283 indigenous plant species, of which 20 are endangered and two endemic. The *Erica verticillata* and *Erica turgida*, both listed as extinct in the wild, were reintroduced in the KRCA in 2005.

A small but healthy reptile, bird and mammal population can be found in the KRCA, and its seasonal wetland hosts the critically endangered micro frog (*Microbatrachella capensis*) population – the last of its kind on the Cape Flats and endemic to the south-western part of the Western Cape.

Although the area is managed by the City of Cape Town, it is owned by Gold Circle.



Challenges

The KRCA has become infested with alien vegetation and domestic garden escapees. Staff and volunteers remove litter, and spend time hacking out the alien Port Jackson (*Acacia saligna*) trees and seedlings. The natural vegetation sometimes has to be cropped so as not to obscure the horse racing.

Part of the reserve was rejuvenated by a controlled burn in March 2005.

ADDRESS: Rosmead Avenue, Kenilworth
 OPENING HOURS: By prior arrangement only
 SIZE: 52 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi, bus or train
 ACTIVITIES: Walks, and Friends of the KRCA activities (E-mail fkrc-owner@yahoo.com for bookings.)
 ENVIRONMENTAL EDUCATION: Programmes and presentations available upon request
 CONTACT: Tel 021 700 1843; fax: 021 797 6008
 E-MAIL: conservation@goldcircle.co.za
 WEBSITE: www.krca.co.za



Diastella proteoides



Restionaceae sp.



Serruria glomerata



Micro frog (*Microbatrachella capensis*)



Erica margaritacea

False Bay Ecology Park

False Bay Ecology Park (FBEP) is a multi-use area of about 1 200 ha. It includes a variety of ecologically linked sites, which form an important ecosystem and unique platform for conservation and partnerships in Cape Town.

The FBEP includes Rondevlei and Zeekoevlei Nature Reserves, the coastal strip between Sunrise Circle at Muizenberg and Strandfontein, the Cape Flats Wastewater Treatment Works, the Cape Flats Development Association (CAFDA) and the Coastal Park landfill site. CAFDA's stables complex is located next to Rondevlei Nature Reserve, and central to the vision of the FBEP. Additional land in Pelican Park will also be incorporated into the area in the near future. The FBEP is an excellent example of how ecosystems and social systems function interdependently.

A new environmental education centre was launched here in late 2006, and quality environmental education is provided to the many nearby schools. Day trips to Rondevlei Nature Reserve are popular and fully booked months in advance.

The Cape Town Environmental Education Trust (CTEET) runs two overnight camps with programmes for learners focusing on ecology, human-related environmental issues and personal and social development.

The area has enormous conservation, recreational and eco-tourism value. A disused pump-house at the centre of the maturation ponds of the treatment works has been renovated into the Strandfontein Information Centre, which will provide information about birding and fishing activities, and the area in general. A tearoom at Rondevlei Nature Reserve is planned to be opened to the public shortly, and a new headquarters node for the FBEP has been constructed on the southern shore of Zeekoevlei.

ZORRO THE HIPPO

In February 2009, a hippo named Zorro escaped from Rondevlei Nature Reserve after a section of the reserve boundary fence had been stolen. Zorro made a temporary home for himself in one of the retention pans of the Cape Flats Wastewater Treatment Works. Living comfortably in the retention pan, feeding on invasive alien kikuyu grass (*Pennisetum clandestinum*), Zorro has been confined to one of the pans. However, once captured he will move to a new home and join a free-roaming herd of hippos.

Hippos, or rather hippopotami (*Hippopotamus amphibius*), are listed as vulnerable on the International Union for Conservation of Nature's Red Data List. It is therefore important to maintain genetic diversity among current hippo herds to ensure a healthy population for the future. Zorro will add to the genetic strain of his new herd, will contribute to the conservation of his own species, and hopefully will live happily ever after.



Freshwater aquarium at Rondevlei Nature Reserve.



Western leopard toad (*Ameletophrynus pantherinus*)



Malachite kingfisher (*Alcedo cristata*)



Erica verticillata

Rondevlei Nature Reserve

Concerned bird lovers established Rondevlei as a bird sanctuary in 1952. Today, it is a well-run nature reserve, 290 ha in extent, with a museum, an auditorium, a network of footpaths, viewing towers, and several hides named after well-known birders.

There is a permanent wetland with Cape Flats sand fynbos to the north, and seasonal wetlands and Cape Flats dune strandveld in the south. About 278 species of indigenous plants grow in the Rondevlei Nature Reserve. Rare and endangered plants are strongly nurtured: These include the Cape Flats cone bush (*Leucadendron levisanus*), the Rondevlei spiderhead (*Serruria aemula foeniculaceae*) and the Cape Flats erica (*Erica verticillata*), which became extinct in the wild. The Cape Flats erica was discovered in a botanical garden, and has since been propagated and replanted at Rondevlei.

In addition, there are 237 bird species, from ducks to herons, ibises, pelicans, weavers and more. Hippopotami (*Hippopotamus amphibius*) have been reintroduced, and there are 20 other mammal species, including Cape grysbok (*Raphicerus melanotis*), porcupine (*Hystrix africaeaustralis*), Cape dune mole rat (*Bathyrgeus suillus*), Cape clawless otter (*Aonyx capensis*) and small-spotted genet (*Genetta genetta*). Twenty-

nine types of reptiles and eight frog species have been seen. The only indigenous fish present is the Cape galaxias (*Galaxias*), while introduced alien fish include common carp (*Cyprinus carpio*), banded tilapia (*Tilapia sparrmanii*) and sharp-tooth catfish (*Clarias gariepinus*).

ADDRESS: Corner of Perth Road and Fisherman's Walk, Grassy Park
 OPENING HOURS: 07:30-17:00 (seven days a week); 07:30-19:00 (on Saturdays and Sundays from December to February only); closed on Christmas Day
 SIZE: 290 ha
 ENTRANCE FEE: Adults R7.00, children (3-13 years) and senior citizens R4.00, children under 3 years free (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Picnicking, bird hides, lookout towers, museum, lecture theatre, aquarium, fishing platforms, boat trips, overnight island bush camp, a boma and conference facilities
 ENVIRONMENTAL EDUCATION: Rondevlei Environmental Education Centre and Leonard Gill Field Museum (booking essential)
 ACCOMMODATION: Island bush camp, run by Imvubu Nature Tours
 FRIENDS GROUP AND BIRDERS: The Friends of Zeekoevlei and Rondevlei consist of local community members who support the reserve. The Cape Bird Club and A Rocha International run birding and bird-ringing programmes.
 CONTACT: Tel 021 706 2404; fax 021 706 2405
 For accommodation, contact Imvubu Nature Tours on www.imvubu.co.za or 021 706 0842.
 For environmental education camps, phone Cape Town Environmental Education Trust on 021 706 8523.
 E-MAIL: rondevleinaturereserve@capetown.gov.za
 WEBSITE: www.rondevlei.co.za



African darter (*Anhinga melanogaster*)



Purple swamphen (*Porphyrio porphyrio*)



Leonotis leonurus



Orphium frutescens



Erica verticillata



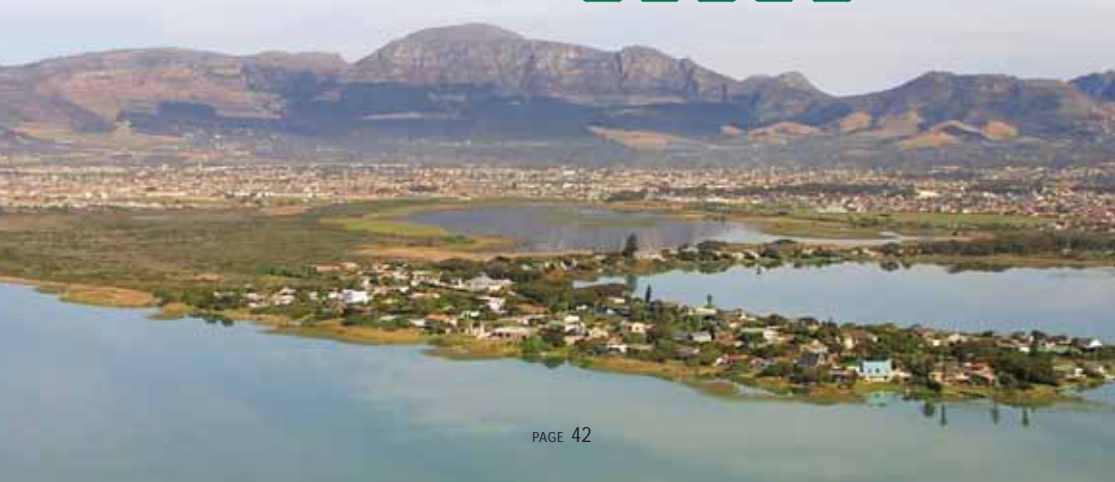
Hippopotamus (*Hippopotamus amphibius*)



Great white pelican (*Pelecanus onocrotalus*)

Zeekoevlei is the largest natural inland water body in the city. The vlei is a popular picnicking, sailing and fishing spot. Pelicans, flamingos and many other birds can be seen within the 344 ha site. Houses line the northern and western shores, and the Zeekoevlei Yacht Club is situated on the west bank. The new headquarters for the FBEP are located on the southern shore. 23 sporting clubs use the vlei with two overnight environmental education centres along its shores.

ADDRESS: Zeekoevlei Road, Pelican Park
 OPENING HOURS: 07:30-19:30 (summer), 07:30-18:00 (winter)
 SIZE: 344 ha
 ENTRANCE FEE: Only for power boats, payable to the Cape Peninsula Aquatics Club (for updates, visit www.capetown.gov.za/environment)
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES: Picnicking, fishing, boating, birdwatching
 ENVIRONMENTAL EDUCATION: Zeekoevlei Environmental Education Centre, tel 021 396 1272
 ACCOMMODATION: School camps, tel 021 706 8523
 FRIENDS GROUP AND BIRDERS: The Friends of Zeekoevlei and Rondevlei consist of local community members who support the reserve. The Cape Bird Club runs birding and bird-ringing programmes.
 CONTACT: Tel 021 706 2404; fax 021 706 2405
 E-MAIL: zeekoevleinaature.reserve@capetown.gov.za



Southern Birding Area and Cape Flats Wastewater Treatment Works

The Cape Flats Wastewater Treatment Works handles approximately 40% of Cape Town's sewage effluent. Ironically, the high nutrient levels in the maturation ponds encourage the growth of plankton, making them an excellent feeding ground for birds. This is therefore an important birding area, attracting an amazing diversity of species – some 20 000 birds gather here, including 200 water bird and nine Red Data bird species.



