

A Portrait of Kenya's Wildlife

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Think of wildlife and you think of Africa. Think of big game, the 'Big Five', the world's greatest wildlife spectacles, and your mind turns to East Africa. But think of a classic wildlife safari across sun-kissed African savanna and of course you think of Kenya. Other countries may share Kenya's astonishing wildlife diversity but for its photogenic nature and easy accessibility, Kenya surely takes the gold.

It is no exaggeration to suggest that the very existence of Kenya as a sovereign territory owes a great deal to the abundance and visibility of its wildlife. Early Arab and European explorers and traders gave what is now Kenya a wide berth on account of their fears of marauding bands of Masai warriors. Joseph Thomson broke this particular spell in 1884 when he discovered that a degree of humility and good neighbourliness paid dividends and avoided hostility. As a result, it became possible that the route from the Indian Ocean into the interior of East Africa could be reduced in both time and distance by using Mombasa instead of Zanzibar as a jumping off point, trekking directly up-country towards Lake Victoria instead of taking the more arduous and circuitous route through central Tanganyika and around the southern end of the lake.

A few years later came about the permanent route for both railway and road which continues to serve so well up to the present day. The construction of the railway from Mombasa to the shores of Lake Victoria in the final years of the nineteenth century gave European visitors the opportunity to see just what incredible wildlife spectacles existed in this part of the world. Instead of having to march for weeks on end with long caravans of porters, hunters, naturalists and other tourists could now watch big game from the comfort of their carriage.

Although big game hunting in all its guises - sport hunting, trophy hunting and the ivory trade - formed the early core of the fledgling safari business, this led in a short space of time to what has subsequently become the massive wildlife tourism industry which now forms one of the greatest contributing sectors to the Kenyan economy.

Cherry Kearton, one of the world's first wildlife photographers, visited Kenya on safari in 1910. Here's what he had to say about his first impressions. (*From Photographing Wildlife around the World, by Cherry Kearton, Arrowsmith Books, London, 1913*)

"I had, of course, heard a great deal about the railway and of the nature of the journey itself, but I was not prepared for the marvels I saw.

I spied a troop of ten giraffe, so close to the permanent way that I could have hit them. Evidently they had become quite accustomed to the trains. I was, perhaps, more excited than those giraffe were, but as the hours went by I grew accustomed to it, although I had never expected to see one tenth of the number of game. Literally, it was Nature's Zoo. All the time the numbers seemed to increase, until you began to wonder how it was possible for so many to find pasturage. Zebra, wildebeeste, kongoni, Thomson's gazelle, Grants, eland, ostrich, a lion and a rhino - we saw all these actually from our railway carriage. During the last forty miles, whilst we were crossing the great Kapiti and Athi plains, it was impossible for anyone possessed of ordinary eyesight to look out and not see game of some sort or another."

Even today, visitors arriving at Jomo Kenyatta International Airport are just as likely to spot a troop of giraffe on the plains adjacent to the airfield, and the dry season migrations of plains game into Nairobi National Park can have just the same lasting impact as they did nearly a hundred years ago.

Diversity of habitats

There are two secrets behind the wonder of Kenya's wildlife - a marvellous climatic diversity leading to a plethora of different habitats, and a strong cultural legacy of custodianship from indigenous tribes such as the Masai. Kenya straddles the equator, which gives it two seasonal cycles each year as the sun passes back and forth between the tropics, trawling rain clouds behind it. The country's ecological zones span the greatest possible range from beneath the ocean to the snowfields and glaciers at over 17,000' on Mt Kenya. At least seven distinct habitats can be characterised, based on varying altitude, rainfall and climatic conditions.

The **pelagic ocean** habitat lies offshore, where the seasonal winds and currents flow alternately up and down the East African coast line. The steady 'Kaskazi' monsoon blows from the north east from November to March. This is the wind which in ancient times brought sailing dhows and settlers from the southern Arabian peninsula to form the characteristic East African coastal culture we now know as Swahili. But the currents bring too shoals of billfish - marlin, sailfish and swordfish - along with tuna, dorado and barracuda, sharks and whales. The deep sea fishing grounds off Watamu in the north and Shimoni in the south are considered by sport fishermen to be among the best in the world and many records have been taken here. Nowadays, a tag-and-release scheme ensures that this big game of the ocean remains numerous, while important research has revealed that these denizens of the deep undertake massive migratory journeys which encircle virtually the entire Indian Ocean from Kwa-Zulu Natal in the South all the way round via Arabia and India to Western Australia.

