

CAPE TOWN'S UNIQUE BIODIVERSITY ENDEMIC ECOSYSTEMS

6. Cape Flats Sand Fynbos

General: This used to be the most widespread veld type in Cape Town. Although not important for agriculture or grazing, Cape Flats Sand Fynbos (CFSF) was easily drained and is suitable for housing. It was avoided by the early travellers, as the sandy conditions bogged down ox wagons and buggies, and the old main roads to Somerset West and Paarl skirt on the edge of this veld type. However, following the World War II, rapid urbanization eradicated most of the CFSF. With only 15% left, it is now Critically Endangered, but only 5% is in a good condition.

Distribution: CFSF is endemic to the city, and occurs on the Cape Flats from Blaauwberg Hill west of the Tygerberg Hills, to Lakeside in the south, to Klapmuts and Joostenberg Hill in the east, as well as southwest of the Bottelary Hills to Macassar in the south. This is a lowland veld type, occurring at altitudes of 20–200 m.

Landscape features: Moderately undulating and flat sandy plains. Historically a series of wetlands during winter, with dry soft sands in summer.

Geology and soils: Acid sands of Tertiary origin. These are dunes and alluvial sands that are old and have leached, so that they have been stripped of all seashells and nutrients. They form deep, grey regic sands, usually white. Sand Fynbos could also be called "Acid Sand Fynbos", as it is restricted to this geological type. On alkaline sands, it is replaced by Strandveld.

Climate: CFSF occurs in a winter-rainfall regime with 575 mm of rain per annum, peaking from May to August. The mean daily maximum temperature is 27.1°C in February, and the mean daily minimum 7.3°C in July. Mists occur frequently in winter. Frost is uncommon, at only three days per year. CFSF is the wettest and the coolest of the Sand Fynbos types on the West Coast.

Vegetation: CFSF is a Fynbos type consisting of a dense, moderately tall, ericoid shrubland containing scattered, emergent, tall shrubs. Proteoid and Restioid Fynbos are dominant, with Asteraceous and Ericaceous Fynbos occurring in drier and wetter areas, respectively. Seasonal vleis and wetlands are prominent in depressions during winter. Annuals and bulbs are prominent in spring. CFSF has more ericas, proteas and other shrub species and more vleis, than Sand Fynbos types to the north.

What is left? This is the most transformed of the Sand Fynbos types, and more than 85% of the area has been transformed by urban sprawl and cultivation (mainly smallholdings). Most remaining patches are small pockets surrounded by urban areas, for example Rondevlei, Kenilworth, Milnerton, 6 Base Ordinance Depot, Platteklouf, Rondebosch Common and Tokai. Most of these patches have been identified as 'core flora conservation sites'.

Threats: This veld type is mismanaged in terms of mowing, fire protection and alien plant invasion. Mowing eliminates cone-bearing and taller shrubs, while fire protection causes a few common thicket species (e.g. Sourfig and Bitou) to replace the rich fynbos species. Alien woody species include Port Jackson and Rooikrans wattles and species of pines and gums. Dumping and spread of alien grasses (both annual and Kikuyu) are other major problems. Alien wattles result in elevated nutrient levels, a conversion to a grassland of Weeping Lovegrass, and near-annual fires. Molerats can become a major problem in disturbed areas. An ecosystem threat is that water



Witskollie (Protea Family)



Orangebreasted Sunbird on Whorled Heath (Erica Family)



Cluster Spiderhead (Protea Family)

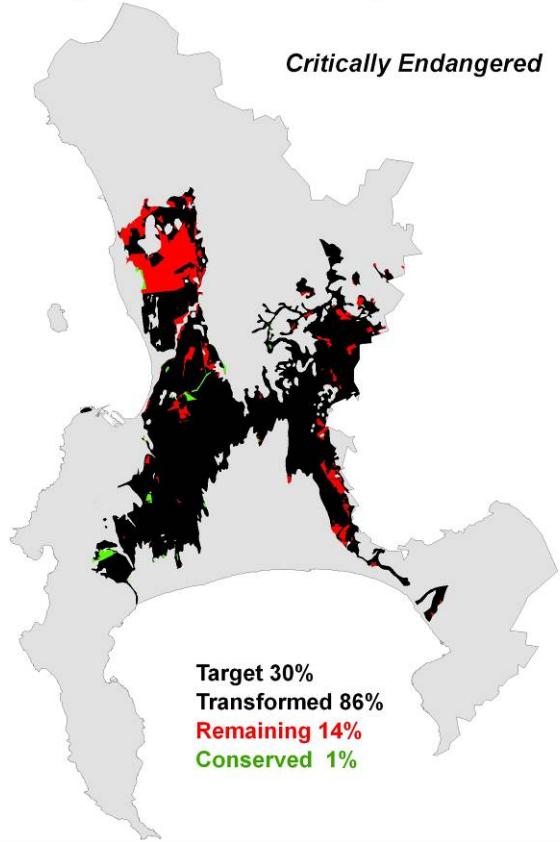
tables can be lowered and polluted (with lawn fertilisers) in urban areas, especially where reserves are very small.

