

CAPE TOWN'S UNIQUE BIODIVERSITY ENDEMIC ECOSYSTEMS

2. Peninsula Granite Fynbos

General: Peninsula Granite Fynbos (PGF) fringes Table Mountain. It occupies the less steep, lower slopes of the Peninsula, from Lions Head to Muizenberg, with a few patches towards Cape Point. Although most people confuse it with sandstone fynbos it occurs on a far richer soil type, and much of it has been lost to vineyards and wealthier suburbs. The last remaining Peninsula pine plantations are found on PGF. Historically, it would also have supported many wild animals that are now extinct on the Peninsula.

Distribution: PGF is endemic to Cape Town and is found on the lower slopes on the Cape Peninsula, from Lions Head to Smitswinkel Bay. It almost completely surrounds Table Mountain, Karbonkelberg and Constantiaberg, through to the Kalk Bay Mountains. South of the Fish Hoek gap, it is limited to the eastern side of the Peninsula from Simon's Bay to Smitswinkel Bay, with a few small patches between Fish Hoek and Ocean View. It occurs at an altitude of 0–450 m.

Landscape features: PGF can be found on steep to gentle slopes below the sandstone mountain slopes, and on the undulating hills on the western edge of the Cape Flats. Wynberg Hill, Newlands and Constantia are the largest freestanding (not covered by sandstone) remnants of this type.



Granite Fynbos on Chapman's Drive



Grey Tree Pincushion (Protea Family) is dominant on north slopes of PGF

Geology and soils: PGF occurs on deep, fertile, sandy-loam soils derived from Cape Peninsula Pluton of the Cape Granite Suite. The soils are well structured and suitable for vineyards and fruit orchards. The northern tip of this geological unit was visited by Charles Darwin in 1844 at the point of contact of the granite with the neighbouring shale at Green Point, and today this is a national monument.

Climate: PGF occurs in a typical winter-rainfall climate with rainfall of 590–1 320 mm per annum, peaking from May to August. The mean daily maximum temperature is 26.0°C in February and the mean daily minimum is 7.2°C in July. Frost incidence is low, at fewer than three days per year. Significant water runoff takes place from the sandstone slopes, both as aboveground rivers and as subterranean aquifers.

Vegetation: A medium-dense to open tree vegetation within a tall, dense proteoid shrubland. It is a diverse veld type, dominated by Asteraceous and Proteoid Fynbos, with extensive Waboomveld (dominated by the Wagon Tree) in the north. On wetter slopes where sandstone rock screes provide protection from fire, it is replaced by Afrotemperate Forest. South of Hout Bay, the dwarf form of the Wagon Tree is dominant, so that there are no emergent proteoids. Groves of Silvertrees occur on the wetter eastern and southern

slopes, whereas the Grey Tree Pincushion dominates the western slopes. Two subtypes are recognised: the northern form on the hot, dry north and west slopes of Table Mountain and Camps Bay to Karbonkelberg, and the southern form mostly on moister south and east slopes from Rhodes Memorial and Hout Bay to Smitswinkel Bay.

What is left? Almost 40% remains, but much of this is under pine plantations. This type has possibly the largest number of emerging weed species in the country. Many Mediterranean weeds have colonised the area, but, fortunately, most cannot cope with the fires. This is a result of the long history of colonisation and the relatively fertile soils. Of the two subtypes, the northern form has 72% remaining and the southern form 35%.

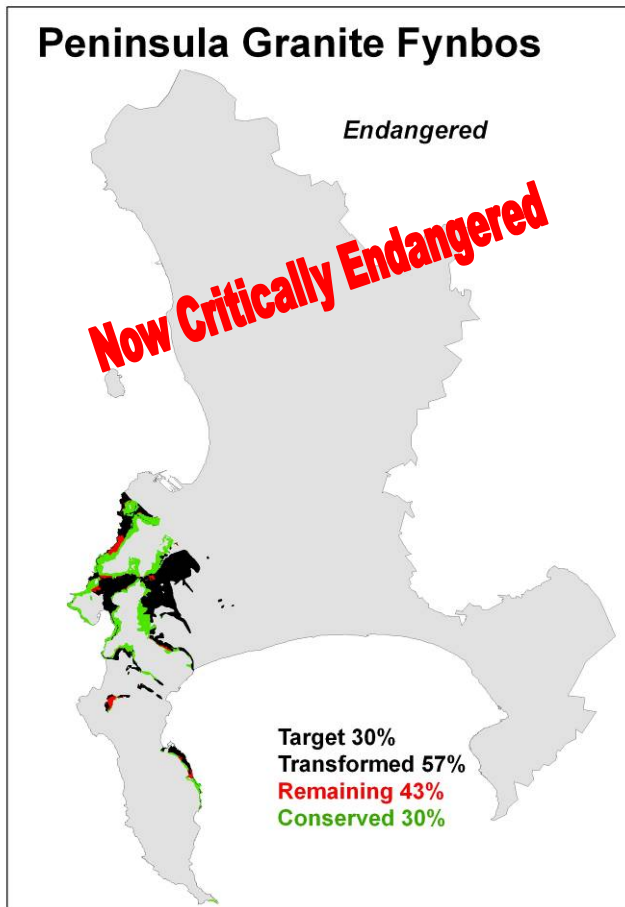
Threats: The biggest threat is alien plants and animals: wattles and pines in that order, with Blackwood being the worst invader, although Black Wattle and Stinkbean are also major threats. Many herbaceous invaders are also a problem. The second-biggest threat is fire protection. Significant areas of this veld type from Newlands to Cecilia, Orangekloof and Tokai are not being burnt frequently enough, and are being invaded by relatively species-poor Afrotemperate Forest.