Coastal Park landfill site

The waste cycle is an essential part of environmental management. False Bay Ecology Park includes a large general waste landfill site to the south of Rondevlei. An integrated waste management concept is practised in Cape Town, whereby residents are encouraged to reduce waste and to reuse and recycle where possible. The site is used to educate learners about landfills and how poor waste management can damage the environment. Garden waste is mixed with manure and soil to manufacture compost. The landfill site will eventually be closed and rehabilitated with natural vegetation.



Greater flamingo (*Phoenicopterus ruber*)



Zandvlei Estuary Nature Reserve



Painted lady (*Gladiolus angustus*)

Zandvlei is a recreational area at Lakeside, where windsurfers entertain picnickers with their antics. It is one of the most accessible reserves, as it is next to Lakeside Station and close to Main Road. The Zandvlei Environmental Education Centre on the northern side is reached from Steenberg Station or Coniston Avenue, off Military Road in Marina da Gama.

Zandvlei is the only functioning estuary on the False Bay coast, and supports a variety of indigenous fish. Juvenile marine fish use the estuary as a nursery, where they can grow in safety. It is important that the estuary mouth is open for at least a part of the year, to enable young fish to enter the estuary and older fish to return to the ocean. It is opened artificially by the City of Cape

Town's Catchment Management Department when a high spring tide is expected. Southern mullet (*Liza richardsonii*), leervis (also known as garrick; *Lichia amia*), the critically endangered white steenbras (also known as pignose grunter; *Lithognathus lithognathus*), white stumpnose (*Rhabdosargus globiceps*) and elf (*Pomatomus saltatrix*) are among the 25 types of fish found in the estuary. Strict recreational fishing regulations apply, including minimum size catch and bag limits, to protect young fish and allow them to breed. Many sport anglers now prefer to 'catch, tag and release' fish, so that they can enjoy fishing without threatening fish populations. Local anglers are encouraged to remove alien invasive fish species, such as common carp (*Cyprinus carpio*) and barbel (also known as sharptooth catfish; *Clarias gariepinus*).

Wetlands like Zandvlei are important habitats for birds, both those that live here year round and those that migrate from Europe, Asia and other parts of Africa. There are about 150 species here, including great crested grebe (*Podiceps cristatus*), African fish eagles (*Haliaeetus vocifer*), Caspian terns (*Sterna caspia*), ducks, coots, herons, ibises, pelicans, kingfishers, swallows and weavers.

Eighteen different reptiles have been recorded in the reserve, including the marsh terrapin



Salvia africana-lutea



Great white pelican (*Pelecanus onocrotalus*)



Angulate tortoise (*Chersina angulata*)

(*Pelomedusa subrufa*), brown water snake (*Lycodonomorphus rufulus*) and mole snake (*Pseudaspis cana*), as well as 210 different plant species. Residents of neighbouring Lakeside and Marina Da Gama enjoy the sound of birds and the croaking of frogs. They sometimes see Cape clawless otter (*Aonyx capensis*), porcupines (*Hystrix africae australis*) and small grey and water mongoose (*Galerella pulverulenta* and *Atilax paludinosus*), whilst their gardens are often visited by Cape dune mole rats (*Bathergus suillus*).

Challenges

Farming, urban development, invasive alien plants and dredging of the vlei have destroyed much of the natural vegetation around Zandvlei. The City of Cape Town, Working for Wetlands, and volunteers from the area are slowly restoring the natural Cape Flats dune strandveld vegetation. They collect indigenous plants before bulldozers create new developments, and transplant them at Zandvlei. The extensive reed beds are an important part of the river, as they filter out silt and remove nutrients so that the water does not become thick and green with algae. The invasive water hyacinth (*Eichhornia crassipes*) is a problem, as it clogs large areas of the vlei.

ADDRESS: Coniston Avenue, Marina Da Gama
 OPENING HOURS: 07:30-16:00 (weekdays), closed on weekends
 SIZE: 200 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi, train or bus (within walking distance of Steenberg and Lakeside Station as well as Main Road)
 ACTIVITIES AND FACILITIES: Jetty, bird hides, picnic sites, boating, walking, windsurfing
 ENVIRONMENTAL EDUCATION: Zandvlei Environmental Education Centre is within walking distance of Steenberg Station, and offers field trips for primary learners. (Book in advance for live reptile displays.)
 FRIENDS GROUP: The Friends of the Zandvlei Trust help with conservation, education and awareness projects.
 CONTACT: Tel 021 701 7542; fax 021 701 7542
 E-MAIL: zandvlei.naturereserve@capetown.gov.za





De Hel Nature Area is a riverine valley adjoining Table Mountain below Rhodes Drive to the north-east of Constantia Nek. The upper reaches of the Spaanschemat River runs through this 21,3 ha natural area, and environmental surveys of De Hel show that the site remains in a near natural condition. The land is designated as zoned public open space, and is owned by the City of Cape Town. A management partnership has been arranged between the municipality and the Friends of Constantia Valley Greenbelts (FOCVGB).

De Hel has not been dubbed 'the jewel in the crown' of Constantia's riverine open spaces without good reason. Its steep slopes, densely covered in trees, run down to the riverbed, and at the bottom, a flat piece of land known as 'the Meadow' is still home to pockets of fruit trees and garden plants, as the Meadow was cultivated in the past. The site has also been declared a Provincial Heritage Site.

De Hel is linked to ancient cattle tracks originating from the Khoi-Khoi pastoralists in the Cape. The Dutch East India Company also established one of their four woodcutters' posts in the area, and because of this and its associations with slave labour and slave runways, De Hel is a heritage site of significance.

A plant survey identified 250 plant species; a third of these being alien to the site. The indigenous vegetation is Afrotemperate forest and fynbos (i.e. species common to the mountains of Africa), and is home to the endangered silver tree (*Leucadendron argenteum*) and the *Erica phyllaefolia*.

Some 16 species of mammals have been observed, and a bird count yielded 72 species to date, with 17 reptiles and amphibians recorded. Notable endangered species include the Knysna warbler (*Bradypterus sylvaticus*) and the Western leopard toad (*Amietophrynus pantherinus*).

Challenges

Invasive alien species are a threat to the granite fynbos, and controlling the spread of alien trees without affecting the indigenous forest proves a difficult task.

ADDRESS: Between Southern Cross Drive and Constantia Nek Road, Constantia
 OPENING HOURS: Sunrise to sunset
 SIZE: 21,3 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES: Walking, jogging, birdwatching and photography
 ENVIRONMENTAL EDUCATION: None
 FRIENDS GROUP: Friends of Constantia Valley Greenbelts
 CONTACT: City Parks Tel 021 689 9141



Botterblom (*Sparaxis bulbifera*)

Meadowridge Common is a small protected area of approximately 8 ha – a valuable remnant of the critically endangered Cape Flats sand fynbos. It contains as many as 137 different flowering plant species, of which four are listed as endangered. These plants are representative of the almost 600 species that were collected by Dr William Frederick Purcell on the Bergvliet Farm between 1914 and 1919, and this collection can today be viewed in the Compton Herbarium at Kirstenbosch National Botanical Garden.

Floral displays are at their best in spring, from September to October, and a number of insects, birds and amphibians, including the endangered Cape rain frog (*Breviceps gibbosus*), have been observed. Meadowridge Common is managed by the City of Cape Town, with the help of the Friends of Meadowridge Common.

Challenges

Due to its small size, isolated location and low numbers of some plants species, the risk of extinction is high. The invasion of kikuyu grass (*Pennisetum clandestinum*), pine trees (*Pinus sp.*), and annual weeds, together with a lack of natural fires, suppress the natural vegetation. Other problems are uncontrolled dogs and soil that was dumped on the site over 20 years ago.

ADDRESS: Accessible from Edison Drive and Faraday Way, Meadowridge
 OPENING HOURS: Not applicable
 SIZE: 8 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Bus or taxi
 ACTIVITIES: Dog-walking, wild flowers, recreation
 ENVIRONMENTAL EDUCATION: Illustrated talks given upon request
 FRIENDS GROUP: The Friends of Meadowridge assist with keeping the site clean and tidy, and controlling invasive alien species. The group keeps detailed botanical records, arranges spring walks, provides signage, and monitors the activities on the common. Contact them on 021 715 9206.
 CONTACT: City Parks Tel 021 762 9180



16 CITY OF CAPE TOWN NATURE RESERVES

Die Oog Conservation Area



Die Oog is a small conservation area located on what was once a dam on Bergvliet Farm. The dam was built sometime between 1716 and 1764 as a link to the Spanschemat furrow. It was later converted into a recreational lake owned by the Eksteen family, who used it to entertain their guests. The Eksteens even introduced swans to the lake, and created an artificial island.

Bergvliet Farm originally occupied most of the Constantia Valley, but was repeatedly subdivided into smaller patches of land. In 1982, a small remnant was designated a zoned public open

space and named Die Oog. The City of Cape Town and the Bergvliet and Meadowridge Ratepayers' Association provided fences, benches and planted indigenous trees and shrubs, and the Friends of Die Oog Conservation Area were formed to help maintain and improve the site. The Friends group successfully secured funding for signage, wheelchair-friendly paths, a viewing platform, and improvement of the amenities. They have also initiated environmental education programmes, and are managing a website about Die Oog.