Conservation status: Critically Endangered, with a national conservation target of 30%, but with only 15% remaining. About 1% is statutorily conserved. Some 108 threatened and near-threatened Red List plant species occur on the remnants within Cape Town. The endemics include six species listed as extinct in the wild, some of which are being reintroduced from botanical gardens.

Where conserved? Statutorily conserved as small patches in Table Mountain National Park at Tokai, and at Rondebosch Common (degraded: all shrubs have been lost, but the area has a good bulb flora), Bracken Nature Reserve, and Blaauwberg Conservation Area. Some good stands that have not been proclaimed are found at Milnerton Racecourse, Kenilworth Racecourse, 6 Base Ordinance Depot and Platteklouf. Very few additional areas are available that could conserve CFSF – the only potential area that could protect an ecologically representative patch is located east of Blaauwberg Hill, towards the N7.

Cape Flats Sand Fynbos

Critically Endangered



Cape Flats Sand Fynbos at Kenilworth Race Course

Endemic taxa: Rich in peas, ericas and proteas with the following 16 plant species unique to CFSF. Cape Flats Gorse *Aspalathus variegata* (Extinct), Unihead Kanniedood *Athanasia capitata*, Erica-leaf Climbers-friend *Cliffortia ericifolia*, Pearl Heath *Erica margaritacea*, Pyramid Heath *E. pyramidalis* (Extinct), Showy Heath *E. turgida* (Extinct), Whorled Heath *E. verticillata* (Extinct), Cape Flats Conebush *Leucadendron levisanus*, Grass Mountain Pea *Liparia graminifolia* (Extinct), Strawberry Spiderhead *Serruria aemula*, Rondevlei Spiderhead *S. foeniculacea*, Kraaifontein Spiderhead *S. furcellata*. Narrow Brightfig *Lampranthus stenus*. Flats Kolloosie *Ixia versicolor*. Varied Mountain Sedge *Tetralix variabilis*, and Solitary Bristle Sedge *Trianoptiles solitaria*.

What can be done to prevent CFSF from becoming more threatened? The areas identified in the Biodiversity Network as the last suitable remnants of CFSF must be zoned and conserved. Degraded areas need to be restored by having the invasive alien wattles removed and natural fire regimes re-established. Competing land uses such as shaded walks at Tokai and urbanisation around Blaauwberg Hill, need to be contained and moved to less sensitive habitats.

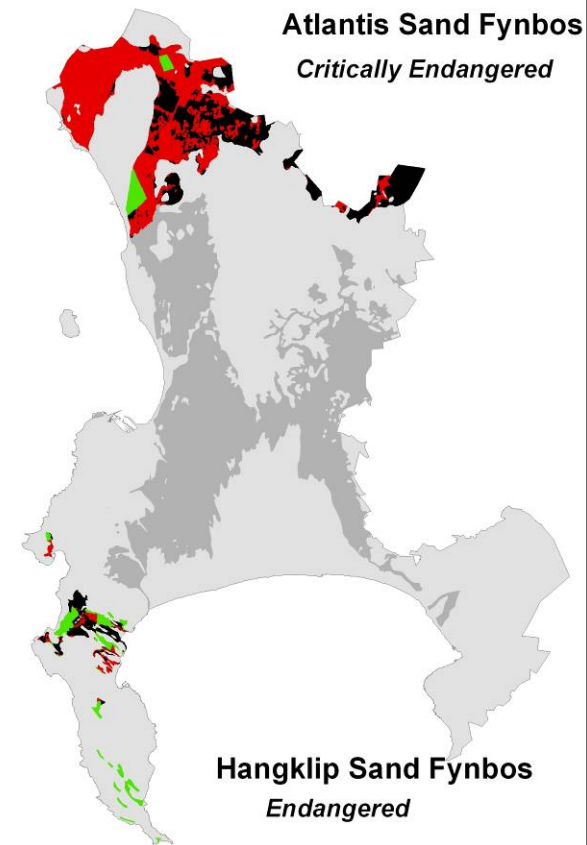
Benefits: For many nearly extinct plant species, CFSF is the only ecosystem on earth where they can be conserved. Many of these species may have unrealised horticultural and medicinal values, in addition to being wild gene banks for important horticultural plants, such as Geraniums, Gladioli and other species. Apart from

recreational activities (hiking, dog walking, and botanising) and important spiritual connections with nature, natural areas of Sand Fynbos help to conserve water tables, attenuate floods, and function as green lungs for the city. Nature reserves and natural areas also provide excellent opportunities for environmental educational.

Other, similar veld types in Cape Town: Atlantis Sand Fynbos occurs to the north, and is also Critically Endangered, as it contains a large number of threatened Red List plant species. The Cape Peninsula type of Sand Fynbos is more similar to the type that occurs from Pringle Bay to Agulhas, and is known as Hangklip Sand Fynbos. Its a conservation status is Endangered.

Atlantis Sand Fynbos

Critically Endangered



Hangklip Sand Fynbos
Endangered

For more information, an explanation of terms, and copies of fact sheets, visit www.capetown.gov.za/environment; go to "Publications", and select "Brochures, booklets and posters".



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