

Welcome to the Walter Sisulu National Botanical Gardens

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Summary

Walter Sisulu National Botanical Garden is a large botanical reserve with an Environmental Education Centre, numerous feature

gardens and plant collections. There are also areas for viewing native mammals, birds and reptiles.

INTRODUCTION

The Walter Sisulu National Botanical Garden and nature reserve is situated in Poortview, Roodepoort, Gauteng. Home to a breeding pair of Verreaux's eagles (*Aquila verreauxii*) on the cliffs adjacent the Witpoortjie waterfall, the centrepiece and backdrop of the Garden and source of the Crocodile River (**Fig. 1**). It was proclaimed as a National Botanical Garden in July 1982 by Prof Brian Rycroft, then director of the National Botanic Gardens (NBG).

The first curator of the gardens was Mr. Peter Chaplin, served from 1982-1999. The Botanical Garden was formerly a privately owned farm, acquired by the Roodepoort and Krugersdorp City Councils in the late 70's who made the establishment of the Garden possible by providing the land on a 99-year lease to the Institute. The Walter Sisulu National Botanical Garden is administered by South African National Biodiversity Institute (SANBI).



Figure 1. Aerial view of the Witpoortjie Falls in Walter Sisulu National Botanical Garden, Poortview, Roodepoort. (Photo SANBI)

The Garden was initially known as the Transvaal National Botanic Garden and could only be visited by special arrangement. The Garden was opened to the public in 1987 and was previously known as the Witwatersrand National Botanical Garden. In March 2004, the Garden was renamed the Walter Sisulu National Botanical Garden, in honour of the late ANC stalwart Mr

Walter Sisulu (1912-2003) who, together with former president Nelson Mandela, led the struggle for a democratic South Africa. It was a well-known picnic spot since the 1800's and currently received ca. 320k visitors per annum.

Major infrastructural developments took place in the early 1990s. These included the construction of the Entrance Building, the Nestlé Environmental Education Centre, Sasol Dam and Bird Hide as well as the paving of the main walkway.

Over the years the following features have been developed in the Garden; a Succulent Rockery Garden (**Fig. 2**), Cycad Garden (**Fig. 3**), Water Garden, Fern Trail, Arboretum, Geological Garden (**Fig. 4**), People's Plant Garden, Birds and Butterfly Garden, Dell section, Waterwise Garden, Children's Garden, Wildflower Area, Visitors' Information Centre, restaurant and function venue (SANBI, 2022).



Figure 2. Succulent Garden (photo SANBI)



Figure 3. Cycad Garden (photo SANBI)

Aspects of interest in the garden

Bird life: An abundant birdlife which ranges from the smallest, minute Fairy Flycatcher (weighing in at a dainty 6 g) to the Verreaux's Eagles (*Aquila verreauxii*) (**Fig. 5**) which can weigh up to 4.5 kg and boast a wingspan of 2.8 m.



Figure 4. Geological Garden (photo SANBI)

The eagles are a popular tourist attraction and have been since the 1970's. Every year they lay two eggs (usually around mid-April). The first chick kills the second chick (cainism) who is then raised by the adults. Once fledged the juvenile remains in the valley until it gets chased away by the parents usually around December -January.



Figure 5. Verreaux's Eagles (*Aquila verreauxii*) (photo Ernest Porter)

The super-speedy Peregrine Falcon hunts from the cliff faces, these birds are reputed to be one of the fastest of all, apparently capable of reaching up to 100 km per hour. By contrast, Helmeted Guineafowl are reluctant and slow fliers, being far more suited to their ground-based lives. They can be seen in flocks, sometimes shepherding tiny stripy chicks and always vocal, their unmistakable calls part of the atmosphere of the Garden. In between these extremes is the wonderful assortment of birds making up the 241 listed species for the Garden (SANBI, 2022).

Mammals: The mammals tend to be far more secretive; they have adapted to human presence by lying low during the day and coming out at night. Mammals such as honey badger, serval and the aardvark (antbear) are still living in the urban wild. Mountain Reedbuck ewes with lambs

have been ‘camera-trapped’ frequently, a sign that the ridge ecosystem is intact. Sengi (rock elephant shrew) have also been noted (SANBI, 2022).

Invertebrates: Invertebrates such as insects and spiders are vital to the functioning of the Garden ecosystem acting as pollinators, as well as cleaner, nutrient processors and serve as food sources for other wildlife (SANBI, 2022).

The nature reserve is also home to various naturally occurring wildlife such as Jackal, Porcupine, Rooikat, Serval, Common Duiker as well as a population of Southern Mountain Reedbuck (*Redunca fulvorufula* ssp. *fulvorufula*) which is listed as endangered on the red List of South African mammals (Fig. 6).



Figure 6. Southern Mountain Reedbuck (*Redunca fulvorufula* ssp. *fulvorufula*) in the Walter Sisulu National Botanical Garden (Photo Ernest Porter)

In late 2007, the WSNBG yielded one of its first surprises when a Red Data listed fish species, the Marico Barb (*Enteromius motebensis*) was discovered in the plunge pool of the waterfall. (SANBI, 2022; Fig. 7).



