

Dassie Interpretive Trail



RATING: EASY

Welcome to the Dassie Interpretive Trail
(Self Guided)

The trail is approximately 5km in length and does require a certain level of fitness as it includes climbing over slippery rocks.

Before you begin the trail, do you have the following?

- ♦ Water
- ♦ Sunscreen
- ♦ Appropriate footwear
- ♦ A hat

Numbers found along the trail correspond to the information contained in this brochure. Please do not remove the numbered signs!

Mother Nature is fragile. Please stick to the path and leave only foot-prints (remove all trash).

We hope you enjoy it!

are not fit for human consumption because fig wasp pollinates the tree, lays its larvae in the flowers, the larvae form in the fruit, and eat the fruit until ready to emerge. However, other creatures eat the figs. Pale-winged starlings are the first to arrive once the figs are ripe, and their wing flapping attracts Augrabies flat lizards (*Platysaurus broadleyi*). (Augrabies flat lizards are small lizards that can be found only within a 100km radius of the Falls. The males are bright colored while the females are brown and blend in very well with the rocks.)



[9] Rock Dassies/ Hyrax (*Procavia capensis*)

Dassies are herbivores who eat

any vegetation from grass to tree leaves.

Rocks play an important role in the lives of dassies because that is their main escape from predators. Glandular secretions keep their feet moist which gives them the traction to climb steep rock faces and trees. Dassies live in colonies usually containing a dominant male and up to 50 females and juveniles of all ages.

One can usually see the presence of a dassie colony by the white

Giant Kingfisher (*Ceryle maxima*)

This is the largest of all the kingfishers (43-46cm). They are short-legged, dagger-billed, fish-eating birds. They plunge-dive for their food from a perch. Sometimes they hover briefly before diving. Fish caught are taken to a perch or the ground and beaten until not moving before being swallowed. They nest in a hole in a bank.

Cape Clawless Otter (*Aonyx capensis*)

These are found in freshwater systems, lagoons, and the sea so long as fresh drinking water is available. Their short, dense fur varies in colour from light to dark brown. Their legs are short, hind feet webbed with tiny nails, and front feet only slightly webbed with no nails. Adult otters can reach up to 18kg. They mainly eat crustaceans, frogs, fish, reptiles, and birds.

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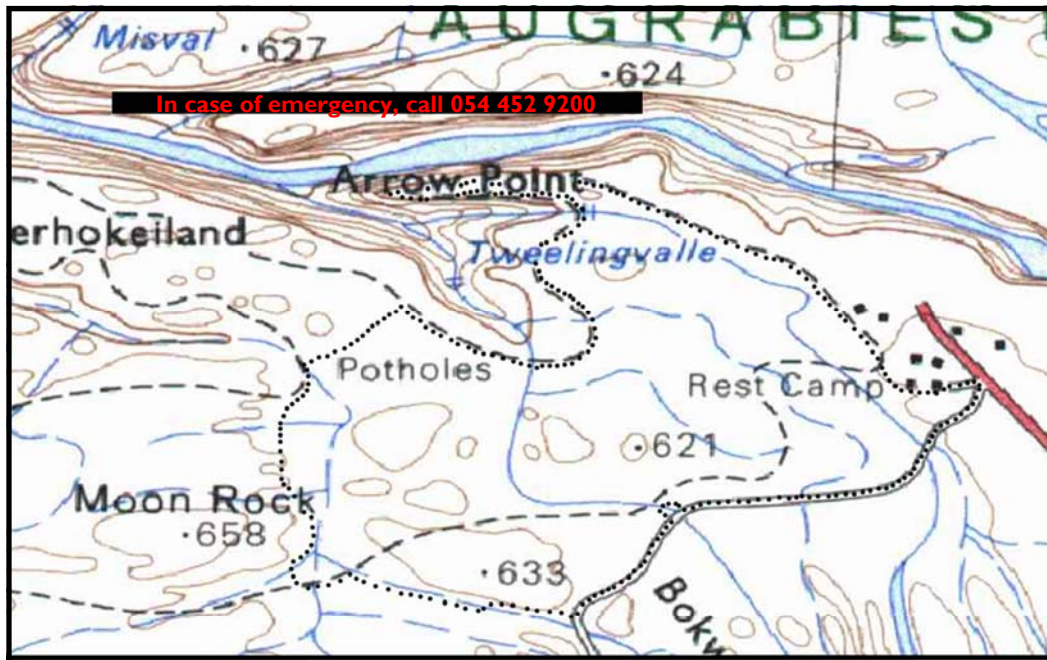
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In case of emergency, call 054 452 9200

