

6.2 APPENDIX 2: PHYSICAL FEATURES AND SPECIES

Special Conservation Areas

The Phyl Martin Park, a botanical garden, is located on the eastern edge of Nature's Valley. Approximately 1,5 hectares.

The Fynbos Reserve is situated in the centre of Nature's Valley on one of the highest points in the valley. Approximately 1,2 hectares.

The Wetland Reserve (Erf 380)

Forest Trail (Erf 381)

The frontal dunes are home to some endemic plant species, including the *Satyrium princeps* which is locally endemic.

Climate

The climate in The Craggs and Tsitsikamma regions is characterized by a temperate coastal climate with an annual rainfall of 1 200mm. The region receives even rainfall throughout the year with the months of May, June and July being a little drier than other months. The higher peaks of the Tsitsikamma mountains such as Formosa Peak get snow and the temperature can drop below 0°C. Closer to the coast, the temperature is moderated by the sea. This area frequently experiences mist and fog, blown in from the sea. The temperature varies from between 20°C and 30°C in the summer months (October to April) to between 10°C and 20°C in the wetter winter months (May to September).

Geology & Soils

Professor Lubke (Head of Dept of Botany at Rhodes University) commented: Nature's Valley is dominated by Bokkeveld shale and sandstone of the Cape system. However, the localised site studied at Nature's Valley (Fynbos Reserve) was of similar geological origin to the Brenton and Goukamma localities, i.e. Pleistocene aeolionite. These aeolionite substrates form alkaline soils of high calcium content but with a low clay fraction. Organic levels in the soil are generally low, but depend on the nature of the vegetation cover. The Pleistocene deposits of the areas are widespread along the coast. They are restricted in extent and this factor may indirectly affect the distribution of the organisms upon which the butterfly, Brenton Blue butterfly (*Orachrysops niobe*), depends. In addition, soils formed from the substrate are generally richer in nutrients than most fynbos soils, thus promoting the occurrence of other vegetation types.

Vegetation

Existing vegetation in Nature's Valley includes succulents (including some exotic aloes), restios, indigenous geophytes, protea species, orchids, various ericas, agathosma and other fynbos species, Candlewoods (*Pterocelastrus tricuspidatus*), Keurbooms (*Virgilia oroboides*), etc.

The Fynbos Reserve is an old sand dune vegetated with coastal dune fynbos. In addition to Bracken (*Pteridium aquilinum*), it is dominated by three-meter-high Blombos (*Metalasia muricata*) at the western end, and pioneer forest dominated by Candlewood (*Pterocelastrus tricuspidatus*) at the eastern end. The top ridge of the reserve is prime fynbos with Erica (*Erica versicolor*, *Erica hispidula*, *Erica sparsa*, etc) and Agathosma (*Agathosma capensis*) species and ground orchids well represented.

Of vital importance to the Brenton Blue butterfly is *Indigofera erecta* (host plant of the butterfly) and this is found on the reserve along with other *Indigofera* species (*Indigofera verrucosa* and *Indigofera glaucescens*).

The forested areas of Nature's Valley include many of the Afromontane tree species of the Knysna enclave and the forest bordering the Groot River Pass is of particular importance. Three forest species (*Strychnos decussata* (Cape Teak), *Hippobromus pauciflorus* (false horsewood) and *Strelitzia alba* (wild tree banana), with limited representation elsewhere in the Southern Cape, have small populations in this area.

Larger Mammals

Nature's Valley is frequented by Bushbuck (*Tragelaphus scriptus*), Bushpig (*Potamochoerus porcus*) and Baboon (*Papio ursinus*). At least 22 species of mammals are known to roam in the De Vasselot section of the Tsitsikamma National Park and the environs of the Groot and Salt

River estuaries. These include Baboon (*Papio ursinus*), Vervet Monkey (*Cercopithecus aethiops*), Bushbuck (*Tragelaphus scriptus*), Genet (*Genetta genetta/Genetta tigrina*), Leopard (*Panthera pardus*), Honey Badger (*Mellivora capensis*), Cape Clawless Otter (*Aonyx capensis*), Cape Porcupine (*Hystrix africaeaustralis*), Water Mongoose (*Atilax paludinosus*), and Blue Duiker (*Philantomba monticola*), all of which are protected.

