CALCUTTA
622X

JULIETTE HUXLEY

Wild Lives of Africa

INTRODUCTION AND
POSTSCRIPT BY
JULIAN HUXLEY

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Introduction by Julian Huxley

Early in the year 1960 I was asked by Unesco if I would go to Africa on their behalf to report on (I give the precise wording) the Conservation of Wild Life and Natural Habitats in Central and East Africa.

It did not take long to make up my mind. Already in 1929 I had travelled widely in East Africa, and in *Africa View*, the book I wrote next year, I had pleaded strongly for the conservation of East Africa's splendid and unique wild life, and for the establishment of National Parks in the region. In 1947 and 1948 I had the privilege of serving Unesco as its first Director-General, and succeeded (in the face of considerable opposition) in setting up I.U.C.N., the International Union for the Conservation of Nature in relation with it. I was thus much gratified at the intensified interest in conservation which Unesco had begun to show since Dr. Kovda had become head of the Section of Natural Sciences, and more than willing to do what I could to help the Organisation in advancing the good cause. Accordingly, although the prospect of the journey looked a little formidable at my age, I had no hesitation in accepting it. I am very glad that I did, for it proved to be the most interesting assignment of my life.

In 1929, my wife had accompanied me on my trip through Uganda to the Parc National Albert, including a fortnight's fascinating but rather gruelling foot-safari from Kabale in Western Uganda to the Virunga volcanoes and the south end of Lake Edward, and I knew the value of her companionship

and her fresh eyes. So I insisted that she should accompany me on this much more extended journey. After months of complicated planning, much aided by the Colonial Office and the Commonwealth Relations Office, by the High Commissioner for the Central African Federation in London, by the authorities of the Universities of Cape Town and of Natal (where I had undertaken engagements to lecture), by the Nature Conservancy in London, by the Congo National Parks organisation in Brussels, by I.U.C.N. in Switzerland, and of course by Unesco itself in Paris, we set out in June on the first lap of our journey. I would like here to express our grateful thanks to all those who made this possible.

The conservation of wild life and wild habitats in Eastern Africa is most obviously, though far from wholly, bound up with National Parks, since these by definition must be devoted primarily to the preservation of the natural environment and its wild plants and animals. Secondly, unlike Game Reserves, they are statutorily established by legislation and cannot be abolished by administrative order, but only by further legislation in the National Assembly or Governing Body of the country. Further, in most cases they are not under direct government control, but are administered by an independent body of Trustees, though in some countries a special National Parks Service is established by the governments.

When we first went to Africa in 1929, there were only two National Parks in the whole continent—the Kruger Park in the Union of South Africa, first set up as a Game Reserve in 1898 and established as a National Park in 1926, and the Parc National Albert in the Kivu area of the Congo, established in 1925. By 1960, nearly forty National Parks or their equivalents in Provincial Parks, Wild Life Sanctuaries, statutorily established Reserves and Tribal Parks had been set up in eastern Africa, of which we were able to visit some twenty-five. In addition, we made it a point to see as many as possible of the

areas which were likely candidates for National or Tribal Park status, or which were important as Game Reserves. This added another dozen areas to be visited.

Besides actual wild habitats and wild life areas, we had of course to make contact with as many as possible of the government departments, university colleges, research institutions, museums, and private organizations directly or indirectly concerned with conservation; and this involved discussion in over a dozen cities and administrative centres.

As a result, our journey took us from Cape Town across the Trasnkei to Durban; on via the Hluhluwe Provincial Park in Natal and the Kruger National Park in north-eastern Transvaal to Johannesburg and Pretoria. Then to the Central African Federation, with visits to Zomba and Lake Nyasa; Salisbury, Wankie and Lake McIlwaine Parks, Zimbabwe and the Kariba; Livingstone, Lusaka, the Kafue Park and the Lochinvar Reserve; and a side trip to the Gorongoza Park in Mozambique. And finally to East Africa. Tanganyika with Dar-es-Salaam and Arusha, the Serengeti, Manyara and Ngurdoto National Parks, the Ngorongoro Crater, and Leakey's dig at Olduvai; Uganda, with Entebbe, Kampala and Makerere College, Queen Elizabeth and Murchison Falls Parks, the Gorilla Sanctuary at Kisoro, and a meeting on the Congo border with the Warden of the Congo National Park in Kivu Province; and lastly Kenya, with Nairobi, the University College, the Coryndon Museum, and various East African Research institutions; the Nairobi, Tsavo, Aberdares and Nakuru National Parks, the Game Reserves at Amboseli and Isiolo, the Meru Tribal Reserve; and an exciting aerial reconnaissance to Lake Rudolf.

This involved thirteen weeks of crisscrossing the vast area of Southern, Central and Eastern Africa by car and Land-Rover and every variety of plane. During that time, thanks to the facilities and hospitality so generously given by Govern-

ment authorities, Game Departments, National Park Trustees and Wardens, Museum Directors, private Conservation Societies, University professors and many unofficial friends, we were able to have fruitful discussions with scores of responsible people in government offices, in research and academic institutions, in private homes, and in the field, and to see with our own eyes a greater number of actual or potential National Parks and equivalent Reserves than any other couple has ever been privileged to visit.

We both took a number of photographs, and filled a series of notebooks with notes, mine primarily on scientific, administrative and technical matters, Juliette's with her impressions of the astonishing panorama of Africa.

As one result of our journey I was able to prepare a detailed report, in which I discussed the many problems besetting wild life conservation and National Parks in eastern Africa—human population-increase, lack of money and trained personnel, pressure for immediate economic and agricultural development, organised poaching, inadequate or misdirected education, lack of understanding of the value of wild life and National Parks.

This report, on the Conservation of Wild Life and Natural Habitats in Central and East Africa, admirably produced by Unesco, was published just in time for the very successful Arusha Conference on the conservation of nature in Africa, organised by I.U.C.N. and C.C.T.A. (the Commission for Technical Co-operation in Africa South of the Sahara) and held in Tanganyika in September 1961 shortly after that country's independence, which I attended as a delegate.

As further result of our journey, Juliette wrote this book. To round off the story, I am completing her text with a Postscript embodying my experiences at and after the Arusha Conference.

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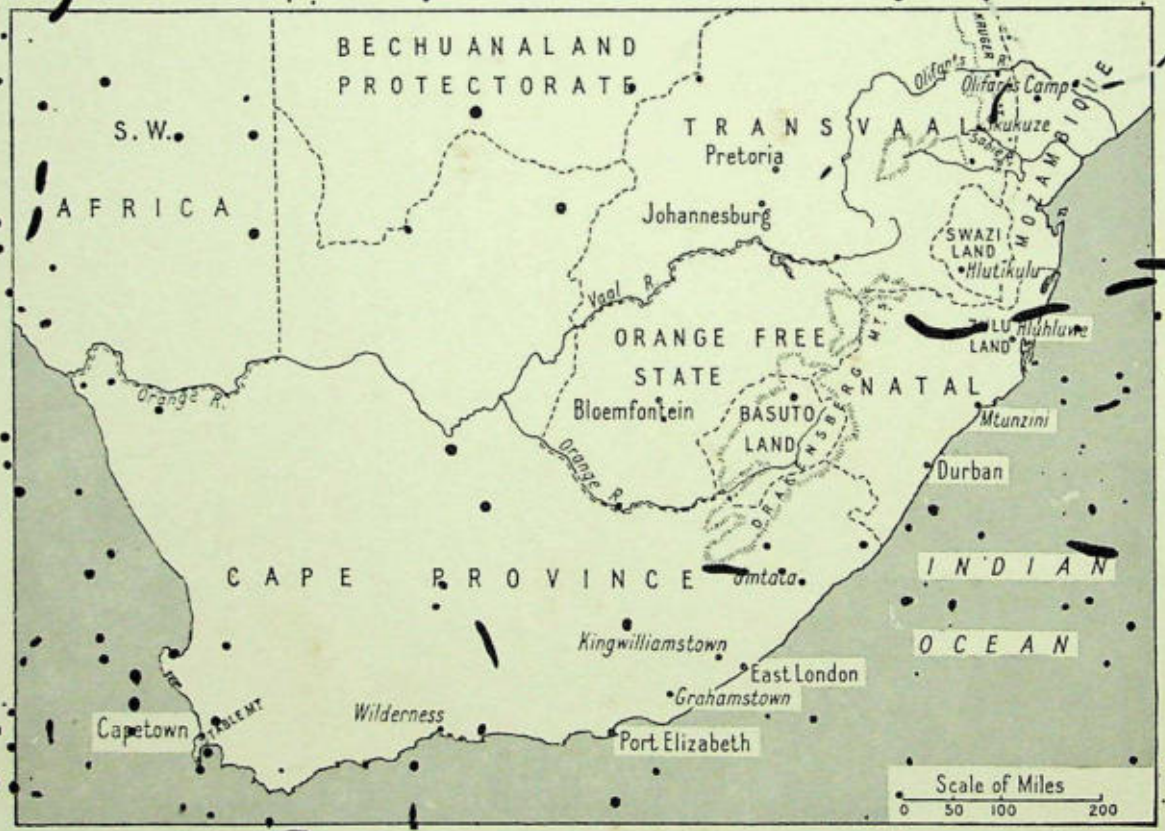
I. SOUTH AFRICA


BECHUANALAND
PROTECTORATE
S.W.
AFRICA
TRANSVAAL
Pretoria
Johannesburg
Vaal R.
ORANGE FREE
STATE
Bloemfontein
Orange R.
BASUTO
LAND
DRAKENSBERG MTS.
NATAL
Durban
Mtunzini
ZULU
LAND
Hlahlume
SWAZI
LAND
Hlutikulu
Oliefant's
Oliefants Camp
Kukuze
Sabie R.
KRUGER R.
MOZAMBIQUE
CAPE PROVINCE
Umtata
Kingwilliamstown
East London
Grahamstown
Port Elizabeth
Wilderness
Capetown
TABLE MT.
INDIAN
OCEAN
Scale of Miles
0 50 100 200

1. Cape Town

Table Mountain – Windermere Native Township and the steatopygous girl

Arriving in Cape Town by sea is a common enough occurrence. But whether you are a tourist in 1960, or imagine yourself as an early explorer emerging from desperate hazards to cast anchor in its Bay, you are impressed. Above you looms Table Mountain, powerful and serene, the end of a vast continent. The town stands upright at its feet in plate glass and concrete, with flower-spread suburbs sprawling along its narrow shores. After the long sea journey, all grey and slaty-blue, our eyes are dazzled by the brilliant colours of the scarlet African trumpets (Spathodia), the sealing-wax-red erythrinas, the golden cassias, violet jacarandas, vermilion hibiscus, and the bougainvilleas and ipomeas and passion-flowers competing for space in sun and shade.

To inaugurate our voyage into Africa, it was right and proper that we should climb the mountain; we did so on our very first afternoon. A cable railway takes one dizzily up the almost vertical face of the cliff to its squared flat summit. The level blocks of sandstone reach to the actual edge—one stands at 3,500 feet looking on the living map at one's feet, at seas lapping promontories, sand and satin beaches, at False and True Bays, and the bustling harbour with its fringe of cranes like praying mantises.

The mountain descends towards the Indian Ocean in craggy outposts, above the beaches crowded with fallen boulders. The table of the mountain spreads far inland, many square miles of natural pavement. Towards the north rises the chain of blue hills where Rhodes found his hinterland, and where the voortrekkers drove their millipede trains of oxen. But we were too absorbed in discovering this new land, in drinking the high breeze under a sparkling sky, to give the voortrekkers more than a passing thought. We looked on the limitless crystal horizon as a millionaire would look at his banking account: for we had more than three months of time before us, and had not even yet spent the first day of this fortune.

A white-naped raven floated below us, Julian's first new bird in Africa. At our feet, in the cracks between the grey slabs, grew a whole unfamiliar flora: an extraordinary abundance of heathers; succulents, thick and thorny; grasses with tingling rust-coloured panicles; intensely blue lobelias; on the rocks, red, orange and yellow lichens. In this new context, even colours gave forth new vibrations.

We lingered till sunset, when all visitors must go; and left the darkening mountain austerely brooding over this beautiful land.

July 22nd. Julian gave his lecture to the university to-night. A very crowded hall, with determined students and non-students sitting in every available place, including the cornice, the rafters and the window-ledges.

There were only a few Africans among them, since the Bantu Education Act had come into action, excluding them from white universities, directing them to their own colleges where they are taught by other Africans, in the vernacular, even at university level.

Throughout our stay in South Africa, we never spent a day without hearing about the bitter antagonism, anxieties and prophecies of disaster resulting from Apartheid policies. It was like a cloud over the land, obsessive and oppressive.

No one can be blind to the immense tragedy of South Africa; the waves of migrant Africans driven from their homes by poverty and rumours of marvels; precarious rafts of lost creatures on the fringes of a civilisation which needs and uses them, but is not made for them.

On these fringes shanty towns like Windermere grew like fungus, pitiful refuges of tin shacks and cardboard contraptions. A friend took me there one day to visit Shawco, the Students' Health and Welfare Centres Organisation, founded in 1943 by a group of white students to cope with disease, dirt and ignorance among these uprooted and bewildered natives. I was greatly impressed by the dedication of the people who run it, and by the immense need of such organisations. I was also delighted to see in the kitchen, stirring a cauldron of soup, a perfect example of a steatopygous[1] Hottentot girl. Under her cotton dress, her buttocks projected in rounded opulence like a pair of footballs. The ideal of female beauty varies among human races, as Darwin pointed out in the *Descent of Man*: " It is well know that with many Hottentot women the posterior part of the body projects in a wonderful manner: they are steatopygous; and Sir Andrew Smith is certain that this peculiarity is greatly admired by the men. In some parts of Africa, the men are said to choose their wives by ranging them in a line, and by picking her out who projects farthest

[1] Steatopygous: a protuberance of the buttocks due to abnormal accumulation of fat in and behind the hips and thighs, found mostly in women as a racial characteristic of certain people, especially the Hottentot of South Africa. *Encyclopaedia Britannica.*

a fergo. Nothing can be more hateful to a negro than the opposite form."

If, by a curious evolution of necessity, a Hottentot girl makes her bottom her larder, is it not nice and fitting that it should be recognised as a sexual attraction?

2. Kirstenbosch Botanical Gardens

Cycads, living plant fossils – Proteas – The Cape flora, its richness and its origin

When, in 1602, the Dutch founded their Dutch East India Company they soon realised that a port of call on the long voyage to the East Indies was essential—not only for revictualling and repairs, but also for communication between the ships of the Company. The Cape promontory was chosen as the best site, and letters and instructions to following crews were at first left there in a specified place under a stone.

In 1652, Jan van Riebeek was sent out with seventy Dutch burghers, a few domestic animals and seeds, and instructions to build a fortified place which could be defended against prowling Hottentots, wild animals and competing alien fleets joining in the race for conquest of the newly-discovered, fabulously rich, new world of the East. The Cape to them was a menacing wilderness rising out of perilous seas, with its unknown hazards of savage lands, the mountains sheltering thick forests in their valleys and full of wild beasts, among which the now extinct Cape lion.

Van Riebeek set to his task, and found it hard. Some miles from the present Cape Town, he established his first outpost and farm, surrounding it with a hedge of "wild almond"—a small section of which still stands in what is now Kirstenbosch. The Cape forests of hardwood were cut for ships'

timber, while the early colonists cleared the ground for cattle and crops. Silver-trees of the Proteaceae family then covered much of the lower slopes, forming open woodland communities harbouring an abundance of beautiful flowers and shrubs. These were replaced by alien pine-trees and oaks, and much later by the faster-growing gum-trees and pines which destroyed much of the indigenous flora.

In 1895, Cecil Rhodes bought the land as part of his scheme for preserving the eastern slopes of Table Mountain and the Devil's Peak as a National Park. It was not until 1913, however, that it became a Botanical Garden under its creator and first Director, Professor Harold Pearson, who founded the collection on the principle that only the indigenous African flora should be grown there. And so lavish is that flora that the original 680 acres are having to be enlarged to accommodate yet more species.

He was succeeded by Dr. R. H. Compton, who was responsible for much of the Gardens' magnificent lay-out, and founded the herbarium which now houses some 200,000 sheets. He also realised the appalling effects of European man's 300 years of agriculture with its reckless practice of veld-burning, and began the systematic preservation of the wild flora outside Kirstenbosch.

The memory of General Smuts also lives at Kirstenbosch: for he found his relaxation and secret joys in long rambles and climbs over the grounds, and delighted in the discovery of new plants in out-of-the-way places.

It is impossible to resist the enchantment of the Gardens, for the site is as near the ideal as man can imagine. It includes a wide strip of lowland watered by the Liesbeek River, rises to steeper forested slopes and up precipices to the very top of Table Mountain (Maclear's Beacon at 3,050 feet), with its sandstone cliffs sheltering pockets of specialised plants. It provides, in fact, the most varied and favourable conditions

Above, kaffir-bread tree, *Encephalartos altensteini*, a cycad, and like all existing cycads, a living fossil from mesozoic times. Its yard-wide rosette of metallic green fronds grows on a thick stump, and produces a brightly coloured cone which is its nearest approach to a flower. *Below*, the King Protea, Cynaroides, its magnificent rough-hewn flower large as a soup plate. Round it are other members of the ancient Family Proteaceae, the 'pin-cushion' and 'candelabra' proteas

Left, dazzling white and pink Amazon Lily, which shines on craggy basalt and arid surroundings. Like the Old World lily, the same Fairy Lily is protected by poisonous substances. *Below*, detail of Paradise or Crane flower, the giant strelitzia related to bananas and has large elongated [illegible] flower known to be pollinated by birds' feet

of climate, aspect, and soil-chemistry for a comprehensive flora as well as scenery of wonderful natural beauty.

At present more than 4,000 species, all of them South African, are being grown there, planted in conditions as similar as possible to their original habitat. This not only produces a delightful effect, but is an essential condition of their successful growth. For a curious feature of this immensely varied flora is the sensitiveness of many of the now rare species: their seeds germinate only in restricted environments, which may be one of the reasons for the unusually rich number of plants found in South Africa.

The collection of growing plants in Kirstenbosch increases every year owing to a vigorous campaign of rescue of rare and dying species led by Professor Rycroft, the present Director. Discovered in remote corners where they have managed to survive the depredations of flower-pickers (and fire), they are carefully grown and multiplied and often successfully re-established where they once flourished. The Cape colonists were as thrilled as we are with the beauty of their wild flowers, and on certain feast-days prided themselves on decking every church and public place with masses of ground orchids, gladioli, proteas, watsonias and many other flowers. It is only recently that the Government became aware of the danger of species being exterminated, and passed laws protecting them. Accordingly, the Jubilee Celebration of Kirstenbosch in September staged a floral parade, but the flowers were artificial!

