

## The Drakensberg

TC	VO
00:01	Lying in South Africa's heartland is a mystical world.
00:07	A land of extremes, where high barren peaks border rich, rolling grasslands.
00:19	Giants soar in the skies...
00:22	And the most vulnerable seek shelter.
00:30	The vast mountain range poses a constant danger and a daily challenge.
00:40	But for those that have adapted, it's home.
00:51	Still, even for the mightiest, life is never easy in the Drakensberg's Barrier of Spears.
<b>Series Title - Africa's Hidden KINGDOMS</b>	
<b>Episode Title - Drakensberg Barrier of Spears</b>	
01:31	The Zulu people who live along the eastern shadow of the mountain range call it uKhahlamba.
01:39	The Barrier of Spears.
01:44	The first Dutch settlers to drive their ox-wagons into the foothills named it the Drakensberg.
01:52	The Dragon's Mountain.
01:58	Both names are still in use today but most South Africans simply refer to it as "The Berg"...
02:06	The Mountain.
02:11	Regardless of what it is called, the gargantuan sequence of peaks that divides Kwazulu-Natal from the cloud-reaching Kingdom of Lesotho...
02:20	Is among the most impressive landscapes in South Africa.
02:30	The Drakensberg mountain range extends more than 900 kilometers across Southern Africa.
<i>IMP</i>	<i>The Drakensberg mountain range extends more than 550 miles across Southern Africa.</i>
02:39	It encompasses massive sandstone buttresses,
02:46	Grass-covered slopes,
02:51	And 3 kilometer high cathedral-like rock towers.
<i>IMP</i>	<i>And 2 mile high cathedral-like rock towers.</i>

02:57	Dangerous thunderstorms can gather in a matter of moments.
03:07	And a mighty waterfall plummets more than 900 meters from its cliffs.
<i>IMP</i>	<i>And a mighty waterfall plummets almost 3,000 feet from its cliffs.</i>
03:18	The mountains' rugged character is paired with stunning natural beauty.
03:27	And surviving here requires the ability to adapt and use the mountain to your advantage.
03:41	Overnight temperatures regularly drop below freezing so for many mountain residents; the rising sun is their cue to get moving.
03:52	The Drakensberg is home to a number of species of birds of prey.
03:59	Soaring high over the mountain they glide vast distances along the many peaks and cliffs.
04:10	But one species requires a little more assistance to get airborne.
04:17	The Cape vulture is not an early riser.
04:22	One of the most widely spread scavengers on the mountain, you don't see them out and about until the sun is well above the horizon - and the thermals are strong enough to get them, and keep them, airborne.
04:40	Highly sociable, they nest and roost in large colonies along the cliffs where they sit and wait for the first air currents of the day to rise up the mountainside.
04:53	On still days, they may not take off at all – at almost 10 kilograms they are just too heavy.
<i>IMP</i>	<i>On still days, they may not take off at all – at almost 22 pounds they are just too heavy.</i>
05:03	But when the conditions are right, they launch themselves off the cliffs.
05:42	Making use of up-draughts produced as wind blows over the mountain ridges, they fly back and forth to gain height.
05:55	Once up, the vultures flap as little as possible.
06:01	They have a special arrangement of muscles that enables them to lock their wings, keeping them extended in the soaring position for hours at a time.
06:13	Using thermals decreases the need to flap their huge, 1 meter long wings, meaning the birds use three times less energy than they would need for flapping.
<i>IMP</i>	<i>Using thermals decreases the need to flap their huge, 3 foot long wings, meaning the birds use three times less energy than they would need for flapping .</i>
06:32	Vultures coast and soar with so little wasted effort, they can range over a distance of almost 150 kilometers on a good day .
<i>IMP</i>	<i>Vultures coast and soar with so little wasted effort, they can range over a distance of almost</i>