Die Oog is one of the few remaining breeding sites for the endangered Western leopard toad (*Amietophrynus pantherinus*), and the 'roaring' of the toads when they arrive in Die Oog in August to breed, is one of the true wonders of nature. The site has five different biodiverse areas: granite fynbos, which turns into a sea of colour in spring; the dam itself; the artificial island, which is a major roosting site for cattle egret (*Bubulcus ibis*), reed cormorant (*Phalacrocorax africanus*) and sacred ibis (*Threskiornis aethiopicus*); a seasonal wetland below the dam wall that leads to the Keyser River; and sanctuary and recreational areas planted with silver trees (*Leucadendron argenteum*) and ericas.

At night, the island sometimes hosts over 1 000 birds, such as coots, dabchicks (also known as little grebe; *Tachybaptus ruficollis*), moorhens, yellow-billed ducks (*Anas undulata*) and Egyptian geese (*Alopochen aegyptiacus*). Black sparrow-hawks (*Accipiter melanoleucus*) are fairly common, whilst the Cape weaver (*Ploceus capensis*), the hadeda ibis (*Bostrychia hagedash*), reed cormorant and the dikkop are all breeding residents.

The Cape clawless otter (*Aonyx capensis*), water mongoose (*Atilax paludinosus*) and porcupine (*Hystrix africaeaustralis*) have also been observed,

and besides the famous Western leopard toad, the common clawed frog (platanna; *Xenopus laevis*) and the clicking stream frog (*Strongylopus grayii*) add to the amphibians of Die Oog.

Challenges

Invasive alien species are the main challenge for the site. The growth of aquatic weeds has to be contained, and indigenous geophytes and other plants are being re-established. Common carp (*Cyprinus carpio*), which is an alien fish species, had also presented a problem, but have been removed, and attempts are being made to reintroduce the indigenous Cape galaxias (*Galaxias zebratus*) and Cape kurper (*Sandelia capensis*).

ADDRESS: Lakeview and Midwood Avenues, Bergvliet
 OPENING HOURS: 07:00-19:00 daily
 SIZE: 1,2 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES: Walking, birdwatching and quiet recreation. (Dogs, sports games and swimming are not allowed.) Guided visits can be arranged through the Friends of Die Oog.
 ENVIRONMENTAL EDUCATION: For school learner programmes, contact the Friends of Die Oog.
 FRIENDS GROUP: Friends of Die Oog
 CONTACT: City Parks Tel 021 762 9180 & Friends of Die Oog
 Tel/fax 021 715 8665
 E-MAIL: mppearce@lantic.net (Friends of Die Oog)
 WEBSITE: www.dieoog.org.za



Western leopard toad (*Amietophrynus pantherinus*)



Cape weaver (*Ploceus capensis*)



Lower Silvermine Wetlands



Situated between Clovelly and Fish Hoek, the Lower Silvermine Wetlands are a rehabilitated floodplain featuring Hangklip sand fynbos, sand dunes, and aquatic and wetland areas. The rehabilitation was initiated eight years ago, and took two years to complete. The floodplain was initially planned to be canalised due to the flooding of nearby houses during the winter season, but a group of nature conservationists managed to ensure its rehabilitation instead. Remains of over 100-year-old dykes are found next to the wetlands as well as on Clovelly Beach. The nearly pristine Silvermine River is unique, as its natural state is almost intact, running from its source in the Silvermine Mountains to the sea in False Bay.

A plant inventory has been compiled, and since the vegetation consisted mostly of alien plants, many indigenous plant species have been reintroduced. However, more species are still being rediscovered, and a photographic record of the species that existed in the area before it was developed has proven very useful for the rehabilitation.

The area is a breeding ground for the endangered Western leopard toad (*Amietophrynus pantherinus*), the arum lily frog (*Hyperolius horstockii*), the Cape river frog (*Amietia fuscigula*)



Ferraria crispa

Cape sand frog
(*Tomopterna delalandii*)

and the clicking stream frog (*Strongylopus grayii*). It was also the type site for the Cape platanna (*Xenopus gilli*), which now unfortunately seems to be extinct in the area.

Around 50 bird species are seen here, although many of the waders have disappeared due to the *Typha* (commonly known as bulrush) invasion. Painted snipe (*Rostratula benghalensis*) and Ethiopian snipe (*Gallinago nigripennis*) have bred in the area, but are no longer seen.

The area has a small mammal population of otter (*Aonyx capensis*), porcupine (*Hystrix africae-australis*) and Cape grysbok (*Raphicerus melanotis*). Water mongoose (*Atilax paludinosus*) has also been observed.

Challenges

Typha, although an indigenous species, is over-stimulated due to excess nutrients in stormwater runoff, and becomes a threat to other species. Also, despite plastic bags being available for dog-walkers to clean up after their animals, not everyone cooperates. The dog-walkers, however, contribute greatly to making the Lower Silvermine Wetlands a safe area for the enjoyment of young and old. A minor decline in the pond's water quality has also been observed.

ADDRESS: Clovelly Road, Clovelly
 OPENING HOURS: 24 hours
 SIZE: Not applicable
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Train or taxi. A 15-minute walk from Fish Hoek Station, or free parking just off Clovelly Road, at the traffic lights on Main Road
 ACTIVITIES AND FACILITIES: Walking, birdwatching, self-guided trail for the blind, cycling.
 ENVIRONMENTAL EDUCATION: None
 FRIENDS GROUP: The Riverine Rovers are a subgroup of the Friends of Silvermine Nature Area (FOSNA)
 CONTACT: City Parks Tel 021 701 1233 & The Riverine Rovers tel 021 782 6144; fax 086 603 7554
 E-mail: terry@marques.co.za (The Riverine Rovers)



Glencairn Wetland

Glencairn Wetland is located between the Glencairn Expressway (M6), Simon's Town Road (M4), Glen Road and Gordon's Camp, and is easily reached from Glencairn Station.

The Else River runs through the site, and transforms into a wetland as it approaches the sea. Footpaths in the shape of the number 8 take hikers around the site, and the hour-and-a-bit-long hike leads to Glencairn Beach and the ascent of Elsie's Peak.

The Glencairn Education and Environment Support Enthusiasts (GEESE) manage the site together with the City of Cape Town. Improvements to the site take place regularly, the most recent being the laying of stepping stones across the causeway, the construction of benches, and the development of a new pathway.

Owners are most welcome to bring their dogs along, provided they clean up after their animals, and prevent them from chasing the birds or entering the water. Common carp (*Cyprinus carpio*) can be found in both the top and bottom pans, which provide excellent training ground for

would-be young fishermen. Schools and clubs frequently visit the site on exploratory and educational outings.

Glencairn Wetland is home to several bird species, many of which return each year to breed. Evidence of otter, porcupine and mongoose is frequently recorded, although the nocturnal animals themselves are rarely spotted.

Members of GEESE strive to keep the wetland free of litter, and several municipal litter bins are provided for visitors' convenience.

ADDRESS: Glen Road, Glencairn
 OPENING HOURS: 24 hours
 SIZE: 20 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Bus or train
 ACTIVITIES: Walking, birdwatching, guided hikes
 ENVIRONMENTAL EDUCATION: School programmes: booking is essential. (Contact Rob Erasmus on enviro@absamail.co.za)
 FRIENDS GROUP: Glencairn Education & Environment Support Enthusiasts (GEESE)
 CONTACT: City Parks Tel 021 701 1233 & GEESE tel 021 782 6400; fax 021 782 5016
 E-MAIL: cilla@bromley.co.za (GEESE)
 WEBSITE: www.geeseglencairn.org



Edith Stephens Wetland Park

In 1955, Edith Stephens, an eccentric and far-sighted botanist, donated 3,7 ha of land to the Kirstenbosch National Botanical Garden to protect a rare plant species called *Isoetes capensis*, a relic plant found nowhere else in the world.

In 2000, the City of Cape Town added the surrounding conservation-worthy land to extend the wetland park to 39 ha, and named the park after Ms Stephens.

The vegetation type at the Edith Stephens Wetland Park is a transition from Cape dune strandveld to Cape Flats sand fynbos, both of which are highly threatened. The site supports 7 Red Data plant species, and some 95 bird species have been recorded. An important heronry is located here, and 5 water bird species breed on the islands in the detention pond.

The large seasonal wetland provides an important habitat for breeding waterfowl, such as Cape shoveller (*Anas smithii*), yellow-billed duck (*Anas undulata*) and African snipe (*Gallinago nigripennis*). There are 5 amphibians, including the easternmost population of the endangered Western leopard toad (*Amietophrynus pantherinus*),

that start their mass-breeding in the first weeks of August.

12 reptiles and 10 mammals can be found here, including the Cape clawless otter (*Aonyx capensis*) that still move along the Lotus River canal.

The wetland park works in partnership with many organisations in the surrounding communities, and is home to Cape Flats Nature and the Primary Science Programme.

Public facilities include an environmental education centre, a wetland boardwalk trail, a picnic area, a medicinal garden and a bird hide.

ADDRESS: Lansdowne Road, Philippi
 OPENING HOURS: 07:30-16:00 (weekdays); bookings essential for weekends
 SIZE: 39 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Picnic sites, birdwatching, Working for Wetlands nursery, urban agriculture garden, medicinal garden
 ENVIRONMENTAL EDUCATION: The environmental education centre provides local residents and schools with conservation, recreational and educational opportunities, from teacher's workshops to children's holiday programmes.
 CONTACT: Tel 021 691 8070; fax 021 691 7375
 E-MAIL: luzann.isaacs@capetown.gov.za



Durbanville Nature Reserve

Next to the Durbanville Racecourse is a special triangle of land. This 6 ha reserve is where critically endangered Swartland shale renosterveld and Cape Flats sand fynbos meet. The area became a nature reserve in 1966, after local residents had found a rare plant, *Aristea lugens*, growing there and persuaded what was then the Durbanville Town Council to set aside the land for conservation purposes.

Alien vegetation was cleared, an indigenous garden was planted, and an education centre was developed. The reserve also manages a patch of critically important natural vegetation in the centre of the Durbanville Racecourse.