LEGEND

- | | | | |
|--|---------------------------|---|--------------------|
|  | Main Road |  | River |
|  | Game Drive Road |  | Contour Lines |
|  | Klipspringer Hiking Trail |  | Man-made Structure |
|  | Dassie Interpretive Trail |  | Dassie Trail |

streaks of urine stains on the rocks and piles of feces in left in joint latrines. The crystallized urine has been sold as a folk medicine called hyracium in Southern Africa.

[10] Stream Life

The watercourses provide a totally different habitat within the surrounding arid environment that attracts a variety of wildlife. Highlights:

The Water Monitor (*Varanus niloticus*)

This is the largest African lizard (100-200cm). It has a stout body with powerful limbs and strong claws. The adults are greyish-brown on top of the head and back with scattered darker blotches. The throat and belly are paler with black bars. Juveniles are beautifully patterned in black and bright yellow. They are excellent swimmers using their oar-like tails. Adults forage in water for crabs and mussels, but will also eat frogs, fish, birds, and their eggs. Juveniles hunt in the reeds for frogs and insects.



[1] **The Common Reed** (*Phragmites australis*)

The name *Phragmites* is derived from the Greek word for fence, “Phragma” in reference to its fence-like growth along streams. *Phragmites* is found on every continent except Antarctica and may have the widest distribution of any flowering plant. *Phragmites* is frequently regarded as an aggressive, unwanted invader. However, it has the capability of efficiently filtering water and proves useful in the Augrabies Falls National Park where we utilise this plant filter our waste water before putting it back into the Orange River. *Phragmites* reeds can also pose a problem when they clog river systems through over growth. Much water is lost through transpiration in these reeds.

P. australis has many uses: baboons eat the underground shoots, stems are used in the construction of traditional reed huts, stems and leaves are used in the production of arts and crafts, and young men and women wear ornaments made from stem segments which are threaded onto fibre or animal fur string.

[2] **Stream Capture and Gorge Formation at Arrow Point**

Stream capture occurs when two side streams flow from a braided stream, but one cuts more quickly into its basin than the other. The consequence of this is that water is constantly drawn into the deeper channel which results in the deep chan-



nel's containing the majority of the water while the shallow channel has little to no water. There are many examples at the Main Falls (e.g. the Bridal Fall). At Arrow Point, this process is well illustrated with the secondary gorge on the left which carried a lot of water in the past but had it stolen further up the main channel.

(←Look farther left, and you can enjoy a special view of Twin

Falls.)



[3] **The Swart Rante (Black Ridges)**

The Swart Rante is an intrusive dyke complex: volcanic rock which solidified in a dyke formation deep under ground. Later, the dyke was subjected to intense heat and pressure which changed the mineral composition to form metamorphic rock.

Due to the fact that both volcanic and metamorphic rock erode at a slower rate than other rock types, the dyke still remains intact with the portion above ground being 8,2km long and 900m wide.

The rocks you see today consist of the minerals pyroxene, amphibole, and feldspar. The shiny black, glazed surface is created iron, manganese, and titanium oxides are leached from the rocks by the sun and deposited on the surface in a thin layer known as “desert varnish”. The

desert varnish protects against further weathering.

[4] **Decomposition**

Here is a perfect example of the very slow rate of decomposition. Dead plant matter accumulates and can lie around for years without being broken down. Valuable nutrients are therefore kept “locked up” and prevented from entering the soil. The most important decomposers in this area are harvester termites. Unlike African termites, which feed on fungus grown in special fungus gardens, the harvester termites feed directly on the plant material they collect.