Julian and I had the good fortune to be taken round the Gardens by Professor Rycroft. It is difficult to grasp the fabulous wealth of the South African flora, even when so much of it is spread like a feast in this garden of Eden. Not only is its richness astounding, but also its completely new character, its miracles of invention and breath-taking beauty. It is ever more difficult to believe that all these novelties in

shape and design could be the result of natural selection alone: going from one to another display of flowers and leaves which are their own works of art I pondered, like Darwin, upon the unimaginable versatility of life.

The origins of this richness, of this world record of 16,000 to 20,000 species in the blunt tip of Africa, have not been fully cleared up. Great Britain, for comparison, has 2,000 species, and southern Australia about 2,500. The pundits say that there were probably three roots of its evolution—one indigenous, another in the north, bringing in many familiar Old-World types; and a third independent root, originating many millions of years ago on the ancient southern continent, before it broke up and its parts slowly floated away from each other in what Wegener called "continental drift."

Some important groups in the Cape flora such as the Proteaceae and the rush-like Restionaceae are almost absent from the northern hemisphere but are widespread south of the equator in South America, Australia and New Zealand as well as in the Cape, and this link is difficult to explain unless we accept the Wegenerian view that the continents were all once joined together. The Cape, in fact, could be an ancient botanical refuge from a sub-antarctic mesozoic past, and some of its peculiar plants could very well be living fossils.

The kaffir-bread tree, *Encephalartos altensteini*, is a cycad, and like all existing cycads, is certainly such a living fossil. In the Gardens, we came upon a stand of these: stout horny stumps crowned with an expansive rosette of metallic green fronds and bearing somewhat clumsily a large, bright orange, pineapple-like cone at the centre; this cone is a half-way stage between a fern's spore-bearing frond and a pine-tree's seed-bearing cone. It is the cycad's nearest approach to a flower. Its hardened scales can withstand drought or flood; it contains seeds packed in its cones with admirable geometric precision. This relic links us to a past of some 200 million years.

The most hideous-looking plant which Sir Joseph Hooker named *Welwitschia* after its discoverer, and *mirabilis* because of its extreme oddity, was, perhaps fortunately for the future of floral evolution, an abortive experiment of nature. It survives in very limited areas of South West Africa, and Professor Rycroft has been able to grow specimens from seed. The plant has a long stem buried deep in the sandy waste; this swells at the surface, forming two coarse basal lips round an oval depression; each lip growing a single leaf on its outer edge. The two leaves go on growing for years, up to ten feet in length but in so frayed a condition that they look more like stranded dry laminaria sea-weed than anything approaching a leaf. The lips of the cup grow to three feet or more across, and when conditions are right, produce curious male pink spikes whose pollen fertilises the female brown cones. This fascinating monster conjures a Dali surrealist landscape out of a barren desert.

Pride of space in the Gardens is devoted to the culture and display of Proteaceae. So called by Linnæus after the sea-god Proteus and his multiple impersonations, this family is extraordinarily varied. Its flowers are strange and fabulous. They are recognisable by their composite structure, not unlike that of an artichoke or a thistle; on this basic pattern surprising variations are played. *Protea barbigera*, for instance, the woolly-bearded protea, looks like a flame-coloured artichoke whose thick scales have been tipped with frosted glass, and whose heart is a mass of feathery white florets turning to black at their apex. *Protea mellifera*, the sugar-bush, elongates its bracts like the non-functional nails of a chinese princess; *Protea cynaroides*, the king protea, rough-hewn and magnificent in pinks and reds, large as a soup plate and flat as a sun-flower, opens its wide crown of pointed bracts round a centre of hairy florets; the whole flower-head is set like a surprise on a shrub of stiff dark leaves edged with fine crimson seams. The exquisite

silver-tree, *Leucadendron argenteum*, has long grey-green leaves edged and backed with a delicate white fleece which shimmers like silver in the least breeze. The pincushion proteas of the genus *Leucospermum* explode in scarlet, flame and gold tentacles, some species upright like candelabra, while others, recumbent, ambush their green blossoms facing close to the soil, to be fertilized by beetles.

But the prize should go to the blushing bride, *Serruria florida*, a cluster of waxy white bells shading to pale pink. Its beauty made it an easy victim to flower pickers, and it was declared extinct. Professor Rycroft discovered a single struggling plant, luckily rich in seed, from which by careful culture he was able to grow a thriving crop. He now sends seeds of it to California, Japan and New Zealand, where it flourishes.

This fantastic family, comprising over 1,400 species, is also found in Australia and South America, but its true home is certainly the Cape; here the proteas grow, heraldic and proud, in their unforgettable beauty. Yet they are only a fraction of the plants thriving at Kirstenbosch and of the astounding flora of South Africa. Our gardens in Britain are enriched with the descendants of scores of African flowers, agapanthus, freesias, gladioli, montbretias, gerberas, red-hot pokers, mesembryanthemums, to mention only a few. Many more are even now being hardened to face our curious weather.

In a single morning Kirstenbosch revealed to me a whole new range of botanical wonders; it was a constant fascination, throughout our voyage in Africa, to discover further examples of this unmatched flowering world.

3. Durban

The Garden route – Strelitzia and its fertilisation – Paul Sauer Bridge – King Williamstown Museum and Hubert, the wandering hippo

We left by car for Durban, 1,200 miles in four days. For most of the first 300 miles, the road follows the coast through open rather flat country with sheep and cattle on fertile land, large bright-green fields of young wheat rolling to the foot of rocky scarps. We slept at the Wilderness the first night. In a charming little Reserve at the back of the hotel, we found the glamorous Watsonia, looking like a slender gladiolus in brilliant orange colours; the lovely blue iris-like plant which Linnæus called Morea after his wife, and a clematis with a lily-of-the-valley little bell.

Next morning we had an exciting drive to Grahamstown: the road winds through steep gorges and thick forests with brief and lovely views of the sea. Among the dark heads of pine and hardwood trees, the two kinds of *Strelitzia* (Bird of paradise flower) opened their sharp beaks, both the giant white on its banana-like tree and the smaller one with its tongues of flame and purple. They are the only known flowers to be pollinated by birds' feet: the long horizontal petal serves as landing perch to the sun-birds—their weight opens the groove concealing the stamens and pistil couched within, the pollen sticks to the birds' toes and in due time fertilises the next flower.

Masses of orange-red aloes of diverse sorts and sizes stood out everywhere as we drove past, beautiful, strange and admirable.

This truly remarkable road with its two steep passes and zigzag descents to deep clefts was started by the British in 1830 to exploit the magnificent ancient trees. The Paul Sauer bridge, built in two halves dropped from each side and fastened in the middle, spans the deepest gorge in South Africa: seen from the bridge it looks like the hull of a giant stone ship, its granite ribs squeezing the Kruis River far below.

Our next stop was Umtata, capital of the Transkei. This vast Bantu Reserve is a rolling grassland, largely treeless, dotted with groups of beehive mud huts, their neat tufts of grass-thatch shining like silver fur in the sun. Painted white circles round their two windows and door give them the gay mask of clowns.

Apart from the actual highway, the Reserve is out of bounds to all outsiders, and the large cars rush through impassively on the wide road. Staring at the forbidden land, one catches glimpses of the Xosa people who live there; of the curious triangular sledges called tramsters introduced by the Boers, pulled by teams of ten or more oxen; of a Kaffir herdsman watching his sheep on a pair of stilts, or an African farmer scratching the soil with a wooden plough. Some of the women have cast the warm bantu wrap with turban, beads and large ear-rings, but here as elsewhere, traditional costume is giving way to the flood of European fashions and merchandise.

At the little museum in King Williams Town, we paid our respects to the stuffed hippo who became world news between 1927 and 1931. Thought at first to be a male and called Hubert, an untimely death revealed her female sex, and she was duly rechristened Huberta. Unique among her race, she was a dauntless hippopotamus with a lust for travel and adventure, trekking from river to river in search of God knows

what so tolerant of cities and their ways that she became half-urbanised. First seen in northern Natal, she made her way across country by night, through villages and towns, arriving in the main thoroughfare of Durban early one morning; during the noisy days, she lay up in some safe place of her own finding, and came out at night to feed on what she found in dustbins and front gardens. Eventually she descended on Port St. Johns, then on East London, and finally wandered towards King Williams Town. She was known and respected by all, even deified by some Bantu tribes and by Indians who brought her adoration and delicacies, and never complained of her trampling their gardens.

She was shot by a white farmer who was fined £25 for his stupidity. Her obituary was printed in newspapers all over the world, and she is permanently glorified in a museum's glass case.

Early next morning, we left Umtata's busy shops, full of plastic goods and spike-heel shoes, and climbed into hills everlasting, blue hills with grey granite rocks, euphorbia trees and aloes, and patches of mealie fields scratched in the red earth below their crests. By tea-time we were driving through the flowery suburbs of Durban and on to our hotel. Our balcony towered right above the city, giving us a view of sky-scrapers, the Bay holding the waters of the Indian Ocean, and at nightfall the sky filled with unfamiliar stars and a giant full moon possessing all.

4. Durban Aquarium

We stayed twelve days in Durban, attending the University of Natal's stimulating conference on education, and spent our free time exploring and enjoying the splendid coast. One day we were taken round the recently built aquarium by the moving spirit and co-founder of this most successful venture, Dr. George Campbell, who combines medicine with a passion for fish.

The great round central tank is visible from three levels, giving an intimate view of a large variety of fish, all living together according to their habits, and apparently as happy in their glass palace as in the waters of the Indo-Pacific whence they came. Twice a day, a frogman with an aqualung descends and feeds the fish, making sure that none go without their special diet. He is expected: the moment of his arrival creates a swirling agitation and a gathering of gaping mouths. A four-foot-wide eagle-ray almost envelops him in its wings, its under-side mouth open like a letter-box; the sea-turtle takes liberties, nudging him for more; the improbable cow-fish approaches horns first, waiting for small cuts to suck into its pursed round beak.

Angel-fish, trigger-fish, bat-fish, snappers, fire-crackers,

Above, Elephants quietly wait their turn while buffaloes slake their thirst at a water-hole in the Kruger Park. *Below*, Captain Sheldrick's orphaned elephants: the smallest takes shelter under Samson's avuncular tail

Hippos. *Above*, this old bull has lost one of his vicious tusks, presumably in a rivalry fight. *Below*, the congregation of hippos at Gorongoza, heaving out of their mudbath at our approach, protesting noisily, with a fish eagle in the foreground. *Below right*, a hippo skull, almost toothless now—showing the widened front of the jaw which anchors the lower tusks and smaller upper canines. The hinge is as far back as it

concertina-fish, parrot-fish, they diversify the frozen limitations of their faces with bizarre profiles, with projecting fins and tassels, with brilliantly coloured masks. They earn for themselves engaging names such as the French Madam with her mascara make-up, the Englishman with his sheep's nose, the Old Woman in black fins and defeated profile, the Slinger with a forehead like the dome of St. Paul's.

We contemplate these fish at eye-level; seen from the front, full face on, they become ovals, but ovals with a gape, making, as it were, their own faces at us. We laugh, for we know no better; and they continue, sardonic, tragic, or smug, to gape and gasp, totally beyond communication.

We look at them from the half-way stage and see layers of this multi-species display; flatfish flattened on the bottom of the tank, patterned like the sand in which they partly sink themselves; skates and ray beating the water like winged souls in limbo; sharks and their kind, cut for speed, streamlined and impeccably tailored; and all the fin-fluttering, hovering, loitering coral-reef fish poised like mannequins at a fashion parade, turning this way and that, showing off their fantastic designs. They flaunt their fancy dress of spots, stripes, fins, discs and arcs of every hue and colour, all glamorously emblazoned for existence among the rocks and corals. And they have—as practically everything in nature—a very good reason for this display: Konrad Lorenz has recently shown that these striking patterns serve as warning flags in the constant territorial conflict of the crowded reefs.

There has been, George Campbell told us, only one spoil-sport, a six-foot shovel-nosed shark in the man-eating class, who preferred to make his own arrangements about food. Several valuable specimens were attacked and devoured, including some of his own cousins, grey-sharks and hound-sharks. And when the temperature of the tank was high, he became definitely too interested in the divers

cleaning it. "The death of the shark was not due to natural causes."

The remoras or sucker-fish have admirably solved the problems of transport, board and lodging. They attach themselves to the underside of sharks (who perhaps only tolerate them because they can't reach to bite them off), get carried around on the sharks' killing forays, and benefit from the morsels which fall from the prey. It is not certain, I gather, if this is a case of symbiosis, when both parties get something out of the arrangement, but to my eye it looks as if the sharks were the suckers.

Remoras have a special crêped sucker-pad on the top of their heads with which they stick to their hosts. They will accept battleships and turtles as well as sharks for transport. In fact, the Torres Straits' islanders catch the hawksbill turtle (which they value for its tortoise-shell) by getting a remora o[illegible] to attach itself to the turtle's underside. So power[illegible] is the sucker that both can then be pulled into the canoe.

Until the six-foot shark was brought to the aquarium, the quartet of remoras had to accept the restricted facilities provided by the small sharks; however, they did not cling to these, but did their own swimming just below, in hopes of windfalls. At intervals, they would go and rest in an upright position, their pads glued to the grey pillars of the tank, each strictly in his own special place.

The Aquarium has repaid its capital cost in less than two years and is making a substantial profit. This is being used to extend further research into this other medium of life, as amazing as the botanical world of Kirstenbosch.

From this submarine world we emerged on to the busy scene of Durban Sands, with bathers and parasols in blazing sunshine, and the Zulu rickshaw-boys lined up for fares and

photographers (ten shillings a shot). Their fierce warrior apparel is a rather pathetic legacy from Chaka's legendary army: panoplies of leopard skins, bushy tails, lions' teeth, horns, feather-halos and masses of beadwork, not to mention plastic and nylon intrusions, now adorn a set of muscular black athletes. The rickshaws themselves, bristling with more trophies, have become fiery chariots, heroically pulled among the traffic by these reckless competitors of the automobile.

5. Hluhluwe

Snake Mongooses – Chaka Zulu – Hluhluwe National Park – rhinos black and white – the dancing giraffe – Shorty the tame giraffe

We left Durban by car for Hluhluwe, pronounced Shlushluwe or more correctly (Welsh fashion) Thluthluwe, our first Wild Game Reserve in Africa. It took us all day to get there, stopping for lunch at Mtunzini, where we made the acquaintance of a pair of African weasels. These lively and gentle little creatures are black with a double white stripe along their back, a white skullcap and white bushy tail. They have the peculiar habit of running in Indian file, generally in threes, looking so snake-like that they are called snake-mongooses. These two had been deprived of their leader by a motorist who in the dusk mistook the trio for a snake crossing the road, and deliberately ran over what he believed to be its head. On alighting he found the rest of the unit fragmented into a couple of bewildered little weasels and took the two orphans home in a sack. True to habit they reformed a depleted Indian file and lived happily in a drainpipe, emerging on forays without ever losing sight of each other in their peregrinations.

The road continues through Zululand. The coastal area is mostly under sugar, square miles of waving green plumes; tea and coffee are also grown and there are mines of gold, iron and copper as well as anthracite.

Having read Ritter's somewhat romanticised *Life of Chaka*

Zulu, I enjoyed seeing his country and the kraals which were the background of his life. Chaka was born in 1783, the result of a chance encounter between a young unmarried girl and a small Zulu chief, Sensangakone: the name Chaka, given him by his father, means " the beetle which stops the menses " and marked him from his birth as an accident. His mother brought him up after his father threw them out of his kraal, and tradition says that the boy suffered many indignities. He then became a sort of captain under the ruling chief, Dingiswayo, who himself, observing the ways of white men in the Cape, reformed the Zulu's warring rabble into a disciplined army. Chaka brought to this process his own natural military genius. In the end, he became king of all the Zulus and conquered the vast territories now called Natal and Zululand, a black Napoleon still glorified in Zulu hearts.

Unless the population at the time was much denser than one expects it to have been, his lust for mass-killing has been much exaggerated—but his unhappy childhood certainly fostered in him an added streak of barbaric cruelty, even in those days of blood-thirsty horrors. He himself never fought the British, but was in fact on friendly terms with British travellers. After his murder by his half-brother, however, the claims of the Boers and the British forced a military issue. One reads the story with horror: over and over again the Zulus lost between one and two thousand men while the British counted their casualties in tens and twenties. Assegais against rifles and machine-guns. The outcome was inevitable. As Belloc wrote:

. . . we have got
The Maxim gun and they have not.

Some day an impartial history should be written about these great campaigns, now told round the tribal fires as legends of a glorious past.

When we finally arrived at the gate of the Hluhluwe Reserve,

night had already fallen. Headlights played on the rutted road, the bush along it loomed secret and dark, in its deceptive silence. But suddenly caught in the beam of light, a pair of creatures leapt over and vanished. "Bushbuck—" We bumped along, screwing our eyes expectantly, when the car jerked to a stop: in front of us, starkly outlined against the night, loomed the frozen bulk of a rhino and its calf. Checked for an instant by the same shock of surprise, then trotting across the road with amazing agility, they disappeared into the bush.

Within the unseen world, one became aware of a nocturnal rumour, a flurry of sudden retreat. Pairs of eyes reflecting our headlights, the small port-holes of a bush-baby, the red flickering eyes of nightjars, who actually made use of our beams to see and catch insects, themselves looking like huge moths with white bars on wings and tail; finally there was the instantaneous vision of a nyala antelope, a tall heraldic ghost framed in thick shadows.

With such enticement, we were up by 6.30 next morning and off in two Land-Rovers with the warden and two African rangers. It was cold and foggy as we left the camp of rondavels built on a hill, dominating the rolling landscape. One is apt to imagine wild Africa as a dark jungly sort of place, closed and inimical, with trees tangled into thick masses by lianas, sombre with lurking menace. Hluhluwe does not look in the least like that. It is a beautiful site: 57,000 acres of rolling parkland, spacious as an English park but with euphorbias and acacias instead of oaks and elms; varied with smooth grassy hills and river valleys of palms and reeds, where crocodiles bask and pounce on drinking animals; with tracts of thorn-bush laced with narrow game-paths, and fringes of mountain forests towards a blue crested horizon. Hluhluwe is an almost undisturbed habitat, and though in the past a favourite hunting-ground for Africans and whites; it still contains

a rich variety of wild animals, now protected under the laws of a Game Reserve.

On that early morning, the wide landscape showed no sign of life; its private world was secret and silent under a slight mist. We felt like intruders, harmless enough but keyed-up and expectant.