Along the shoreline itself, Kenya possess one of the finest stretches of **coral reef** in the world, forming in turn part of one of the world's longest reefs which runs more or less uninterrupted for 4,000km from Somalia to Mozambique. Coral reefs are living ecosystems which accommodate an enormously diverse range of species. Snorkellers and divers can see lobsters, octopus, turtles, and a huge variety of colourful reef fish such as parrot fish, wrasse, angel fish, clown fish, box fish, and a host of others.

Much of Kenya, as indeed much of Africa itself, consists of the wide open spaces variously referred to as plains, **steppe or savanna**. This is the Africa of infinite cloudscapes, of distant horizons, baked by the midday sun but where you can watch stars rise and set at night. Savanna comes in a number of types depending on the amount of rainfall it receives on and on its soil type. This in turn affects the type of vegetation. Dry grass savannas are home to the vast herds of gazelle, antelope and zebra that are often called 'plains game'. These species are grazers, able to exploit what to other creatures might be just straw or woody stems. But the abundance of these large mammals testifies to the sheer productivity of the savanna ecosystem which although often dry is able to turn the cellulose fibres of its grasses into protein to build muscle and bone. Typical mammals of the grass savannas include hartebeest, wildebeest, oryx and oribi. On the short-grass plains, pock-marked by termites mounds, Thomson's gazelle, bat eared fox and nocturnal spring hares are the characteristics species. Thornbush savannas possess a dense, sometimes impenetrable, growth of prickly vegetation which deters some species while offering sanctuary to others. These areas are typically less used by humans and livestock and may provide shelter and nourishment to antelopes such as lesser kudu, gerenuk and dikdik.

Acacia savannas support a speckling of the tree that so characterises the habitat, the flat-topped umbrella tree or *Acacia tortilis*. In such areas, 'tree islands' may emerge as clusters of woody vegetation in a sea of grass. They may also grade into denser **dry woodlands** which typically form a transition zone between the open plains and other habitats. This is the preferred habitat of browsers such as impala, giraffe and elephant. The reedy or bushy vegetation where savannas merge into swampy areas near lakeshores and river banks is home to mammals such as waterbuck, reedbuck and buffalo.

Semi-desert terrain exists across a huge swathe of northern and eastern Kenya covering almost half of the land area. This habitat consists of open sandy areas interspersed with varieties of thornbush and some grasses. Particularly where open water occurs, wildlife can be plentiful, from

blossoming flowers after the rains, to clouds of butterflies, huge flocks of seed-eating birds and mammals such as dikdik, gerenuk and reticulated giraffe.

In Kenya, **tropical forests** or rain forests are confined to the moister zones in the west of the country and on the flanks of the higher mountain ranges such as the Aberdares, Mt Elgon and Mt Kenya. Much of the Kenyan highlands was formerly covered in forests of various kinds but this is the first habitat to fall to the influence of human settlement and relatively little remains. A great deal of what is left continues under threat. Great swathes of the Mau escarpment - the high lying land between Naivasha and Kericho - has been devastated by bulldozers, chainsaws and fire, contributing, it is supposed, to localised climate change and a greater frequency of drought. Moist forests, ecologists tell us, act as the lungs of a nation, breathing life into the atmosphere and soil. The long term effects of the loss of forest cover has yet to be fully felt. Meanwhile, much of the Kenyan rain forests continues to be accessible to visitors but although wildlife is often abundant it can be difficult to see. Elephant and small antelope called duiker are amongst the characteristic species of forests, and monkeys can often be seen swinging and clambering around the treetops. Species include black and white colobus and Sykes' monkeys, though in the Kakamega forest, a remnant patch more typical of the great central African forest, a much greater range of arboreal monkey species can be found. Forests range in Kenya's equatorial highlands to over 9,000' in altitude at which level, the habitat gives way to moorlands of tussock grass and giant heathers. Here, in concentrated ultra violet light but with chillingly cold night time temperatures, strange overgrown species of plants grow - giant versions of groundsels and lobelias whose nectar is sipped by long tailed malachite sunbirds. Mammals too have adapted to this environment and it is not unusual to see jet black serval cats and leopards prowling in search of francolin, a kind of equatorial partridge.

