

# RHEBOK HIKING TRAIL / VOETSLAANPAD

## History

When the Voortrekkers reached the Orange Free State in 1836 it was sparsely inhabited. The area around Golden Gate became occupied by white farmers at an early stage. Constant clashes between the farmers and the Basuto led to several wars till the border between the Free State and Basutoland was finally fixed by the treaty of Thaba Bosigo in 1869. During the Anglo-Boer War when the homesteads in the vicinity were destroyed and the women and children taken to concentration camps, Mrs. Cillier, wife of the owner of the farm. Noord-Brabant, now part of the park, fled with her children and hid for some time in a nearby cave. The name Golden Gate refers to the impressive sandstone cliffs on opposite sides of the valley at the Golden Gate dam. In 1875, a farmer J N R van Reenen and his wife stopped here on their way to their newly acquired farm Vuurland as the last rays of the setting sun fell on the cliffs. He named it "Golden Gate".

By 1960 Golden Gate had become a popular picnic site. The Orange Free State had no national park and the Administrator at that time, Mr. Sand du Plessis, and his Executive Committee decided to do something about it.

After a visit to Golden Gate in May 1962 it was agreed that the beautiful scenery justified the creation of a national park. The Provincial Administration immediately purchased the required land and handed its control over to the National Parks Board. In 1963, 4792 ha were proclaimed as a national park. In 1981 the park was enlarged to 6241ha and in 1988 to 11, 633ha.

The park is situated in the Rooiberge of the Eastern Free State and contains the foothills of the Maluti Mountains. The watershed between the Vaal and the Orange River systems is to the east of the park. Eastwards it feeds the Wilge River and to the Southwest the Caledon River. The Caledon River forms the Southern Boundary of the park as well as the border with Lesotho.

## Geology

The Golden Gate Highlands National Park is situated on the upper catchment area of the Little Caledon River. The highest peak in the park and also in the Free State is Ribbokkop (2829 m). The geological formations in park form the upper part of the Karoo Supergroup. These formations were deposited while the climate became progressively drier until arid desert conditions set in. The sedimentation process was terminated when lava flowed out over the desert 190 million years ago.

Starting from the bottom, the following sequence of geological formations are visible in the park:

**Molteno Formation.** This consists of coarse sandstone with layers of khaki-coloured mudstone in which leaf- impressions are imbedded. It is only visible in the eastern section of the park.

**Elliott Formation.** A reddish-brown mudstone which comprises the lowest parts of the valleys and is mostly covered by talus slopes and earth. It is visible north of the Little Caledon River at the Gladstone Dam and south of the tarred road at Rooidraai. The red colour of the mudstone and the presence of calcareous nodules is an indication that it was deposited under semi-arid conditions. It was most probably transported and deposited by rivers. The formation contains fossils of dinosaurs.

**Clarens Formation.** The spectacular yellowish-brown cliffs like Golden Gate and Brandwag are made up of this formation. It consists of very fine sandstone which was deposited by wind under

desert conditions. The layers vary in thickness from 140 to 160 metres. The vertical black stripes on the upper parts of the rock faces are formed by a dark-coloured mineral that seeps out with rainwater on the drainage line of the rock face. Lichens also grow on these damp areas adding to the dark colouring of these lines.

Calcareous nodules are common and can be seen in the toadstool rocks opposite the shop at Glen Reenen,

**Drakensberg Formation.** This dark-coloured formation, which lies on top of the Clarens Formation, is basaltic lava which flowed out over the sandstone in successive layers 190 million years ago. On Ribbokkop it is 600 metres thick. It forms the mountain summits in the park. Not all the molten rock (magma) flowed over the sandstone. Under tremendous pressure some of it was forced in horizontally between the formations to form hard dolerite plates. The molten magma also solidifies in the fissures through which it was pushed up to form dolerite dykes. These dykes are usually visible on the surface as ridges and may be kilometres long. At Rooidraai where the road cuts through the Elliot Formation, there are good examples of dolerite dykes.

Where the molten lava came into contact with the Clarens sandstone the tremendous heat baked the sandstone into a hard quartzite which is more resistant to erosion than the sandstone. Through erosion the sandstone becomes hollowed out to form a cave of which the veranda is formed by a hard quartzite plate. The overhang of the Cathedral Cave is formed by such a plate.