Soon the first rays of the sun glinted down on grassy clearings and the first rumour of awakening life: a herd of impala regarded us, twitching ear and tail, suddenly alert and poised for flight yet inquisitive enough to stay for another look. Then, by common accord, the whole bunch turned and sprang into space—at all angles—to land and rebound again with a bare touch on solid earth. I never saw this coherent and controlled defiance of gravity without a thrill of delight. Its breath-taking grace is like a spontaneous ballet of the bush; creating its own spatial dimensions like a Calder mobile, it leaves a lightning but indelible impression.

Because there are no lions or elephants at Hluhluwe, the rangers can allow visitors to dispense with the protection of the Land-Rover and walk about the place; this is a rare privilege in National Parks, and it adds enormously to the joys and revelations of the bush. One is let into the private language of this wild nature, recognising footprint and spoor, shapes and smells with an exhilarating sense of participating as well as understanding. One is full of curiosity and its infinite rewards.

This quality of curiosity is apparently shared by most of our mammalian relatives—and the buffaloes certainly displayed no less of it towards us than we did towards them. The ranger fooled a whole herd of buffaloes by taking his Land-Rover, not directly at them, which would have dispersed them at once, but gradually nearer and nearer in ever-closer circles. The animals, though deeply suspicious, could not bear to retreat while this was going on; the leading bull watched our

manœuvres with lifted muzzle, his bossed horns draped low over his eyes; when we got out, and advanced cautiously to about fifteen yards, he became so frantic with curiosity and perplexity that his lips curled back over his teeth, giving him an unbelievably human expression. He then decided to have nothing more to do with us, and with a powerful lurch, wheeled round and made off with his herd.

On an open hill just beyond the road a family of white rhino were grazing peacefully. They looked—and are—large animals, indeed the second largest type of mammal on earth, somewhere about three and a half tons in weight. Their name has nothing to do with the colour of their skin—like the black rhino's, a dark dirty grey—but derives from their wide mouth which the Boers called "*weidt*." The black has a pointed prehensile upper lip like a short proboscis, used for browsing upon bushes.

These huge creatures lumbered along behind their bellicose horns with a disarming domestic air, and are said to be less aggressive than the black, which can be fierce and dangerous. After our brief encounter of the night before, we paused and watched respectfully. For the rhino is an animal which inspires respect and fear: a survival from pleistocene epochs, a magnificent anachronism; the Indian perhaps even more than the African who wears his gritty-textured hide tailored to his powerful body, without the gussets which give the Indian the air of a plated warrior. All are chiselled out of ancient matter, inheritors of a great evolutionary experiment in size and defensive armour. The Baluchitherium, their fossil relative, reached a height of eighteen feet, and was the largest known land-mammal.

The rhino's skull is an impressive piece of sculpture: the wide convex forehead curves towards the horns growing halfway down the two-foot-long profile; one behind the other, each with its own aggressive tilt, solidly based on the nasal

bones. The front horn may be over forty inches in length, the second is smaller and nobody can tell me what it is for. Maybe it comes under the heading of what paleontologists call "opportunistic." The skull is firmly set to take the power of the animal's shoulders and haunches, yet the neck of the white rhino is set at such an angle, in order to graze, that he cannot raise his head above the level of his shoulders and will drown in three feet of water.

The rhino has acute eye-sight only when young, and loses it as he grows to maturity; he then relies a good deal on the piak-piak birds of oxpeckers who feed on his ticks to warn him of danger. He has a sharp sense of smell, is fierce and reckless in audacity, and will charge with quick fury on surprisingly agile legs. Both species have certain endearing habits: the black is a topiarist; he will delicately browse upon bushes just low enough for his comfort, and will never entirely prune the vegetation beyond its chances of recovery, so that there are always succulent green shoots in the rhino garden. Nor does the white over-graze.

The seeds they eat, being like most bush-seeds well protected by a horny shell against drought or fire, pass through their digestive system whose acids soften them sufficiently for easy germination. The rhino returns to the same lavatory in his habitual wanderings, incidentally making a fine humus bed to receive the digested seeds for his next garden. The dung-heaps are sometimes used by other rhinos passing by, and may serve, according to Dr. Dillon Ripley, "as a sort of family bulletin-board." An excellent housekeeper, careful of his habitat, a creature of reasonable habits, liking a good sleep in a warm mud or dust bath, he is on good terms with his companions of the bush and willing to let bygones be bygones after he has shown you your place in his world. But there must be no mistake about his full rights in that world; and no one but man is to blame for any deterioration in

the rhino's character, or indeed in that of most wild animals. Especially among the oriental races, sympathetic magic has endowed the rhino horn with supernatural aphrodisiac virtues. Wish-fulfilment based on this curious aberration has triumphed over all negative scientific tests. The horn is still in great demand, and its high monetary value is the chief reason for the appalling massacres of rhinos. In India, other by-products of this animal are also deemed capable of arousing and prolonging the ardours of love. A fresh supply of rhino urine is more valuable than a vintage one, and the keepers who collect it are carefully watched in case they adulterate it with water. Paid for in hard cash, it can make an acceptable addition to the income of Zoological Gardens in India.

Driving along on our last morning, we saw a fine full-grown giraffe standing, as if waiting for us, in the middle of the road. We got out, obeying the rangers' advice to keep on the opposite side of the car; the giraffe then proceeded to do a cha-cha round the car, forward and backward with dainty steps, bending his head to examine us, walking around, coming back, arching his neck over the bonnet and peering with a baffled but unafraid curiosity.

We peered back with equal eagerness, observing his enormous eyes, the enviable size of his eye-lashes, the long flat snout with its nostril slits facing upwards, ready to close when tackling too prickly a meal; and the black tongue which he occasionally projected to lick an added piece of information from the Land-Rover. It is a formidable tongue, thick, over a foot long and clearly very tough: it must be in fact tough, for it is constantly exposed to the sharp thorns of the acacia on which the giraffe largely lives. It is also long enough to reach the back of his head for a spot of grooming.

We were told that this particular giraffe was often to be

found at this spot, devoured with unappeasable curiosity, not bellicose, but not entirely satisfied that all was well. He began this vigil soon after the birth of his second calf, once biffing a safari bus hard enough to smash its rear windows, once disconcertingly straddling a small Volkswagen. There is no knowing what he will do next, nor why: giraffes are the most improbable creatures of Africa. After over an hour we left him, still at his strange display.

Two kinds of animals in Africa, both of the same family, have the reputation of being mute: the okapi and the giraffe. But okapis have been heard to make a sort of trumpeting noise, and giraffes a low inner grunt, short and rare. I have heard it myself when visiting the late George at the London Zoo, and attracting his attention by crinkling a paper bag. He would then arch his neck over the high barrier, and "bark" with greed. But it remains a fact that giraffe talk is but seldom heard, possibly because there is no serious need for them to communicate by sound. The typical formation of their horns and ears is so unmistakable that it suffices them to watch each other over the tops of trees, and derive information from their actions. But when hunted or wounded, giraffes can be heard crying like a hare.

Captain G. B. Rimmington actually broke a young giraffe to the saddle and rode it on a safari for a distance of 234 miles. Until it was about five years old, it occasionally made a small bleating noise.

Mrs. Potter, the wife of the warden of Hlulhluwe, brought up a young giraffe not long ago. He went by the name of Shorty. When he was still at the milk stage, she used to fill a basin with condensed milk for Shorty, but Shorty always refused to bend his head down to drink; she had to heave the basin up to his face and allow him to splurge noisily into his breakfast, swilling a good deal of the contents over her. After each meal, she had to have a hairwash and a complete change,

until she resorted to feeding him in a raincoat and a sou'wester. Shorty became very tame and too large to get into the house, so he squatted outside the lounge window, just so as not to be alone. And at night, when they all went to bed, Shorty sociably moved round to their side of the house, peering through the windows in the early morning to make sure they were still there. He became a problem, poor Shorty, too devoted, too clinging, and too large for ordinary life. Finally Captain Potter gave him to a friend who wanted a giraffe on his farm, and Shorty made himself at home there too. He had to be in on everything, so that when the time came for branding the cattle Shorty was taking a lot of room and got himself branded with the rest. After a time, the farmer had had enough; he wanted to return Shorty to the Potters, to be put in the Reserve with the other giraffes. But Captain Potter knew his Shorty and replied that he could not possibly have a branded animal in a Wild Life Reserve.

Shorty has now moved to fresh fields on the Umshabezi River between the Transvaal and Southern Rhodesia. Alan Savory writes about him there, in his book *Thunder in the Air*.

> Tods Hotel has a tame giraffe named Shorty. Shorty is a character and just happens to like Tods. He spends most of his time in the bush, but every now and then he turns up in the garden and allows children to climb trees near him and to put hats on his head. He even lies down and lets them sit on him. He will stay around for a week or so and then wander off into the bush. He may be away for months, but he always comes back.

I was delighted to read this account of Shorty, for it once looked as if his attachment to human beings had unfitted him for the bush; indeed, when Shorty was, on several occasions, left in the Reserve at Hluhluwe to join his own kind, he got

so terrified at the sight of the wild giraffes that he ran madly home to the familiar sight of men and women.

According to Professor Waddington, human beings are born with a built-in capacity to accept authority and believe what they are told; animals seem to have this same tendency on their own level: the young implicitly react to their parents' signals. This is an absolute necessity for all wild animals born in the open, since a young creature is utterly defenceless alone: hyenas, jackals, lions and vultures being constantly on the prowl, ready to devour the helpless young alive. To survive, they must be able to run almost as soon as they are born, closely to follow their mother, trotting on the side away from danger, obeying by age-long instinct the signals of warning. Death is the sure penalty, life and the survival of the race the reward.

When a young creature is separated from its mother and fostered by a human being, this allegiance and obedience may be transferred to the source of food and protection, and become absolute. It may even deepen into something more than the normal short-lived bond between mother and young, for life in the wild is full of dangers, and much of the energy of growth and life is directed to cope with them. Given protection, food and love, a new dimension can be added to the possibilities of development.

We saw this happen when we visited Elsa, the Lioness of Joy Adamson's *Born Free* and *Living Free*. That the Adamsons were able to foster in Elsa an unfeline character, revealing more than merely instinctive potentialities, and succeeded in retaining her loyalty and love, as well as training her to live her own wild life, is a remarkable achievement with fascinating psychological implications.

6. Swaziland

Paramount Chief Sobhoza the Second – Piggs' Peak and the Jail

Hluhluwe was our initiation into the ancient pleistocene world of Africa, our first encounter with its extraordinary surviving manifestations. It was a strange and wonderful experience to be able to move right into it, adding our footprints to those of the wild animals and watching them at close quarters.

Very soon, alas, we were filling up at a common petrol station and buying peppermints at a crowded multiple store with two entrances, one for whites and one for non-whites. Back into "civilisation" with a bang.

We crossed the frontier into Swaziland, all tidied up into sisal plantations or left to coarse yellow grass where browsing cattle replace the creatures of the wild. One looked in vain for giraffes with the quatrefoil pattern of ears and stubby horns, overhanging their thorny meal of acacia; for rhino or impala, bush-buck or nyala. Yet this was a land once swarming with game of all sorts, thriving on the poor soil which barely feeds the cattle.

We picnicked under a spreading acacia, while our friend the botanist pointed out the many varieties of these common and most useful trees of Africa. We drove past fields of aloes, brightening the scene with their blaze of orange candles; climbed between rocky ridges growing magnificent stands of *Euphorbia cooperii* — their succulent leaves like green hearts upon a spit — and noticed groups of giant aloes curiously

stripped of most of their leaves. These, we were informed, were the producers of Carters' Little Liver Pills, "five minims enough to purge an elephant." That night we slept at Hlutikulu, with a cheery fire to warm us after our climb to these cool heights.

It was also, of course, winter here (end of July) and everyone kept telling me that I should see the flowers in spring, in summer, in autumn, any time except now. Nevertheless, Swaziland was lovely with dancing hills and green valleys; with native cultivation and forestry plantations of conifer and patula pine and eucalyptus, which do very well on the slopes.

We also met Paramount Chief Sobhuza the Second, calling on him at his official residence, which might be a Wimbledon bow-fronted gentleman's property. He received us in the main parlour sitting in a red-plush armchair with antimacassar, plastic flowers stiff and lonely in stiff little vases. He was sixty years old, but looked about forty-five, has a fine long face, brilliant eyes and a little beard—very delicate arms, hands and feet. He wore a short yellow cotton skirt and an orange and black printed toga tied on one shoulder, leaving the other bare. Two of his ministers attended him, in European clothes. He spoke perfect English and asked Julian how animals manage to adapt themselves to such different climates and conditions as prevail in the world. Then we talked of giant trees such as the redwoods of California, 2,000 years old and still growing, and he responded with a long high note of surprise and delight. His ministers rocked with laughter at small jokes and kept the little party gay and informal. We failed to catch the merest glimpse of his reputed hundred wives.

Such of the Swazi ladies we did see wore graceful long folds of cotton draperies and turbans. The daughters of chiefs adorn their hair, piled up high in a rounded dome, with a red feather; married women decorate theirs with various ornaments such as bottle-tops or B.P. labels. From a distance

they look like superbly heraldic Byzantine images. Peasant women come into town to trade and gossip, dressed in accordion-pleated skirts of goat-skin, remarkably neatly done.

At Piggs Peak, the D.C. showed us the jail; male detainees were lounging around in clean tunics; a few huts housed women prisoners engaged in making grass mats of a most attractive pattern.

"What have they done," we asked, "to get themselves jailed?"

One of these got knifed by a neighbour, we were told, and both were brought before the magistrate.

"Why did you knife the woman?"

"She interfered with my beer."

"How could she, being so small and you a great big fellow?"

"She put her head into my pail of beer and blew her nose in it." Three months jail for each: fair enough.

Another woman was accused of giving a man—not her man—a love-philter. This was discovered by the lawful wife and considered to be witchcraft, now punishable.

The gates of the jail are left wide open all day, for no one ever escapes; the prisoners take a few days off occasionally, with or without permit, but they are always glad to return. In fact one of them made a dreadful fuss when he found the gates shut one evening, though he had most carefully warned the jailer that he would be back that night.

The only wild life we saw in Swaziland was a huge tawny eagle sitting on top of a termites' nest. As they were coming out to forage, he was daintily picking them off one by one with his raptorial beak. We felt he was cheating. But we heard later that though picking up of such inconsiderable trifles as termites may be demeaning, is also necessary, for the dry season brings a great scarcity of more appropriate prey. Eagles too must fill their bellies.

7. The Kruger Park

Impalas, elephants, elephant courtship, hippos, Ficus trees

The Kruger Park is one of the most visited and best publicised reserves in Africa. Everyone knows that there lions sit in the shade of cars, playing happy families, that elephants wave friendly trunks and so on. So I was feeling a bit let down when we got into our first camp for the night, having seen nothing but vast stretches of acacia bush and fever trees, relieved only by road-trained herds of impalas.

The rules for visitors are strict, and rightly so: no one is allowed out of their car, the speed-limit is 25 m.p.h., and you must keep to the roads. The traffic was considerable, every camp filled with large Afrikaans families spending the last of their school holidays in the Park. Food is provided at the camp restaurant, but delicious picnics can be contrived on open braziers. Rondavels and tents overflowed with the pent-up vitality of children and young parents, released at sundown after being caged in hot cars all day long.

"We saw ten lions," someone boasted. "Over twenty giraffes, and just hundreds of buffalo," said another. The list was long and tantalising. We had nothing to boast of: only "*la route qui poudroie et les champs qui verdoient*," as in the Bluebeard story; except that the fields were of dry coarse grass which naturally did not attract game.

Next day it was just the same; as we proceeded, with all eyes peering into the lifeless bush, we began to imagine

elephants in grey tree-stumps and crouching lions in tawny tufts of grass. Once we fancied we saw a leopard in a tree, till the outline in the leaves was scrambled by wind and the leopard dematerialised. Frustrating and laborious, the unrewarding miles crawled by. Yet how exciting the hunt, with always the hope that round the next bend, over the next ridge, something was bound to appear! It is like a game of hide-and-seek, but one which the wild animals are bound to win, for we have to stick to rules and they have over eight thousand square miles to play with.

We turned in at our appointed camp at sundown, washed off the dust and tidied up for supper, retired to our rondavel where the light was cut off at ten o'clock, and were ready to start at dawn the next day, traiing through the cool early mist. Most animals tuck themselves out of sight till the sun warms them up, retiring again into shade when the heat gets unbearable.

In the end, our persistence was rewarded. We had just parked on the side of a reed-fringed lake when thirty-two of the four-thousand-odd elephants said to wander across the Kruger Park silently emerged on the farther shore, like giant grey ghosts. In good order they climbed down the bank, old cows, young bulls and babies. They began by squirting themselves and each other before leisurely pumping up instalments of the twenty or thirty gallons of water they are reputed to pour down their throats every day.

Fabulous and prodigious—yet indubitably real. How did evolution round off such a creature, such an improbable equipage? Trundling its great bulk on legs like pistons, in the slow counter-poise of moving one cushioned foot at a time, loosely contained in a sack of thick wrinkled grey skin—pachyderms to their fingertips. . . .

And then consider the head: the lofty perpendicular forehead reaching up to eighteen feet, flanked by two flapping

sails of ears; the curved tusks deeply anchored below the beady eyes, and between them the trunk, an elongated tapering nose tipped with a prehensile finger. This is the greatest invention of all. It is the implement *par excellence*. The Nigerian Art Exhibition in London in 1961 showed a small bronze group which fascinated me: two hunters with two elephants, each elephant a sphere pointing a horizontally extended trunk which ends in a human hand: the essential elephant. The trunk is in truth a hand, plucking fruit or tender shoot, conveying all food and delicacies to the mouth below; but it is also a most sensitive organ of smell—and therefore of taste; a funnel to suck and spray; a trumpet to sound the alarm; a weapon to kill or flay; and equally an organ to communicate tenderness and comfort to mate and young. It is ever active: tasting food, palpating the air like a radar antenna, prodding and testing the ground for scents, beating it as a danger signal, threatening in an upturned S. It also gives the elephant the invaluable advantage of being able to eat and drink without stooping and getting into a vulnerable position.

An elephant without a trunk is inconceivable. Yet we heard of one in the Murchison Park, whose trunk had been caught in a poacher's snare and had partly rotted away. It lived in a swamp and browsed directly with its mouth, kneeling on its front legs while jerking its hindquarters upward to keep some sort of balance. The Warden was amazed to see how it had adapted itself to this almost total handicap, and for the time being, survived.

The courtship and mating of elephants have not often been witnessed, for they generally seek a safe privacy for these activities. Major Poles was lucky to witness this scene, later published in *Black Lechwe* (Vol. 2 No. 4:)

. . . The two elephants, a young bull and a mature cow,

faced each other with ears outstretched and then advanced until their tusks interlocked. They took hold of each other's trunks, first wrestling then straining one against the other as in a tug-of-war.