Kenya's landscape soars yet higher. Mt Kenya, the second highest in Africa, peaks at 17,058'. Above 15,000' lies the **snowline and perennial glaciers**. Here, wildlife is less common, restricted to the occasional marauding raven and soaring vulture. But if these zones form the interlocking jigsaw puzzle that is Kenya's ecology, other important pieces help fill in the gaps . . . lakes, rivers, islands, deltas, isolated craggy outcrops, mangrove swamps and wetlands. All these provide refuge to characteristic and sometimes unique wildlife species. And they provide unending excitement for both tourist and naturalist alike.

Although certain mammal species are characteristic to specific habitats, several occur in Kenya that have adapted to differing zones and evolved into separate races or closely related species. There are three types of giraffe, for example, the common or Masai race of the savanna woodlands, the three-horned Rothschild's giraffe from western Kenya, and the more starkly marked and colourful reticulated giraffe which occurs in the semi-deserts in the north. There are two types of zebra, the common or Burchell's zebra with the well-known black-and-white stripes and the more narrowly striped Grevy's zebra which has tufty ears and lives in the northern semi-deserts. The Bohor reedbuck lives by lakeshores, the greyer and more slender mountain reedbuck can be found in hill country. The lesser kudu is common in thornbush scrub in parts of southern Masailand and in Meru National Park, while the more stately greater kudu with its spiralled horns occurs in Kenya only on the rocky outcrops of the Laikipia plateau and Samburu country. There are three varieties of hartebeest - the Coke's or common occurring in the southern plains, Jackson's in Laikipia, and the rare hirola or Hunter's hartebeest confined to an enclave on the Tana River. The closely related topi occurs in the south west of Kenya and its close relative the tiang in the far north on the Sudan border. The geographical divide of the Great Rift Valley acts as a separator for some other species. The olive baboon lives to the east of the escarpment while the smaller yellow baboon thrives to the west. The ringed-rump or common waterbuck lives to the east while the patched-rump Defassa waterbuck occurs in the west. Oribi occur only to the west of the rift valley while another smaller antelope, the suni, occurs only to the east.

It's not only mammals that can be seen in these diverse habitats. The variety of birdlife too is second to none, while a huge range of insect species and reptiles are also found here.

Seasonal cycles

The seasonal shifts of climate produce yet another fascinating feature of Kenya's wildlife – the famous migrations. Many people have heard about the mass movements of wildebeest and other plains game including zebra and gazelle which take place each year between the vast Serengeti ecosystem and Kenya's Masai Mara. But less well known are the spring and autumn migrations of palearctic bird species. Flocks of storks, eagles, ducks, waders and smaller perching birds fly literally thousands of kilometres to and from their summer nesting grounds in northern Europe. Within East Africa, other species undertake shorter flights to their seasonal haunts.

When the rains come in April, the fields turn green, the flowers bloom and the trees are full of the noise of birds building nests and attracting mates. For three months or so, this is the season of cool air and clear skies, fresh mornings and nippy nights. Plentiful water and grazing means that wildlife can roam free, spreading out over vast tracts of land throughout southern Kenya in particular. But as the drought bites towards September and October, diminishing supplies draw the herds back to the perennial pastures and waterholes protected by the parks and reserves.

For another three months, the plains fill with incoming game until the short rains come again in November. Then the half year cycle repeats itself again. Thus Kenya enjoys two seasonal cycles each year, with two green seasons full of colour and activity and two dry seasons when the parks fill with game.

Images of wildlife

Images of Kenya's wildlife held in the mind or on photographic paper last for a lifetime and help retain the visitor's sense of wonder – and also help explain why an African safari is at the top of the 'must do' list for so many people from the industrialised world . . .

. . . a giraffe silhouetted against the golden setting orb of the sun . . . a prowling dappled leopard in the fading light of dusk . . . a dancing ostrich with its 'orphanage' of young prancing along behind . . . a lyre-horned impala leaping effortlessly over a high fence . . . skeins of candy pink flamingos undulating across a lake . . .

