

CAPE TOWN'S UNIQUE BIODIVERSITY ENDEMIC ECOSYSTEMS

4. Lourensford Alluvium Fynbos

General: Lourensford Alluvium Fynbos (LAF) is a relatively newly recognized veld type. Some experts used to classify it as a Renosterveld type, and some as a Fynbos type. Although it is transitional, it is a Fynbos type in most respects. It occurs where the mountains meet the lowlands, and where the screes and sandy silts have been deposited in alluvial fans. It is far wetter than it appears from the rainfall, as it is a conduit for mountain water to the lowlands. LAF is unique in that it is one of the veld types that was drastically transformed during the early days of Cape Town, starting in the late 1600s with farming at Vergelegen. Consequently, we do not know what has been lost, as the first botanists only arrived at the Cape almost a century later.

Distribution: LAF is endemic to Cape Town, and is found in low-lying areas between Firgrove and Gordons Bay, including much of Strand and Somerset West, extending up the Lourens River Valley above Lourensford Estate. The altitude extends from 20–150 m.

Landscape features: Low-lying, undulating plains criss-crossed with rivers and streams, many of these only flowing above ground at the height of the winter rain season.



Clifford Dorsey

Geometric Tortoises occur mainly in Alluvium Fynbos

Geology and soils: Plinthic, duplex, silty soils, often embedded with small cobbles and pebbles, resulting from the deposition of alluvial fans where the rapid mountain streams meet the flats. The geology below the sediments is Cape Suite Granite and shales of the Malmesbury Group's Tygerberg Formation.

Climate: LAF experiences a winter-rainfall regime of 470–980 mm of rain per year, with rainfall peaking from May to August. The mean daily maximum temperature is 26.0°C in February, and the mean daily minimum 7.4°C in July. Frost does not occur often. This is the only Alluvium Fynbos type with a strong maritime influence; the others all experience much hotter summers and much cooler winters.

Vegetation: A low, medium-dense shrubland with short, graminoid understorey. Restioid and Asteraceous Fynbos are dominant, with Scrub Fynbos along the rivers. There is some evidence that Proteoid Fynbos might once have been dominant. Some remnants are exceptionally rich in bulbs.

What is left? This is the most transformed of the Alluvium Fynbos types. More than 91% of the area has already been transformed by urban development, cultivation, pine plantations and roads. However, the area was heavily farmed for fruit and pine plantations before urbanisation replaced these land uses. It is the most transformed of the endemic veld types in the city, and one of the most transformed types in South Africa.

Threats: This veld type has largely been destroyed. The small remnants that we have left hint at the diversity that used to occur in the area. The last remnants of LAF are very vulnerable due to their small size, and need to be carefully managed to maintain their biodiversity. Fires especially need to be managed and must occur neither too frequently nor too seldom. Water tables need to be maintained to support the ecosystem, but will come under pressure from water abstraction and canalisation in suburbia. Alien plants and animals need to be controlled. However, the biggest problem is that of neighbours: cats, dogs, lights, paths through the remnants, illegal car and motorcycle use, not to mention dumping and sand theft. Even dumping of garden refuse results in alien plants, eutrophication of soils and water tables and smothering of indigenous plants.



CREW

Flats Kalossie (Iris Family)

Conservation status: LAF is Critically Endangered with a national conservation target of 30%, though only 9% remains. Less than 1% is statutorily conserved.