	<i>90 miles on a good day</i>
06:43	As scavengers, they feed mostly on carrion.
06:50	When searching for food they form a foraging net across the sky, watching each other as they search large areas to locate a suitable carcass.
07:05	This can require travelling great distances.
07:12	When they spot a potential meal, Cape vultures can swoop down, circling in a four and a half kilometer radius and dropping almost 300 meters to the ground in less than six minutes.
<i>IMP</i>	<i>When they spot a potential meal, Cape vultures can swoop down, circling in a two and a half mile radius and dropping 980 feet to the ground in less than six minutes.</i>
07:27	These heavy birds have evolved to use the updrafts and thermals created by the warming sun to master the skies over the Drakensberg.
07:41	Cape vultures are one of a number of species that soar between the peaks.
07:49	Lammergeyers, black eagles and harrier hawks are all found here.
07:57	And for many on the mountain they pose a constant threat.
08:06	As rocks warm in the morning, cold-blooded reptiles use the sun's heat as an energy source.
08:18	The rocky outcrops of the Drakensberg provide a refuge for many lizards...
08:25	And the ideal spot for basking.
08:30	Lizards control their body temperature through a process known as thermoregulation.
08:41	They use the environment to raise and lower their body temperature.
08:53	Either by basking in full sunlight.
08:58	Or by sheltering under a rock.
09:09	The mountains are home to some striking species.
09:17	These Speckled rock skinks seem to almost enjoy their sunbathing despite the threat from above.
09:28	A lower transparent eyelid provides a window for the lizards to peep through while closing their eyes.
09:37	An evolutionary adaptation offering protection to the skinks' eyes as well as allowing them to stay alert to predators.
09:49	Camouflage is crucial when you have to lie out in the open for long periods, unable to make a quick get-away.
09:59	It allows this Southern rock agama to blend in, making it harder to spot from above.

10:08	The Drakensberg's lizards are not the only creatures that depend on the sun.
10:17	A large Mole snake has been warming up in the grasslands.
10:24	Being cold-blooded, they too must heat up before they can perform their regular reptilian activities.
10:32	Most days, this means finding a meal.
10:41	Up on the exposed surface it is now a balancing act between gaining enough warmth from the sun, while at the same time having to deal with a chilling wind.
10:56	It's a slow start to the day.
11:00	A cold snake cannot hunt.
11:15	They feed predominantly on small warm-blooded mammals such as rats, mice and moles.
11:24	They are not venomous. Instead they constrict their prey with powerful coils, which they wrap around the unfortunate rodents.
11:39	Once fully charged, the meter-long serpent heads off in search of a meal.
<i>IMP</i>	<i>Once fully charged, the 3-foot long serpent heads off in search of a meal.</i>
11:54	It pays to make the most of the sun when it's out.
12:04	The weather can change in a matter of hours on the mountain.
12:09	At this altitude days and nights can be bitterly cold, often dropping below freezing.
12:20	To survive here it is vital you keep warm.
12:29	The Cape rock hyrax live in large colonies of up to 25 animals among the crags and boulders of the Drakensberg.
12:41	And there is nothing they enjoy more than a spot of sunbathing.
13:17	Once warm the colony begins to forage.
13:23	Their mountain home provides all the food they need.
13:38	But on a warm day, predators patrol the skies above the Drakensberg.
14:04	The hyraxes are exposed, vulnerable, but they are always alert to danger.
14:21	The black eagle dives.
14:36	The more pairs of eyes the better. Up here working as a team can be the difference between life and death.

14:47	Living in large groups has provided the hyrax with the security they need to survive the slopes of the Drakensberg.
14:59	But not all of the Drakensberg's mammals have chosen communal living as a survival method.
15:07	Some have opted for a life of solitude and use the cover of darkness to their advantage.
15:17	On the grasslands below, one of the mountain's most secretive residents emerges.
15:25	A climbing mouse.
15:28	At a little over 6 centimeters long, it is minute.
<i>IMP</i>	<i>At a little over 2 inches long, it is minute.</i>
15:34	Living in the shadow of the mountain it inhabits the savanna, feeding on grasses.
15:45	A long prehensile tail and specially adapted toes help them climb stalks to reach the succulent seeds at the top.
16:14	In this mighty landscape they can easily be overlooked -
16:24	But the Drakensberg has supported the great and small throughout its history.
16:34	The story of how this extraordinary mountain range got to be here begins around three billion years ago, when this landmass was part of a supercontinent known as Gondwana.
16:50	Scientists believe that at that time a massive lake covered the granite foundation on which the mountain now stands.
17:01	Over the course of millions of years, runoff carried sand and mud into the lake, where it settled into sedimentary layers that hardened under the compacting weight.
17:16	This process carried on until several hundred million years ago.
17:22	The youngest of these sedimentary layers now lies exposed in the cliffs at the base of the Drakensberg range.
17:32	Then, around 160 million years ago, immense pressure deep within the Earth caused Gondwana to split apart.
17:44	The slowly drifting tectonic plates formed the continents of today.
17:52	In this period of great change, vast lava flows poured out through fractures in the Earth's crust.
18:00	Hardening into layers of basalt.
18:09	Over about 20 million years, the basalt deposits grew to be nearly one and a half kilometers thick over the sandstone below.