### **Palaeontology**

Palaeontology refers to the study of extinct wildlife, and in the case of Golden Gate, specifically to the periods from 200 to 220 million years ago. Palaeontology made the park world renowned for the fact that the first examples of fossilised dinosaur eggs were discovered here, dating back to the Trias Period (220 to 195 million years ago). Prof. James Kitching, director of the Bernard Price Institute of Palaeontology, discovered the first fossilised dinosaur eggs in 1978 in the Rooidraai vicinity. These eggs contained the embryos of the dinosaurs, *Massospondylus* sp., a sauropod dinosaur that occurred here. Sauropod dinosaurs walked on all fours and were usually very large. A publication was released in 1988 where it was proved that the eggs that were discovered in Golden Gate, appeared to be the transition between reptile- and bird eggs, and this important information explains a fair amount of the occurrence of certain evolutionary changes. More examples of these eggs were discovered during 1984 to 1988, and it appeared that the discovered nest could have contained up to twenty eggs. Several samples of other dinosaurs were also discovered in the park and from further geological surveys it appears as though many more fossils are yet to be discovered. These include fossils of more advanced cynodontia (canine toothed animals), small thecodontia (animals with teeth set firmly in the jaw), bird-like and crocodile-like dinosaurs.

The geological and palaeontological history book of rocks tells a multitude of stories of big lakes within which a huge variety of plants occurred and thousands of reptile-like creatures fed on. It also tells of long periods of severe droughts during which only the most hardy plants and animals survived, as well as of floods and wind storms over long periods of time.

Palaeontology as such stretches much further and wider, because through palaeontology a vision is formed of the ecosystems that existed here million years ago. Hereby it can be

stated for example that the Golden Gate area originally formed part of a massive river and lake system that was gradually covered by desert sand. The majority of fossils are discovered in the rock formations dating back to the period during which the lakes dried up. In these mud- and silt stone formations the fossilised remnants of tree and grass roots can be seen and it is even possible to determine a horizon line of a great grass plain that was catastrophically covered with sand. In other places in this area there is proof of a massive sand dune that was blown from a westerly direction into a shallow lime-rich lake.

The park is situated in the summer rainfall area with a relatively high rainfall of 800 mm per year. The winters are cold with frequent snow.

### **Vegetation**

The vegetation is typical sourgrass veld with a noticeable scarcity of indigenous trees, The few species present are mostly restricted to ravines, the sides of vertical cliffs and rocky ledges where they are protected against cold and veld fires.

The ouhout (*Leucosidca sericca*, a member of the rose family, is the most common tree in the park. It is an evergreen species that grows mostly in valleys and along streams where it may develop dense stands. The growth form varies from bushes to reasonably large trees with bark that peels off in strips. The leaves are composite with serrated edges. For some unknown reason the plant is a favourite habitat of beetles and 117 species occur on ouhout in the park.

The grasslands of the park harbour more than 50 grass species as well as a variety of bulbs and herbs, each with its own flowering time. As a result veld flowers may be seen throughout the summer.

The Lombardi poplars with their lovely autumn colours, as well as the weeping willows along the river, are exotics which are retained because of their cultural historic association with the eastern Free State. Other exotics like wattle and bluegum are systematically eradicated.



Leucosidia sericea  
Ouhout



Celtis africana  
White Stinkwood

**Lichens.** The irregular red, yellow or blackish blotches on the sandstone are growths of lichens. A lichen consists of a colony of blue-green algae which are capable of photosynthesis and a fungus which attaches the lichen to the rock face. Lichens also grow on the bark of trees where they may form a crust in humid areas. They also occur as long so-called beard mosses.

Lichens can live for hundreds of years. These occurring in the park plays an important role in the erosion of the rocks: the fungal threads penetrate the rock and secrete chemicals which speed up the natural erosion.

### Tree List

S.A Number	Common Name	Botanical Name
145	Ouhout	Leucosidia sericea
39	White Stinkwood	Celtis africana

18	Real Yellowwood	Podocarpus latifolius
563	Mountain Cabbage Tree	Cassonia paniculata
568	Parsley Tree	Heteromorpha arborescens
494	Wild Peach	Kiggelaria africana
670	Tree Fuschia	Haleria lucida
383	Boom Karee	Rus erosa
386	Karee	Rhus lancea
392	Common Taaibos	Rhus pyroides
452	Dogwood	Rhamnus prinoides
399	Common Spike-thorn	Maytenus heterophyllia
87	Highveld Protea	Protea caffra
96	Silver Protea	Protea roupelliae
594	Blue Guarri	Euclea crispa
381.1	Nana-berry	Rhus dentata
637	Sagewood	Buddleja salviifolia
636.2	Mountain Sage	Buddleja loricata
577.2	Cape Myrtle	Myrsine africana
	Fire-sticks	Diospyrus austro-africana
605	Bluebush	Diospyrus lycioides

## Mammals

Thirty-nine species of mammals have been recorded in the park. This comprises 12 species of mice, 10 carnivores and eight antelope species.