Figure 7. Marico Barb (*Enteromius motebensis*) (photo A. Hankey)

Vegetation: The cultivated garden is comprised of ca. 25ha of landscaped gardens and service areas, with an adjoining nature reserve, also managed by the garden, that comprises of 275ha. The natural vegetation is comprised of Afrotemperate Highveld forest, Gold Reef Mountain Bushveld and Egoli Granite Grassland (Mucina and Rutherford, 2006). The garden maintains a small herbarium of plants of the property and currently has ca. 600 species. The north-west ridge system known as Roodepoort Reef Mountain Bushveld (GP8) and is listed as Critically Endangered (Cr) in Threatened terrestrial ecosystems for South Africa (2011).

The Garden is at its best during late spring and summer when most of the flowering shrubs come into bloom. The Pride-of-De-Kaap (*Bauhinia galpinii*) with its unusual brick-red flowers makes a lovely show. The mauve-blue flowers of the wild

phlox (*Jamesbrittenia grandiflora*) and *Dissotis* sp. are a delight for many weeks. One of the highlights of summer are the scarlet river lilies (*Hesperantha coccinea*) which line the stream near the restaurant and produce bright red flowers in mid-summer. The wild banana (*Ensete ventricosum*) (Fig. 8) with its giant leaves makes a magnificent show along the Water Garden. Arum lilies (*Zantedeschia aethiopica*) are also to be found in flower (SANBI, 2022).



Figure 8. Wild banana (*Ensete ventricosum*) (photo SANBI)

Common sugar bushes (*Protea caffra*) are abundant on the north-east facing slopes of the Garden. These naturally occurring trees produce attractive heads of flowers throughout the summer months and provide a constant source of nectar to a wide variety of birds. Cuckoos are an integral part of the Garden in summer and it seems as if there is no place to hide from their persistent calls. Listen out for the Red-chested Cuckoo, Diederik Cuckoo, Klaas's Cuckoo and the Black Cuckoo from the beginning of October. The striking Southern Red Bishops start to build their nests in the bulrushes and reeds around the Sasol Dam

and wetland areas. The male birds can often be seen trying to impress a future mate (SANBI, 2022).

In the ponds in the wetland area, the large flowers of the indigenous water lily (*Nymphaea nouchali* var. *caerulea*) and the smaller star-shaped yellow flowers of the small yellow water lily (*Nymphoides indica*) is evident (SANBI, 2022).

The tremendous variety of spur-flowers (*Plectranthus*) burst into flower to herald the beginning of autumn. Many of these herbaceous shrubs and groundcovers make excellent garden subjects as they flower so profusely and have very attractive foliage.

Garden's Clivia (*Clivia gardenii*) start flowering in autumn near the Lion's Bridge with their unusual pendulous flowers; unlike those of the usual bush lily, *Clivia miniata*. These lesser known clivias come from the east coast province of Kwa-Zulu-Natal. The bright orange flowers of the *Kalanchoe rotundifolia* and the red flowers of *Crassula alba* and *Crassula perfoliata* var. *minor* in the Succulent Rockery Garden also create a lovely show at this time of year.

By the end of autumn, many trees such as the white stinkwood (*Celtis africana*), river bushwillow (*Combretum erythrophyllum*) and the lavender tree (*Heteropyxis natalensis*) are all flowering in their respective yellows, reds and purples.

The Succulent Rockery is particularly beautiful during winter when most of the aloes are in full bloom (Fig. 9). A variety of birds, including the magnificent Malachite Sunbird, feed on the nectar from showy plants such as *Aloe cryptopoda* which has attractive bi-coloured flowers.



Figure 9. *Aloe arborescens* flowering in the Peoples plants garden (photo SANBI).

At the end of winter, the common wild pear (*Dombeya rotundifolia*) can be seen from afar by its axillary clusters of white to pale pink flowers. The sagewood (*Buddleja salviifolia*) promises the onset of spring and bursts into flower, filling the air with its fragrant scent.

Albertina Sisulu Orchid: In 2007 the Albertina Sisulu Orchid (Fig. 10) was re-discovered on the ridge behind the WSNBG. The staff at WSNBG initiated a search to document the extent of the population and the species was soon up listed on the Red List of South African Plants to Vulnerable (Vu).

The WSNBG garden staff together with several conservation partners initiated a search across Gauteng to visit all known historical locations of the species. After extensive searching it was concluded that the species was only remaining at four locations. Three of the four populations had less than ten individuals and the species was up listed to Critically Endangered (Cr). The WSNBG staff every year conduct population counts together with their conservation partners to monitor the extent of the population and search for new sub populations. In 2022 the count revealed 227 individuals. Negotiations with the Mogale City Council

to incorporate the land on which the orchid is located under the management of WSNBG are under way.



Figure 10. Albertina Sisulu Orchid. (*Brachycorythis conica* subsp. *transvaalensis*). (photo A. Hankey)

Behind the scenes: Over and above what the public sees, the botanical garden is involved in various conservation and research

activities, only indigenous plant species are being cultivated and planted in the National Botanical Gardens and living plant collections maintained. The Botanical Garden is also involved with provincial and national bodies in Threatened plant programs, conduct horticultural and botanical research, engage in field expeditions to collect, document and explore South African flora, host WIL students and interns in Horticulture & Nature Conservation students, participate in plant rescue operations and host shows and events.

Conclusion

The Walter Sisulu National Botanical Garden is a valuable resource for biodiversity conservation and biological research in South Africa. The garden forms part of a structured training ground for the green industry as well as provides valuable safe recreational open space where the community can experience nature, enjoy the hiking trails and have a peaceful picnic while meeting basic human relaxation needs and well-being. Botanical gardens play a vital role in society and should be valued as an asset to society.

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