Reptiles and Amphibians

Thirteen species of amphibians have been recorded in Tsitsikamma National Park and these include the black rain frog (*Berviceps fuscus*) and the Knysna spiny reed frog (*Afraxalus knysnae*).

A total of 13 snake, 10 lizard and agama, 2 tortoise and 4 turtle species have been recorded in the National Park. Included here is the blue spotted girdled lizard (*Cordylus coeruleopunctatus*) and Knysna dwarf chameleon (*Bradypodion damaranum*).

Birds

Over 200 bird species have been recorded in and around Nature's Valley. They include large raptors such as the Long-crested Eagle (*Lophaetus occipitalis*), the Crowned eagle (*Stephanoaetus coronatus*) and the African fish eagle (*Haliaeetus vocifer*). In spring and summer the Emerald Cuckoos (*Chrysococcyx cupreus*), Narina Trogons (*Apaloderma narine*), Starred Robin (*Pogonocichla stellata*), Black-headed Orioles (*Oriolus larvatus*), Grey Cuckooshrike (*Coracina caesia*), and Knysna Woodpeckers (*Camphethera notata*) can be seen. The Groot River and estuary harbour the Half-collared Kingfisher (*Alcedo semitorquata*), the rare African Finfoot (*Podica senegalensis*) and White-backed Night Heron (*Gorsachius leuconotus*). The Victorin's Warbler (*Bradypterus victorini*), Cape Siskin (*Serinus totta*) and Orange-breasted Sunbird (*Nectarinia violacea*) can be found in the fynbos areas.

Insects

In addition to the obviously many insects that may be found in Nature's Valley {fireflies (*Lampyridae* family), Lace-wings (Order: *Neuroptera*), Common Emperor moths (*Bunaea alcinoë*) and Long-horned beetles}, of specific association with the Keurboom trees is the Silver-spotted Ghost Moth (*Leto venus*).

The Brenton Blue butterfly (*Orachrysops niobe*) is associated with the coastal dune fynbos habitat found on the Fynbos Reserve. Thought to be extinct, it was re-discovered after more than 100 years on the Reserve and presently only occurs on the Brenton Blue Reserve in Knysna, to the west of Nature's Valley.

Threatened Species

Mammals:

Blue duiker (*Philantomba monticola*)
Honey badger (*Mellivora capensis*)
Leopard (*Panthera pardus*)
African wildcat (*Felis lybica*)

Birds:

African finfoot (*Podica senegalensis*)
African black oystercatcher (*Haematopus moquini*)
White-backed night heron (*Gorsachius leuconotus*)
Stanley's bustard (*Neotis denhami*)
White stork (*Ciconia ciconia*)
Cuckoo hawk (*Aviceda cuculoides*)

Insects:

Brenton Blue butterfly (*Orachrysops niobe*) (associated with coastal dune fynbos habitat found in Nature's Valley).
Velvet worm (*Peripatopsis* sp.)
Silver-spotted ghost moth (*Leto venus*)

Plants:

Satyrium princeps – local endemic

Cape wild banana (*Strelitzia alba*) – local endemic

Coastal dune fynbos (a specific combination of fynbos species only known to occur in two areas along the southern Cape coast.)

Pincushion (*Leucospermum glabrum*)

Cape teak (*Strychnos decussata*)

False horsewood (*Hippobromus pauciflorus*)

Wild tree banana (*Strelitzia alba*)

South Africa's indigenous forests are the richest temperate forests in the world with respect to tree species but cover only about 0.5% of the country. Those in the southern Cape area are amongst the largest remaining areas in the country and the forest bordering the Groot River Pass near Nature's Valley are an important remnant of these forests.

Reptiles:

Knysna dwarf chameleon (*Bradypodion damaranum*)

Blue spotted girdled lizard (*Cordylus coeruseopunctatus*)

Plain rain frog (*Breviceps fuscus*)

Knysna spiny reed frog (*Hyperolius horstockii*)

SOURCE : NATURE'S VALLEY URBAN CONSERVANCY RESOURCE FILE 2007