<p><i>IMP</i></p> <p>18:18</p> <p>18:27</p> <p>18:35</p> <p>18:44</p> <p>18:53</p> <p><i>IMP</i></p> <p>19:09</p> <p>19:19</p> <p>19:34</p> <p>19:46</p> <p>20:00</p> <p>20:11</p> <p>20:19</p> <p>20:25</p>	<p><i>Over about 20 million years, the basalt deposits grew to be nearly a mile thick over the sandstone below.</i></p> <p>The results were majestic.</p> <p>When the lava flows stopped it halted the construction of this extraordinary mountain range,</p> <p>And a slow process of wearing away began.</p> <p>Along the escarpment, erosion often follows fracture planes that form deep within the rock.</p> <p>As the rocks crumble along these planes, broad cliff faces form — sometimes extending in a straight line for many kilometers.</p> <p><i>As the rocks crumble along these planes, broad cliff faces form — sometimes extending in a straight line for many miles.</i></p> <p>Higher still, much of the hard basalt has long since been whittled down by time and the elements.</p> <p>Blocks and slabs were shorn away, then pulverized over centuries of weathering or were swallowed by the Drakensberg’s deep ravines.</p> <p>Now, only towering peaks remain, a chain of sentinels keeping watch over the landscape.</p> <p>The debris from this long process has been churned into a black soil that supports the grasses covering the slopes below.</p> <p>From every vantage point, this “Barrier of Spears” bears the scars of the powerful forces that have shaped it through the ages.</p> <p>But the Drakensberg too is a force and has an impact on the surrounding landscape.</p> <p>For this reason it is also known by another name:</p> <p>The “Creator of Rivers”.</p>
<p>20:41</p> <p>20:54</p> <p>21:02</p> <p><i>IMP</i></p> <p>21:22</p>	<p>High rainfall combined with winter snow and porous basalt rock makes the Drakensberg the most important watershed in southern Africa.</p> <p>It’s the source of several significant rivers; including South Africa’s two largest.</p> <p>The west-flowing Orange, which runs 2,200 kilometers before emptying into the Atlantic Ocean and the east-flowing Thukela, which flows over 500 kilometers in the opposite direction before it reaches the east coast.</p> <p><i>The west-flowing Orange, which runs over 1,300 miles before emptying into the Atlantic Ocean and the east-flowing Thukela, which flows over 300 miles in the opposite direction before it reaches the east coast.</i></p> <p>Up to 2,000 millimeters of rain can fall on the high plateau in a single year.</p>

<i>IMP</i>	<i>Up to 6.5 feet of rain can fall on the high plateau in a single year.</i>
21:30	There is snow cover for four months of the year in protected gullies and in south facing slopes.
21:39	Mists shroud the peaks.
21:43	Strong winds batter their summits,
21:48	And torrential thunderstorms regularly build during the summer months.
21:55	The lifeblood of the Drakensberg combines and overflows, pouring off the mountain.
22:04	Nowhere is this more impressive than at the Thukela falls.
22:10	With a total drop of 947 meters it is the highest waterfall in Africa and the second highest in the world.
<i>IMP</i>	<i>With a total drop of over 3,000 feet. It is the highest waterfall in Africa and the second highest in the world.</i>
22:23	It is so high that by the time the water has reached the bottom much of it has turned into mist.
22:32	Disappearing into thin air.
22:40	From their very beginning, the Drakensberg's rivers support life despite the harsh conditions.
22:47	River frogs embrace the cold; living in high altitude streams - some even spend the winter months sheltered under a layer of ice.
23:03	Freshwater crabs breed successfully, populating the waterways.
23:37	And the abundance of life attracts visitors.
23:43	A lone Black stork feeds along a river on one of the high plateaus.
23:50	These migratory birds are attracted to the mountain as they make their way north.
23:59	An African spoonbill has also made its way up from the plains below.
24:10	The rich, fertile lands provide a wealth of feeding opportunities for them both, with frogs and crabs being favored items on the stork's menu.
24:24	The perfect pit stop on their annual migration.
24:41	As the waterways flow further down the mountain they finally spread out into the vast grasslands surrounding its peaks.
24:55	Despite looking like one homogenous mass, these plains are actually made up of an incredibly diverse mix of species.
25:09	The montane grasslands have an exceptionally rich biodiversity,

