

## SERENGETI SCRIPT

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A scene from a million years ago. Today, the ancient herds are still on the move, still shadowed by old foes -- in a remnant of an Earth that once was ...a place where life is still untamed.

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Spanning 5700 square miles, The Serengeti is a rare and protected area with an astonishing diversity of life.

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Extraordinary wildlife thrives where the life-giving elements of Earth abound. And here in East Africa, nature's riches are spectacular ... with an active volcano, tropical rainforest, savanna woodlands, vast grassy plains, and a murky river with creatures whose ancestors walked with dinosaurs.

Untouched wildlife on this scale endures today in few places.

It's special and rare.

To protect it, we need to understand it.

So how does it all work?

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We begin on these rocky outcrops, or kopis, with one of Serengeti's newest residents.

Kijana is the Swahili word for little one. And this kijana is just days old.

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Right now, he's a playful cub in part of a large family. But when he grows up, he'll be a top predator here.

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With their mighty bearing, you'd think that these lions are kings of the Serengeti, but they're not.

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So, if not the lion, which is the key species here?

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It's the humble wildebeest, or gnu. Gnu are mild-mannered grazers.

So, what makes them supreme on the Serengeti? Numbers.

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There are more than a million of them.

And everywhere they go, they have a ripple effect on this ecosystem.

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The wildebeests' home turf is in the north of the Serengeti.

For about five months, there's enough good grazing and a permanent water source to take care of the entire herd.

But by late October, the massive population has nearly exhausted the food supply.

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Further south, the short rains called Vuli begin, offering the promise of greener pastures.

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So begins the start of one of the greatest migrations on earth.

It's a round trip of over 1000 miles.

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Every year like clockwork, the wildebeest follow the rain south. Their destination? The short grass plains. Joining them, a quarter of a million zebras and a half dozen other species.

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Among the other migrants are some African legends.

These elephants, or tembos in Swahili, move in family units led by the matriarch, the oldest and wisest of the bunch.

The males are mostly solitary.

They go at their own pace.

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This little girl will stay with her mom for her entire life, learning all that she needs to know from her.

And who knows, maybe one day she'll grow up to be the matriarch.

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As the elephants move through the woodlands, they feed on trees, thinning them out and clearing a path for the wildebeest migration.

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The Serengeti's other giants, giraffes, or twiga, primarily live in these woodlands.

They've evolved to eat what is out of reach to others.

So there's no need for them to migrate.

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But for the million strong wildebeests, the search for food motivates their migration and the distant rains draw them southward.

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After two months, the migration arrives at its destination, the short grass plains in the south of the Serengeti.

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It is not just grazing land. This is also their birthing grounds.

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It's now February and over the next few weeks, about 400,000 calves will be born.

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Only a few minutes old and instinct drives this wildebeest calf to stand.

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Things happen fast.

In these first minutes, mother and calf imprint on each other and learn each other's unique sound.

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That's not mom.

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Within 15 minutes, the calves can run, an important skill for a species that is always on the move.

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There are also crucial life lessons, like who is friend.....and who is foe.

Definitely a foe.

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Luckily for this calf, this lion is not looking for a meal.

Intuitively, wildebeest's moms give birth late in the morning, after the predators have fed.

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Wildebeest calves are born with survival skills.

Predator cubs, like these cheetahs, they need to be taught.

They're home-schooled by mom.

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She uses a termite mound to scan for today's lessons.

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It's time to see if the cubs have been paying attention to ~~their lessons.~~

Here comes the opposing team.

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The wildebeests focus on defence.

The cubs, on the other hand, well, they're acting like its playtime.

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Clearly, more work needs to be done.

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As darkness falls it's the predators turn to be on the defence.

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This is prime time for male lions.

They'll spend the night patrolling their territory, keeping their pride safe.

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That roaring is meant to warn intruders to stay away or face a fight.

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Predators play an important role in any natural community.

They help regulate the population of grazing animals so they don't overeat and destroy the ecosystem.

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As the sun rises, the predators retreat to a cool place to sleep, leaving ownership of the plains to the wildebeest.

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Across the ages, a mutually beneficial arrangement developed between the grasses and the wildebeest.

The grazers rely on the grass for food, they in turn encourage new growth as they eat and trample the soil.

Their dung also fertilizes the soil..... with a little help from these Dudu's.

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Dudu means insect in Swahili.

The dudus in this case are dung beetles who break apart the waste.

There's technique involved.

Some dig through it.

Others prefer to roll it into balls.

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Dung is so prized that dudus will fight over it.