The extraordinary variety is unending and truly astounding. Kenya's register of wild animals includes horses (zebras), ungulates (buffalo, antelopes), cats (lions, leopards, cheetah), dogs (wild dogs, hyena), pigs (warthog, giant forest hog, bushpig), rodents (rats, porcupines, mice, squirrels), monkeys, bushbabies, aardvarks, rabbits and hares, hedgehogs . . .

The biggest mammal is the African elephant, actually holding the record as the largest land mammal in the world weighing in at up to six tonnes. The white rhino, although not strictly indigenous to Kenya, is next at 2.5 tonnes followed by the hippo at 1.5 tonnes. The black rhino is more lightly built than the white variety and weighs around a tonne. A mature bull buffalo can weigh about 750 kg.

The tallest animal in the world is the Masai giraffe which can grow to over five metres tall.

The biggest antelope is the massively built eland which can grow up to 500 kg. Great kudu, wildebeest, Oryx and sable can all clock in at around 230 kg.

At the other end of the scale, the smallest antelopes to be found in Kenya are the suni and dikdik which measure only 30 cm or so at the shoulder and weigh a mere 5 kg.

Amongst the antelopes, there is too a fascinating variety in the shape of their horns, with the males typically possessing the most impressive sets. The sable's are massively back-swept scimitars, the oryx's long straight spears, the kudu's dramatic spirals, the duiker's short sharp spikes.

Visitors' fascination is most characteristically captured by the big cats, especially the lion, the cheetah and the elusive but surprisingly common leopard. The 'Big Five' was the term used to describe the top five trophies sought by hunters - lion, leopard, rhino, buffalo, and elephant. But modern day tourists are often just as excited at the antics of a host of smaller animals that can be seen around their camps and lodges. These include genets, mongooses, squirrels and hyraxes.

While beauty lies very much in the eye of the beholder, there is some consensus about the most attractive wildlife species. Many people's favourite is the elegant and lovely spotted cheetah with its characteristic 'teardrop' facial markings but the leopard, more common but less often seen during daylight, also possesses a gorgeous shining coat marked with black rosettes. The delicate stripes of the bongo and male bushbuck are also highly attractive, in both species set against a glowing russet background. The Grevy's zebra and the reticulated giraffe are particularly photogenic, especially amid the sometimes stark semi-desert terrain of their natural home.

These fantastic images no longer rest exclusively in the realms of the professional photographer. Any and every visitor to Kenya stands a good chance of achieving them, though a strong pinch of luck is an important ingredient on most game drives.

Also fixed in the memory and stimulating the senses are the sounds of the African bush which reverberate across the plains and echo amongst the trees . . . the splash and grunt of a hippo in the night . . . the haunting cry of a fish eagle . . . the boom of the colobus in the forest canopy . . . the ghostly shriek of the tree hyrax . . .

. . . in an eery silence, a herd of over 400 elephants marched across the rolling Tsavo plains as if they had a date with destiny . . . they did, little did we know it. During the 1980s in particular, poachers armed with automatic rifles laid waste to Kenya's wildlife heritage as never before, decimating the herds. Parts of Tsavo National Park resembled a battlefield with scattered corpses and spent cartridges. A closely guarded group of white rhino in the heart of Meru National Park was wiped out under the noses of rangers. Zebra and antelopes were snared in thousands to supply a thriving trade in 'bush meat'. These were dark days for Kenya's wildlife and no less for the parks and reserves themselves as a land-hungry population erected more and more settlements and planted more and more crops.

Serious losses to Kenyan wildlife in these decades have placed the following species under serious threat:

- ◆ black rhino
- ◆ bongo
- ◆ giant forest hog
- ◆ yellow backed duiker
- ◆ roan antelope
- ◆ Grevy's zebra
- ◆ dugong (manatee).

Wildlife conservation

Right from the earliest pre-colonial days, prominent personalities at home and abroad echoed the call for conservation. Under pressure from big game hunters in particular, wildlife was under threat from the start and visitors like Cherry Kearton in the early years of the twentieth century bemoaned the inevitability of a great and impending loss. In the 1940s and 50s, the colonial government set aside vast tracts of land as preserves for wildlife and this network of parks and reserves has been maintained intact, and extended, into the present era. The network of national parks and game reserves was designed to reflect the vastness and diversity of Kenya's landscapes and wildlife in the days before the word 'biodiversity' was even coined. The amount of land set aside and the range of habitats covered remains one of the world's finest contributions to conservation, a legacy which Kenya can be proud to hand on to subsequent generations.

