

THE 5-BIOME CITY

Nelson Mandela Bay represents a large percentage of South Africa's biological diversity in that it is a meeting point for 5 of the 7 South African Biomes, namely the Thicket, Grassland, Nama-Karoo, Fynbos and Forest Biomes. The area also boasts a significant amount of endemic species i.e. species that are only found here and nowhere else in the world. Such a concentration of biomes, particularly within a city, is unparalleled in the world and results in an extraordinary diversity of landscapes, plants and animals.

A biome is a broad classification of vegetation according to the kinds of plants that occur in the area, which is influenced by factors such as soil and climate.

A biome is not usually found only in one part of the country. Depending on the climate and features of the landscape, a particular biome can be distributed in patches, like forest in the kloofs of mountains all over the country.

A number of municipal nature reserves have been included in, and can be visited along the "Outward Bound Route" of the city. A mosaic of these 5 Biomes could be experienced in these reserves. The Outward Bound Route is an Eco-Outdoor Adventure and Sports Route incorporating Walking Trails and Wildlife experiences. The aim of this route is to spread tourism to similar attractions along the route, leading to increased foot traffic and related benefits to these sites.

Cape Recife Nature Reserve

FYNBOS BIOME

The Fynbos Biome reaches the eastern edge of its distribution range in Nelson Mandela Bay (NMB) where it is located in the western and mountainous areas of the city. Fynbos is a winter rainfall vegetation type, found on shallow nutrient poor sandstone soils. The vegetation comprises low growing bushes, mostly with very small leaves and is characterized by an abundance of Erica, Restio and Protea species. The genus Agathosma, especially Agathosma species, commonly known as Boegoe, is typical to coastal fynbos. This aromatic species is well known for its medicinal properties in terms of curing a variety of stomach ailments, and is strong smelling with pungent odor when crushed between the fingers. Agathosma plants are generally pollinated by insects. Their seeds are dispersed by wind and "planted" beneath the soil by ants.



Boegoe: Wesley Barington

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Van stadens Nature Reserve
Van der Kemp's Kloof Nature Reserve

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Aloes Nature Reserve
Swartkops Nature Reserve

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Settlers Park Nature Reserve
Cape Recife Nature Reserve



METROPOLITAN
OPEN
SPACE
SYSTEM

nelson mandela bay
PORT ELIZABETH
URBAN LOCAL GOVERNMENT
go green
PROMOTING
RESPONSIBLE
TOURISM

Aloes Nature Reserve

THICKET BIOME

The Thicket Biome occurs mostly on deep red loamy soils in the northern and eastern areas of the NMB. Thicket grows at the junction of the summer and winter rainfall regions. It is big game country and consists of a diverse impenetrable mass of spiny, evergreen shrubs. Typical thicket species include Spekboom (*Portulacaria afra*), and various Aloe species. Spekboom shows exceptionally high carbon dioxide storage ability, and is considered an important plant to buffer the effects of climate change. It is also a favourite food of elephants. Once cleared thicket is gone forever and cannot be re-instated.



Spekboom: Paul Martin

Settlers Park Nature Reserve

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Spekboom: Paul Martin

Swartkops Nature Reserve

NAMA KAROO BIOME

The Nama Karoo Biome is mostly found in the drier interior areas of Nelson Mandela Bay on shallow well drained soils. The vegetation comprises various succulent species, intermixed with stunted trees, geophytes and annual forbs. Nama Karoo species, typically, Aloe striata, various Crassula and Euphorbia species, have adapted to growing in low moisture conditions and extreme temperature ranges.



Crassula: Wesley Barington

Van der Kemp's Kloof Nature Reserve

GRASSLAND BIOME

Grasslands in Nelson Mandela Bay usually occur in association with Fynbos or Thicket. Grassy Fynbos stretches from Bethelsdorp towards the Van Stadens Berg, extending across Port Elizabeth on flat plains with deeply incised valleys. The vegetation type is dominated by Rooigras (*Themeda triandra*) which is an indicator of an undisturbed grassland. The fynbos present in the grassland largely comprises various bulbs and Erica species. Seasonal vleis are unique features within grassy fynbos as they provide habitat for the critically endangered Southern Bull Frog (*Pyxicephalus adspersus*).