The goal? Attract a mate, lay an egg, and bury it in the ground, where the egg is then incubated by the dung.

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This action disposes of the waste, tills the soil, and instantly fertilizes the plains, making the grass even more nutritious

The dung beetles are small, but in the Serengeti, they have a mighty role.

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How could such an extraordinary place come about?

Surrounding these lush plains is a ridge of volcanoes that tells the story of the Serengeti's turbulent geological past.

3 million years ago, the area was dominated by gigantic active volcanoes.

Over millions of years, they laid a foundation of volcanic ash hundreds of feet deep that created the Serengeti plains.

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Today, the active volcano Ol Doinyo Lengai stands as a remnant of that volcanic era.

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Lengai erupts every 40 years, covering the plains with volcanic ash that is full of minerals and nutrients, all of which are needed for the healthy growth of plants.

A super soil, born of fire.

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At the foot of Lengai is lake Natron.

The volcanoes collect rain water that runs into rivers and springs that feed this lake.

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The waters of Lake Natron are so acidic that only a few species thrive here.

The most notable, the spectacular pink flamingo.

[00:22:40} Each year, millions of flamingos migrate here from all over East Africa.

It's the Serengeti ecosystem's other major migration.

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Back on the short grass plains it's about to get wet.

Masika the long rains, start in March and last for several months, fed by monsoon winds off the Indian ocean, they drench the entire Serengeti.

The rains produce seasonal rivers and waterholes, a vital resource for all life here.

As the elephants play their movements deepen the river, forming pools.

These pools become home to Hippos.

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Hippo skin is extremely sensitive to the sun.

They spend up to 16 hours a day lounging in these pools, cooling off.

It's key to their survival.

But the rains of Masika don't last forever.

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By late June, the monsoonal winds have changed direction, robbing the short grass plains in the south of moisture.

The change is fast and dramatic.

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Without the rains, the grasses dry up, leaving an arid landscape.

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The wildebeest sense in the changing weather what thousands of generations before them have -- that to survive they must be on the move again.

A massive exodus begins.

The herds head back north.

The calves that have only known life on these lush planes get their first taste of migration with a 300-mile journey

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For the resident predators on the plains, the time of plenty is over.

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But for the wildebeest, migration does not end the relentless threat of predation. The route north weaves through the territory of other lion prides.

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They will have to run the gauntlet all the way home.

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Life is plentiful here.

But so is death.

And death, in its own way, serves the Serengeti.

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High on the cliffs of Gol Mountains, vultures are leaving their nesting grounds.

As the heat of the day increases, they catch rising thermals.

With a wingspan over two meters, they can climb as high as a jumbo jet.

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The vultures are scavengers, searching the ground for dead and dying animals.

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They are another vital layer in Serengeti's intricately woven web of life.

They're clean-up crews recycling nutrients back into the ecosystem.

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It's August. The wildebeest are almost back at their home in the north.

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The plains here haven't been grazed in over six months, making it hard to spot danger.

The dry grasses are like tinder for summer lightning storms.

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Fire clears out the long dead grass, allowing for a flush of green just as the herds arrive.

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But to get home to the fresh grasses and security awaiting them, they must cross the treacherous Mara River – the most dangerous moment in all of the annual migrations.

Eager to reach home they speed up.

But ominous risks await them.

The banks of the Mara are steep and hazardous.

The currents are strong enough to sweep a calf away.

The herd seems reluctant to take the first step.

The elder wildebeests have made this crossing many times

But the calves have never encountered the Mara's greatest menace ...

For crocodiles, a feast is about to begin.

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At the Mara, a drink of water can have deadly consequences.

For the zebra, a narrow escape.

These crocodiles are ferocious, effective hunters and they've waited six months for this.

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The instinct of a single animal triggers the herd to follow.

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The herd's numbers are so massive that the crossing takes many weeks.

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Some will die, drowning in the Maras swift currents or taken by the jaws of crocodiles.....but many more make it to safety and their home in the northern plains.

They'll stay here for months until the rains of Vuli come again, beckoning them to begin their migration back to their birthing grounds.

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The wildebeest lifecycle is one of perpetual motion. At every stage of their annual migration, they affect every species they encounter to the benefit of the entire ecosystem.

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The interconnectedness that keeps the Serengeti vital shows us how nature works and it applies to nature everywhere.

Each species, including our own, is instrumental in creating the grand symphony of nature.

It has been so for millions of years, as the Serengeti bears witness – a timeless spectacle of life untamed, in a remnant of an earth that once was ...

THE END