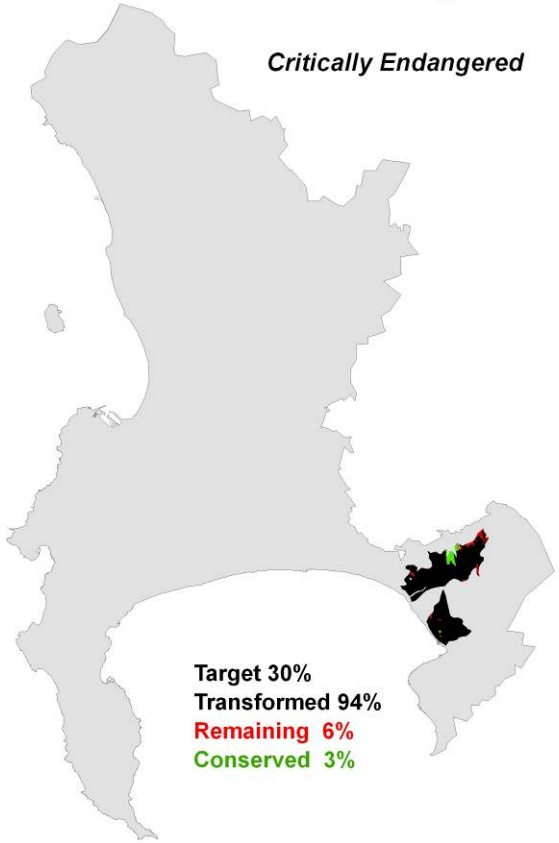


Rupert Koopman

Harmony Flats: one of the very last gems

Lourensford Alluvium Fynbos

Critically Endangered



Rupert Koopman

The Helderberg Basin was dominated by Lourensford Alluvium Fynbos

Where conserved? LAF is statutorily conserved in Harmony Flats Nature Reserve. It is no longer possible to conserve an ecologically viable reserve for this veld type.

Endemic taxa: None known, but it is not certain if this is because there were none historically, or because they had been lost before botanists explored the area. Other Alluvium Fynbos types have many endemic species. The Geometric Tortoise is a typical Alluvium Fynbos animal.

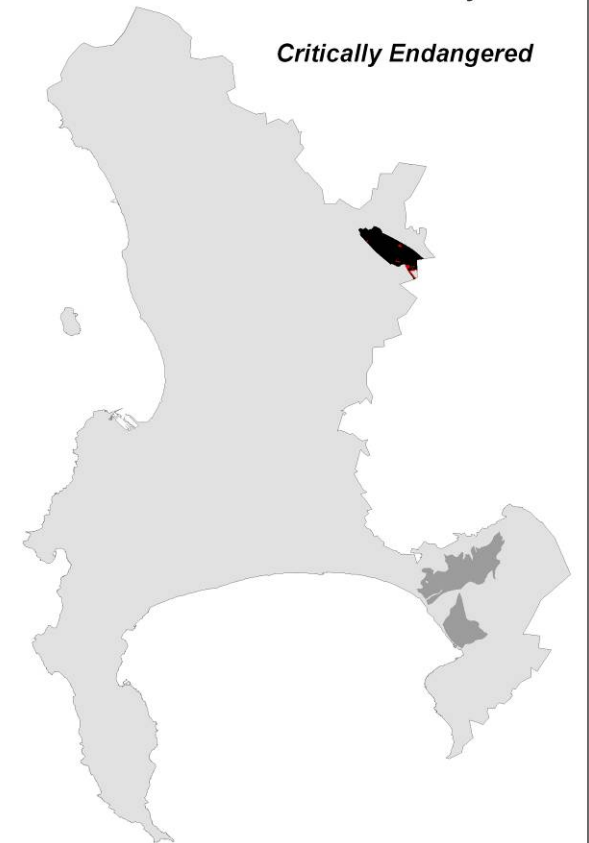
What can be done to prevent LAF from becoming more threatened? The identified areas of the Biodiversity Network must be zoned and conserved. Degraded areas need to be restored by having the invasive alien wattles removed and natural fire regimes re-established. Urban threats must be carefully controlled and rare species monitored.

Benefits: LAF is confined to small remnants, and Harmony Flats Nature Reserve is the last place on earth where this type can still be seen. We have no idea how many of this type's species have already been lost. Many of these species may have had unrealised horticultural and medicinal values, but we will never know. Those that remain should be conserved to ensure that their potential is never lost. The reserves are too small for much recreation (apart from walking, botanising and spiritual upliftment). However, they provide educational activities, with local involvement in species monitoring and other community conservation programmes in an otherwise transformed area.

Other, similar veld types in Cape Town: Swartland Alluvium Fynbos occurs on the mountain plains from Stellenbosch to Porterville, mainly in the foothills of the Hottentots Holland Mountains. It is Critically Endangered with only 6% remaining. It only marginally extends into Cape Town, but is not conserved at all within the city.

Swartland Alluvium Fynbos

Critically Endangered



Rupert Koopman

Corymbium (Daisy Family)

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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