Of more than fifty parks and reserves - and several additional sanctuaries and forest reserves - here are just a few examples . . .

Tsavo National Park, both east and western sectors, totals over twenty thousand square kilometres of rolling plains, rugged mountains, and arid thornbush scrub intersected by the dramatic Tsavo and Galana Rivers. The park includes Mzima Springs, a freshwater spring which bubbles up from beneath the lava flows of the Chyulu Hills and which is home to large numbers

of hippo. A very wide range of wildlife species occurs in Tsavo but animals can sometimes be difficult to find in this vast landscape of spectacular scenery.

Fringing the semi-deserts in the lower lying terrain to the north of Mt Kenya lies a trinity of contiguous reserves, **Samburu, Buffalo Springs and Shaba**. Flowing as a life-giving artery through the heart of the ecosystem is the Uaso Nyiro River, dripping with doum palms, much frequented by crocodiles and providing sustenance to herds of elephant. Typical species in this northern area are oryx, gerenuk, Grevy's zebra and reticulated giraffe.

The **Aberdares National Park** comprises a range of forested foothills and mountain moorlands from 6,000' to the peak of Satima at over 13,000'. The slopes are clad in dense rain forest and bamboo which, in the Salient section of the park, provides refuge for elephant and rhino. There are some spectacular waterfalls, including the Karura Falls which tumble some 900' into an inaccessible forested valley.

Close to Kitale in the west of Kenya lies the tiny enclave of **Saiwa Swamp National Park**, established to protect Kenya's only group of marsh dwelling sitatunga antelope which can be viewed from tree platforms.

Surrounded by steaming geysers and bubbling hot springs, deep inside a fold of the Great Rift Valley lies **Lake Bogoria**, protected as a national reserve and home to millions of flamingoes. The flocks sometimes nest here but the nature of their erratic mass movements across east Africa remain something of a mystery.

Just inland from the coastal resort of Diani is the **Shimba Hills National Reserve**, a range of rolling, park-like hills just an hour's drive for the holiday hotels. This is the only location in Kenya where the splendid sable antelope is found.

Nairobi must surely be the only city in the world with its own national park and herds of wildlife right on its doorstep. Barely fifteen minutes drive from the city centre, you can be amongst huge dry season concentrations of antelopes, zebra, wildebeest, buffalo and giraffe. Lion, cheetah, hyena and rhino can all be found here just outside the city limits.

But in spite of this impeccable and incredible asset, there is no doubt that wildlife remains under serious threat. There are people who feel that conservation has faltered in Kenya, lost in a Byzantine maze of politics, recriminations and greed in which voice-less and vote-less animals literally have no say. The figures tell a sorrowful message: wildlife numbers decreased by over 50% during the eighties and nineties outside controlled areas and by over 30% in parks and on private land. Massive exterminations have taken place in southern Masailand, and in northern and north eastern parts of the country. At present, numbers are considered to be stable only on private ranches in Laikipia, Rift Valley and Machakos districts.

Weighed against the critical value of wildlife as part of Kenya's natural wealth, the failure of conservation must be considered as a potential disaster to the country and its economy. In considering how this situation has arisen and what can be done about it, it is important to note that it is not that the problems are not recognised but rather that solutions on offer span too wide and mutually incompatible extremes of opinion.

Land ownership

Many of the issues impacting upon conservation are connected with ownership and use of land. Kenya has undergone major transitions in a relatively short historical span of time. These have involved a substantial growth in population, as well as large shifts in ownership of land as title has devolved from the former dominance of traditional 'public' ownership more and more into private hands, often of smallholder farmers. In a country with a low industrial base such as Kenya, the majority of its people depend on agriculture, often subsistence farming – where they grow the crops that feed the family. The need for land for farming puts people into direct competition with wild animals which also need the same land for much the same purpose. Left to their own devices, people would mostly prefer to eliminate the animals, particularly the larger and more dangerous species such as buffalo, elephant and lion.