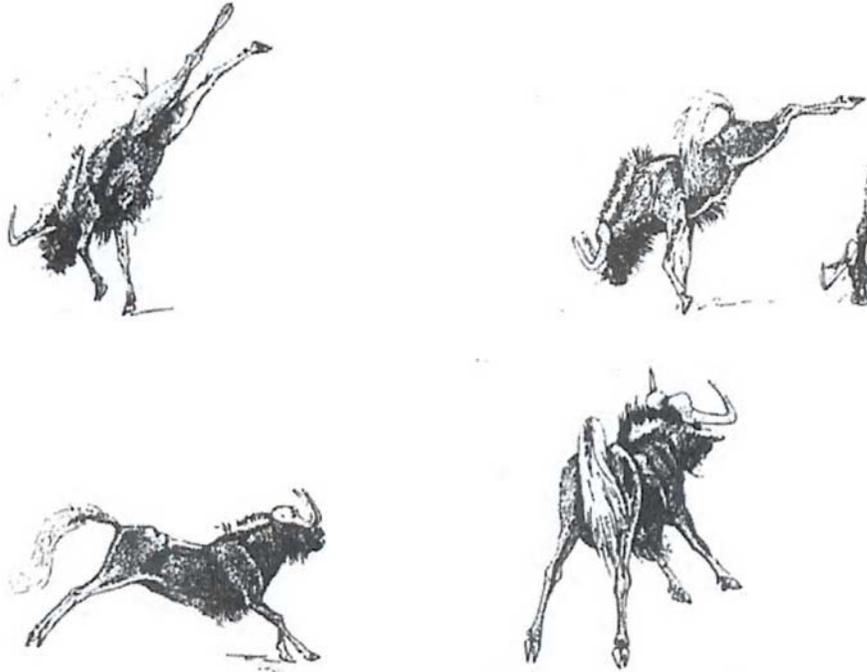
The **Grey rhebuck** and **mountain reedbuck** were present when the park was established. Eland, blesbok, black wildebeest, springbok, oribi and zebra were introduced.

The **grey rhebuck** (*Pelea capriolus*) and **mountain reedbuck** (*Redunca fulvorulula*) survived in the area maybe because their preferred habitat is higher up in the mountains than those of some other species of antelope.

**Black wildebeest** (*Connochaotes gnou*). Of the hundreds of thousands of black wildebeest that John Chapman saw in 1849, a mere 660 were estimated to have survived by the time the hunter

and painter Johan G Millais came to hunt this antelope on the farm of Oom Piet Terblanche, Syfergat near Kroonstad in 1893.

Millais became lyrical about the capers of the black wildebeest and the sketches shown below are from his book. The habit of frolicking across the veld in formation with their white tails flicking, make the black wildebeest one of our most spectacular antelopes. A herd always rests on the same place and will invariably return there after having been disturbed.



**Burchell's Zebra (*Equus burchelli*).** When Cornwallis-Harris hunted on the grassy plains of the Free State in 1837 he came across thousands of zebras. They were eventually exterminated and only recently brought back by farmers.

The zebras that you see in the park are Burchell's zebra and not mountain zebra. The latter occurs only in mountainous areas of the Cape Province. It can be seen in the Mountain Zebra and Karoo National Parks. Burchell's Zebra can be distinguished from the mountain zebra by the presence of faint brown shadow stripes between the black stripes on the sides and buttocks. The black stripes are continued on the belly while the mountain zebra's belly is without stripes. The stripes of Burchell's zebra are wider than those of the mountain zebra. The latter has a dewlap which is absent in Burchell's zebra.

**The Eland (*Taurotragus oryx*)** previously occurred over the whole of South Africa down to Cape Point. It is Africa's largest antelope and a bull can weigh up to 1 000 kg. Because it is easy to hunt and has delicious venison, it was almost exterminated at an early stage. In the previous century hunters used to chase an eland on horseback until it was exhausted after which it was driven to the wagon and shot. This saved carrying the meat.

The eland thrives in a variety of habitats from the Kalahari to the Drakensberg. In the Natal Drakensberg they migrate to the high altitudes in summer and move down into the warmer valleys for the winter. It is a restless creature that is constantly on the move. It feeds on grass, herbs and leaves. The horns are used to break branches to get hold of the leaves.

In spite of its great mass, an eland can clear a two-metre fence from a standing position. The only two species that can beat the eland is that champion jumper, the water-buck, followed by the kudu. While eland trot through the veld, they sometimes jump over each other. A trotting eland's hooves make a clicking sound that is characteristic of this antelope.