There are about 130 plant species, three endemic to Cape Town and ten threatened with extinction. The small grey mongoose (*Galerella pulverulenta*), angulate tortoise (*Chersina angulata*) and the endangered Cape rain frog (*Breviceps gibbosus*) can also be seen.

ADDRESS: Racecourse Road, Durbanville
 OPENING HOURS: 07:30-16:00 (weekdays), closed on weekends
 SIZE: 6 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES AND FACILITIES: Picnic sites, wheelchair-friendly pathways, birdwatching, gazebo for meetings
 ENVIRONMENTAL EDUCATION: Educational activities for children in partnership with Cape for Kids (booking essential)
 CONTACT: Tel 021 970 3097; fax 021 979 0093
 E-MAIL: durbanville.naturereserve@capetown.gov.za





Renosterveld vegetation in spring



Felicia sp.



Katnael (*Hyobanche sanguinea*)



Western sorrel copper (*Lycaena orus*)



Chasmanthe floribunda

The Tygerberg Nature Reserve lies in the northern suburbs. Proclaimed in 1973, it supports one of the last remnants of the highly threatened Swartland shale renosterveld vegetation.

Its 300 ha area boasts 429 different plant species. Of these, 12 are threatened with extinction, eight are endemic to Cape Town, and three endemic to Tygerberg itself.

The diversity of species found here is vast, with some 21 different mammals, 131 bird species, 22 different reptiles, 7 types of frogs, and numerous different butterfly species.

On the western side of the mountain, the Platteklouf Dam is being restored to a natural wetland with the addition of indigenous water plants and fish. This will help to improve the water quality, and provide food, shelter and nesting material for animals.



Lepilochrysops sp.



Kristo Pienaar Environmental Education Centre



The view from the top of the reserve's hill is magnificent, and emphasises just how meagre the patches of natural vegetation are amid the urban sprawl. The hill is covered in renosterveld, and spotted with paler circles of grass in summer.

A SPOTTED TIGER?

From a distance, the blotches visible on the hills of the Western Cape reminded Dutch settlers of a leopard's skin, and in 1657, the hills became known as Luipaerts Berghen ('Leopard's Mountain'). This was changed to Tijgerberghen ('Tiger Mountain') in 1661, and is now known as Tygerberg.

These regular round patches are called 'heuweltjies' or small hills. Many scientists think that these hills are the remains of ancient termite nests. Harvester termites bring plant material into their burrows, and over time, they change the nature of the soil. As a result, the plants growing on the hills differ from those in the surrounding veld. Animals such as ant bears ('aardvark': *Orycteropus afer*), porcupines (*Hystrix africaeaustralis*) and bat-eared foxes (*Otocyon megalotis*) often make their burrows in these hills.

ADDRESS: Main gate: Totius Street, Welgemoed: Secondary gate: Meyboom Street, Platteklouf
OPENING HOURS: Summer 07:30-18:00 (weekdays), 07:30-19:00 (weekends and public holidays)
Winter 07:30-17:00 (weekdays), 07:30-18:00 (weekends and public holidays)

SIZE: 300 ha
ENTRANCE FEE: Adults R10.00, children (3-13 years) and senior citizens R5.00, children under 3 years free (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)

PUBLIC TRANSPORT: Taxi or bus
ACTIVITIES AND FACILITIES: Hiking, picnic sites, birdwatching, panoramic views

ENVIRONMENTAL EDUCATION: The Kristo Pienaar Environmental Education Centre is a well-run, popular venue, and contains a resource centre with a library and a herbarium. Lessons on a variety of topics, including geography, town planning and ecology, are offered. Booking is essential (e-mail: hestelle.melville@capetown.gov.za).

FRIENDS GROUP: Join the Tygerberg Bird Club, the Friends of the Tygerberg Hills or CREW (Custodians of Rare and Endangered Wild Flowers) for lectures, hikes, birdwatching, rare plant surveys and alien plant hacks. E-mail jurgz@mweb.co.za for more information.

CONTACT: Tel 021 913 5695; fax 021 913 6268
E-MAIL: tygerberg.naturereserve@capetown.gov.za





Pseudoselago sp.



Liparia splendens

The 36 ha Bracken Nature Reserve is a core botanical site located in the heart of the Brackenfell residential and industrial area.

The hill overlooking Brackenfell from the reserve is called Kanonkop ('Cannon Hill'), as in the 1700s, a cannon would signal from the hill to the farmers when ships were approaching. The farmers took this as their cue to bring their produce to the harbour.

Between 1950 and 1970, a granite quarry was operating on the hill, and when it closed, the quarry was turned into a landfill site.

An indigenous garden is being developed at the main entrance. Footpaths are designed to enhance visitors' experience with breathtaking views and a vibrant birdlife.

The vegetation types conserved in this reserve consist mainly of Swartland granite renosterveld and Cape sand fynbos. Both vegetation types are poorly conserved and severely threatened with species extinction. Bracken Nature Reserve has a rich and unique diversity of succulents, geophytes, orchids, mosses and lichens.

More than 160 different indigenous plants have been listed, 10 of which are endemic to Cape Town and threatened with extinction. Important species include: *Antimima aristulata*, cowslip (*Lachenalia aloides*), canary yellow vygie (*Lampranthus glaucus*) and carrion flower (*Orbea variegata*).

Plenty of small mammals live on the site, like the Cape dune mole rat (*Bathergus suillus*), the small grey mongoose (*Galerella pulverulenta*) and



Chasmanthe floribunda



Watsonia marginata

a myriad of rodents. Birds like the black-shouldered kite (*Elanus caeruleus*), sacred ibis (*Threskiornis aethiopicus*), peregrine falcon (*Falco peregrinus*), red-capped lark (*Calandrella cinerea*) and the grey-winged francolin (*Francolinus africanus*) are frequently sighted in the reserve. Reptile species include the Cape dwarf chameleon (*Bradypodion pumilum*), the parrot-beaked tortoise (*Homopus areolatus*), the Cape skink (*Trachylepis capensis*) and the Cape cobra (*Naja nivea*).

The reserve also supports amphibians like the Cape sand frog (*Tomopterna delalandii*) and the vulnerable Cape rain frog (*Breviceps gibbosus*).

Challenges

The former landfill is being rehabilitated with suitable soils from nearby sites, and planted with indigenous plants. Gas extraction pipes have to be laid down under the covered waste, to allow the potentially hazardous methane to escape as the waste decomposes. Habitat degradation, agriculture and urban sprawl remain constant threats to the reserve.

ADDRESS: 2 Reservoir Road, Brackenfell
 OPENING HOURS: 07:30-16:00 (weekdays only)
 SIZE: 36 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES AND FACILITIES: Picnic areas, walking trails, birdwatching, wheelchair-friendly trail
 ENVIRONMENTAL EDUCATION: Brackenfell Environmental Education Centre (booking essential)
 FRIENDS GROUP: The Friends of Bracken and CREW (Custodians of Rare and Endangered Wild Flowers) arrange walks, birdwatching, plant surveys and alien clearing.
 CONTACT: Tel 021 982 1323; fax 021 982 7135
 E-MAIL: bracken.naturereserve@capetown.gov.za
 WEBSITE: www.brackenfell.org/bnr

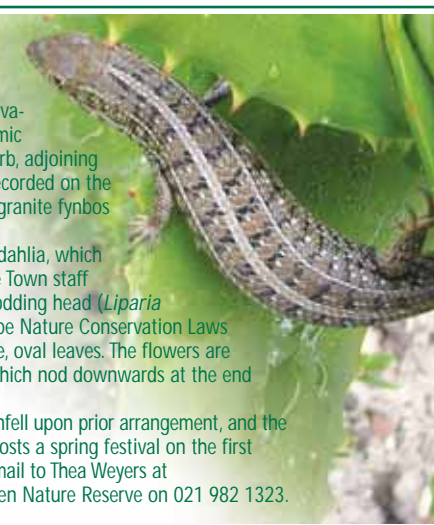


PERDEKOP – A WORLD OF BIODIVERSITY IN ONE PRECIOUS PATCH

This jewel of 2,2 ha is a satellite site to Bracken Nature Reserve. It is well renowned among botanists and conservationists for its rich biodiversity and high number of endemic species. Perdekop is situated east of the Brackenfell suburb, adjoining Protea Village. More than 240 plant species have been recorded on the site, which conserves the severely threatened Swartland granite fynbos and Cape sand plain fynbos.

It is also home to the rare, protected shrub mountain dahlia, which had never been seen on the Cape Flats until City of Cape Town staff discovered it there in 2006. Also known as the orange nodding head (*Liparia splendens*), the plant is protected under the Western Cape Nature Conservation Laws Amendment Act, 2000. It grows to 2,5 m tall, with simple, oval leaves. The flowers are orange and densely clustered into round flower heads, which nod downwards at the end of the branches.

Perdekop can be accessed from Kruin Street in Brackenfell upon prior arrangement, and the site also offers a short walking trail. Each year, Perdekop hosts a spring festival on the first Saturday of September. For more information, send an e-mail to Thea Weyers at theaw@xsinet.co.za, or phone the management of Bracken Nature Reserve on 021 982 1323.



23 CITY OF CAPE TOWN NATURE RESERVES

Uitkamp Wetlands



This site was proclaimed a nature reserve in 2001. Residents formed the Uitkamp Action Group in 2006 to help conserve this precious 32 ha wet-

land valley in a renosterveld region, with its 140 different plants and many rare species.

In spring, masses of arum lilies (*Zantedeschia aethiopica*) and pink watsonias (*Watsonia meriana*) flower in the waterlogged central valley amid restios, besemriet and the rare *Ischyrolepis duthieae*. The dryer edges are home to moederkappie orchids (*Disperis capensis*), babianas, sparaxis, moraeas, sundews and purple-and-red wine cups (*Geissorhiza radians*) as well as a variety of bushes.

The wetland valley is also home to the Cape caco frog (*Cacosternum capense*) and the Cape rain frog (*Breviceps gibbosus*), both of which are considered as threatened.