In a little while the cow, who had been rather roughly pushed and pulled about, backed away. . . . The bull now took the cow's tail in his mouth and, pressing the side of his head against her quarters, frog-marched her a short distance. . . . He then ranged alongside, passing his trunk over her neck and gripping the base of her opposite ear. . . . then suddenly letting go of the cow's ear he mounted her. He rose on his hind-legs in an effortless manner, resting his knees on the cow's loins (not the soles of his feet) and shuffled forward to press his body close against her quarters. The cow stopped and remained still directly the bull let go of her ear. The actual mating lasted only about ten seconds. After that, the bull shuffled backwards and dismounted as effortlessly as he had got up.

The cow then turned to face the bull who stretched his trunk horizontally, at full length, towards her. She extended her own trunk towards the bull in the same manner and in this position each advanced until their trunk-tips touched, then they raised their trunks upwards and backwards over their head in form of the letter S. They remained statuesque in this position for about half a minute.

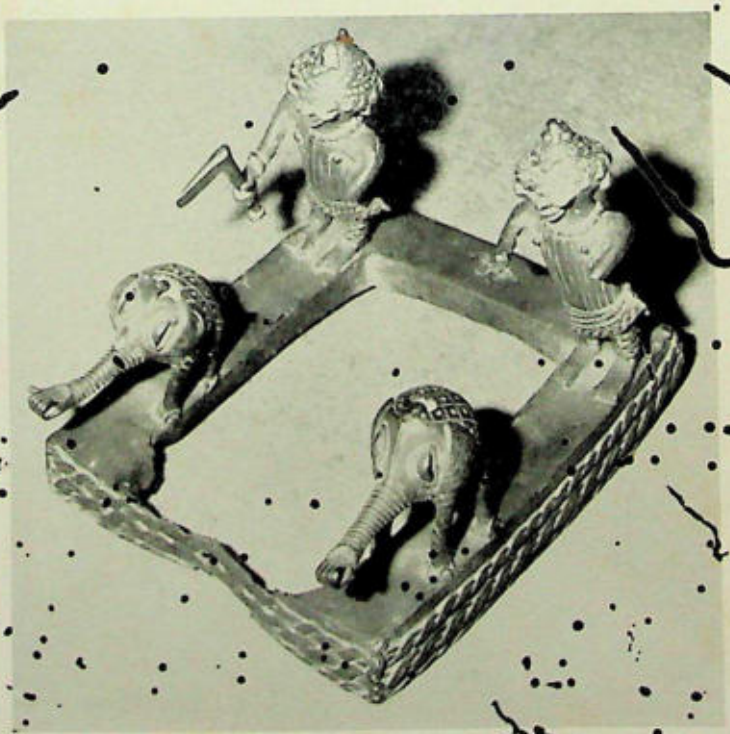
At no time during the courtship did either animal make any vocal sound.

Major Pole adds that "cow elephants, when feeding, may often be seen to put a small bunch of grass or leaves into one another's mouth."

We must have seen hundreds of elephants on our safari; each of them was his own perfect miracle to me—utterly

Creatures of the open plains. *Above*, a pride of lions, the largest African carnivores, feasting their breakfast of zebra.
Centre, female cheetah and cubs at kill. *Right*, spotted hyena and white-backed vultures waiting for what is left. Nothing is wasted on these hungry plains

Animals in primitive cultures. *Above*, a hyena masker dancing the hyena dance to the sound of drums. Few hyenas are killed in Africa, for they fulfil the indispensable mission of scavengers. *Below*, an old Nigerian bronze group of hunters and elephants—the essential elephant, with his all-purpose trunk rounded off by a symbolic hand



admirable. These thirty-two original ones gave us some ten minutes of their lives, drinking deeply, splashing, spraying themselves with the most evident enjoyment, while a big cow kept watch, her trunk curling upwards in several directions. The young ones rolled in the shallows under the eyes of their mothers, the adolescent bulls venturing farther, but within call: a natural family group, at ease among themselves. Suddenly an Egyptian goose came flying down with clumsy splash, a signal was given and the troop climbed out in good order, filed with no hurry along the path and just melted into the bush. We knew they were there, threading their way between far from impenetrable shrubs and trees, and just could not believe they had so completely disappeared from sight. But they had—we never saw even a leaf displaced: the bush absorbed them completely.

Theirs is an evolutionary success story. They have not only survived various climatic upheavals, but their kind thrives equally in hot arid plains and high up in the cool mountains; on the equator and up to the north and south. They have been mercilessly hunted since time immemorial for their ivory and meat, and thousands have to be destroyed every year to save man's agriculture; yet, in spite of a gestation period of eighteen months (and one offspring every four years), their numbers are still increasing, often alarmingly.

Only an extraordinary vital tenacity and flexibility in feeding habits have permitted the elephants to survive. (There must also have been an unbelievable quantity of elephants and their relatives roaming the world in prehistoric times, as attested by the vast deposits of mammoth ivory in Siberia, still worked after two centuries of exploitation). They can eat almost anything vegetable, from the bark of trees to fruit, nuts, lush green leaves and all sorts of grasses, topped by sprinklings of ash and salt deposits which provide them with various trace minerals. It must be said that their digestion is

curiously inefficient and rudimentary, as evidenced by the quantity of undigested food in their opulent droppings—but this is also a measure of their readiness to put anything available into their vast stomachs. To the accompaniment of explosive belches, farts and rumblings, the intestinal machinery grinds out of tons of raw material the nourishment they need, or squeezes out of baobab or sanseverina[1] fibres enough moisture to keep them alive in times of drought.

Elephants are and always have been an essential factor in the ecology of Africa. An elephant shakes a tree for its fruit and bands of monkeys and herds of impalas gather to profit from the left-overs—and this also helps to spread the seed and multiply its chances of germination. Elephants penetrate into deep forests, breaking their way in like bull-dozers: they destroy a good many trees in the process, but they cut a swathe which other game will follow, opening fresh pastures to feed, not only their own, but innumerable smaller hungers. Even the elephants' brutal uprooting of trees, so often deplored in overpopulated regions, has a function, carried out by no other creature, of breaking up the dense crust of senile soil and thus accomplishing every farmer's elementary action of ploughing.

It is to them also that a whole series of smaller creatures, from rhino down, rely for their essential water-supply in times of drought. For elephants are able, not only to scent the moisture below the dry bed of a river, but to dig with tusk and trunk several feet down to the water.

Under matriarchal rule, a leadership-followership organisation, they have ordered their society in disciplined family groups, obeying various tactics like posting sentinels or sending out scouts before the herd moves to new feeding grounds—all for the common good. They show amazing ingenuity and

[1] Sanseverina: succulent plant looking like a green stick.

proverbial wisdom in their determination and efforts to succour each other in difficulties.

"The elephant never forgets" is an old adage based on many recorded incidents. It is interesting to have this confirmed physiologically: Dr. Penfield, the great Canadian neurologist, has proved by remarkable experiments that memory is seated in the brain's temporal lobes: those of the elephant are the largest among mammals. Above all, his longevity enables him to make full use of his capacity for storing memories and utilising his experience.

We slept that night at Olifant's Camp. The group of rondavels is built on a bluff overlooking the Olifant river, winding through an expanse of low scrub with occasional baobabs towering out of it. It had been very hot under the sun but now night was falling and refreshing breezes came up from the river below. After supper, we stood on that high cliff watching the waxing crescent of the moon and the flourish of brilliant stars pinned on an enormous sky. Below the enormous earth stretched out, velvety black, heavy with unseen life. At times there was a hyena's laugh, an owl's screech, a distant lion's roar: we were enveloped, enthralled and awed by the soft menace of Africa.

Next morning we followed the river and watched several hippos snorting and yawning, grunting through their big resonant noses in lazy mood of gossip. A scene of absolute peace, unconditionally given in this beautiful spot: the wide river alternately lazy and swift, shallow and deep, with flat rocks and sandy beaches edged with palms, papyrus, reeds, thick large luscious trees like the Transvaal ebony, the green-trunked acacias called fever-trees, mulberries, and of course the many species of wild fig.

These ficus are a staggering family, comprising no less

than six to seven hundred species; they are endowed with a fantastic power of adaptation and hunger for life. Many of them are stranglers, and look like snakes coiling their muscles on their helpless hosts, dropping aerial roots to consolidate their position, eventually throttling the innocent within. Others cling to the top of precarious kopjes—those odd granite boulders left bare on eroded hillsides—and drape their tentacular roots like seeing tentacles down to the soil below to perform the miracle of living at some thirty to fifty feet above.

The river generously sustains this exuberance of vegetation—but beyond it, there are, in the Kruger Park, desolate stretches of uprooted trees, mostly mopani and marula. We return to the problem of elephants. They are careless feeders: if the leaves they fancy are too high, they pull down the whole branch, pick a leaf or two and start again; if the branch itself is too high, they will often stand on their hind legs, and thus comically elevated, reach aloft till they get at the fruit or pod they are after. And when that little pachydermatous ember of wisdom which is their eye has spied some delicacy even farther up, too high for acrobatics, they lean their upraised trunk against the tree, and down comes the whole affair, its roots prised out of the dry soil. As we travelled through the Park and later through Africa, we came upon great stretches of such destruction.

We spent four days prowling across the Kruger—exploring by-lanes and stretches of river, dawdling where there was game and hurrying where there was none. One of the great advantages of the motor-car is that one can cover great laps in quick time, thereby more than trebling one's chances of seeing animals. We watched giraffe and impala, buffalo and bushbuck, enormous herds of gnu and zebra. The water of a drinking pool reflected a warthog family neatly strung like beads upon the shore; hundreds of hornbills, the cockneys of

the Kruger, flopped behind their heavy beaks by the roadside; and at the rest camps, eager for crumbs like their vulgar cousins in Europe, we were dazzled by the royal-blue glossy starlings, iridescent jewels wearing a golden eye.

A last night was spent at Skukuze—a vast metropolis of a camp with a buzzing bazaar full of African curios for every taste—set like a sore in the midst of this other world so painstakingly preserved from man's interference.

8. Johannesburg

Gold mines and diamond mine dumps—flowering suburbs and drab locations

From the Kruger we whisked westward through the high veld, crossing high plateaux and windswept ranges occasionally broken by green valleys, to reach the City of Gold, Johannesburg, by nightfall.

We stayed overnight in a beautiful estate some distance from the city; next morning, through suburbs perpetually wreathed in flowers, we drove into its heart. It is modern, urgent, vertical, expanding prodigiously in every direction. It has the vivid, vital air of an American town and indeed is the same kind of phenomenon. It is a city born in a hurry, under a shower of gold.

We went right across the town, into the outskirts, through the agglomeration of pyramidal slag dumps created by the gold mines, with attendant black chimneys belching smoke, tangled web of electric wires, rails and prying cranes.

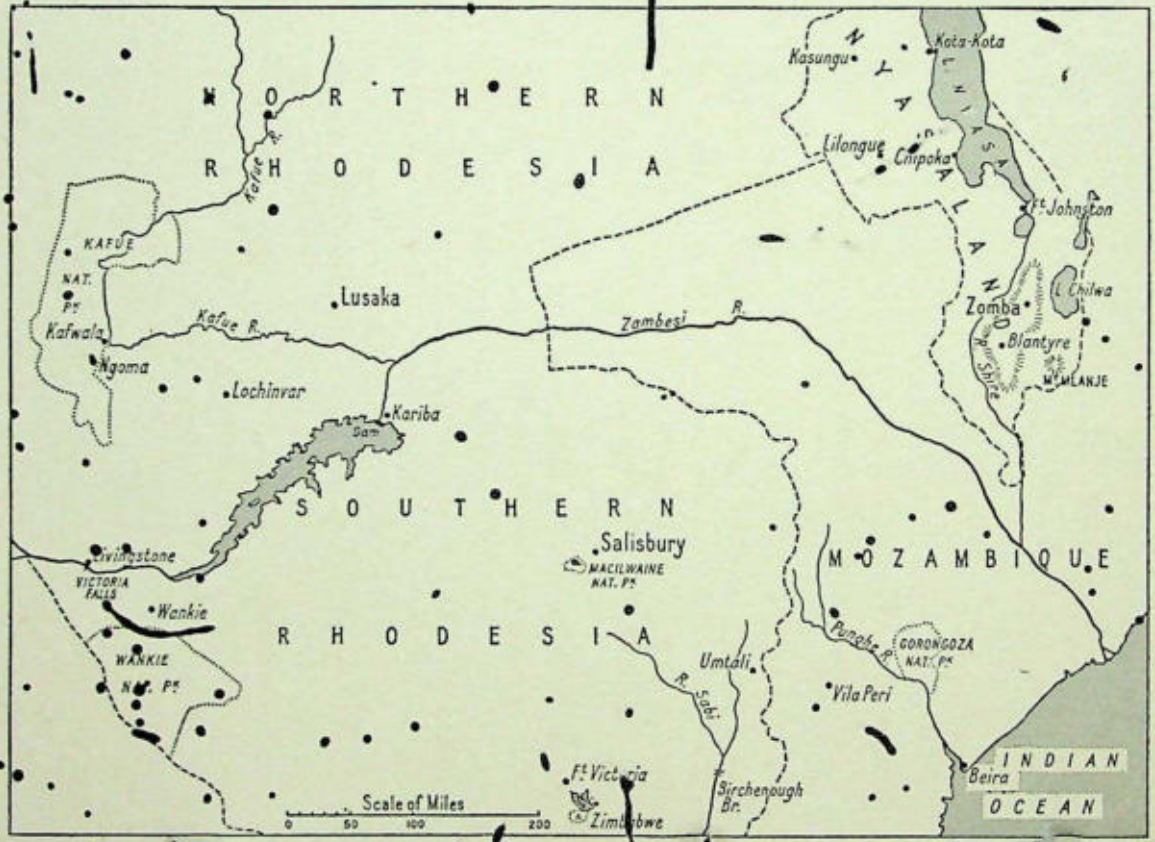
The mines are worked with the latest mechanical equipment, and it is moving to see, in the middle of a field, the original pumping engine used in the 1890's, a clumsy contraption of rough wooden beams; and close by, a small man-made crevasse some ten feet down, which turned out to be the actual head of the richest stratum of ore. No one could guess, looking at this stone trench pickaxed by sweating men, that here was the origin of a fabulous empire of gold.

Then on to the townships, closely packed small cube houses where the African miners and their families live, with a patch of untidy ground front and back; swarming with children: teeming humanity, mass-produced like the houses—the population grows by 2.2 per cent every year. They have come a long way, these Zulu, Xosa people, leaving their holdings in the veld, their beehive huts and calabashes, their tribal ways and laws.

The Townships have replaced practically all the shanty-towns which sprouted round the mines not so long ago. They are planned and organised for this influx of low-grade workers, with churches, schools, swimming pools and playgrounds, beer-gardens and a huge stadium. They cover vast areas, tidy, hygienic, sanitary; but I confess my first impression was of an oppressive repetition of small ready-made boxes, the multiple cells of a robot humanity.

Yet this may be our vision of the future for most of the human race: the Brave New World. Oliphant's Camp recedes into an even further past, leaving one to face the threatening present and all its works.

II. CENTRAL AFRICA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9. Lake MacIlwaine

Salisbury, its multiracial college and art centre – stocking a National Park with tranquillised animals – Bushmen paintings

From Johannesburg, we flew to Salisbury. After three days in that attractive city, set among its flowering exotics, enjoying a delicious climate with a hint of tropical warmth, seeing the flourishing multi-racial college and art centre, we set off early one morning with Mr. Steward, the Director of the Federal National Park, and a young American ecologist, Thane Rhiney, to visit Zimbabwe and Gorongoza.

Our companions were absorbed with the problems of wild life: there was such fascinating talk that one hardly noticed the dust and the miles spinning away. Julian filled his little note-books with jolty notes—will he ever be able to read them back? We only stopped to look at secretary birds hunting for food. Quills crazily stuck round their heads, black tail-coat over off-white waistcoat, long black-breeched sinewy legs with powerful claws, they stalk purposefully with occasional jabs at their prey. They live mostly on the ground and fly only when they are disturbed. As they are too heavy for an easy take-off, this takes quite a time and a bit of hard running—which they do with wings outstretched, comically, like a glider on a tow; then with restored dignity and legs horizontal, they flap majestically off.

We stopped for lunch at Lake MacIlwaine, an artificial lake

which provides Salisbury with its water, and which, with the land round it, has been converted into a small National Park. Of course, the place had been shot out of game, but giraffes, gnu, sables, impala and zebra have been collected and transported painlessly to this new habitat; we saw them thriving and content, gathered in their separate herds.

The lake was satin-smooth and transparent, beautiful with its indented tree-lined shores. It is set in a typically Rhodesian landscape among small kopjes rising out of the plain. These kopjes are little hills crowned with granite or gneiss boulders carved by erosion. Rounded and smoothed by the elements, these rocks remain attached to each other by precarious points of contact. They form oddly shaped groups balancing at curious angles, each one like an *avant-garde* composition. The sunlight plays upon their curves, burnishing the granite into warm peach colour contrasted with purple shadows; vertical aloes burn among them, glowing coral-red above the rust-red earth.

A frieze of bushman paintings, of uncertain date but certainly long after the beginning of the Christian era, is visible on the ceiling of a rock-shelter close by the shore of the lake. It represents elands with their typically small heads, elephants, trees and a group of lively naked huntsmen carrying weapons or tools.

This particular Bushman painting is not especially good; there are many in South Africa of higher standard. It was, however, interesting from the point of view of human evolution and another link in our pilgrimage to the past. There is a remarkable resemblance between the paintings of the Spanish Upper Paleolithic Age and those of the bushman art of South Africa. In fact, rock paintings of antelopes and other game in free, naturalistic style can be traced in gradual descent all the way from Spain some 40,000 years ago, to South Africa in our own century. We find them in Abyssinia,

Tanganyika, Rhodesia, right down to the Drakensberg and the Cape, all bearing the same character, hunting scenes with small matchstick men brandishing almost similar weapons.

The trail ends with the bushmen of South Africa, for they are the last vestiges of a culture which links the present with the paleolithic. Reduced now to a few tribes living in the southern end of the continent, these bushmen are still food-gatherers and hunters; they survive in remote pockets of the Kalahari Desert where they are protected from outside competition by the undesirable natural conditions in which they have learnt to subsist, thanks to their remarkable primitive culture.