In Kenya, politics permeate virtually every aspect of society. In a democracy people have votes, but wildlife does not possess a constituency and cannot easily garner political support. Hence public attention and government action tends to follow human priorities, sometimes to the detriment of wildlife. History shows however that people can often come to an accommodation and live alongside less threatening wildlife species. On this positive side, there has been a growing trend for private land owners, both traditional communities as well as individuals and corporations, to recognise and accept their own responsibilities in conserving the wildlife on their land. In several parts of the country, large scale land owners have come together in forums to represent their common interests and to lobby for appropriate policies and legislation, as well as providing a common voice in negotiating with government and other stakeholders. Success stories in this area abound, including for example the ownership and management of the Masai Mara by the indigenous community, of the Lewa Downs Conservancy, one of several large private 'farms' in the Laikipia district, and group ranches in the Taita district.

Ownership of wildlife

In Kenya, unlike many other countries, wildlife is 'owned' by the state. This creates a dilemma for land owners. At one extreme, if elephants are destroying your crops, you have no right to stop them. At the other, if you want to breed and manage herds of, say, antelope on your ranch, as you would cattle, you have no right to do so. The reality is that both situations do actually take place, flying in the face of unenforceable legislation and an insufficiently resourced ranger force. The fear that delays any change in the law is that landowners will simply wipe out the wild species that get in their way. The probability in fact is that a middle route can and must be found. In many other African countries, wildlife numbers have increased dramatically, especially on large privately owned 'game farms', as landowners have adopted wildlife as a money-making resource.

Good stewardship upon which a sound conservation strategy can be built is most likely to be nurtured by stakeholders who possess a vested interest in the resource they are conserving. The most viable and sustainable solution will probably require not legislation but rather a balance of incentives.

Wildlife utilisation

If there is one debate in Kenya which sparks controversy and emotion it is that between the promoters of the unrestricted utilisation of wildlife as an economic resource versus those who would prefer to ruthlessly protect wildlife from all external impacts and influences. Unfortunately for wildlife, the debate has been characterised less by rational dialogue and a search for common ground than by an unbridgeable polarisation of opinion and lack of consensus. Utilisation falls into two main segments. Consumptive utilisation comprises cropping for meat and hides, live capture for zoological collections, research purposes and the pet trade, and sport hunting. Non-consumptive utilisation involves no killing – this means primarily wildlife tourism and photographic safaris.

The consumptive lobby has a lot of sound economic argument on its side. Landowners suffer from their obligation not to interfere with wildlife, so they have no incentive to conserve. Rather they possess strong incentives to eliminate wildlife, out of the sight and reach of the authorities. Would it not make more sense, they say, to give us ownership and stewardship of the wildlife as an incentive to manage it in everyone's best balance of interests? Proponents may also point to massive abuses of the present law, where slaughter of wild species continues unabated, feeding meat and hides into a clandestine butchery trade across the country. Why ban wildlife consumption, they would ask, when a) it happens anyway and b) the government does not possess adequate resources to enforce it?

But the anti-consumption group would claim to have history on its side, at least so far as hunting is concerned. It became a free for all shoot-out, they might say, with carnage and carcasses all over the place. Hunters, it is claimed, abused the limitations of their licences and massive

poaching, for example for ivory, took place under the guise of safari hunting. True or not, the only way to prevent this from happening again, goes this argument, is to ban all forms of consumptive utilisation.

After lengthy deliberations and the sometimes vociferous presentation of cases on both sides of the debate, the jury is still out. There appears to be regrettably little meeting of minds over a common middle position.

The environment

Changes in land use and climate have had an inevitable impact upon Kenya's environment and landscape. Wheat fields surround much of the northern Mara conservation area. Forests have been slashed and burned on mountain catchment areas across the country, including on the Mau, Chyulus and Mt Kenya. Watercourses have become less consistent and in some cases more polluted. Allocation of land into private hands has led to settlements and fences blocking migration routes. This is particularly worrisome in several high visibility and high density wildlife locations. From the Aberdares range, elephant were formerly able to migrate seasonally across the plains to Mt Kenya and to the north into Laikipia. Settlements have blocked the routes, bringing the elephants into conflict with farmers. The solution in this case has been the charitably funded Rhino Ark project which aims to fence the entirety of the Aberdares National Park. While there is little doubt that this will delight the farmers, the long term effects of creating a closed ecosystem have yet to be fully understood.

