



## Tsavo National Park



### THE BIOSPHERE

With the human population of our planet steadily increasing at the rate of one million more people every five or six days, the total number of humans passed the 6,000 million mark towards the end of the twentieth Century.

The rate of increase may be judged by the fact that in 1970, there were rather fewer than 3,500 million humans inhabiting the world.

The biosphere is the peripheral envelope of the earth together with its surrounding atmosphere in which living things exist, ranging from the deepest layers of the soils and ocean trenches upwards to the highest levels of atmosphere in which any form of life is present.

We humans not only live in the biosphere but are absolutely dependent on it for almost every aspect of our existence. We constitute an integral part of the biosphere, but we are so prominent and active, that we are now changing it very considerably ? and much more rapidly for our future safety and survival.

There is also a great need to make more people aware of the biosphere. We must also become fully aware of the need to maintain and protect this fragile and precious key to our own survival.

As the population increases so do environmental problems of every kind. The needs of the human race appear to be insatiable and we seem to be plundering Earth's resources without much thought for the future and with little regard for the irreparable damage we may be inflicting on the very biosphere upon which we are so dependent for almost every facet of our life support system!

Some of the changes effected by Man are extremely dangerous, especially those we regard as irreversible. Among the better-known examples of Man's effect on the biosphere are:

1. The atmospheric build-up of carbon dioxide
2. Threats to the stratospheric ozone shield
3. The threat of a nuclear disaster
4. Pollution of fresh and salt waters, and of soil and air
5. Erosion and other effects of devegetation, and loss of much of the potential for genetic variation

## NATIONAL PARKS

The world's national parks could be regarded as a step in the right direction, although by no means a solution to the problems we face.

The very first area to be set aside as a "nature reserve" is said to have been a section of the forest of Fontainebleau, near Paris.

Although this act could not really be regarded as the start of the national park movement, the establishment of that reserve in 1858 almost certainly helped to sow the seed.

It was not until 1864 that the first real national park was created. This occurred when the Congress of the United States of America granted the Yosemite Valley near San Francisco to the State of California to be held in trust for public use and recreation for all time.

Even so, it was not described as a national park when first established, and the first named national park was the Yellowstone National Park, the greater part of which is in Wyoming. Yellowstone was not established until 1872, but it can still claim to be the oldest national park in the world (with Yosemite (pronounced Yo-sem-ity) a close second).

From 1872 the national park movement gradually became worldwide as more and more countries declared areas large and small to be national parks, although the precise interpretation of the term tends to differ slightly in certain countries.

Some of the most exciting and interesting parks are to be found in Africa, where the earliest reserves were

created not so very long after Yellowstone.

The great Kruger National Park in South Africa developed from the Sabie Game Reserve established by President Kruger in 1892.

In Tanzania, the Serengeti National Park (5,600 square miles) was created in 1951, and has since drawn many thousands of tourists to marvel at the great herds of game to be seen on the plains of Serengeti or in the Ngorongoro Crater.

However it is to Kenya that we turn now, to learn something of another world renowned park ? the Tsavo National Park, created in 1948.

## THE TSAVO NATIONAL PARK

One of East Africa's main wildlife strongholds, the Tsavo National Park is Kenya's largest national park, covering an area of 8,034 square miles; an area slightly bigger than Wales!

This vast arid region lies approximately half-way between Nairobi and the Indian Ocean, with the Nairobi-Mombasa road and railway dividing the park, from north-west to south-east, into two main sections.

The area to the north and east of the road forms Tsavo Park East that to the south and west, Tsavo Park West.

Despite its generally arid and rugged topography, the Tsavo National Park offers an interesting variety of habitats and ecosystems ranging from semi-desert, savannah and open plains, to acacia woodland, palm thickets, mountain forest and riverine vegetation. There are hills, rocky ridges and outcrops, lava flows and clear water springs.

Geologically speaking, the main rocks of the Tsavo are ancient gneisses and schists formed more than 600 million years ago.

In many parts of the park they have been worn down by weathering into level plains covered by more recent deposits, thereby concealing the age of the area to the casual observer. These rocks are clearly visible, however, in hilly parts that have resisted erosion such as the Ngulia Hills and the Ndi Hills.

It is these ancient rocks, in the western part of the park, that have yielded large supplies of the minerals kyanite and graphite. The graphite occurs in a series of bands that can be traced for many miles on either side of the Tsavo River.

Millions of years after the formation of the gneisses, volcanic eruptions took place and gave rise to two of the Park's most attractive features; the Chyulu Hills in the north-west, and the Yatta Plateau along the east along the east side of the Athi River. The gently declining narrow lava surface of the Yatta stretches for some 170 miles.