Conservation status: PGF is Endangered, with a national conservation target of 30%. Some 57% is transformed, of which 40% is found in Cape Town's urban areas and 13% under vineyards and pine plantations. About 30% is conserved, but this includes large areas that are currently mismanaged as Afrotemperate Forest, or are still under pine and gum plantations. The northern form has 28% conserved, and the southern form 35%.



Silvertrees (Protea Family) are dominant in some southern forms of PGF

Peninsula Granite Fynbos



Drier Fynbos occurs on the northern slopes

Where conserved: PGF is conserved in Table Mountain National Park as well as on the premises of Kirstenbosch National Botanical Garden.

Endemic taxa: There are nine endemic plant species: Crown Climbers-friend *Cliffortia carinata*, Small-flowered Saffronbush *Gnidia parvula*, Small-flowered Dolls-rose *Hermannia micrantha*, Wynberg Conebush *Leucadendron grandiflorum*, Spreading Everfig *Erepsia patula*, Bakoven Brightfig *Lampranthus curvifolius*, Granite Cape Flax *Polycarena silenoides*, Unistem Aristeia *Aristea pauciflora*, and Table Mountain Window Reed *Willdenowia affinis*.

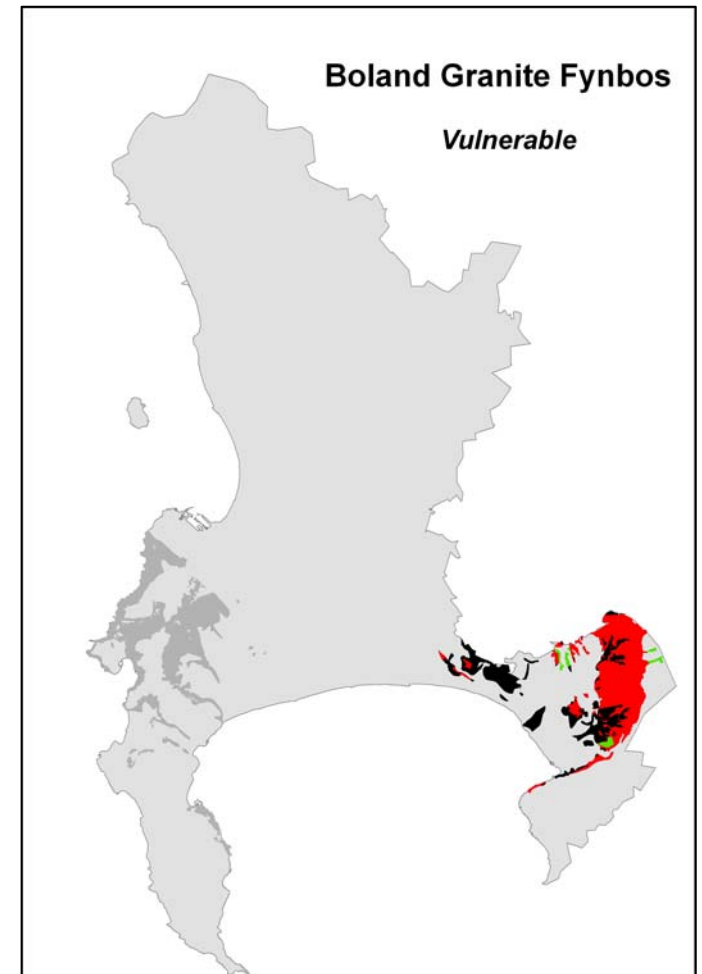


Granite Fynbos is productive and sustains more animal biomass than other Fynbos types

What can be done to prevent PGF from becoming more threatened? Invasive alien plant and animal controls need to be improved. Better fire management, with block burning of the older veld, is needed to prevent forest from replacing this rich veld type. Paths and roads need to be carefully maintained, because granite is easily eroded if water runoff is not properly managed.

Benefits: PGF is the main ecosystem on the northern Peninsula that conserves baboons. Most larger animals have been lost due to development and human use of the fertile soils. PGF is very popular for recreational activities, such as hiking, cycling, dog walking, horse riding and jogging.

Other, similar veld types in Cape Town: Boland Granite Fynbos is Vulnerable with 45% transformed, mainly by vineyards, fruit and olive orchards. The remaining areas are badly invaded with pines, hakeas and wattles. However, most Boland Granite Fynbos is found outside the city, to the east.



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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