Light yellow or brown in appearance, small in stature, with prominent mongoloid cheekbones, flat noses, thick lips and so called " peppercorn " hair growing in short spirals, they are somewhat of a mystery among the races of Africa. Their culture has survived the Bantu invasions and even the white men's coming. Although they have freely mixed with the Hottentots, they are not to be confused with these, and almost certainly derive from an ancient stock, driven south to the end of the continent in persistent waves. Threatened now on all sides, it is not likely that they can remain much longer in their " wild " state: confronted with modern technological man, all they have painfully learnt about keeping alive on the extreme limits of possible existence will be as thistle-down in the wind. But as long as they and their neolithic culture survive, they are another astonishing anachronism in Africa.

10: Zimbabwe

The Temple – The Acropolis – Monomatopa empire – historical surmises – latest archeological views

We reached Zimbabwe by four o'clock, and rushed off at once to see the "Ruins." They fall into three main groups: the Temple, the Acropolis, and a mass of tumbled walls some distance away, the so-called Valley Ruins.

We made our way first towards the Temple; the road which leads to it is still of the ancient *daga*, a pinkish smooth surface looking like Chinese crackled ware, made of a mixture of powdered granite and clay.

A green parkland valley opens before us, framed with high parallel ridges edged with kopjes, and in the middle of it rises the Temple. It looks like a huge grey well, its high walls blank and blind, closed against intruders, with at first sight no opening whatever. Tall trees grow around and within it, their dark foliage a foil to its pale-grey granite flecked with orange, white and dark grey lichens. The well is actually an ellipse with a circumference of 830 feet, rising in level courses to thirty-four feet. Part of its top is decorated with a simple chevron pattern of single up-ended blocks; the same blocks made from the local stone, which cleaves in fairly even planes and needs little final dressing, are used for the whole construction, with no trace of mortar between their regular courses.

The evening light touched the high curve, the roundness of its geometrical beauty smooth and satisfying to the eye.

This encircling wall, in its thickness of seventeen feet at the bottom tapering to ten feet at the top, is slit by two narrow openings, V-shaped, and rounded on both sides to make an entrance.

Within the high rounded outer wall is another, lesser one, leaving a narrow passage between them; near the periphery, two conical towers of solid masonry, the smaller one half-demolished, the taller one rising as high as the outer wall.

Inside the walls, a group of thin monoliths stand in a small open space: everything else is in ruins. Heaps of the neat granite blocks litter the ground, with here and there circular platforms of *daga* which formed the floor of destroyed huts. Half-ruined walls, curiously S-shaped, appear to have no function whatever: everything, in fact, seems to be a jumble of curves framing odd little corners.

The confusion of all these curves is so perplexing, so unlike anything one can recognise, that one begins wildly to speculate. Is it the image of a sacred constellation? The representation of an organic thing like a foetus? A stage for extraordinary ceremonies and dark spells? It is baffling and mysterious.

It induces a sort of trance in which we wander, trying in vain to imagine what lies behind it all. There must be some clue—some answer in human dimension . . . What was this pair of conical towers for? They both are solid and filled with rubble, the outer surface neatly finished in the round. A great ficus tree spreads its branches over the large one, as if in protection. When the place was first discovered in 1868, it was covered with a luxuriant vegetation, like Angkor and the Mayan Temples; the Office of Works, when cleaning and restoring it, wisely left some of the large trees.

We threaded our way back through the narrow passage

between the two outer walls. All the questions were left unanswered. Night fell as we departed.

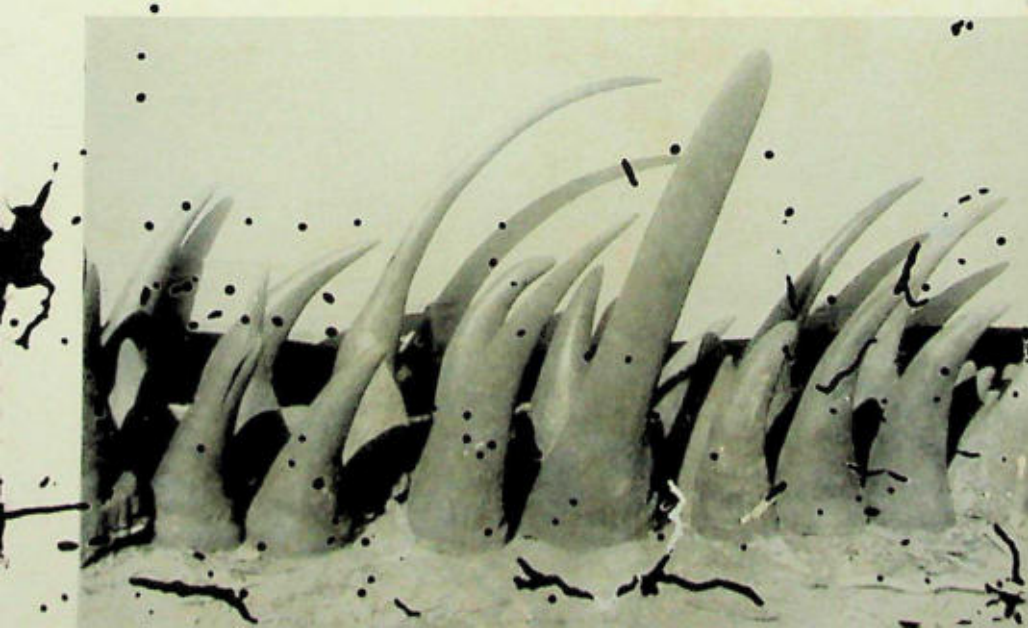
Early next morning we climbed the Acropolis, the second important component of the Ruins complex. It is perched on the very top of the ridge which shelters the Temple, so that from below, one sees only the inchoate mass of boulders rising sheer against the sky. Wisps of vapour still clung to the peaceful green valley, which looked strangely happy, as if it carried memories of some golden age. The bright turf of the English golf course contrasted gaily with the long shadows thrown by the trees and by the great mass of the Acropolis towering nearly 400 feet above the Temple.

The ascent was gentle at first till we reached the narrow passage squeezed between boulders to form a steep ramp. This natural formation was clearly used for defence, an added wall being sometimes built and bonded against the rock-face; nor was the passage ever widened when bulging boulders encroached upon it. One at a time we climbed the tortuous and deep corridor, rising steeply on rock-cut stairways.

The Acropolis itself is an amazing enterprise. The wild natural chaos has been accepted and domesticated: the gigantic boulders have been yoked and linked together by walls of neat granite blocks, precisely tailored to their contours; intrepidly crowned with walls no one could ever scale; used to serve as partitions to the complex and capricious design of chambers, terraces and courts. A strange harmony in which geological accident and human industry co-operate, the one a counterpoint to the other: rock and masonry firmly welded together to make a place of safety, a granite fortress both fabulous and impregnable.

We emerged on to a large court encircled with boulders and walls; in the inner wall is a narrow door. Entering under a wooden lintel, we passed through a tunnel cut in the thickness of the wall, out and up on to an open platform. This dominates

Above, the Three Musketeers—the inseparable group of half-grown black rhinos at Amboseli enjoying their daily dust-bath. *Below*, after the great drought in the Tsavo Park, hundreds of rhinos died of thirst and hunger. These horns collected by the rangers show their remarkable variations



Above, a water-hole, with wildebeests and two sables—a fine male and a female with smaller horns and a paler coat. The sable's scimitar-shaped horns look more decorative than functional but they can kill a grown lion or a rival for leadership of the herd. *Left*, a giraffe balancing his diet of thorns with a pinch of salt extracted from the salty soil. To avoid the 18 foot up-and-down journey of his head between each swallow, he fills his cheek-pouches to full capacity and takes one large gulp at the end

the lovely valley, stretching far out with its great trees and green slopes; the Temple itself lies far below us, like a deep well with foliage emerging from its brim. Farther down, the Valley Ruins disclose themselves as a large group of destroyed stone huts, probably once housing the workers within their patch of gardens.

We made our way along the high crest of the ridge parallel to the valley, guarded by outcropping boulders and their surmounting walls, here decorated with thin fingers of rough-hewn stone pointing at the sky.

The famous Zimbabwe Birds have, alas, all been stolen from the top of the great ramparts where they once stood. Four of them are known, three of which we saw in the Cape Town Museum, together with fragments of rather coarse stone friezes and bowls decorated with baboons and zebras. These massive birds are carved in soapstone, over two feet in height. They have a curiously debased appearance, more like a groping attempt to imitate something remembered than a spontaneous creation. They have been variously interpreted as charms against lightning, memorials to chiefs, or even as the Egyptian Hawk, emblem of the Goddess Hathor to whom all mines were sacred.

One last look at the Temple Valley from the outer vantage point, and we crossed the ridge to the other side. Here more rocks, tangled with ficus roots, pile on top of each other in a disorder which was made to serve both for defence and for observation: we scrambled on top of one of these recumbent giants to scan the whole horizon.

Just below this point of view, we came upon another large irregular court within a high wall, curiously crowned with rounded chimney-like but solid pillars of granite blocks. From this court, a natural crevasse between the jumble of boulders led us first steeply down, then towards a more gentle slope opening on to the wide, hilly plain. This, by the

look of its terrain, could be the site of many graves which have not yet been explored, possibly the final key to Zimbabwe lies here.

The design of the Acropolis is as intuitive as a child's drawing, with no regard for geometry: the creation of some unknown and unrecorded Pericles, who invented his own rules in immediate relation to his needs. It is an impressive achievement. Yet there is, in these ruins, no *style* of architecture which can be related to anything—no single hieroglyphic, no link which archaeologists can connect with anything they know.

It has not been decided what the Acropolis really was: a lookout point? a fortress? a necropolis? a secret storehouse and workshop where gold and tin were smelted? It could be all of these. There are indeed the remains of a furnace for gold and iron smelting in the heart of the citadel, and in the outer precincts, a shallow cave still full of iron ore. The furnace itself, shaped like a rudimentary female, has been taken to the Livingstone Museum.

In most early cultures, the ritual of smelting was held to be sacred and dangerous, the smiths a race apart and their vocation not lightly undertaken. Like priests before a holy function, they had to withdraw from their families, to purify themselves with complicated rituals, and compose themselves for communion with their genii. What better place for the process could they find than the Zimbabwe Acropolis, in whose well-defended chambers they could also store their treasures?

At the moment of going to press, Desmond Clark offers a new light on this problem: he writes in *Antiquity*, No. 37, 1963, that charcoal dating of Acropolis material proves it to have been occupied as early as A.D. 200, to have been used in five distinctive periods and to have begun to deteriorate in A.D. 1100, at the time when the Temple was increasing its own power and importance. This fascinating monument may

well prove to be the basis for all studies of iron-age cultures south of the Zambesi.

And what of the Temple? Evidence points to its being of later date than the Acropolis. Recent checking by the Carbon 14 test has dated a wooden beam found in a drain to the seventh century A.D. But this beam is made of the wood of the tambootie tree (*Spirostachys africana*), very resistant and so extremely poisonous when fresh that even the smoke of its burning will taint the food it cooks, and cause blindness to man and beast. (The porcupine is said to make use of its leaves for a purge, which seems rash.) The beam would have been left to mature for quite a long while before being used in the building, so the building itself may be considerably later.

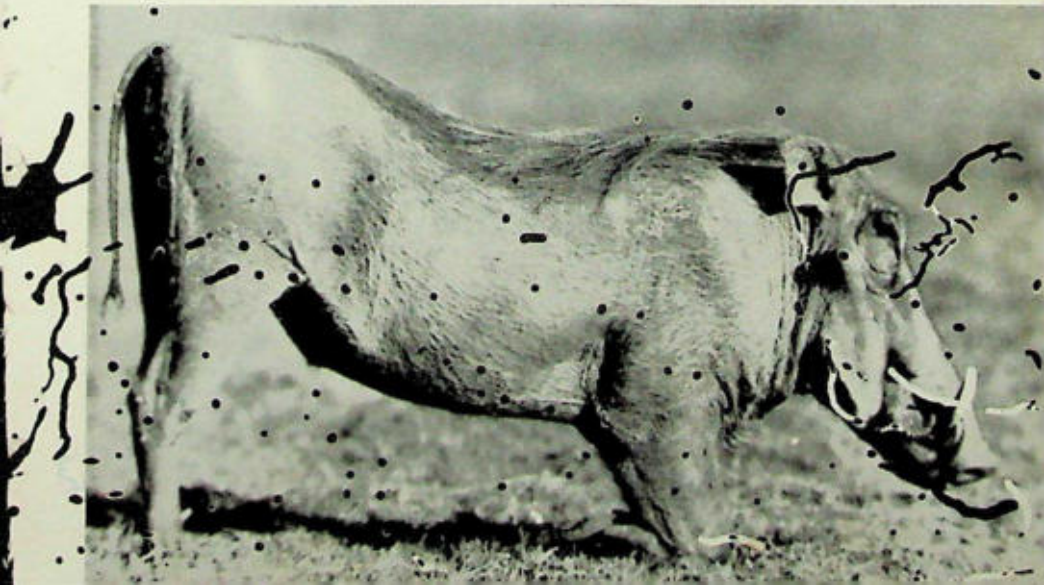
When in 1896, gold began to be found in ruins all over the country, the Ancient Ruins Company was formed and given permission by Dr. Jameson, through open and lawful contract, to dig up and take anything they found. These legalised robbers unearthed quantities of gold ornaments and vessels which were all melted down regardless of their artistic or archaeological value. In their frantic search, they pulled down walls and dug up floors with an almost vindictive gusto, and it is estimated that, from Zimbabwe alone, they removed over 1,700 ounces of gold. When Rhodes was told of this vandalism, he intervened at once and within forty-eight hours all digging was stopped. But by then, precious objects and essential evidence had been destroyed, leaving only the basic fact that the whole Ruins' complex was connected with gold. This at least is unquestionable. A total of 75,000 pits and other ancient gold workings have been traced in Rhodesia and northern Transvaal, from which, it is estimated, some 650 tons of gold must have been extracted by the ancient miners. It should be possible to use the Carbon 14 test on some of their early pit-props and to estimate their date, which can have covered a period of 2,000 years or even more.

Recent explorations of Southern Rhodesia and beyond have shown over 300 ruins of the same general type, though only five are on the scale and importance of Zimbabwe. Mapungubwe (in northern Transvaal), discovered in 1932, is a particularly interesting site, reminiscent of Rider Haggard's *She* and Conan Doyle's *Lost World*. Its situation on top of an forbidding rocky plateau only accessible by a secret chimney, as well as the veneration it was held in by the local tribes till quite recently, kept it from the clutches of the Ruins' robbers. It was found practically undisturbed, containing a rich necropolis with hoards of thin gold masks and ornaments, as well as imported pottery and beads.

In the Zimbabwe Ruins, even after their mauling by the Ancient Ruins Company, a curious assemblage of goods was also found, among them a Ming blue and white bowl and a Dutch gin bottle, both dated 1700, as well as quantities of sherds and beads from the north.

This confirms that Zimbabwe, like Mapungubwe, was for many centuries an important trading centre, exchanging its gold and copper for a variety of objects brought from the coast. And it all fits in with the reports of early Arab and Portuguese travellers and traders who tell of the great kingdom of the Monomatopa, with fabulous mines of gold and copper, sole source of these minerals to the coast of Mozambique. It is known that Sofala, near Beira, and Kilwa in southern Tanganyika were famous for their exports of gold as early as the seventh century, and everything points to the hinterland of what is now Portuguese East Africa as the source of this gold. Zimbabwe, the chief of the important, well-defended repositories in the heart of the mining fields, could have been built—or rebuilt—by a people skilled in the mining and smelting of gold and iron and copper, ruled by a succession of kings who were able to maintain their independence from

Above, a large elephant masked by straggly thorn branches; a herd of elephants can vanish behind the thinnest screen. *Below*, thanks to his ugly warts, which painlessly absorb thorns, the ubiquitous warthog is able to reach lush green grasses under thorn-bushes. To graze at leisure he usually kneels



Zimbabwe: the Acropolis. *Above*, J.S.H. and M.J.H. on the ruined ramparts of the Acropolis, with the Temple in the valley below. *Below*, the south entrance, with the base of a ruined turret on the right. The lower courses of the defensive walling are tailored to the contours of the irregular natural boulders, making an impregnable rampart on the crest of the hill

the Arabs and then from the Portuguese who occupied the coast.

Ever since its discovery nearly a hundred years ago, Zimbabwe has drawn a trail of red herrings for archaeologists and romancers. There have been two schools of thought about this perplexing monument.

One considers the Ruins to be very ancient, first built under semitic influence for mining the gold which provided Solomon with his glory—gold which Hiram's navy brought back together with ivory, ebony, spices and apes, to the port of Ezion Geber on the gulf of Aqaba (which flourished about 900 B.C.) The Temple was equated with a palace of the Queen of Sheba, and the country with the fabulous Land of Ophir.

The second school, represented chiefly by Miss Caton Thomson, R. McIver and Desmond Clark, who have done the most recent scientific work on the problem, all agree that the people who built Zimbabwe were of Bantu origin; that the idea of building in stone came from the east coast where Arabs had their stone houses, often with conical towers as lookout points; and that they were first built between the ninth and the thirteenth century A.D.

Furthermore, Desmond Clark, in his *Prehistory of Southern Africa*, advances the idea that the Temple of Zimbabwe is the enlarged version, in stone, of an actual Bantu chief's kraal, and gives convincing diagrams comparing the two. This seems, in fact, a likely explanation of the present lay-out of the ruins, and disposes of the enigma of all those curved walls which puzzled us so much. For, in the Bantu chief's kraal, the entrances of huts are screened by reed mats planted in sinuous lines to give more stability, and the builders of Zimbabwe repeated this traditional feature in spite of its being no longer functional.

Nevertheless, the size of Zimbabwe, the solid stoniness, the

texture of the whole thing, leaves in one's mind an unsatisfied curiosity, a need to probe deeper. The field, anyway, remains open—for the enigma of Zimbabwe is still only partially solved. Maybe some day, research on Kilwa and Sofala, and also on the ancient routes of the caravans carrying gold, will throw a new light on these far-reaching problems.

11. Goroñgoza

Journey – Umtali – the Park and its Director – a pride of lions – a raft of hippo – hippos in general

We left that dormant valley of the past and sped towards Umtali where we were to spend the night with the Stephen Courtaulds at La Rochelle. It was a lovely drive past granite-crowned kopjes, then through haunts of bare baobabs. Like silvery ghosts, their trunks are bloated with conceit only to find their substance insufficient for their branches. They lift these constricted limbs with a disarming air of pathos; from their ends dangle sausage-like fruits said to contain antidotes for malaria and dystentery, as well as tartar emetic with which the Boer housewives made their cakes. Elephants enjoy them for their own reasons, one being the calcium element necessary in their diet.