Complete ring fencing has also been the preferred solution in the case of Lake Nakuru National Park. This too has prevented crop raiding by animals while simultaneously halting encroachment into the park. However, it risks the accusation that the park is now an artificial ecosystem little different from a large zoo. Along the Kitengela boundary of Nairobi National Park, housing and farms have now seriously constricted the migration routes of plains game in and out of the park. The long term potential could be a disturbingly complete loss of the ebb and flow of the natural ecosystem, thus reducing the viability of the park as a viable tourist attraction. Deforestation and human settlement on the Mau catchment area for the Mara River are feared in the long term for their potential to reduce the river's flow and thereby reduce its value in watering the western part of the Masai Mara reserve which presently forms the country's greatest wildlife attraction.

Again, no easy solutions are in sight.

Conservation management

The responsibility for the management of wildlife in Kenya is entrusted to the Kenya Wildlife Service, KWS. Non-government organisations have also played an important role. These have included the African Wildlife Foundation, African Conservation Centre, East African Wildlife Society and the World Wildlife Fund. The ability of any and all of these organisations to succeed has inevitably been compromised by the factors mentioned above. But the management of KWS itself has become highly politicised and no single incumbent director has consistently been able to move forward with necessary changes. Indeed over the years, in spite of great attempts to 'professionalise' the service, some policies have been introduced which could be called misguided.

Although historically the majority of Kenya's wildlife exists outside of protected areas, little has been done to ensure its sustainability in such areas. Some effort has been made to encourage traditional community based landowners to conserve and benefit from wildlife. But the benefits have proved elusive and assistance programmes to create 'ecotourism' attractions have often lacked the commercial viability demanded by the realities of the marketplace.

The pricing of park entry has also generated its share of controversy, resting on the argument that wildlife should pay its way and that foreigners can afford a certain fee level. But an entry fee of, at present, up to US\$60 per person per day can have a disincentive cost multiplier effect on overseas holiday packages and encourage shorter stays. Commercially, the wisdom might

reasonably be questioned of maintaining high prices over a period of decline in tourist numbers. At the other end of the scale, reduced fees have been made available to Kenyans but there is little evidence that this has had a measurable positive impact on either revenue or visitor numbers, while the pricing policy is open to accusation of a racial bias as park gate officers demand evidence of citizenship upon entry.

A further oddity of policy relates to the introduction of alien species in certain parks. Biologists tell us that one of the greatest detrimental effects on an indigenous ecology can be devastation by species from outside which devour either the local species or the food upon which they depend. They may also bring disease or other complicating factor which can be difficult to forecast. Yet several alien introductions have been made into Kenyan parks and reserves in the name of tourist attraction. These have included bringing lions into the Aberdares moorlands, which has resulted in a major loss of bongo and giant forest hog, chimpanzee 'orphans' into a resettlement programme on a Laikipia ranch, and importing South African white rhinos into the Mara and Lake Nakuru National Park.

Security and infrastructure

Other issues impacting wildlife and conservation are more generally applicable to the present situation in the country overall. The state of Kenya's roads is probably the one factor that most visitors notice most readily. This significantly lengthens travel times and increases transport operating costs.

Another key issue is insecurity which has adversely affected travel to and within the country, as well as contributing to a lack of enforcement of applicable wildlife regulation and legislation.

Window on the world

But wildlife is not just about tourism and conservation. Kenya has long been a favourite with photographers and film makers due to its reliable sunshine, scenic variety and the relative ease of access and close approach to its wildlife. Cherry Kearton has been followed over the years by a veritable lineage of cinematographers. Armand and Michaela Denis put Kenyan wildlife onto British television in the 1950s with their 'On Safari' programme. Joy and George Adamson came to fame along with rehabilitated lioness Elsa when 'Born Free' was published in the late 50s, quickly followed by a series of films during the early 1960s. George later earned a place in conservation history when he lost his life to a gang of armed poachers. The Kora reserve where he was based was subsequently declared a National Park in his memory.

'Out of Africa', the film based on Karen Blixen's 1930's life of adventure involving coffee farming and love affairs with hunters such as Denys Finch-Hatton, came out in 1986 and led to a surge in tourism to Kenya. Artist and photographer Jonathan Scott has more recently put the Masai Mara indelibly on the wildlife map with his presentation of TV programmes such as Big Cat Diary. He and many others have ensured that Kenyan wildlife stars on broadcast channels around the world such as National Geographic, Discovery Channel and the BBC as well as in Canada, Australia and Japan.