Bullfrog: by Mark Marshall

Van Stadens Nature Reserve

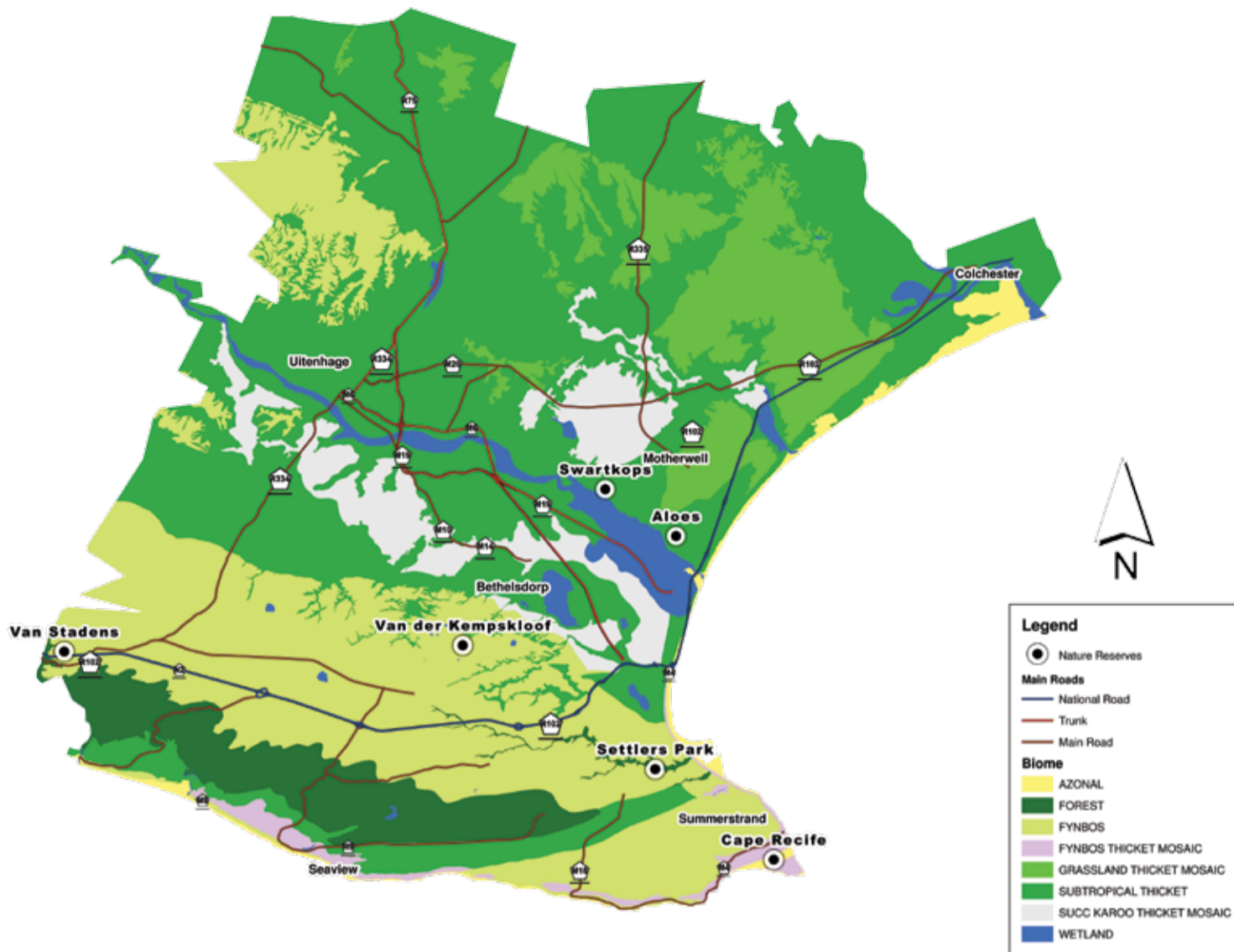
FOREST BIOME

The Forest Biome is found along the Southern Coastal Belt of Nelson Mandela Bay on south facing slopes. Forests are characterized by tall trees that form a canopy making it shady on the forest floor below. It is found in areas of high rainfall and in protected kloofs in the mountains, where it is wetter and cooler than surrounding areas and where it is protected from fires. Some spectacular species are found within the forests, well known examples include the vividly coloured Knysna turaco (*Tauraco corythaix*) and the imposing yellowwood tree (*Podocarpus latifolius*).



Knysna Loerie: Paul Martin

Nelson Mandela Bay Biomes



Outward Bound Route



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- Diving sites
- Blue Flag Beaches
- Visitor Information Centre



- Diving Sites inside the Bay**
- Shore Entry**
- The Slipway
 - Postmans
 - Devil's Reef
- Boat Entry**
- White Sands Reef
 - Bell Buoy
 - Phillip's Reef
- Wrecks**
- Cape Recife
 - North End Wrecks
 - Haerlem
- Diving Sites outside the Bay**
- Shore Entry**
- Malay Pools
- Boat Entry**
- Riv Banks
 - Suicide Reef
 - Avalanche
 - Mark 4
 - Thunderbolt Reef
- Wrecks**
- The Patti

Dive site Reference:
Dive Alert Network (DAN): 0800 020 111
Ocean Divers International - Tel: 041 581 5121 website: www.odipe.co.za
Pro Dive - Tel: 041 581 1144, website: www.prodrive.co.za

This map is not to scale and is for reference purposes and tourist information only.