25:18	And this has contributed to the Drakensberg's status as a World Heritage Site.
25:26	The total number of plant species recorded equates to about a tenth of all plant species in South Africa.
25:39	Incredibly 13 percent of these are found nowhere else on Earth.
25:56	The grasslands harbor a wealth of life.
26:07	The vast expanse of land lying at the foot of the mighty Drakensberg plays host to animals of all shapes and sizes.
26:20	Each species has adapted to make the most of what's on offer.
26:27	But to do so, they must cover huge distances as food and resources are spread far and wide.
26:36	Black-backed jackals thrive on the lives the mountain takes.
26:42	Scavenging on carcasses.
26:57	For one family, the day's foraging starts in the open grasslands.
27:04	After spending the freezing night sheltering in the mountains endless caves and overhangs, this troop of Chacma baboons has come down to forage.
27:19	The family move as one unit and those that can't keep up are carried.
27:34	But out on the plains they are all vulnerable.
27:40	Exposed by the enormity of the landscape, the Drakensberg's aerial predators are a constant threat even for these heavyweights.
28:04	But baboons are opportunists, and a clear morning has enticed them out of last night's dwellings.
28:14	Chacma baboons are highly adaptable and can survive in a range of habitats.
28:21	The key to their success in the Drakensberg is to not be picky eaters.
28:28	The baboons' diet includes almost anything that is edible.
28:34	When foraging they use their fingers to dig through the hard soil to reach the nutritious plant roots, bulbs and grubs below.
28:44	This technique has allowed them to carve out a life for themselves in this barren landscape.
28:53	These grasslands also attract visitors from afar.
29:04	These White storks spent the warm summer months of the breeding season in parts of central and southern Europe, the Middle East and Asia.
29:19	As winter arrived they undertook a spectacular migration, flying directly across the vast expanse of the Sahara.
29:32	Before eventually taking up residence in the shadow of the Drakensberg's peaks.

29:43	The White stork is a largely carnivorous bird, consuming a wide range of prey including snakes, frogs, insects and on occasion some rodent species.
30:11	They are not picky eaters – almost anything will do.
30:17	Allowing them to scrape a living from the Drakensberg's meager offerings.
30:24	The White stork is a tough character but it's not the only animal drawn to the Drakensberg.
30:34	Down on the plains large grazers gather.
30:39	But all are dwarfed by their surroundings.
30:51	Black wildebeest used to migrate across the region in their thousands but due to human activity they are now restricted to the Drakensberg's territory.
31:06	Small grazing herds roam the grasslands and plateaus as they feed.
31:13	They are hardy survivors.
31:20	Thick, dark coats insulate them better than their relative the Blue wildebeest, making them more adapted to the severe cold.
31:36	They require little protection during the mountain's cold winter and at its higher altitudes.
32:01	Despite the abundance of land in the Drakensberg, the rules of Africa's savannas still apply here when it comes to territory.
32:10	The best are prime sparring grounds for male hartebeests.
32:24	Their domains must incorporate a rich source of food, easy access to water and a firm footing during the rains.
32:36	Competition for such pivotal lands is fierce...
32:43	Ruling individuals will regularly meet at their borders and lock horns.
33:07	Serious fights, though rare, can result in fatalities.
33:13	For now, it seems they are just letting off a bit steam.
33:25	With so many grazers competing for the mountain's fresh succulent grasses,
33:30	Some have been forced higher to find land of their own.
33:37	The Grey rhebok ekes out a living on these steep slopes.
33:46	It has evolved to survive here by subsisting off grasses that are either inaccessible or unpalatable to most other antelope in the Drakensberg.
34:00	The rhebok lives in some of the more barren areas of the Drakensberg, where some of the very first species to settle here continue to thrive.