**Blesbok** *Damaliscus dorcas philhpsi* “When the does have young ones and a herd is disturbed, and takes away up the wind. every other herd in view follows it. and the alarm extending for miles and miles down the wind, to endless herds beyond the vision of the hunter, a continued stream of blesboks may often be seen scouring up wind for upwards of an hour, and covering the landscape as far as the eye can see.” This observation by Gordon Cumming in 1849 gives some indication of the incredible numbers of blesbok that roamed the plains of the Free State in those days.

Because there is no hiding place in the blesbok’s habitat, the only answer to danger is to run. Even a newborn lamb can run with the herd. No wonder a blesbok can outrun a hunting dog with ease.

A blesbok herd consists of groups of ewes with lambs, bachelor herds and solitary territorial rams, regarded by many as having been kicked out of the herd. Nothing is further from the truth: they are on the contrary the breeding males who collect and service a harem of females in the breeding season. A territorial male occupies a small area known as his territory with a dungpatch in the centre where he spends much of his time outside the mating season. He marks the territory with a black tarry secretion of his preorbital glands which open just below the eyes.

This secretion is deposited on a grass culm after which he sweeps his horns over it so that the secretion adheres to the basis of his horns. Females also have preorbital glands which are smaller than those of males. Both sexes have glands between the front hooves which secrete a fragrant yellow substance.

The alarm snort of the blesbok ram sounds like someone loudly blowing his nose. A lamb that has become separated from its mother will call with a bleat to which she answers with a grunt. While the two graze. they converse by regular soft groans.

## Birds

The park doesn’t have an extended bird list, although it is home to some interesting species.

The bearded vulture (*Gypaetus barbatus*) has a wing span of 2,8 m and is often spotted in flight over the park. It has a distinguished wedge shaped tail by which it can be easily identified. This vulture is a scavenger and also utilises bone marrow as a food source by dropping it on rock from 50 to a 150 m from the sky. With only 200 breeding pairs recorded in South Africa, the Bearded Vulture is classified as rare.

The Cape Vulture (*Gyps coprotheres*) is endemic to South Africa and used to occur over most of southern Africa. but is very restricted in its distribution nowadays and is therefore classified as vulnerable. They are also scavengers but feed on muscle meat and intestines, described as inside feeders .hence its bare neck.

The Bald Ibis (*Geronticus cabus*) is a beautiful bird with glossy dark green feathers that appear black at a distance, with a bald. red head and no feathers on as well as a red beak. .

Ground Woodpecker (*Geocolaptes olivaceus*) can be identified by its diagnostic pinkish red belly and rump It has a light grey colour with yellowish blotches on the wings and tail.

Orange throated Longclaw (*Macronyx capensis*) is characterised by its orange throat encircled with black A total of 140 bird species have been positively recorded in the park.



Gypsoetus barbotus  
Baardosvoël

### **Snakes**

Of the seven snake species that occur in the park, the puff adder, mountain adder and rinkhals can be classified as dangerous. Snakes are seldom seen, but when they are encountered they should definitely be avoided.

### **General suggestions**

A hike demands a great deal of exertion because of the broken topography of the terrain and a fair degree of fitness is essential. Consult the contour map of the route so that you will be well prepared to tackle the more exacting sections. You should begin the day's hike before 07h00 in summer time to ensure that you are well down the mountain slopes by the time lightning and thunder start in the afternoons, which can be very severe in this region. This does not mean you must run! Winter can be cold, with occasional snow, fog or sleet. Sudden drops in temperature are common

Keep to the route. Short-cuts are prohibited and you will only endanger yourself unnecessarily and get lost.

The hiking trail winds through valuable natural assets please be careful with fires and cigarette-ends.

When packing your rucksack please remember the following necessities: raincoat, warm clothing, knife, piece of string, plasters, aspirins, hat, water bottle, torch and sleeping bag.

Wear sturdy hiking shoes and thick woollen socks your feet are doing all the work.

Littering is a criminal offence and it includes the dropping of tissues, sweet-wrapping and cigarette-ends.

Close the doors and windows of the hut before departure, please.

Please, don't touch animals or birds you may sign the animal's death warrant.

You are in a conservation area. Do not damage, disfigure or tamper with any natural object. Look at the flowers or photograph them .do not pick them. Enjoy your hiking trip and indulge in photography: the photographs will serve to remind you of how you enjoyed the trip.

In case of an emergency you may contact the Section Ranger or Duty Manager. Expenditure in connection with any services rendered is payable.

NB: If you send a person to call for help, stay at the exact spot where you sent him from- that will help the rescue party find you.

**Information supplied by SANparks**