The Africans believe that spirits, mostly bad ones, reside in them, and give them that look of being individuals, each different from every other. Teenager baobabs are slim and lissom, but very soon fall into that middle-age spread with girth up to thirty feet and tortured brow. No one could ignore such monsters of trees—such explosions of vegetable matter, so fittingly called baobab.[1] The fibres which compose them can contain up to 300 gallons of water. Water can also be retained in the hollow of the trunk; the Arab slave-traders exploited these reservoirs in times of drought, even covering

[1] These trees are also found in Australia, where they are called Boabs.

them with planks to keep the water cool and fresh. In times of drought also, the wise but destructive elephants excavate them with tusk and trunk until the trees hang disembowelled and broken-hearted: they die that way, going limp all over like wet stuffing. I found them most endearing, and always wanted to stop and photograph them.

Here and there among the trees shone the miraculous white or pink star of the impala lily, its five petals edged with carmine, growing like the Judas Tree flower, straight out of the wood. These jewels grow all over Africa, blazing their surprising galaxies in the dismal scragginess of the bush.

Before crossing the Sabi River by its audacious Birchenough Bridge shining with aluminium paint, we stopped for lunch at the inn. The bar is decorated with about fifty skulls, prides of lions reduced to blind bone, all shot by the landlord and his wife.

We drove on, climbing towards the highlands—blue ridges tilting up in lovely cavalcades; through the spacious streets of Umtali with its prosperous shops and houses and flowering trees, round and up towards La Rochelle. This is a wonderful estate at the head of a valley, an ideal site to ensure privacy, wide views, and a perfect tropical yet misty climate for even the most ambitious garden. The house spreads round its Italianate courtyard, filled with the treasures of a life-long love of art. The gardens have been planted with the same discrimination: flowers and trees from all over the world, flourishing surprisingly side by side, as beautiful as any I have seen.

Our next stop was Gorongoza, the Portuguese National Park in Mozambique.

The countryside between Umtali and Vila Peri, the first town after the frontier, looked wild and empty after the well-

groomed, prosperous appearance of so much of Southern Rhodesia. Farmer settlers are not encouraged in Portuguese East Africa, land can only be leased for a period of years and exploitation is restricted. The few natives walking along the road were poorly dressed, there was little traffic and few towns. Occasional sugar and tung-oil plantations merely accentuated the monotony of mean scrub and dusty road. There were a hundred and fifty miles of this before we reached the Punghe River.

There is no bridge across the river. Wide and vigorous, it winds between forested banks with occasional sandy beaches. When we arrived, the flat-bottomed ferry was half-way towards the other side, two men poling it against the strong current. While waiting for its laborious transit, we went for a stroll along the banks. Hippo tracks marked the sweep of sand between the knife-sharp blades of reeds, but the river was deserted in a trance of stillness, reflecting fleecy clouds on its pale blue mirror. The banks, carved high on the far side, cut into wooded slopes. The river glided towards us out of thick forest, where only a solitary roof showed among the trees.

We entered the Park gates just as dusk was falling, to be hospitably received by Senhor Rodriguez, the Director of Gorongoza. A stocky, blue-chinned man, talking a kind of Portuguese basic English, he was most friendly and obliging. "You want see lions? I show you plenty lions. You want see elephants? Plenty elephants. Hippo? I take you my *private* road, plenty hippo in river—two thousand hippo in ten miles of river. But no tourists on my private road; one tourist, then *no* hippo. I show you. Plenty." But, he added ironically, "pipple stay four days, not four hours at Gorongoza." How right he was: this was indeed a miserly thing to do, but we had underestimated the distance and the time it took to cover it, and our time was short. Still, we felt rather guilty as the generous "plentys" rolled off his tongue like inflated balloons.

Anyway, we made the best we could of our time by getting up before dawn next day, and setting off on a hot cup of tea and a biscuit, in the Park's Volkswagen Combination. This was a superb vehicle, guaranteed to climb in and out of almost any ditch, with an open roof on which one could lean watch in safety and comfort. Senhor Rodriguez drove with dash and flourish right across the hummocky plains of the park, cut by deep irrigation gashes. This plain is entirely flooded in the wet season, only forested "islands" protruding out of the water. All the animals retire to these and manage on the available resources until the waters subside.

Tails flying, necks arched under their short, archaic manes, a great herd of zebra galloped across our path, followed by a larger herd of gnu at a slouching canter. The African game-scout accompanying the Director had uncannily long sight. Presently he pointed to a speck in the distance—a stationary car: there must be a kill nearby with lions at it. So off we bounced, hanging on at various angles as we navigated like a drunken ship across the bumpy plain. A pride of lions had assembled round a dead zebra whose striped leg pointed up from among their tawny hides. There were twelve of them, five yearling cubs, four females and three large males. When we arrived, the fathers had retired from the feast and were dozing comfortably a few yards away, with the utmost lack of dignity. One was lying on his back, sunning his belly, his four huge pads flapping loose; another was exposing his carnivorous set of teeth in a formidable yawn. The cubs meanwhile had the half-eaten carcass to themselves, trying to tear the skin from the legs with their teeth, but making no impression on what was evidently a very good piece of leather. There was an occasional difference of opinion, fierce angry growls, bristling manes and baring of teeth. Then the largest male got up, stretched and snarled his way back to the kill for another snack. The cubs crawled away resentfully. One of them,

feeling the heat, came and lay down in the shade of the Volkswagen. I longed to lean out and scratch his ears.

"What would happen if I did?" I asked Rodriguez. "Nothing," he answered. "They walk away a little, but they do not attack." He added, "I could go, but tourists see me, that is not good!"

Vultures stood around, patient and persistent. There was also a lonely marabou, very dignified and aloof in appearance: "*La chair est triste, hélas, et j'ai lu tous les livres.*" But that bald, scholarly head will stop at nothing when the lions have gorged themselves, snatching its share from the vultures' beaks and ravenously gulping down the sordid left-overs.

"Time to go," said our friend. We tore ourselves away, the car heading across the plain for a line of trees. A mixed herd of gnu and zebra were bunched together in a curious way, marching forward, then stopping in a dense phalanx. Some fifteen yards ahead of them was a very pregnant lioness, walking slowly towards the kill. She was too heavy and near her time to do her own killing, and was making for the pride's breakfast. The herds followed her step by step, keeping at the same distance till they had seen her safely off their premises and on to those of the pride. Then they resumed their feeding. Was it defence? Curiosity? Or a touch of malice, knowing the lioness to be *hors de combat*?

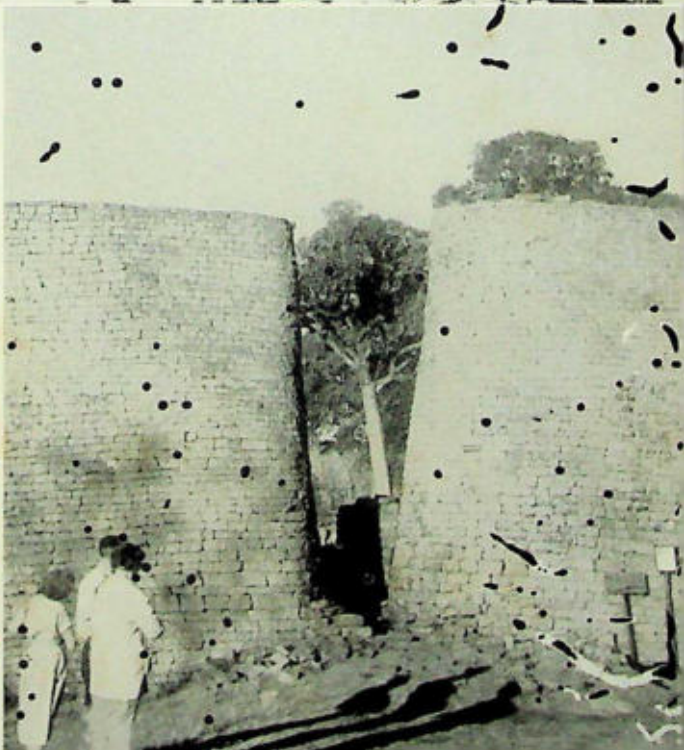
In the forest the scout sighted a herd of elephants, eating the foliage of the fever-trees. Leisurely the pliant trunk explored the branches, rejecting some in favour of others, neatly stripping off the leaves, using one tusk as a fulcrum, and stuffing the little bouquet into the pink mouth. There were some very young ones among them, adorable little creatures getting used to their trunks. One of them strayed too far from its mother's side, ignoring the short rumble commanding it to return: she went after him and smacked his bottom with her trunk, hard enough for the youngster to give a sharp squeal.

But they have scented us, the large ears flap and the trunks curl up. Senhor Rodriguez says "not good," quickly backs the car. "Not good," he says again, when a big female advances threateningly, though without undue haste. He bangs on the outside of the car and revs up the engine, which stops her long enough for us to get away. One must never use a klaxon on an elephant, for it sounds too much like their own scream of challenge.

"Now my private road," said Rodriguez. We vaguely expected a handsome avenue, leading perhaps to his own residence or something; but it was just a secret approach, not even a track, and we bumped along, dodging all kinds of obstacles till we came in sight of the river. We climbed out and walked quietly towards what looked like a dark humped heap of mud. But at our approach, the heap began to stir and resolved itself into sausage-like bloated bodies propelling themselves towards the river, exploding in a series of deep short grunts. They swarmed like giant maggots, they pushed and bumped into each other, all three hundred of them trying to get away from the same place at the same instant. "Plenty hippo," triumphed Rodriguez in his rich Portuguese accent. The river was, in fact, alive with them; the air resounded with their protests, for we had alerted them out of a blissful doze in the warm mud.

In the French translation of the Book of Job, the fearful Leviathan shrinks into a mere *Hippopotame*: the mythical monster is reduced to the real creature, whose appearance on land, trundling the fat barrel of its body, is far from awe-inspiring. Even the ancient Egyptians failed to extract much divine essence out of their hippopotamic goddess, Smet Smet. She is just a female figure behind an enormous belly, with a large projecting hippo-snout for a face. It is when floating in the water that these amphibious creatures assume their extraordinary character. Submerging their sausage-like bodies, they become fabulous water-horses, their long straight noses

Zimbabwe: the Temple. *Above*, a jumble of fallen walls within the Temple, one of the two solid masonry cones, and the outer wall with one of its enigmatic stone fingers. *Right*, outside the Temple, the V-shaped opening cut into the 30 foot high wall, built entirely without mortar. The pale-grey granite blocks contrast with the yellow, black and white lichen rosettes which spread all over the buildings



Operation Noah. *Above*, the elephant that refused to be rescued from the rising waters of the Zambesi in Lake Kariba. *Left*, a duiker rescued, tied with nylon ropes and gently held by an African scout until it can be landed on the mainland and leap away to safety

just above the water, ending in sensitive nostrils; their protruberant eyes set well up, and the sharp shell of their ears planted firmly on the arching neck. The profiles become works of art—an equine frieze of classical parentage. One expects to see them rearing up, pawing the water with martial hooves, like the horses of the Acropolis.

But then suddenly there is an argument and a clash of tempers: the huge bodies thrust themselves powerfully out of the water, opening their blunt snouts on the full hinge of their jaws—to reveal great caverns startlingly upholstered in pale pink glistening flesh, and pronged with fierce lower tusks. Or else they snort and belch, close the slit of their nostrils and vanish under water. They appear and disappear in that convenient medium with such effortless ease that one forgets they are not fully aquatic animals. Although they are born under water, they must breathe air every ten minutes or so, and they spend half their existence, mostly their nights, feeding on the vegetation of the land. One forgets also that even these thick-skinned animals are vulnerable to the tropical sun, and when out of water, roll into mud-baths to coat themselves with a protective layer.

Except for Huberta, whose tale I told earlier, none that I know of achieved fame; nor have I ever heard of anyone bringing up a baby hippo, or telling enchanting stories about them. But the other night we saw a film on television showing a young hippo and a terrier romping and splashing together in a wonderful game. When the terrier failed to appear, the young hippo walked expectantly up to the house until his little friend joined him; the mother did not quite approve of this un-hippo-like friendship, and often broke in to chase the dog away.

Yet hippos also have their heroic passions: they are known to kill even lions in defence of their young; and males will fight to the death with those great tusks for the possession of

their chosen mates. One often sees the resulting gashes on the bodies of the contestants, huge bites taken out of the grey hide, ears torn off, cheeks hanging by a thread: a serious matter, for birds and fish will peck at the open wounds which the bulky creature is unable to defend.

The great explorer Samuel Baker described with relish the soup he made of their flesh: it was so like turtle soup as to give him the idea of calling turtle "mock-hippo" for the rest of his life.

Leaving the river to the piercing cry of fish-eagles and the white fluttering of egrets, with the monotonous honk of the hippo echoing along its winding banks, we traversed another plain. Gorongoza lies open for miles, and the eye sweeps freely across it, picking out the distant herds. Here we saw our first sables—a great herd under the protection of a magnificent bull, black with white underparts in triangular pattern, carrying a set of scimitar-shaped horns of impeccable design; elands, with their disproportionately small heads and powerful muscular bodies harnessed with pale vertical stripes; bouncing oribi, mostly on their own solitary business; waterbuck in small groups; warthogs, trotting in Indian file with upright tail; and impala and gazelles leaping everywhere with restless grace.

One was conscious of innumerable watching eyes, twitching ears, scenting nostrils; of every creature acutely aware and ready for action at the least sign of danger. A bird flies off and a whole herd instantly wheels round. There is a swift coherence in their reactions which amazes the onlooker; a sudden flexing of a hundred muscles and a springing and leaping away out of range. No matter how large or how small the creature, how bristling with horn, tusk or claw, they all obey the same urgency. They seem to know about you long before you see them, by a system of unconscious communication. Even in these National Parks where animals are protected

from their most dangerous enemy, man the destroyer, an incautious noise or movement can empty the bush in a second.

All this teeming life was under the care of Senhor Rodriguez. We asked him how he came to be a warden of wild animals. Well, he explained, when the Park was reorganised after the war, his colonel called him and said: "Sergeant Rodriguez, you like shooting wild game and you are good at it. Now go and take over this Park of Gorongoza." So he went, built the roads and the new rest camp (the old one is now a favourite resting place for lions: you may see them looking out of the windows in the heat of the afternoons); he trained his staff of African rangers and scouts and established what is clearly a flourishing Wild Life Reserve. No, he is not married: there is no time for that. "A great lone buffalo bull"—that is what an American lady called him, he chortled.

There was only one thing he was disappointed in: the Portuguese in their own colony accounted for but five per cent of his visitors, while Rhodesia sent him eighty-five per cent and South Africa ten per cent. He would have liked his compatriots to be more interested.

We left soon after eleven o'clock, conscious of the four hundred miles back to Salisbury; and got safely back by eight for dinner, repacked, and were off next morning for Kariba.

12. Kariba.

The Lake – the dam and the power-house – Operation Noah – the elephant that would not be rescued – fires in Africa

At Salisbury Airport, a small four-seater plane was waiting for us and Mr. Stumbles, the Minister of Natural Resources. The two hours' flight took us over hilly ranges cut by deep valleys in what seemed to be entirely uninhabited country. We were making for the Zambesi and bore south to fly over the Cheti Gorge, a cleft in the high rocks constricting the river. It is the inflow end of the vast new Kariba Lake, which now stretches 50 miles broad by 170 miles long, the largest man-made body of water in the world, until the Volta Dam comes into being. By 1963, it will cover 2,000 square miles.

The Minister was anxious to examine it again, for, in the last year and a half, it had been invaded by a small aquatic fern called salvinia. This covers the surface in thick mats often many square miles in extent, still growing and so far undefeated. We flew as low as possible without touching the water, watching this voracious proliferation which threatens Rhodesia's engineering marvel. Mr. Stumbles told us he had actually photographed a dead buffalo on what had become a floating island of salvinia, with sedge rooting itself on top. Salvinia occurs naturally on the upper reaches of the Zambesi above the gorge, but it only proliferates in this alarming fashion where man has provided large bays of quiet shallow water. Multiplying in their millions, the ferns are now blocking navigation

and suffocating the fish below. The problem was so grave that the Federal Government allocated large sums of money for its study.

To provide good dredging for the fishing, vast stretches of forest were cut and burnt; on land not yet covered by the rising waters, all that is left of the great trees lies in grey streaks of ash on the land. Elsewhere, in areas not suitable for dredging, the heads of dead, drowned trees protrude above the surface like crowns of coral.

We flew east over the shimmering blue edged with its bright green scourge, towards the white collar of the dam. It is set like half a giant porcelain cup between the rocky abutments of the Kariba Gorge, and from the air looks too slight and delicate a barrier to hold back the power pent behind it. A single foamy cascade leaps forth from one of its seven mouths, to fall on the bed, now shockingly exposed, of the shrunken giant. All passion spent, the Zambesi trickles on.

The living rock to which the dam is anchored has been excavated to make room for the huge turbines; in due time they will generate enough electric energy for the whole Federation. We walked through these new cathedrals of technical power, painted in House and Garden colour-schemes. The turbines are vivid scarlet against a dove-grey background; the gates, through which only initiates can pass, are decorated with laminated woods and plastic designs. The work was nearly completed: all but one cave where water dripped over webs of steel scaffolding and drilling machinery, still only a dark wound hacked out of the rock, in violent contrast with the glittering vaults beside it.

That night, we watched the sunset and the rise of a huge moon from the game warden's temporary camp, high up on the bluff facing the lake. The talk was all of Kariba and its many ramifications: of the immense ecological upheaval to the wild valley, once a remote and almost inaccessible habitat

of wild game and primitive Tonga tribes. This great stretch of land, enclosed by steep forested escarpments, carved by the powerful fast-flowing river and its affluents, flourished great concentrations of animals on its rich alluvial soil. It was an important link on the migration route from the East Portuguese border to the western hinterland. Undisturbed forests, thousands of years old, throve on the moist humus, hiding in their midst rare tree species barely known to botanists: iron-hard woods, precious woods, scented woods, slow-growing, imperishable woods—all doomed to vanish.

A dramatic transformation is now taking place right under our eyes. For those who have known the valley in its beauty and richness of life, it must be a tragic experience. For us, whose imagination can only grope under the silvery sheath of water, the drowning trees make their final appeal. Their green crowns still fighting for life, they burst into a last flowering, looking like their own funeral wreaths cast upon the waters.

The Tongas scratched a living, as their ancestors had done for centuries, on the strips of fertile soil between outcrops of rock, self-supporting in primitive fashion. The project of flooding the whole valley meant that they must be moved to other areas, leaving their dead and the shrines of their gods and the only way of living they had ever known. About 30,000 of them were uprooted, to their great distress and distrust, although everything possible was done, not only to smooth their removal and their path of change, but to improve their conditions. Seizing upon the accidental disasters which can seldom be avoided in a scheme of such magnitude, they claimed that the god of the Zambesi is angry, and has vented his fury, first in the great flood of 1959, which nearly swept away one of the coffer-dams; then in causing a deep fissure in the bedrock, which is still giving the engineers a great deal of trouble. They also say the doom is falling on some women

and children who have been resettled on new land, a strange disease killing them mysteriously.