Challenges

The wetlands are threatened by invasive alien port jackson (*Acacia saligna*) trees, kikuyu grass (*Pennisetum clandestinum*) and other garden plants. Pollution by stormwater from the surrounding D'Urbanvale residential area also poses a challenge.

ADDRESS: Mosselbank Road, Durbanville

OPENING HOURS: 24 hours

SIZE: 32 ha

ENTRANCE FEE: None

PUBLIC TRANSPORT: Taxi or bus

ACTIVITIES: Nature walks amid a small wetland; interesting plants, birds and frogs

FRIENDS GROUP: Uitkamp Action Group, e-mail:

yoellmj@mweb.co.za

CONTACT: Tel 021 970 3097; fax 021 979 0093

E-MAIL: durbanville.naturereserve@capetown.gov.za



Moraea bellendenii



Geissorhiza radians



Drosera cistiflora



Moraea villosa



Sparaxis bulbifera



Babiana stricta



Restionaceae sp.

24 CITY OF CAPE TOWN NATURE RESERVES

Wolfgat Nature Reserve



Wolfgat Nature Reserve, covering 248 ha, was declared a reserve in 1986. It protects spectacular coastal limestone cliffs along Baden Powell Drive. Still covered with Cape Flats dune strandveld vegetation, this reserve conserves more than 150 different plant species. Evergreen shrubs, annual and perennial daisies, vygies and arum lilies are common.

A colony of kelp gulls (*Larus dominicanus vetula*) nest on the limestone cliffs, and African black oystercatchers (*Haematopus moquini*) scurry along the rocky and sandy shores.

Challenges

Alien rookrans (*Acacia cyclops*) trees have invaded large areas of the False Bay coast.

Littering also remains a problem. However, Wolfgat Nature Reserve works with youth organisations in Khayelitsha and Mitchells Plain, supporting youth development through conservation activities, such as beach and litter clean-ups. The reserve was one of the pilot sites for the Cape Flats Nature project.

RUNNING WITH WOLVES

Wolfgat is named after the brown hyena or strandwolf (*Hyaena brunnea*), which occurred in Cape Town around the 1840s. A fossil den site of a brown hyena was found in the Wolfgat cliffs in 1962, dating back to about 45 000 years ago.

ADDRESS: Baden Powell Drive, Mitchell's Plain

OPENING HOURS: 07:30-16:00 (weekdays)

SIZE: 248 ha

ENTRANCE FEE: None

PUBLIC TRANSPORT: Taxi or bus

ACTIVITIES: Picnicking, fishing in designated areas (permit required), watching coastal birds, swimming, paragliding

ENVIRONMENTAL EDUCATION: An education officer assists schools with field trips for groups of 30-40 learners. Larger groups could take part in special programmes, like coastal hikes and clean-up campaigns.

CONTACT: Tel 021 392 5134/5; fax 021 392 8878

E-MAIL: wolfgat.naturereserve@capetown.gov.za



Fishing along the Wolfgat coastline

25 CITY OF CAPE TOWN NATURE RESERVES

Macassar Dunes Conservation Area



School coastal clean-up along Macassar beach

The Macassar Dunes Conservation area, with its spectacular view across False Bay to Kogelberg and Hangklip, is an important site in the Biodiversity Network. The area contains 178 plant species, and an area of more than 1000 ha is planned to be set aside as a nature reserve. In spring, the thicket vegetation is ablaze with wild flowers, and a pleasant walk through the dunes leads to False Bay Beach, where coastal birds, whales and dolphins can be seen.

The white milkwood trees (*Sideroxylon inerme*) growing in the Macassar Dunes area are protected by law, and already, these dunes benefit members of the Khayelitsha and Macassar communities in tangible ways. The Traditional Healers' Association, for example, harvests plants for medicinal purposes. A partnership between Cape Flats Nature, the Macassar Dunes Co-management Association (MDCA) and iLitha Lomso (an environmental youth organisation) uses the site



as an outdoor classroom for environmental education, attracting hundreds of learners from surrounding schools each year.

Challenges

Urban development is creeping closer, and threatens to engulf the Macassar Dunes and its endangered Cape Flats dune strandveld vegetation. There is huge pressure from sand mining (legal and illegal) in areas neighbouring Macassar Dunes.

ADDRESS: Macassar Road, Khayelitsha; Baden Powell Drive, Macassar
 OPENING HOURS: 07:30-16:00 (weekdays); closed on weekends
 SIZE: 1 116 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi or bus
 ACTIVITIES: Picnicking, fishing in designated areas (permit required), hiking, swimming, birdwatching
 ENVIRONMENTAL EDUCATION: Outdoor educational programmes are offered to mark special environmental events, such as Arbor Day, Water Week and Marine Week.
 CONTACT: Tel 021 392 5134/5; fax 021 392 8878
 E-MAIL: macassar.reserve@capetown.gov.za



Sand mining in the dunes



Arum lily (*Zantedeschia aethiopica*)



26 CITY OF CAPE TOWN NATURE RESERVES Helderberg Nature Reserve



Cape rock-jumper
(*Chaetops frenatus*)



Babiana sp.



Bontebok (*Damaliscus pygargus pygargus*)

Helderberg Nature Reserve was proclaimed in 1960. It covers an area of 398 ha and extends up the Helderberg Mountain to a height of 1 137 m.

Kogelberg sandstone fynbos is the predominant vegetation type, with almost 600 plant species, including sugar bushes (*Protea* sp.), pincushions (*Leucospermum* sp.) and cone bushes (*Leucadendron* sp.).

On the northern side, in the deep, more fertile granite soil, there are also patches of Boland granite fynbos, including the waboom (*Protea nitida*), forming a fairly dense, closed shrubland.

In wetter areas, one finds restios and a variety of ericas, as well as other shrubs and watsonias.

A small group of tame bontebok (*Damaliscus pygargus pygargus*) often grazes on the grass in the shady picnic area. The bontebok, along with some of the shade trees, have been introduced to the reserve. Naturally occurring grey duiker (*Sylvicapra grimmia*), Cape grysbok (*Raphicerus melanotis*), steenbok (*Raphicerus campestris*),

small grey mongoose (*Galerella pulverulenta*), angulate (*Chersina angulata*) or padloper tortoises (*Homopus* sp.) and even an occasional snake can be seen. More than 170 bird species have been recorded.

ADDRESS: Verster Avenue, Somerset West
OPENING HOURS: 07:30-17:30, May-October; 07:30-19:00, November-April
SIZE: 398 ha

ENTRANCE FEE: Adults R10.00, children (3-13 years) and senior citizens R5.00, children under 3 years free (for annual permits, special rates and updates, visit www.capetown.gov.za/environment)

PUBLIC TRANSPORT: Taxi

ACTIVITIES AND FACILITIES: Picnic area, Oak Café, hiking trails, summer sunset concerts, information centre, gift shop, museum displays in the Maskew Miller Herbarium (10:00-16:00)
ENVIRONMENTAL EDUCATION: Mike Woods Environmental Education Centre (bookings: 021 852 8831)

FRIENDS GROUP: The Friends of the Helderberg Nature Reserve are active, and support the reserve manager by running programmes for environmental education, fundraising, maintenance, upgrades and promotions. They also run a museum, a shop and an indigenous nursery.

CONTACT: Tel 021 851 6982; fax 021 851 2148
E-MAIL: helderbergnature.reserve@capetown.gov.za
WEBSITE: www.helderbergnaturereserve.co.za



27 CITY OF CAPE TOWN NATURE RESERVES Silwerboomkloof Natural Heritage Site



Silver tree (*Leucadendron argenteum*)



This beautiful 4,9 ha kloof in Somerset West, just northwest of the Helderberg Nature Reserve, was proclaimed a Natural Heritage Site in 1988. The site conserves a fine forest of silver trees (*Leucadendron argenteum*), as well as granite fynbos and renosterveld, with 220 plant species.

Challenges

The vegetation is old, and the silver trees are starting to die. The veld needs to burn, but because the site is surrounded by houses, it is difficult to get permission for a controlled burn.

SILVER TREES – NATURE'S SILVER LINING

There are male and female silver trees. They are wind-pollinated, and the seeds float on fluffy parachutes from the sweetly scented female silver tree's cones. Silver trees belong to the protea family, and are the largest cone bush species. They are spectacular, and are found only on the eastern slopes of Table Mountain. Therefore, this population at Silwerboomkloof is an anomaly – outlying and isolated.

ADDRESS: Van Gogh Road, Somerset West

OPENING HOURS: Open access

SIZE: 4,9 ha

ENTRANCE FEE: None

PUBLIC TRANSPORT: Taxi

ACTIVITIES AND FACILITIES: Hiking trails, birdwatching

ENVIRONMENTAL EDUCATION: No formal programme

CONTACT: Tel 021 851 6982; fax 021 851 2148

E-MAIL: helderbergnature.reserve@capetown.gov.za

WEBSITE: www.helderbergnaturereserve.co.za



Lourens River Protected Natural Environment



Red-veined dropwing (*Trithemis arteriosa*)



Striped toktokkie (*Psammodes striatus*)

From its source in the Hottentots Holland Mountains to its mouth at Strand, the Lourens River extends over 23 km. It travels through fynbos, alien plantations and farmland, as well as residential, commercial and light industrial areas.

The pristine mountain catchment area and upper reaches are not freely accessible, as they are on private estates. The estuary at the mouth is not accessible to the public, but may be viewed through the fence from Strand Beach.

Challenges

Invasive alien plants, such as the black wattle (*Acacia mearnsii*) and kikuyu grass (*Pennisetum clandestinum*), as well as dumping, littering, squatting and illegal abstraction of water, are ongoing challenges.

In the lower reaches, the river passes the golf course on its way to the estuary at Strand, where interesting birds may be spotted. Sadly, the river is often cluttered with unsightly rubbish, and the banks are overgrown with thick grass.