In any ecosystem, the role of decomposers is vital. In most, typical decomposers are tiny soil organisms such as bacteria, protozoa, fungi and nematode worms which break down feces and dead plant matter. This then releases the nutrients back into the soil making them available to plants. Such decomposers occur in very small numbers here because conditions are too dry for them to survive in the soil. The micro-organisms in the guts of termites, however, are safe from desiccation and there they carry out their decomposer task to the mutual benefit of themselves, their host, and the ecosystem.

[5] **Shepherd's Tree** (*Boscia albitrunca*)

This is a stocky tree which is common in dry, open woodland and bushveld. The bark is smooth and conspicuously whitish-grey to reflect the sun's rays as an adaptation to conserve water. The leaves are small, hard and leathery to prevent too much water loss through transpiration.

In arid areas where this species grows, it is known as the “tree of life” since it affords sustenance to both man and animals. The leaves are a very nourishing fodder, and the roots can either be roasted and ground to make a substitute for coffee or pounded into a white meal for porridge.

In Botswana, the old trunks are hollow and hold rainwater which is tapped out by the Bushmen. A cold infusion of the leaves is applied as a lotion to inflamed eyes of cattle, and a decoction of the roots provides a treatment for hemorrhoids.

These trees also feature in the folklore and spiritual beliefs of many African people. In some areas, it is believed that the wood must never be burned as this will result in cows producing only bull calves. It is also said that if the fruit withers before the millet crop is ripe, the harvest will be a failure.

Many African people hold this tree in deep regard and the destruction thereof is forbidden. This tree is protected in the Free State and in some districts of the Northern Cape.

[6] **Moon Rock**

Moon Rock is a huge exfoliation dome made of Augrabies Gneiss. Exfoliation domes are formed when the uniform composition of granite (before it turns into gneiss) is extremely resistant to weathering because water, needed for chemical weathering, cannot penetrate the granite easily.

Moon Rock consists of two oblong, east-west aligned domes con-

nected in the middle. The northern dome is larger and is approximately 700m long and 100m high. The current weathering process on Moon Rock is known as onionskin weathering: layers of rock, from as thin as a few centimeters to as thick as a meters, wear away. This happens in all rocks that are mineralogically and texturally uniform.



The most exciting features of this type of rock are “A-frames” or “pop-ups.” Pop-ups are the result of internal stresses in the dome causing a top layer of rock to break away from the main rock along a sub-horizontal joint, splitting it in the process, and the two pieces end up leaning against each other. It's estimated that 80% of the pop-ups on Moon Rock have been destroyed by visitors picking up rocks and placing them on piles to commemorate their visit to Augrabies Falls. **Please don't pick up or remove any rocks from the park.**

[7] **Potholes**

According to the conventional theory, potholes are formed when the rocks of a streambed don't all have the same texture and size. Many joints and weaknesses, or hollows, may exist from the breaking out of large fragments. Once a depression is formed in the bed of a stream, sand grains and pebbles that are too heavy to flow past get lodged in the depression. While trapped, these items are moved in a circular motion by the running water, and they slowly grind away the walls of the depression. As the depression deepens, more pebbles are caught, and the cycle of grinding away the walls of the depression continues. Eventually, a pothole is created.

[8] **Namaqua Fig** (*Ficus chordata*)

This species is common in the dry, rocky deserts of the Northern Cape and is characteristically associated with rocks. The roots of this tree are so strong that they can literally break rocks apart, and thus they are also known by the nickname “Rock Breaker.” They are specially adapted to this environment: the leaves are evergreen so the tree doesn't waste energy shedding leaves and growing new ones; the leaves are also protected from hungry herbivores by a milky latex which makes them poisonous; and the bark is light-coloured to reflect the sun's rays, reducing water loss through transpiration.

The figs of this species are small—about 12mm in diameter. The figs