The Chyulu Hills consist of a series of volcanic cones, many of which are largely composed of volcanic ash. There are also lava flows which extend on to the lower ground and can be seen in the Mtito Andei valley east of the Chyulu Hills and at Mzima Springs. The volcano Shitani stands about half-way up the southern end of the Chyulu range. Here you can see the basalt lava flows, piles of lava splashes thrown up by lava fountains, and the surrounding ash fields.

Acting as a giant sponge, the Chyulu Hills absorb much of the rain that falls on them. Much of this water disappears underground and moves towards the southern part of the hills, flowing underneath the lavas and eventually emerging again as the crystal clear waters of Mzima Springs.

Mzima is a favourite attraction for tourists of all nationalities, for here one can go below ground to view hippos through plate glass windows, like a gigantic aquarium tank. Large shoals of fish (chiefly barbell) can also be seen through the glass windows.

About 50 million gallons of crystal clear water flow out into Mzima Springs each day.

Another great spectacle of the Tsavo, is Mudanda Roack. This mile-long outcrop is a water catchment area which supplies a natural dam at its base. The whale-back of this outcrop directs the water from each shower of rain into the pool beneath. Here, in dry weather, hundreds of elephant come to drink, and it is possible for tourists to observe this breath-taking scene from a wide ledge on the east side of the pool.

Tsavo is renowned for its great elephant herds. It is also known for its marauding bands of elephant poachers. Some of these poachers still work in the old way ? with poison-tipped arrows and primitive bows. Ot

hens, however, are well armed and equipped, with trucks, Land Rovers and the latest in automatic weaponry. The modern poacher moves fast, and a small gang ? using trucks and automatic weapons ? can wreak havoc on a herd of elephant. Modern poachers have little hesitation in using their guns against game guards. The guards, generally speaking, are armed with old rifles made for the Great War of 1914-18, so they are ill-equipped to deal with the kind of poacher we have today. Recently however, the Government of Kenya has brought in the Kenyan Army to help check poachers ? and this has been of considerable value.

With well over 500 miles of roadways in the Park, tourists are able to see a wide variety of animals, including black rhinoceros, buffalo, giraffe and such antelopes as the lesser kudu, gerenuk, fringe-eared oryx, eland, waterbuck and impala. Lion, leopard and cheetah are also listed.

The birds of the Tsavo include bustards, hornbills, sunbirds, weaver birds, heron, egret, secretary bird, vulture, fish eagle, buzzards, kites, harriers, eagles, ostrich and many, many more.

Among the reptiles are crocodile, several species of lizard, common mamba, Egyptian cobra, black-necked cobra, night adder and puff adder.

Two permanent rivers carry water into the Tsavo National Park. One of these is the Tsavo River which flows through the western sector of the park; the other is the Athi River which crosses part of the eastern section.

Eventually the two rivers join to become the Galana River. To the south there is another river, the Voi, but this is not permanently flowing, and its presence and volume depend upon the seasonal rains.

Today the Tsavo National Park attracts tourists from far and wide ? and yet, before the construction of the Mombasa-Nairobi-Lake Victoria railway, the Tsavo was a wilderness area in which huge numbers of wild animals were left largely undisturbed.

Now, there are threats and problems of many kinds to worry those in whose hands the future of the Tsavo rests. Poaching has increased alarmingly and both elephant and rhinoceros have been savagely killed in great numbers.

Fire is an ever-present hazard during the dry season, and huge tracts of vegetation have been destroyed from time to time by fires that are impossible to control. Many such fires are caused quite unintentionally by

Africans seeking honey and burning smoking torches to quieten the bees.

Erosion is another problem. Much of the erosion is natural; but in other cases it has been caused by too many tourists driving across the dry soil instead of keeping to roads and tracks.

Squatters may try to occupy some of the more fertile zones and introduce cattle. The cattle soon dispose of all the edible greenery ? thereby helping to cause further erosion and loss of ground cover.

There are always people who regard great open spaces as ideal locations for development. There are those who regard the Tsavo as their tribal homeland. There are also those who care little for natural resources if there is a chance of rich mineral deposits within the boundaries of national parks.

Disease may strike at any time, killing off thousands of animals and weakening thousands more. Drought is another killer, although many animals instinctively migrate towards the few permanent water supplies when severe drought occurs.

Patrolling an area about the size of Wales with just a small company of rangers presents endless problems, and more aircraft and helicopters are badly needed to help alleviate the present situation. More rangers would be the simple answer, together with more modern equipment and weapons. However, such reinforcement and re-equipping would cost a great deal of money, which the Government of Kenya just could not afford at present.