INDIGENOUS FISH FIRST

Two indigenous fish species, the Cape galaxias (*Galaxias zebratus*) and Cape kurper (*Sandelia capensis*), live in the mountain streams. CapeNature is helping the Helderberg Nature Reserve to rid its dams and ponds of alien freshwater fish, such as bass, carp and Mozambique tilapia. They will then introduce Cape galaxias from the Helderberg mountain streams, and Cape kurper from the nearby Lourens River to make sure that the nature reserve conserves local indigenous fish, and not fish from other catchment areas.

ADDRESS: Somerset West to Strand
 OPENING HOURS: Not applicable
 SIZE: The river is 23 km long.
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES AND FACILITIES: Picnic area, hiking trails, birdwatching
 ENVIRONMENTAL EDUCATION: No formal programme
 CONTACT: Tel 021 851 6982; fax 021 851 2148
 E-MAIL: helderbergnature.reserve@capetown.gov.za
 WEBSITE: www.helderbergnaturereserve.co.za



Dick Dent Bird Sanctuary



Pied kingfisher (*Ceryle rudis*)

The Dick Dent Bird Sanctuary was once a wastewater treatment works near the estuary of the Lourens River. Today, the site is home to many coastal and wetland birds.

It is conserved as part of the Lourens River Protected Natural Environment.

The Somerset West Bird Club helps to look after the sanctuary, which falls under the management of Helderberg Nature Reserve.

Challenges

While enormous potential exists within this reserve, it is often under threat from vandals due to its isolated location.

ADDRESS: Broadway Boulevard, Strand
 OPENING HOURS: Not applicable
 SIZE: 10 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES: The site offers a bird hide, and birdwatchers are advised to visit in groups.
 ENVIRONMENTAL EDUCATION: None
 CONTACT: Tel 021 851 6982; fax 021 851 2148
 E-MAIL: helderbergnature.reserve@capetown.gov.za



Sacred ibis (*Threskiornis aethiopicus*)





This 9 ha plot is located on the Cape Flats, between Strand and Gordon's Bay. It is surrounded by low-cost housing, and contains critically endangered Lourensford alluvium fynbos. Locals sometimes refer to the reserve as a hidden treasure because of its spectacular flora. Each spring, the reserve bursts into flower.

The reserve contains nearly 220 plant species, many of which are rare and endangered. Plant species include lang-steelvycgie (*Lampranthus filicaulis*), peacock moraea (*Moraea villosa*), blouoog-kalossie (*Ixia versicolor*), spider orchid (*Bartholina burmanniana*), thistle sugarbush (*Protea scolymocephala*) and chinchinchee (*Ornithogalum thyrsoides*).

The land was once home to the rare geometric tortoise (*Psammabtes geometricus*), which is now extinct at this site. The parrot-beaked tortoise (*Homopus areolatus*) and a number of insects and snakes, like mole snake (*Pseudapsis cana*), common slug-eater (*Duberia lutrix*) and spotted skaapsteker (*Psammophylax rhombeatus*), can however still be found in the reserve. A variety of bird species have also been observed in the area, like clapper lark (*Mirafa apiata*), orange-throated longclaw (*Macronyx capensis*), zitting cisticola (*Cisticola juncidis*) and white-rumped swift (*Apus caffer*).

WORKING IN HARMONY

The Harmony Flats Working Group (HFWG) started out as a group of volunteers from the nearby area Casablanca. The group was awarded a certificate by the Cape Action for People and the Environment (C.A.P.E.) in appreciation for their good work in helping to manage and conserve the area. They remove litter and clear alien vegetation as well as assist with environmental education and awareness raising.

The annual Arbor Week programme near the end of August reaches over 400 learners. Children find special plants, participate in a competition, and plant trees on the edges of the reserve. Cape Flats Nature and the Custodians of Rare and Endangered Wild Flowers (CREW) also organise ecology courses on plant and animal interactions, and how fynbos has adapted to drought, fire and other environmental conditions. Plans for the future include a resource centre, nursery structure, a children's park, and an upgrade of the fence and paths.

ADDRESS: 11th Avenue, Strand
 OPENING HOURS: Sunrise to sunset (no controlled access)
 SIZE: 9 ha
 ENTRANCE FEE: None
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES AND FACILITIES: Plant monitoring, spring flowers, walking trail
 ENVIRONMENTAL EDUCATION: The Harmony Flats Working Group, supported and trained by CREW and Cape Flats Nature, organises lessons and plant monitoring.
 CONTACT: Tel 021 856 5605; fax 021 851 2148
 E-MAIL: harmonyflats.naturereserve@capetown.gov.za



Thistle sugarbush (*Protea scolymocephala*)



Ixia versicolor



Spider orchid (*Bartholina burmanniana*)



Pelargonium triste

TORTOISE TALES

South Africa, and especially the Cape, has the most tortoise species in the world. Of the 40 tortoise species that exist, 12 are found in South Africa, and six of these are endemic to the Western Cape. This is because of the variety of habitats that are found here. Fossil records show that tortoises already existed 200 million years ago.

All South African tortoise species are protected by law: This means one cannot collect, keep, sell or remove any tortoises from their habitat, and that they must be left alone.

Tortoises have no teeth, but they use their sharp-edged, horny beaks to tear and chew food. They are mostly herbivores, but can also eat bones, snails, insects and faeces. As tortoises do not completely digest their food, tortoise droppings often contain seeds, which in turn are important for plant generation.

Padlopers

Padloper tortoises (*Homopus* sp.) are endemic to Southern Africa. The four types of padlopers found in the Western Cape are the smallest tortoises in the world; they never grow longer than 15 cm. They have flat shells, and their scutes do not have knobs. The parrot-beaked tortoise (*Homopus areolatus*) of Harmony Flats belongs to this group of tortoises. The other three padlopers are the Karoo padloper (*Homopus boulengeri*), the greater padloper (*Homopus femoralis*) and the Southern speckled padloper (*Homopus signatus*).

If padlopers accidentally end up on their backs, they can quickly turn themselves over again because of their strong legs and light weight. Other tortoises usually cannot do this, and could even die if they are left lying in the sun and heat.



Kogelberg Nature Reserve

Dassie (*Procapra capensis*)

The R44, a mountain drive from Gordon's Bay to the Bot River mouth, is one of the most scenic coastal routes in the world, and skirts the large Kogelberg Nature Reserve.

The Kogelberg itself is often referred to as the heart of the fynbos. With 1 600 plant species it boasts a floral diversity per unit area higher than anywhere else in the world.

The primary vegetation type is Kogelberg sandstone fynbos, comprising a low, closed shrubland, scattered with tall shrubs. There are many protea

CONSERVING NATURE – ZONE BY ZONE

Kogelberg Nature Reserve forms part of the 100 000 ha Kogelberg Biosphere Reserve. A biosphere reserve is an area of terrestrial and coastal ecosystems recognised by the United Nations Educational, Scientific and Cultural Organisation (UNESCO). It is zoned to benefit both nature and people. The core area of a biosphere reserve is strictly conserved.

The buffer zone supports eco-friendly recreational activities, wild-flower farms and private properties, where natural vegetation is nurtured.

The transition zone has towns, farms and factories that are also environmentally aware, and minimise the impact of their activities and waste.

species and their relatives, hundreds of erica species, and a host of endemic species and families. There are numerous seeps and seasonally saturated wetlands, dominated by bruniaceae and restios.

Chacma baboon (*Papio ursinus*)Red hot poker (*Kniphofia uvaria*)

The majestic Verreaux's eagle (*Aquila verreauxii*), klipspringer (*Oreotragus oreotragus*) and baboons (*Papio ursinus*) are common sightings in the reserve, and whales and dolphins can be viewed from the road verges.

The mountain slopes are strictly controlled and closed to the public, except for the hike along the Steenbras River Gorge, taking visitors past crystal clear mountain pools and cascading waterfalls, to the Steenbras Dam.

ADDRESS: Gordon's Bay - 8 km along the R44 (Clarence Drive)
 OPENING HOURS: 07:30-16:00
 SIZE: Approximately 3 000 ha
 ENTRANCE FEE: R15.00 per person for hiking permit to enter Steenbras River Gorge (for updates, visit www.capetown.gov.za/environment)
 PUBLIC TRANSPORT: Taxi
 ACTIVITIES AND FACILITIES: Hiking trail, abseiling, kloof jumping (run by external company), whale watching, scenic drive and fishing (permit required)
 ENVIRONMENTAL EDUCATION: None
 ACCOMMODATION: The Kogel Bay Resort offers camping and caravanning facilities on the beachfront (reservations: 021 856 1286)
 CONTACT: Tel 021 856 5605; fax 021 851 2148
 E-MAIL: kogelberg.naturereserve@capetown.gov.za



HONEY BADGERS' BATTLE FOR SURVIVAL

The home range for a single honey badger (*Mellivora capensis*) would exceed the total area of all the City of Cape Town's reserves put together!

Honey badgers do visit and live in some reserves, but they leave to forage or look for mates. This is why it is critical that our reserves do not become islands of nature surrounded by seas of development. Honey badgers have a sweet tooth, and often raid beehives. Farmers can badger-proof hives quite easily – keeping them out of reach of the badgers. Unfortunately, many beekeepers still use gin traps to protect their hives – an action that results in the unnecessary death of many badgers.

To help the honey badgers survive, make sure that you buy only 'badger-friendly' honey, and drive carefully at night to avoid these animals on the road.



Nature conservation in an urban environment – linking people and nature

Conservation in an urban context offers both challenges and opportunities for linking people and nature. The benefits of our natural environment and the resources it provides us with are invaluable assets to the people of Cape Town. Thanks to many partnerships, organisations and voluntary efforts, Cape Town has become a vibrant place for new ideas and approaches to conservation – born out of peoples' concern for their precious natural environment.



Other organisations and natural areas



King protea (*Protea cynaroides*) in the Table Mountain National Park

Table Mountain National Park & SANParks

The southern tip of the Cape Peninsula was the first area of the Western Cape to be formally protected. Initially known as the Cape of Good Hope Nature Reserve, the area was proclaimed in 1930. In 1998, this area and the rest of the Peninsula mountain chain was declared a national park, and managed by SANParks (South African National Parks). This national park was initially called the Cape Peninsula National Park, but was renamed Table Mountain National Park in 2004. Today, it also includes the coastal and offshore areas.