Until they adjust themselves to their new life, they will continue to mourn their beautiful valley, and to weave legends about their past, and their present drama.

The lake was still rising about an inch a day, stretching its blue tongues into folds of hills, filling up the valleys. The features of the patiently moulded river and its tributaries are blotted out, irrevocably submerged. Former hilltops become islands, last but temporary refuges for the bewildered creatures of the bush.

When the plight of the marooned animals became known, Operation Noah was put into action. The game warden has a team of assistants, two launches and a number of small craft equipped with Evinrude motors. They watch the rise of the water to see what animals are trapped with what food, what chances there are of rescue and so forth. We heard of leopards, hippo, antelope, elephant, zebra, giraffe, rhino—rescued sometimes with the aid of tranquillisers, sometimes just driven in the water and guided to dry land; of the snakes and crocodiles, collected in a tank before being released, giving the scouts curious surprises, as that of the nine-foot python devouring a six-foot crocodile. Plans were made for us to join the team the next day and see for ourselves.

Breakfast was cooked aboard the Ark. We chugged over the lake's satin-smooth surface in the pearly light of the new day. The central lower reaches are still free from salvinia, and the open water glistened, apparently limitless, in front of us. Soon, however, tiny green rosettes bobbed in our wake: Julian, who always carries a magnifying glass about his person, picked up small clumps to examine: they are up to two inches across, with inner bracts covered with fine white hairs

as an anti-wetting device, and float on tufts of thin roots. Unlike the Nile cabbage which clings essentially to shallows, salvinia thrives and multiplies equally over deep or shallow waters as long as they are not flowing. It could perhaps be used for fertiliser, as we use peat: this might insure its exploitation and solve the problem. But so far, no successful attempt at utilisation has been made, and salvinia continues to multiply. We were soon cutting our way through a thick carpet, which closed up instantly behind us.

By 10.30, having met the second flotilla, consisting of Tuna the launch and several dinghies, we set off on our first rescue operation. Two dinghies went to the back of an island to round up the quarry, while we remained in front to catch the animals as they swam out. A tangle of partly submerged thorn-bushes and trees scratched and impeded us as, watching and listening, we approached the shore. Suddenly our dinghy spurted violently forwards, darting with amazing skill between branches, towards a little brown head barely out of water. Weaving the dinghy like a shuttle with one hand upon the rudder, the ranger seized the antelope by the scruff of the neck, lifted it, screaming its weird almost human scream, and handed it to the African scout, who tied its legs with a nylon stocking and gently held its head. Soon each boy had a palpitating little creature in his arms, and nursed it till it relaxed: steinboks, duikers with little top-knots of dripping hair and unfathomable eyes, fringed with improbably curly lashes; warthogs with snouts tied up because their tusks can tear anything; a land tortoise; a little grysbok, very frightened and rebellious, uttering its heart-rending cry. We turned and made for the mainland some fifty yards away. As we went, the ranger marked each animal's ear with an aluminium clip, gave it an injection to neutralise the shock, and weighed it as soon as it was landed, for the record. The nylon ties were cut, and off they all bounced towards the interior, in long grateful

leaps. All but the little grysbok, who took the wrong turning and went straight back into the water: whereupon the ranger leapt in after it, returning like the good shepherd carrying the lamb on his shoulders. Released once again, and wiser now, the grysbok made for the hills.

A second island was surrounded and this time a very young bushbuck was picked out of the water. Its mother was not so easy to retrieve, for she darted to and fro under low branches where the dinghy could not go, back and forth in desperate panic. Finally the African scouts got into the water and converged on her. She very nearly drowned herself in her struggles to escape: captured at last, she uttered those deep cries, convulsed with the new terror of being touched by the hands of man. I stroked her delicate head; little by little she calmed down and her heart quietened, but the least noise set her struggling again.

How exquisite she was—her ears like large petals marbled with crimson veins, sensitively twitching all the time; her brilliant eyes, with eyelashes at least 1¾ inches above and ¾ of an inch below, reflecting her quivering fear. It is a cruel experience for a wild creature, and especially dangerous for a mother with a nursling: this condition demands a sharper sense of awareness and a heightened response to dangers. It was important, therefore, to release her and her young as rapidly as possible; without weighing or marking her, she was given an adrenalin injection and set upon the land. We watched them leaping off together and hoped they would soon forget this strange encounter.

By noon the heat became objectionable, glaring back at us without a breeze. We picnicked on shore under the welcome shade of an awning, then set off towards the problem elephant. This was a sad case: about three weeks ago, a couple of elephants arrived on a shrinking island from no one knows where. One of them spontaneously took the plunge and swam

to the mainland, but the other, a big bull, refused to leave. His island was now only a hundred yards by twenty, and completely bare; even the partly submerged trees on which he fed, wading into the lake, were nearly stripped, and he was beginning to starve. The team had been at great pains already to get him away, enticing him in various ways, then shooting tranquillisers into him to put a thick rope round his tusks for towing him; but he was untranquillisable and with one smack of his trunk snapped the rope. After getting him in the shallow water, they set fire to his island, leaving the abominable smell of kerosene, but the elephant put up with that, too.

To-day a final effort was to be undertaken, combining the two launches and all five dinghies, armed with empty tins, air-guns, Very lights, and with all the manpower shouting their heads off. They streaked round the island in full chorus and the elephant took to water facing the quickest way to the mainland, about 500 yards away. Deeper and deeper he went, the tip of his trunk curled up above the surface, but just as he was getting out of his depth, when we all expected he would do his swimming, he stopped, looked round, slowly turned and retraced his steps. He did this time and time again, while, anchored to the top-knot of a baobab, we watched with dismay: there was no doubt about it, he was stubbornly refusing to abandon his tiny familiar strip of land. The teams were worn out with their explosive efforts, and as it was clear the elephant would not now respond with a new pattern of behaviour, it was best to return. We left the poor baffled animal to his hopeless vigil, wondering if perhaps, in the last extremity of hunger and rising waters, he would realise his only chance and swim to safety. Alas, poor elephant! Four weeks later, he was still there, thin and full of bitterness, hardly able to stand. In the end he died of hunger.

We turned for home, three hours back across the lake, past

a partly submerged promontory whose trees stretched dead branches out of the deepening water. These were laden with quantities of darter[1] nests crowded with honey-coloured young just fledged. As we approached, the whole colony stood up and squealed, then spilt like stones into the water, their necks stretched out stiff as rods.

The thorn-trees here were covered with incredible numbers of moths, beetles, and every other kind of insects; as well as spiders whose webs draped their gauze over every twig: all seeking precarious refuge from the flood.

The lake reflected the pale-blue sky, the islands floated like darker crystal; we chugged along like a noisy toy breaking the almost hypnotic transparency. The vestment of water creeps imperceptibly over the land, unwittingly overwhelming fauna and flora; the silent drama continues.

Kariba to-day has a large shiny glass-fronted hotel perched high over the lake, besides a number of bungalows and huts for staff and workmen. What, I wondered, will it be like in ten years' time, when factories and their accretions have risen on the land, to turn the power of the Zambesi River into machines and consumer goods, with giant pylons striding towards the horizon? We felt we had been projected into the new Africa before we had begun to understand the old—at the dividing line between past and future.

Meanwhile we listened from our hotel room to the noisy guests below, still a solid white community, singing shanties and mournful songs. Under the full moon, the lake looked like mercury.

There was a bush fire creeping along the surrounding scarp, so common a feature of the landscape that nobody takes any

[1] Darters are small-headed, web-footed, cormorant-like aquatic birds with long, sharp beaks, who catch fish by darting at them under water.

notice. Generally lit by Africans for clearing a site for cultivation, for burning-out wild bees from their nests to take the honey, or for the easier hunting of game, fires have a way of getting out of hand and advancing like a living fringe across miles of country. Fire is part of the smell of Africa, and for the wild animals, part of their destiny. I am still haunted by the story of the elephant whose feet were lumps of raw flesh, his rubbery soles having been burnt right off while escaping through a bush fire. He was mercifully shot by a game warden.

Fires are also part of the destiny of the vegetation of Africa. Due originally to lightning discharging on the dry savannas, then increasingly to man, they might have reduced the whole country to cinders if some plants, trees and seeds had not evolved fire-resistance through eons of natural selection. Several important and widely distributed trees, among them the flame-tree Erythrina, have a fire-resisting bark. You can see belts of these in some areas, standing like a wall of warriors in the midst of bare, fire-swept areas, protecting islands of forest.

Conversely, there are seeds which cannot germinate unless they have been exposed to fire, and plants which explode into breath-taking beauty among the burnt-up stumps. After a fire has swept over the land, many birds return to the still warm embers to pick up freshly roasted victims, and later on, great herds of herbivores come to feed on the new green shoots which replace the old strawy growths too tough to eat.

Fire, clearly, has its function and its rights: yet there is now all over Africa a serious threat to natural resources due to over-burning, added to the loss of recuperative powers due to over-grazing. No traveller to Africa can be blind to this threat of erosion, this death of marginal land. We were to see much more of it during our journey.

13. Wankie

Elands and sables – elephants and a painted stork – giraffes and a giraffe skull

We flew to Livingstone and drove straight on to Wankie. This is a popular National Park and easy to enjoy.

Because it is partly established on Kalahari sands, which are dry and desertic, the warden, Mr. Davidson, has built a number of tanks for the animals and viewing towers for the public. Unfortunately, these tanks have a two-foot concrete rim which proves a risk for young elephants. They fall in and can't get out again.

One day, Davidson heard a great commotion coming from one of those tanks, and discovered a small elephant struggling noisily inside, clumsily assisted by its mamma who was trying to scoop up the baby with her front foot. She may also have been trying to push down the rim to make a sort of bridge, which is the usual rescue procedure when elephants fall into ditches and pits. She was, anyway, failing in her efforts, and the young was squealing desperately. Davidson fired a shot in the air which sent the cow away; the young elephant was pulled out with ropes, petted and comforted after his trying experience, and evidently beginning to enjoy himself.

At this moment the anxious mother returned, escorted by the whole herd ready for trouble. No time to lose. The team quickly re-embarked; but the young elephant wanted to come too; scrambling on to the steps of the lorry, he clung and

squealed with anguish. Only with the greatest difficulty did the lorry manage to make off without him, leaving him trotting behind as fast as his stumpy legs could carry him, like a child crying, "Wait for me!" A case, I take it, of confused allegiance.

It was too hot and dry for us to see many animals that day, but we followed some buffalo and later watched a herd of beautiful sables. They are the most spectacular, though not the largest antelopes (elands are twice their weight). Wary and difficult of approach, they stand poised for flight, the backward-sweeping horns curved like scimitars over their powerful backs. Sables are great fighters: the males fight for leadership and the winner among his rivals is a superb and outstanding bull, his black mane matching the thick black tip of his tail, his deep-brown robe meeting the white underside in a bold triangular pattern. The head, too, is particoloured, with dazzling white cheeks and neck against a black forehead. He stands four foot six at the shoulders, and another two foot six to the curve of the horn, banded and tapering, which can reach a length of up to five feet. Magnificent addition to the profile of the animal, the horns seem at first sight more decorative than functional: yet sables can kill a full-grown lion with them.

We got dangerously near a herd of elephants browsing in a bit of swamp, but Julian was much more interested in his first sight of a painted stork, apparently out of its route among the tall grasses; it has a startling bandage of bright red-orange on the long beak between the eyes.

If I were a hunter, I think I would collect and cherish the skulls of animals. I did the next best thing, and photographed every one I found on our travels. From Wankie I got the picture of a giraffe skull-and-crossbones hanging on a tree with a warning notice to visitors not to get out of their cars. The skull is an aristocratic long-nosed structure topped by the

two prongs of bony horns. The bone case tapers finely towards its nasal aperture, it is porous to decrease weight and elongated to give yet more reach to the creature, thus creating its own functional beauty.

The live giraffes watched us depart with a disdainful flicker of their great eyelashes—after all, they had the full freedom of the place and we were the ones in a cage.

14. *Victoria Falls*

The spray rain-forest – the gorge and its origin

We returned to Livingstone to lunch at the famous Victoria Falls Hotel, covered with all kinds of tropical flowers and tourists; then on to stay with the provincial commissioner. From his house we emerged equipped with heavy shoes and macs and umbrellas, to pay homage to the Falls.

Like every traveller since Livingstone, we stood on the spot, now commemorated with his statue in bronze, where he had his first sight of them. The experience is unforgettable.

Falling abruptly from its mile-wide threshold, the whole river spills over the black cliffs; but instantly, before it can reach more than a fraction of its arc to the depth of the gorge three hundred and fifty feet below, the liquidity of the water is violently shattered and transformed into clouds of foam, into millions of dancing droplets which catch the sunlight and refract it into rainbows—rainbows reaching the bottom and rising to touch the upward rising spray. The shock of the water's transmutation is communicated with such violent power that we remain transfixed and numbed. No wonder Livingstone was thrilled by so intense a phenomenon.

At eye-level, only some fifty yards away, the river flows towards us from among its rocks and islands (now unconvincingly named after British Royalties), with hippos and crocs and aquatic birds flourishing in its placid waters. Then, in the words of Livingstone in his journal: "The Falls . . . are

simply the whole mass of the Zambesi waters rushing into a fizzure (*sic*) or crevice made right across the river."

Though he ascribed the Falls and the gorge to a sudden cataclysm of nature, they are in fact due to gradual erosion. Taking advantage of lines of geological weakness offered by faults in the rock, secular erosion has excavated the river bed in a series of diagonal fissures or rents to form eleven miles of zigzag gorge, squeezing the river into a black coil round its bends. The next rent has already begun, and in a few thousand years, the river will have eaten its new cleft into the rock, at a sharp angle to the present one, which will then become the latest limb of the zigzag gorge.

Drenched by the pervading spray and deafened by the uproar, we paddled in mud through the hot-house "rain-forest" abnormally created in this semi-arid country by the diffused moisture, far out of its normal range (the nearest true rain-forest is some two hundred miles away to the west). The lip of the ravine opposite the Falls is clothed in luxuriant forest green, palms and great trees of rich foliage glistening with sap, while ferns and mosses thrive in the lush dark depths: fifty yards beyond, the grasses are hungry straws.

The imperious god of the Zambesi has always claimed a fearful adoration from the Africans. In spite of science's understanding of geophysical laws and its tiresome habit of explaining phenomena, we too were shaken and awed by this pure experience which went beyond our grasp. We kept on returning to look at the Falls, hypnotised by such demonic power forcing inert matter into this boiling, fuming and protesting mass.

Finally we flew over it. Seen from above, the Falls are seen as a simple and natural transfer of the river from a flat rocky high bed into a narrow low winding one; the conflict of different elements is resolved, the awesome experience is transformed, and the great Zambesi flows on towards Kariba.

15. Rhodes-Livingstone Museum

Livingstone's Journals – the Craft Village – the Toe-puppet man and the Hyena Masker

Desmond Clark took us to see the Rhodes-Livingstone Museum. This is not a large museum, yet it contains an important nucleus of Central African history, an inspiring basis for further studies into the still unexplored beginnings of that great continent.

From the past to the living present: we see the Craft Village just outside Livingstone. Its mud stockade is covered with paintings—African Matisse—and contains about fifty huts or shelters, each one the setting for a traditional craft or speciality. In one they carve wooden bottles with an adze, scooping out the interior, chipping the outer surface with deft strokes—a day to a bottle. In the next they build bamboo masks covered with skin and paint to represent terrifying spirits. One large contraption represents a hyena covered with black and white skin and edged with long fringes; a man gets inside this carapace, and to the tapping of drums, twirls and twists and shakes, the fringes sweeping the dust while he opens a fearful snout full of sharp fangs. This is a regular ritual dance, for the hyena is an essential part of their lives, a convenient cemetery, absorbing all refuse, including the dead.

Farther on, a man is trying a musical bow he has just finished; holding the fibre string between his lips, humming and gently stroking the little bow with a small stick, he draws

Rhodes-Livingstone Museum

out a delicate thread of melody, faint and pure and sad, from the combined vibrations of fibre and voice.

But the most enchanting of all is the Toe-puppet man. He sits on the ground with his legs apart, his big toes connected by a thin strand of fibre. In the middle of this balances a pair of little puppets about six inches high, made of split reed and dressed in minute fur kilts. To make them dance, he gently taps his calves in rhythm with a little song he is warbling. The puppets facing each other between his feet respond to the slightest variations of his taps and dance to his bidding, bowing and bending and hopping on the tips of their reed toes. He sings his ditty and nods his head, an expression of charmed delight on his old wrinkled face. At the end of their ballet, he gave me the pair of puppets, but not the magic, for I could never entice them again to play their bewitching game.

The Craft Village has been set up to demonstrate and if possible to help to preserve the old native crafts, which, as everywhere in the world to-day, are threatened by the tentacles of modern life. The small trading post now penetrates to the deepest recesses of wild Africa. Outside the tribal communities, very few Africans wear their native clothing, in eastern Africa anyway, and those who do are usually considered inferior. The reign of the tin-opener, too, is beginning to be established in the bush just as it has been in our own kitchens.

The day will also come when the pram conquers Africa. To-day, black babies are carried like limpets on their mother's back, the small round head bobbing like a woolly button out of its swathing sack. It looks uncomfortable in the broiling sun, and one wonders how Africans grow their straight legs after being splayed out as they are until they can walk. Mothers wear their babies almost like a bit of clothing, only taking them off when they themselves sleep; and then the little one lies alongside. I never heard a baby cry in Africa. It is fed

when it is hungry and is never left alone to face the terrors of insecurity. It grows up in a warm body-closeness to tenderness and food, carried everywhere within this essential bond.

This is something that we have lost, with our well-sprung prams and sanitary nurseries; perhaps we shall be told one day there lies the origin of our discontent, our neurotic fears, our delinquency. And maybe, when the African mother proudly tucks her baby in the latest aluminium pram, she will in one decade turn him into a security-starved, questing, unappeasable creature.

The painful process of so-called progress has already begun. These men in the Craft Village may be the last artisans practising ancestral skills. Coca-Cola bottles will replace the carved wooden ones, mouth-organs from Japan will be heard in the villages. We are looking at a dying culture, and the Craft Village is already a museum.