34:25	One of the earliest life forms to take hold had a lasting influence.
34:36	The arrival of lichen is a vital step in the colonization of bare rock.
34:55	
35:19	As soil slowly begins to accumulate in the cracks of rocks, and the dead bodies of lichens begin to gather, larger plants are able to gain a hold on the layer of remains.
35:19	As these gather, they break up the rock even more and they add their own dead bodies to the pile.
35:34	Creating soil where the seeds of small plants are able to root and grow.
35:48	But the entire process starts with the lowly lichen.
35:59	And without it the Drakensberg would have a very different appearance.
36:08	Throughout the range plants and animals have adapted to survive the extreme conditions faced on a daily basis.
36:18	At higher altitudes the soil is like a dry sponge.
36:28	This prevents it from freezing in the severe cold.
36:33	Above the tree line plants survive because many of them have subterranean bulbs and roots.
36:42	While lower down specialists fringe the streams and rivers running off the mountain.
37:02	Mosses are perfectly adapted to make the most of the wet conditions.
37:09	Part of an ancient lineage, they were one of the first plants to colonize the mighty mountain range.
37:17	Along with the pioneering lichen.
37:21	The damp, shady, sparsely vegetated rock faces of the Drakensberg are the ideal habitat for them to thrive.
37:41	And they create an ideal hiding place for a hunter.
37:47	A Many-spotted snake uses its surroundings as cover.
38:03	Only its breathing gives it away.
38:25	Lurking along the Drakensberg's streams, rivers and marshes it searches for a meal.
38:44	It preys on amphibians, like Karoo toads that have adapted to blend into the rocky banks.
38:53	But even when you are well camouflaged, sometimes the best defense is a hasty retreat.

39:06	As the evening light settles on the grasslands, its residents head for shelter.
39:13	The White storks have to make do with any form of high ground.
39:18	A lone tree does the job.
39:23	The travelers gather in informal colonies.
39:29	The Chacma baboons also need to head home.
39:36	They travel back up the mountain to the safety of their caves.
39:49	They are not the only primates to have used these caves for shelter.
39:58	Over time many have gazed out over this dramatic landscape.
40:06	Formed over the centuries by a slow process of weathering, these hollows have served as a refuge from the Drakensberg's fierce elements.
40:18	For more than 4,000 years they were home to the indigenous San people, who created a vast body of rock art.
40:31	The largest and most prolific collection in Africa.
40:38	There are some 600 sites and 35,000 individual images in the Drakensberg alone.
40:51	The Bushmen were drawn here by the abundance of game living on the grasslands.
41:01	The images depict a detailed account of their hunter-gather existence.
41:12	Among the animals represented in these paintings, eland are given a prominent role.
41:25	Both the quantity and quality of the eland paintings are remarkable, suggesting they were very important in San culture.
41:40	While most other animals are regularly depicted in a single color, the eland are painted in combinations of several, often using sophisticated shading techniques.
41:55	Today eland still have a central role in the Drakensberg story.
42:01	They are one of the most common large mammals in the area, with an estimated 2,000 individuals representing around 20 percent of the South African population.
42:17	The Cape eland typically move in herds of up to 15.
42:24	Even at a distance these giant 900 kilogram animals are unmistakable.
<i>IMP</i>	<i>Even at a distance these giant 1,900-pound animals are unmistakable.</i>
42:34	Their unique bulk and heavy dewlap, once revered by the Bushmen for its high fat content,

	give the animals an iconic image.
42:49	Their mountain home has supported life throughout the ages.
43:08	By the end of the 19th century, the San had disappeared from the Drakensberg completely.
43:15	Driven out by European settlers.
43:19	But their drawings remained.
43:22	Based on known rates of deterioration, most of the rock art remaining in the Drakensberg belongs to the last 1,000 years of occupation – if not the last few centuries.
43:37	Today they offer a glimpse back in time, a reminder of the people who lived, survived and thrived for centuries in this extreme land.
43:58	While some have come and gone others have stayed and flourished.
44:05	Conquering the Drakensberg is not easy but if successful the mountain will shelter and protect those willing to live here.
44:19	The mighty Barrier of Spears is a formidable and unforgiving landscape.
44:28	A hostile wilderness.
44:33	Where harsh conditions make every day a challenge.
44:47	But for the few that have taken them on, the rewards have been worth it.
45:02	In the mountain's hidden corners a host of creatures have found sanctuary.
45:11	While some rise above the peaks,
45:15	Others thrive in their shadows.
45:30	Stretching as far as the eye can see it is called the "Barrier of Spears" for good reason.
45:37	It's a realm of sharp extremes, an unforgiving land that also harbors a wealth of life ... creating one of Africa's greatest Hidden Kingdoms.
<b>CREDITS</b>	

## REFERENCES