The City of Cape Town works closely with SANParks through a bilateral forum, where the organisations jointly tackle issues that are relevant to both the park and the city.

Table Mountain National Park conserves eight vegetation types.

Peninsula sandstone fynbos is the dominant vegetation, of which 90% is preserved. Other

vegetation types include Peninsula granite fynbos, which is divided into Southern Peninsula granite fynbos around Miller's Point, and Northern Peninsula granite fynbos from Camps Bay through to Hout Bay. Peninsula shale fynbos grows on Devil's Peak, as does Peninsula shale renosterveld, which can also be found on Lion's Head. Cape Flats dune strandveld occurs at Kommetjie's Slangkop Dunes and in patches on the west coast of the Peninsula.

Tokai State Forest is part of Table Mountain National Park. As the pine plantation is gradually harvested, this area will contribute to the conservation of the highly threatened Cape Flats sand fynbos and Peninsula granite fynbos. As the pines are removed, the natural vegetation regenerates from the seed bank, which is still viable in the soil after decades.

Fire is an important process in this regeneration. The other two major vegetation types conserved in Table Mountain National Park are

southern Afrotemperate forest and Cape lowland freshwater wetlands.

For more information, visit www.sanparks.org, or phone SANParks head office in Cape Town on 021 701 8692.

Robben Island World Heritage Site

Robben Island has a rich history, and is most famous for being the prison home of South Africa's first democratically elected president, Nelson Mandela, for 18 years. This popular tourist destination, which lies 11 km from Cape Town, is an important breeding site for many bird species.

For more information, visit www.robben-island.org.za, or phone the Robben Island Museum on 021 413 4220/1.

CapeNature

CapeNature is the conservation authority for the Western Cape Provincial Government, and manages a large number of provincial reserves across the province. It also works with private landowners through the Conservation Stewardship Programme with maintaining biodiversity on private land.

In Cape Town itself, CapeNature manages the Driftsands Nature Reserve on the Cape Flats, and the large eastern portion of the Kogelberg Biosphere Reserve. (The western section is managed by the City of Cape Town.) A portion of the CapeNature-managed Hottentots Holland Nature Reserve also lies within the boundaries of the City of Cape Town (above Somerset West).

For more information, visit www.capenature.org.za or phone the CapeNature head office on 021 659 3400.

University of the Western Cape

Cape Flats Nature Reserve is a private reserve



that falls under the administration of the University of the Western Cape (UWC). Although the reserve was created to protect Cape Flats dune strandveld and Cape Flats sand fynbos, it also serves as a base for ecological teaching, environmental education and research.

For more information, visit www.botany.uwc.ac.za/eeru/CFNR or phone UWC's Environmental Education and Resource Unit on 021 959 3891.

Eskom

Platteklouf Natural Heritage Site belongs to Eskom, the national electricity utility. The site conserves critically important Cape Flats sand fynbos.

The Koeberg Nature Reserve, which surrounds the Koeberg Nuclear Power Station, was proclaimed in 1991. It is a well-managed reserve, with an active alien-clearing programme, and protects Cape Flats dune strandveld, wetlands and Atlantis sand fynbos.

So far, 301 plant species have been identified here.

Trails lead to the beach, where white mussels (*Donax serra*) and plough snails (*Bullia sp.*) can be seen. The reserve is about 3 000 ha in extent, with a spectacular display of wild flowers in spring.

There is an abundance of introduced wildlife, such as springbok, bontebok, blue wildebeest, zebra and eland. There are occasional sightings of the African wild cat (*Felis libyca*), small grey mongoose (*Galerella pulverulenta*), genet (*Genetta sp.*) and caracal (*Felis caracal*). The area is also home to the angulate tortoise (*Chersina angulata*) and a variety of other reptiles, and as many as 197 different bird species.

For more information, phone 021 550 4021/553 2466, e-mail gert.greeff@eskom.co.za, or visit www.eskom.co.za

Management challenges



Urbanisation and agriculture

Low-density urban development (urban sprawl) is the greatest threat to the remaining biodiversity in the city. This causes the transformation and fragmentation of natural habitats, making the plants and animals vulnerable to disturbance, alien species and pollution.

In terms of agriculture, although most of the productive land in the city has already been developed, some marginal land is still ploughed – particularly for the extension of wine farms.

An environmental impact assessment (EIA) and permits are now required for all new developments, even for the seemingly simple action of ploughing new agricultural fields.

The City of Cape Town's Biodiversity Management Branch is responsible for guiding development away from areas of important natural botanical remnants. If the site is not a priority

biodiversity remnant, search and rescue teams will find and remove rare plants from sites before building starts. During the construction of roads and dams, the topsoil, which contains bulbs and seeds, should be stored and used to rehabilitate the area.

The City of Cape Town's Spatial Planning and Urban Design Department has prepared a Spatial Development Framework (SDF), which will guide the way in which the municipality manages Cape Town's spatial growth and development. This overarching framework will be accompanied by Spatial Development Plans for each of the eight planning districts in the municipal area, which will provide a further level of detail to the SDF.

For more information about the City of Cape Town's spatial planning process, visit www.capetown.gov.za/en/sdf, or e-mail futurecapetown@capetown.gov.za



Common carp (*Cyprinus carpio*)

Invasive and problem species

The second most important threat to biodiversity after habitat destruction is invasive species. Trees, particularly the Australian acacia,

hakea and eucalyptus species as well as pines from the northern hemisphere, outcompete indigenous vegetation. These invasive species change the ecosystem processes, such as nutrient-cycling, fire and water retention.

In the city, pines and hakea are to a large extent being successfully controlled. This, however, is not the case in the lowlands and riparian habitats, where the Australian acacias dominate.

Here, control of alien acacias is costly and time-consuming, due to their ability to produce vast amounts of seed at a young age and to re-sprout vigorously. Woody alien species burn ferociously, and damage indigenous seed banks. The most effective method of clearing these species is to cut down the trees, treat the stumps with poison,

and follow up with rigorous seedling control for several years. Biological control is also used. Alien grasses, such as kikuyu, are killed with chemical sprays.

Other invasive and problem species are:

- the Argentine ant (*Linepithema humile*), which disrupts the dispersal of fynbos seeds by indigenous ants;
- the mallard duck (*Anas platyrhynchos*), which hybridises with the indigenous yellow-billed duck (*Anas undulata*);
- the Indian house crow (*Corvus splendens*), which is aggressive and preys on small indigenous animals;
- feral and domestic cats; and
- introduced fish, such as common carp (*Cyprinus carpio*), trout (*Salmoninae sp.*) and barbel (*Clarias gariepinus*), which prey on indigenous fish.

The City of Cape Town has responded to these challenges by developing a strategy and action plan for controlling invasive alien species. For more information, visit the Environmental Resource Management website, www.capetown.gov.za/ environment and click on 'Publications' then 'Policies and strategies'.



Cluster pines (*Pinus pinaster*)

Having a crow to pluck with the *Corvus splendens*

The Indian house crow (*Corvus splendens*) is an invasive alien species, and a threat to other species and their habitats. It travels on ships, spreading all over the world. It first appeared in Africa in the late 1800s, and in Cape Town in the 1980s.

Its aggressive behaviour and omnivorous habits make it a severe threat to indigenous insects and birds, and it often carries diseases such as salmonella, cholera, entamoeba, dysentery and typhoid, making it a threat to human health as well.

The Indian house crow's wings and tail as well as its forehead, crown, throat and upper breast are all glossy black. Its neck and lower breast are light grey-brown. The Indian house crow should not be mistaken for the pied crow (*Corvus albus*), which is found throughout sub-Saharan Africa. The main difference between the house crow and the larger pied crow is the pied crow's large white area from its shoulders to the lower breast.



Indian house crow (*Corvus splendens*)



Water pollution and changes to water flows

Rivers and vleis become polluted by the storm-water system and failing sewerage systems. Nutrient enrichment of wetlands causes the loss of indigenous biota, and the subsequent colonisation by less sensitive, often alien species. The water hyacinth (*Eichhornia crassipes*), for example, spreads rapidly and clogs waterways.

Urbanisation, particularly on the Cape Flats, has brought with it changes to hydrology, which could in turn lead to loss of species. These changes to hydrology are caused by:

- the infilling of wetlands;
- alien vegetation
- the canalisation of streams; and
- large-scale hardening of catchment areas.



Inappropriate fire

Fynbos requires summer fires for the long-term conservation of its species, but these fires need to be neither too frequent nor too infrequent. When fires are too frequent, slower-growing species may be eliminated. If fires are not frequent enough, forest species start to invade. However, not all vegetation types in Cape Town are fire-prone.

Cape Flats dune strandveld, for example, does not require fire to persist, because it has a high succulent and/or thicket component. While it can withstand the occasional fire, it may become a species-poor and weedy grassland if it is burnt too often.

Controlled burning

Managers try to prevent frequent fires, but long periods without fire lead to loss of some annuals and bulbous plants. A controlled burn every four to seven years is considered optimal for renosterveld, but mountain fynbos needs on average 10 to 20 years between the burns.

On well-managed reserves, the City of Cape Town's conservation team is often faced with the problem that the vegetation has not been burnt for many years.

The vegetation here becomes 'senescent', which means that it is unproductive, and many of the plants are dead or dying (there is a lot of dead



plant material).

The species diversity on such sites decreases, and it is essential that the land be burnt.

The reserve managers not only revive the natural vegetation, but they also remove the wild-fire risk by burning under controlled conditions. The manager must make sure that the plants have

set seed before carrying out a controlled burn. Burning should not take place in winter or spring, as this destroys sprouting bulbs and seedlings, and endangers nesting birds.

Fire is also an essential tool when managing invasive vegetation. After manually clearing invasive plants, fire is used to remove dead material and stimulate the indigenous seed banks to germinate. Fire also stimulates the seeds of exotic plants, and the growth of these plants therefore needs to be controlled after the burn.

Ironically, the use of fire is the most critical tool in managing the risk of wildfires in natural vegetation.