So the future of the Tsavo National Park hangs in the balance to some extent, despite the dedication of the game rangers and the devotion of such people as Daphne Sheldrick and her late husband David, who for many years was the Chief Warden of the Tsavo.

There is no doubt that the Government of Kenya will do everything in its power and within its limited budget to protect all that country's national parks, but it may need a great deal more help in the future.

Probably few of the tourists who visit the Tsavo each year ever pause to wonder about the history of that vast region. Very few indeed are likely to be aware of the fact that once, not so long ago, Arab slave traders followed the course of the Galana River into the hinterland to raid tribal settlements and then return to the

coast with their 'bag' of chained and terrified men, women and children.

Perhaps a few older visitors to the Tsavo will recall that during the Great War of 1914-18 (World War 1), what is now the national park was part of a wartime 'front', where British East African forces fought the Army of Imperial Germany! Even today there are still the abandoned trenches and fortifications to be seen and even rusted equipment is found in the hills dating back to that war.

Many stories are still told and re-told concerning the Great War as it affected the Tsavo. The attitude of the British in Kenya at that time might be summed up by the famous telegram sent by the stationmaster at Voi to his headquarters in Nairobi saying:

'Just sighted 300 Germans. Please send one rifle and 300 rounds of ammunition. Very urgent!'

Gradually, we begin to realize that a national park is not just a tract of countryside in which animals are protected. It has history, beauty, problems, hazards and dangers. Above all, places like the Tsavo are well worth cherishing and protecting, for the sake of generations yet to be born, because the park, with all its problems, high cost and management difficulties contains a small proportion of our world's priceless heritage of wildlife and genetic diversity which future generations should inherit from us intact.

## MAMMALS OF TSAVO NATIONAL PARK

Spectacled Elephant Shrew

East African Hedgehog

Giant White-toothed Shrew

Rousette Fruit Bat



Epauletted Fruit Bat

Pale-bellied Fruit Bat

White-bellied Tomb Bat

Hollow-faced Bat

False Vampire Bat

Yellow-winged Bat

Lander's Horseshoe Bat

Lesser Leaf-nosed Bat

Giant Leaf-nosed Bat

(Recorded from Galana River)

African Trident Bat

Banana Bat or African Pipistrelle

Yellow-bellied Bat

Angola Free-tailed Bat

White-bellied Free-tailed Bat

Flat-headed Free-tailed Bat

## **Fruit bats**

Giant Leaf-nosed Bat



(Recorded from Galana River)

African Trident Bat

Banana Bat or African Pipistrelle

Yellow-bellied Bat

Angola Free-tailed Bat

White-bellied Free-tailed Bat

Flat-headed Free-tailed Bat

Greater Galago

Bush Baby

Black-faced Vervet

Blue or Sykes?? Monkey

**Blue monkey**

Yellow Baboon



Lesser Ground Pangolin

Hunting Dog

Golden Jackal

Black-backed or Silver-backed Jackal

Side-striped Jackal

Bat-eared Fox

Zorilla

Ratel or Honey Badger

Clawless Otter

African Civet

Neumann?s or Small-spotted Genet

Bush or Large-spotted Genet

**African civet**

African Palm Civet

Marsh Mongoose

Dwarf Mongoose

Large Grey Mongoose

Slender or Black-tipped Mongoose

White-tailed Mongoose



Banded Mongoose

Aard-wolf

Spotted Hyaena

Striped Hyaena

Cheetah

Caracal

African Wild Cat

Serval

Lion

Leopard

Ant Bear

Tree Hyrax

Rock Hyrax

African Elephant

Black Rhinoceros

Grevy's Zebra (Reputed to occur in extreme north of park)

Burchell's or Common Zebra

**Serval**



Warthog

Masai Giraffe

Coke?s Hartebeest or Kongoni

Hunter?s Hartebeest

Red Duiker

Blue Duiker

Bush Duiker

Klipspringer

Suni

Steinbok

Kirk?s Dik-dik

Common Waterbuck

Bohor Reedbuck

Impala

Grant?s Gazelle

Gerenuk

Fringe-eared Oryx

Bushbuck

Lesser Kudu

Eland

**Masai giraffe**



African Buffalo

African Hare

Cane Rat

Porcupine

Striped Ground Squirrel

Unstriped Ground Squirrel

Bush Squirrel

East African Red Squirrel

Spring Hare

African Dormouse

Giant Rat

Kenya Mole Rat

Naked Mole Rat

**African buffalo**

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