Biologists, ecologists and behavioural scientists too have found important revelations in Kenya. In Amboseli National Park for example, a team led by Cynthia Moss has discovered how elephants talk to each other using infra-sound.

In spite of the difficulties and challenges, Kenya's wildlife has proved resilient and continues to contribute to the country's image of excitement and attraction all over the world. Visitors and Kenyans alike can still enjoy the exhilarating freedom of a game drive across the Mara savanna and see not another vehicle for hours on end. They can marvel at the stunning sight of a majestic bull elephant framed by flat-topped acacia trees against the crystal backdrop of the snows of Kilimanjaro.

It's August and the wildebeest are trekking into the Mara . . . it's April and the zebra foals are dropping onto the Athi plains . . . it's January and the elephant are back on the Uaso Nyiro River . . . the excitement and delight will never fade.

Kenya's National Parks and Reserves

NATIONAL PARKS

Aberdares
Amboseli
Arabuko
Central Island
Chyulu Hills
Hell's Gate
Kora
Lake Nakuru
Malindi Marine
Malka Mari
Marsabit
Meru
Mombasa Marine
Mpunguti Marine
Mt Elgon
Mt Kenya
Mt Longonot
Nairobi
Ndere Island
Ol Doinyo Sabuk
Ruma
Saiwa Swamp
Sibiloi
South Island
Tsavo East
Tsavo West
Watamu Marine

NATIONAL RESERVES

Arawale
Bisanadi
Boni
Buffalo Springs
Chepkitale
Diani-Chale Marine
Dodori
Kakamega
Kamnarok
Kerio Valley
Kiunga Marine
Laikipia
Lake Bogoria
Losai

Malindi Marine
Marsabit
Masai Mara
Mombasa Marine
Mpunguti Marine
Mt Kenya
Mwea
Nasolot
Ngai Ndethia
North Kitui
Nyambene
Rahole
Samburu
Shaba
Shimba Hills
South Kitui
South Turkana
Tana River Primate
Watamu Marine

Checklist of larger mammal species occurring in Kenya

UNGULATES

Buffalo and antelopes

Buffalo

Eland

Greater kudu

Lesser kudu

Bongo

Sitatunga

Bushbuck

Roan

Sable

Fringe eared oryx

Beisa oryx

Wildebeest

Coke's hartebeest

Jackson's hartebeest

Topi

Hiroa

Common waterbuck

Defassa waterbuck

Bohor reedbuck

Mountain reedbuck

Impala

Gerenuk

Grant's gazelle

Thomson's gazelle

Klipspringer

Oribi

Steenbok

Kirk's dikdik

Guenther's dikdik

Suni

Yellow backed duiker

Common duiker

Black fronted duiker

Red duiker

Ader's duiker

Blue duiker

Pigs

Giant forest hog

Warthog

Bushpig

Hippopotamuses

Hippopotamus

Giraffes

Masai giraffe

Rothschild's giraffe
Reticulated giraffe

Zebras

Burchell's zebra
Grevy's zebra

Rhinoceroses

Black rhino
White rhino

ELEPHANTS

African elephant

CARNIVORES

Hyenas

Spotted hyena
Striped hyena
Aardwolf

Dogs, jackals and foxes

Wild dog
Black backed jackal
Side striped jackal
Golden jackal
Bat eared fox

Cats and cat-like mammals

Lion
Leopard
Cheetah
Serval
Caracal
Golden cat
African wild cat
African civet
Tree civet
Large spotted genet
Small spotted genet

Mongoose

White tailed mongoose
Large grey mongoose
Marsh mongoose
Bushy tailed mongoose
Slender mongoose
Banded mongoose
Dwarf mongoose

Otters, badgers and weasels

Clawless otter

Spotted necked otter
Honey badger
Striped weasel
Zorilla

PRIMATES

Monkeys

Olive baboon
Yellow baboon
Sykes' monkey
Blue monkey
White nosed monkey
De Brazza's monkey
Vervet monkey
Patas monkey
Black and white colobus
Red colobus
Black mangabey

Bushbabies

Potto
Thicktailed bushbaby
Lesser bushbaby

OTHER MAMMALS

Aardvark
Pangolin
Porcupine
Cane rat
Ground squirrel
Spring hare
African hare
Scrub hare
Red rock rabbit
Rock hyrax
Tree hyrax
Hedgehog