Mowing

The City of Cape Town's City Parks Department mows all public open spaces and road verges three times a year. Even though this is a critical function, some sites should in fact be restored to natural vegetation rather than be mowed. In other sites, a detailed mowing plan ensures that areas are not mowed before the attractive annual flowers have flowered and set seed.

In higher-rainfall areas, mowing leads to grass domination, while it reduces plant cover in drier areas. Residents often complain about unsightly





road verges and open spaces, and insist on more regular mowing. Yet, regular mowing is in fact one of the causes of the problem, as mowing promotes fast-growing, unsightly, fire-prone grasses. When natural vegetation remnants are continually mowed, they progressively become unsightly, species-poor grasslands.

Some vegetation types persist mainly in these pockets, and portions of these sites could potentially be restored for biodiversity conservation if indigenous seed banks remain and conservation-friendly management replaces mowing.

Over-exploitation of marine resources

Marine resources are important for recreation, employment and food. However, severe over-exploitation and poaching have seen many fish, such as white steenbras (*Lithognathus lithognathus*), geelbek (*Atractoscion aequidens*) and abalone (*Haliotis midae*), being listed as endangered species. The marine and coastal ecosystems around Cape Town need to be protected and allowed an opportunity to replenish themselves. This could be achieved by educating the public, and by enforcing closed seasons and bag and size limits.

Grazing

When livestock graze all year round on low-nutrient vegetation types, such as strandveld, the vegetation becomes degraded, allowing low-diversity alien grassland to take over.

Although it is difficult to change people's approaches to farming, the City of Cape Town is trying to educate the public, and influence farming practices (such as correct stocking densities, correct species and rotational grazing).

Crime

Often, people are afraid to venture into natural open spaces in case criminals are hiding in bushy or secluded areas. Alien invasive vegetation in particular grows in dense stands, creating a hiding place for scoundrels. This has resulted in an urgent and ongoing call by local communities to clear dense alien invasive vegetation.

The City of Cape Town's Sustainable Livelihoods Programme and Invasive Species Programme, as well as the Expanded Public Works Programmes (Working for Water, Working for Wetlands, Working on Fire and CoastCare), are working to address these issues by job creation, skills transfer projects and training.

Working together



The City of Cape Town also hosts the Local Action for Biodiversity (LAB) project. LAB is a global urban biodiversity initiative, with 21 Pioneer local governments in 16 countries worldwide, and five additional local governments participating (and many more expected to join). LAB assists local governments with conservation and sustainable management of their biodiversity. For more information on LAB, visit www.iclei.org/lab

THE CITY OF CAPE TOWN WORKS WITH MANY PARTNERS TO ACHIEVE ITS GOALS

C.A.P.E.

The Cape Action for People and the Environment (C.A.P.E.) programme is a partnership of organisations that works together to strengthen institutions, support education, develop tourism benefits, involve people in conservation

GOOD PLANNING

The City of Cape Town has a Biodiversity Strategy, which falls under its Integrated Metropolitan Environmental Policy (IMEP). The strategy has resulted in the municipality's Biodiversity Network, which is the fine scale conservation plan for the Cape Town area.



stewardship, and manage watersheds.

Funding sources include the Critical Ecosystem Partnership Fund, the Global Environment Facility, the Worldwide Fund for Nature, and the Table Mountain Fund. For more about C.A.P.E., visit www.capeaction.org.za

The South African National Biodiversity Institute (SANBI) is the project management agency for C.A.P.E., and is housed at Kirstenbosch National Botanical Garden.

The Biodiversity GIS (Geographic Information Systems) Unit of SANBI collects and manages the spatial information database.

To read more about SANBI and its Biodiversity GIS Unit, visit www.sanbi.org and <http://bgis.sanbi.org>

The Urban Conservation Unit at SANBI tackles biodiversity conservation from a community development and poverty alleviation perspective, via Working for Wetlands, the Useful Plants Project and Cape Flats Nature.

The Fynbos Forum

The Fynbos Forum consists of conservation stakeholders working in the Cape Floristic Region. The stakeholders work towards the conservation and



sustainability of fynbos ecosystems. The Forum meets annually to discuss biodiversity management issues, to share their research, and to prioritise future efforts and actions.

The Fynbos Forum is funded by the Conservation and Management of Ecosystems and Biodiversity Focus Area of the National Research Foundation (NRF). The UCT's Botany Department facilitates the NRF funding, while the Botanical Society of South Africa hosts the Forum.

For more information, contact the Fynbos Forum secretariat on 072 625 0274, or W.Paisley@sanbi.org.za

Cape Flats Nature

Cape Flats Nature is a partnership project between the City of Cape Town, the South African National Biodiversity Institute, the Table Mountain Fund, and the Botanical Society of South Africa. The project aims to build good practice in sustainable management of the City of Cape Town nature conservation sites, in a way that benefits the people of the surrounding townships as well.

The Primary Science Programme is an education organisation focusing on improved quality of teaching and learning natural sciences in disadvantaged schools.

For further details, visit www.capeflatsnature.org

CTEET

The Cape Town Environmental Education Trust (CTEET) partners with organisations, companies and communities in bringing environmental education and management to nature sites within the city. CTEET introduces children from communities surrounding the nature sites to the wealth and wonder of our natural heritage, and as its slogan "Changing lives through nature" reflects, it aims to change peoples' idea of nature.

For more information, visit www.zeep.co.za or phone 021 706 8523.

Tertiary institutions

The University of Cape Town, University of the Western Cape and Cape Peninsula University of Technology provide valuable education and research on a wide range of environmental topics. Visit www.uct.ac.za; www.uwc.ac.za; www.cput.ac.za





WHAT YOU CAN DO

Visit the reserves

Visit these nature reserves, and enjoy the scenery and outdoor activities they offer. Walk through the aromatic vegetation, and discover the variety of colourful flowers that attract birds, insects and other small creatures. Spend time along the coast; look out for whales and dolphins; find shells or enjoy a swim.

For the latest updates on entrance fees and opening hours, please visit www.capetown.gov.za/environment and click on "Nature reserves" (fees and opening hours given in this book are subject to change).

Join a Friends group

Friends are volunteers, who liaise with the administrator of 'their' natural area, and:

- educate themselves and the public about the wildlife, archaeology, or history and conservation of the area;
- promote the natural assets by establishing interpretive centres, producing information brochures, planning and constructing trails, conducting outings, and arranging talks;
- help to eradicate aliens, remove litter, combat soil erosion and many more hands-on activities; and
- raise funds for approved projects.

To find details of a Friends group near you, visit the Wildlife and Environment Society of South Africa (WESSA). WESSA members also receive *African Wildlife* and *Envirokids* magazines.

The WESSA Western Cape Region's physical address is The Sanctuary, off Pollsmoor Road, Kirstenhof. Alternatively, phone them on 021 701 1397, send a fax to 021 701 1399, or visit www.wessa.org.za

Join the CREW

The Custodians of Rare and Endangered Wild Flowers (CREW) undergo training in plant identification, and then collect much-needed data on rare and endangered plants in their local areas.

CREW is organised by the Threatened Species Programme (TSP) at the South African National Biodiversity Institute (SANBI).

For more information on CREW, visit www.sanbi.org

Join the Botanical Society

For more information about the Botanical Society of South Africa (BotSoc) and their guided walks, talks and other activities, visit www.botanicalsociety.org.za

Join the Cape Bird Club

The Cape Bird Club is the largest bird club in Africa. It conducts regular bird counts, organises outings, raises funds, and drives important initiatives. Visit www.capebirdclub.org.za

Reduce your carbon footprint

Use less of the earth's resources by driving less; conserving water, electricity and fossil fuels, and by reducing, reusing and recycling waste.

For tips on how to cut your carbon footprint, visit www.capetown.gov.za/environment or www.footprintnetwork.org

FURTHER READING

Kirstenbosch Botanical Garden has an excellent bookshop with general and specialist books. There is also a scientific library as well as a herbarium at the South African National Biodiversity Institute housed at Kirstenbosch.

FIELD GUIDES

Flora

Manning, J.P. (2007). *Field Guide to Fynbos*. Struik Publishers.

Manning, J.P. & Goldblatt, P. (1996). *South African Wild Flower Guide 7 West Coast*. Botanical Society of South Africa.

Trinder-Smith, T. (2006). 'Wild flowers of the Table Mountain National Park'. *South African Wild Flower Guide 12*. Botanical Society of South Africa.

Yeld, J. (2003). *Mountains in the Sea. Table Mountain to Cape Point*. South African National Parks.

Fauna

Branch, G.M., Griffiths, C.L., Branch, M.L. & Beckley, L.E. (2007). *Two Oceans: A guide to the Marine Life of Southern Africa*. Struik.

Picker, M., Griffiths, C. & Weaving, A. (2002). *Field Guide to the Insects of Southern Africa*. Struik.

Sinclair, I., Hockey, P. & Tarboton, W. (1993). *Sasol Birds of Southern Africa*. Struik.

Ecology

Branch, M.L. (1999). *Explore the Cape Flora*. Cambridge University Press.

Cowling, R. & Richardson, D. (1995). *Fynbos South Africa's Unique Floral Kingdom*. Fernwood Press.

Pauw, A. & Johnson, S. (1999). *Table Mountain A Natural History*. Fernwood Press.

Mucino, L., Rutherford, M.L. & Powrie, L.W. (eds.). (2005). *Vegetation Map of South Africa, Lesotho and Swaziland*. SANBI, Pretoria.

ENVIRONMENTAL EDUCATION

City of Cape Town & Botanical Society of South Africa. (2007). E-Kapa: *Cape Town's Lowlands - a Global Treasure*. Visit www.ekapa.ioisa.org.za

Also visit www.capetown.gov.za/environment and click on 'Publications'.



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For more information, or to download a copy of the City of Cape Town Biodiversity Report 2008, please visit www.capetown.gov.za/environment and click on 'Publications', and 'Reports and scientific papers'.



A comprehensive and colourful resource showcasing the City of Cape Town's nature reserves and natural areas.



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