16. Kafue National Park

Ngoma camp – monotonous bush and beautiful river – eels and cormorants – tsetse flies

Kafue brought us a fresh and unexpected joy: it must be said, we both were tired. Tired of the heat and the long drives in Land-Rovers, but mostly of the ceaseless moving on, packing and unpacking for one night, up at dawn, and on throughout the day. In a way the penalty of Julian's planning beforehand, there was no risk of marking time and waiting, possibly in a rage, for delays in transport or permits; we were handed from expert to expert with admirable efficiency and no time was lost in trivial arrangements. But neither did we have time to ponder and digest. Time was losing its fertile rhythm and becoming a tyrant. And on this journey of new impressions, new contacts and new problems, I sometimes longed just to sit and vegetate.

So that when we landed at Ngoma from the small plane into which four of us were packed like sardines, and felt the heat rising from the baked earth and descending from the burning sky, our weaker selves began to groan; and when we were told that on the morrow we should be taken some hundred miles to the next camp, and then to another farther on—my inner groans turned to open rebellion and we pleaded for a holiday. Our hosts were human and understanding—and though they may have been disappointed not to show us

all they had planned, they arranged to take us for a rest to their camp at Kafwala.

It was another long and dusty drive, with tsetse flies hunting for our blood and nearly getting it whenever the Land-Rover stopped. At that time of year the treeless Kafue plains were dry scrub of tawny grass with few animals except puku and impala. But the sandy track on which we bumped along was starred with brilliant cerise-coloured impatiens flowers not larger than primroses, growing defiantly out of the packed dust; and on the mangy scrub among the stunted desperate bushes, clusters of pale-blue Bells of St. Mary (*Trichoderma physaloides*) were flowering and fruiting at the same time, with the urgency of getting the job done. Sprays of combretum flashed their scarlet pin-cushions, convolvulus ramped like spider-webs, and the ubiquitous ageratum was everywhere: so common a plant in Africa that it is hard to believe it is not indigenous.

The Kafue at Kafwala camp was an enchanting surprise. After those 150 miles of depressing hunger and thirst of the earth and vicariously, of our spirits, came banks of great trees, real trees growing by abundant flowing water, with the wind waving in palm-fronds, rustling the thick ilex leaves and the new *bois-de-rose* leaves of stereospermum. The river here is permanent and generous, flowing over its granite bed with a joyful originality: coiling rapids round smooth boulders, lapping promontories and sandy beaches, or stretching out in wide reaches fit for an African Henley. It is full of delicious pike and bream and convenient perches from where to throw a line, with pied kingfishers darting in and out and otters scurrying along the bank as if they were playing a game. We saw a cormorant trying to swallow an eel a foot long which, refusing to be swallowed, popped out twice before it was finally downed. The river was full of hippos and crocs di-

couraging us from a bathe, but we pottered happily about, reprieved and liberated. The Attwells were most kind and helpful in showing us around.

That night we sat by a blazing fire listening to the breeze in the leaves and the water on the stones. We felt so peaceful and relaxed that we even admitted a good word could be said for the tsetse: but for it, the Kafue Park (and many other Reserves) would not exist at all. The area had become so badly infected that all the natives and their cattle had to be evacuated, leaving the bush to the wild animals which are immune to the tsetse-born nagana disease. The tsetse, in fact, is on the side of the wild animals, and Julian even suggested that a monument should be erected to it. Which seems a heartless thing to say, knowing the fearful sickness and its consequences, due to that same tsetse. But then our mission here was concerned with the wild life of Africa, and how to save what was left of it.

Talking so much about saving the wild animals, one might well wonder: what about the human beings? Fortunately there is room in this enormous continent for both man and the animals: the problem is how to strike the balance between the two. And there is no doubt that with right management, the Africans themselves would be the first to benefit: the culling of herds would supply them with a regular distribution of much needed meat, and the influx of tourists coming, in ever greater numbers, to watch the infinite wonders of wild life, would bring a regular income of as much needed money.

The need for right management is urgent: especially soil-management. It seemed at times, I must confess, a hopeless task, especially when confronted with vast stretches of senile soil, poor to begin with and much abused, over-burnt, waterless and tree-less, exposed to the desiccating sun. Faced with these conditions, one sometimes began to wonder if indeed there was food enough for any living being on this waste

land. So that just to see a river in full vitality, flowing between banks of vigorous trees, was balm to the mind and comfort to the body.

Earth, air, fire and water: the four cardinal elements. How comfortably we take them for granted in our moderate climes, but how brutally, in this exposed land of Africa, they can assert their despotic power.

Above, the Victoria Falls; the mile-wide Zambesi flows placidly between its wooded islands, to plunge down into the narrow fissure at the head of the eleven-mile zigzag gorge. *Below*, the Murchison Falls, where the White Nile forces its way down a twenty-foot cleft to fall in clouds of spray to the quiet waters below

Above, courtship on top of a tree of a pair of Black-headed Herons during the breeding season. *Below left*, a Fish Eagle taking off towards the Kasinga channel. The bird catches fish in its powerful talons and carries them back to its perch. *Below right*, Lesser White Egret and Hammerkop fishing in the shallow waters of Lake Manyara

17. Lochinvar

Bush fire – Red Lechwe – cranes, herons and all the aquatic birds – baby zebra nursed by sow

We were off again next day, by air to Lochinvar.

The land below us had been devoured by great fires. The earth was scorched black, dotted with stumps of burnt trees. Occasional game-trails led to a distant water-hole; there was no cultivation, but here and there a few poor-looking native huts. It was a monotonous and empty land, coarsely marbled with streaks of tawny grass between the sinister burnt patches. The heat beat down from a sky that was almost white. In the distance, the silver ribbon of the Kafue persisted across the god-forsaken country.

We soon caught up with the slow fringe of a fire, the orange tongues of flames licking the yellow grass softly, almost tenderly, in their destructive advance. Secretary birds and storks from Alsace and Holland stalked among the ashes, in search of freshly roasted grasshoppers and lizards; immaculate no longer, scorching their feet and feathers, they pounced with unseemly haste.

Just beyond the fire, we landed on the tiny airstrip of Lochinvar, and were met by Mr. Benson, the distinguished ornithologist from Lusaka, said to know more birds of Africa than any encyclopædia.

Julian and he were off at once with binoculars, telephoto lenses and all, in a wave of avian enthusiasm, leaving me to wilt

at ease. They came back, almost as sooty as the storks, for a hasty lunch, and we were all off again, towards the great sanctuary still belonging to and preserved by the Lochinvar Meat Storage Company.

This is centred on a large stretch of swampy land which remains wet for the best part of the year and which has been, from time immemorial, a favourite haunt of birds in unbelievable variety and abundance, and the special home of immense herds of red lechwe. We were soon in the thick of them: an ever-moving frieze of alerted russet-gold creatures, holding their softly S-shaped horns low over their backs as they leapt away in an endless succession of fluid arches. Benson told us the population of these graceful animals once totalled 250,000; they were massacred pointlessly, leaving only a bare 25,000. Farther on, great herds of cattle were pasturing on the flats, destined eventually to feed the miners of the copper-belt.

But it was the birds that made the scene unbelievably wonderful. It was like the first creation, the amazing variety of every kind and size, in such profusion, each finding its own food in the rich resources of the marsh.

Standing high above the rest, the elegant black-frocked cranes, both crowned and wattled; the rabble of spur-wing geese noisily sputtering; open-bill and European storks, large and small egrets in purest white; crested peewits; spoonbills, sacred ibis, goliath herons and marabou storks; crowned plover and thick-knees; sandpipers, knots and ruffs; roseate pelicans; cormorants and snake-birds; gulls and terns; fish-eagles and bateleurs; bustards and peewits; tree-ducks in tens of thousands . . . not to start the long list of small birds, many of them migrant visitors from Europe. All of them moving, wheeling, rising with squawk and flutter, flying in dense clouds or single skeins across the blue-white sky, landing with feet splayed out and reversed engines among protesting earlier-comers—all existing together in a kind of Breughel

panorama fired with activity and purpose. Strings of lechwe graze and move among them, weaving in and out without disturbing the birds.

We could not see enough of this paradisal private view, and returned at dawn next morning, even more enchanted than before, though black as soot all over from the powdery blackened earth which was sucked up as by a vacuum cleaner into our small open truck.

Our little plane was to fetch us back at eleven o'clock, and we just had time, after a good scrub, to visit a young zebra which had mysteriously appeared in the farmyard during the night. It was only about two weeks old, a long-legged furry creature with soft reddish stripes and a fine upstanding short mane; the farmer's wife fed it with milk from a basin, as it would not take the bottle. But as soon as we had left, a commercial photographer who was taking shots of the birds saw it sucking a big sow, as if it were the most natural thing in the world. He sent us a photo in case we didn't believe it.

18. Nyasaland

Lilongue – Kasungu camp – Lake Nyasa – Blantyre and Dr. Banda – Government House – Zomba mountain and its Mlanje cedars

This time we landed in Lusaka, all dressed up for the capital. We spent a few days there, preparing for the next trip to Nyasaland.

The best flight happens to be by way of Salisbury, so we left early in a small Beaver plane, in perfect order except that Julian left all his cameras and binoculars behind. This was a major crisis. Everyone was alerted, telephones and wires flashed from Salisbury and back, but it looked as if Julian would be deprived of his equipment for at least a few days. Already he looked shorn, like Jupiter without his thunderbolts.

We flew twice across the broad Zambesi, then over its tributary the Shire River, descended on Blantyre where we picked up our next guide, Mr. Borley, Chief Game Warden of Nyasaland. At Lilongue, where we refuelled, we saw a hundred or so young Africans queuing behind a gate, waiting to be chosen for work in the South African Mines. They will leave in a Dakota, some 107 to a plane. A year later, when they return, only about half will be able to fit into the plane, because they will have grown sleek and fat and well-dressed, and will be carrying many new possessions. At present, they look a ragged lot, but they are eager to learn and said to be good workers.

In contrast with Northern Rhodesia, most of Nyasaland is intensively cultivated and densely populated. We crossed

some mountain ridges with a few big tobacco estates on their flanks; but mostly the land was covered with a patchwork of small fields cultivated by African farmers.

We finally landed at the small station of Kasungu. We took a welcome cup of tea with the D.C.'s wife, who until recently was the doctor in charge for the region. She confirmed what seems to me a very interesting fact and which I first heard of related to Bantu women, namely that African women tend to have an ovoid pelvic opening as compared with the spheroidal one of the white races. Apparently in relation with this, labour for African women may be prolonged for four or five days, a long and painful experience which the still numerous and active witch-doctors deal with by administering herb remedies of such potency that the uterus may burst and the mother die.[1] When the doctor was called in early enough, she was able to perform a successful Cæsarean operation; however, the moment her back was turned, the grandmother took the new-born baby and stifled it, the opinion being that this was an unnatural birth, and therefore the child must not be allowed to survive.

The country is riddled with bilharzia, hookworm and whooping cough. It is an added cruelty that the help and generous supplies of anti-tuberculosis and other vaccines sent by W.H.O. were recently turned down by the Malawi party as being tainted with Federation propaganda, with lurid rumours of their causing sterility and spreading dangerous diseases: meanwhile the population is debilitated by lingering illnesses for which they are not allowed to accept remedies. A gift of 90,000 dollars offered by a tobacco company to create an agricultural research farm was turned down for similar

[1] This may be due to protein deficiency, as it was in Glasgow some years ago, when the majority of births were Cæsarean. Moreover, a great many African women bear heavy burdens suspended from a strap on their forehead and this is a definite factor in the deformation of the spine and pelvis.

reasons, while the local farmers were still using neolithic methods to grow their penurious crops of millet and maize.

We drove to the Kasungu Camp with the warden, who was preparing us for the curious fact that though Game Reserves are officially established here and at Kota Kota, there is very little game to be seen in them.

We passed a number of villages along the bumpy dirt road, poor even by African standards and still primitive, but clean and pleasant. The huts are built of saplings with mud walls, the granaries and chicken coops on stilts well above the ground.

The camp was still in its embryonic stage, consisting of a single beehive aluminium hut which makes a comfortable bedroom, and an open hut. So far we had not seen a single four-footed animal, nor did we do any better the next day. A few plovers, francolins and guinea-fowl; a great silence and emptiness; a thousand acres apparently without elephants, rhino, antelopes of all kinds.

Mr. Borley told us that one of his chief troubles was the Missionaries of the Assembly of God, who arrive from America magnificently equipped with telescopic sights on their latest rifles, and roam all over the place in Land-Rovers. Being sent to the country by God, they do not think it necessary to obtain such merely human things as game licences, and having had their fun, sustain their converts with much appreciated meat.

Back through Lilongue, and met the chief: an intelligent and attractive African who spoke good English as a result of some months in England. He introduced the local African minister, who proudly showed us the tree where his father had met Livingstone and had been given a packet of needles, still treasured by the son.

On towards Chipoka, another small camp of three tin rondavels, grouped at the foot of a magnificent rain-forested cliff, with distant views of rolling hills fading into blue haze. A site of great natural beauty and variety, said to have many

lives still wandering about. There was in fact a large notice warning us to beware of elephant, but we failed to see any.

I found two kinds of protea in this beautiful complex of green valleys and rocky spines of hills; also a quantity of tall helichrysum, everlasting stars of gold; lower down, below 3,000 feet, masses of vivid combretum shoot their brilliant sprays among the grey baobabs. Lower still, towards Lake Nyasa, majestic terminalia trees shade the road and the thick clusters of villages, the Nyasa people wearing bright colours against their lovely plum-coloured skin, moving leisurely about their business—in and out of their huts; these, their thatch left untrimmed, have a rakish Brigitte Bardot look.

The road descends in zigzags to the very edge of Lake Nyasa—that long lake so notorious in the slave-raiding days, where Stanley camped with Livingstone, and which also, Julian reminds us, lies in the southernmost segment of the Rift Valley. The lake is pale blue with barely a ripple, its gentle beaches shaded by palms—in fact an ideal holiday resort, provided one is well equipped with mosquito repellent. We even saw an antelope, but it was a captive young bushbuck who gaily nibbled the geraniums.

Here in Nyasaland, once teeming with every sort of game, only a few places like the Nyasa Plateau are now safe for wild life. Acid, treeless, soil too poor for cultivation and too high at 8,000 feet, for native settlement, it has recently been created a Wild Life Reserve.

Leaving the shores of the lake, we took to the air again in the little Beaver plane. We flew over the lake and refuelled at Fort Johnston, once the port of embarkation for the processions of chained slaves coming from the interior. They carried ivory to the coast, thus doubling their own cash value. Those unfortunates who fell by the wayside were speared to death and the survivors had to carry double loads.

How much, I wondered as we flew over the lovely [illegible] with its gatherings of thatched huts and its teeming population, how much do these people remember of the terror of those not so distant days? How much do they know of the work of the British—missionaries, administrators and public opinion—in abolishing that terror? And how much did the slave trade retard their development—taking as it did, the young and healthy members of the tribe, leaving behind only the disheartened old?

At present the population is going up—in fact to danger point; agriculture is poor and primitive, ignorance is still heavy on the land, resources are insufficient. The great call UHURU (freedom) is heard everywhere: "What is Uhuru?" someone asked one of the people. "I don't know what it is," he answered, "but we want it."

We flew low over the alluvial plains of the Shire River, with its green marshes and rafts of hippo in comfortable shallows, and herds of elephant and buffalo wheeling with sudden fright at the noise of the plane.

I find this spotting by aircraft unrewarding. You see a dark spot which can look like a pin-head against the uniformly tawny bush, the plane dips and turns downwards at an acute angle; the frightened creatures blindly take to their heels to

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The faces of birds. *Above left*, the exquisite crowned crane with its golden crown-like crest, pale blue eyes set between the black velvety forehead and the smooth white cheek, the scarlet wattle showing when the bird is alerted. The neck and body are pale grey. *Above right*, the white pelican, hiding its pouched beak between its powerful wings in the fresh early morning. The pouch serves to cool the bird in the heat of the day, as well as to catch fish. *Below left*, a pair of marabou, also called adjutants. A naked head and neck of a dingy pink speckled with brown, with a naked inflatable pouch hanging a foot below the neck. The least lovable of storks. *Below right*, the whale-headed stork or shoebill. A rare bird which seldom flies, it stands some 40 inches high, the only representative of its family. Its beak is larger than its stomach and the powerful tip is sometimes used to dig up lung-fish and turtles from the mud.

Above, the vast eleven-mile wide saucer of the Ngorongoro crater, with its herds of wildebeest and zebra, its lions dozing in high tawny grass, its rhinos and hippos and all the unseen community of smaller creatures. *Below*, sand and river. The Uaso Ngiro river in the Northern Frontier district, with Doum palms on its banks

escape the unfamiliar noise and possible danger and all one sees is the top of their backs streaking away. This method is fine for statistical inquiry, and is now used widely in most Reserves to keep track of the movements and numbers of the game: but it is frustrating for detailed observation.

Balloons are different: a young man called Anthony Smith has recently done a balloon safari in Tanganyika, and reports the wonderful experience of floating noiselessly in the heart of the bush, over great concentrations of herds. He took beautiful photographs without disturbing a hair of their tails, for the animals just accepted his balloon as a rather bigger and odder bird.

We landed again at Blantyre and Julian descended on the airfield office full of hopes of rejoining his cameras. But nothing had yet been heard of them. More wires were sent. Julian fumed—but in a dignified and restrained manner, knowing in his heart of hearts that it was really all his own fault. Maybe he was also secretly glad of a short release from the tyranny of the camera.

Blantyre for lunch, where we saw an extraordinary flowering tree, by name Fernandoa, covered with large orange and rust trumpets shaped like Spathodia flowers, but even more fantastic and sumptuous.

By the time we reached Zomba we were feeling rather zombie with fatigue and excitement.

But we soon revived in the comforts of Government House. The view from our wide balcony swept down a pleasant valley framed by tall wooded hills, blue in their high distance. The garden lies in flowery terraces broken by fine trees, monkey-puzzles and palms waving huge plumes over white bushes of beaumontias and daturas; I was surprised to see the herbaceous border displaying all our familiar annuals and perennials, next door to the valley garden, cool under trees with thick clusters of *Osmunda regalis* and the even more regal

tree-ferns. The kitchen-garden flourished under the care of its thirty regular gardeners, aided by about a hundred prisoners (mostly for debt) toiling in the gentle breeze. How different from gardening at home! Everything grows here, tobacco, tea, coffee, cotton, maize, tung oil, groundnuts, rice—everything in fact, except brussels-sprouts, so I was told. The great house has a Scottish baronial air with machicolated balconies, all glistening white.

After lunch we were taken up the unforgettable Zomba Mountain. As the road is narrow and steep, there is a one-way traffic system which changes direction every half-hour, so that no car can halt the procession on the way to the shoulder of the hill: no one can stop, in spite of the exciting tumbling flowers, the glimpses of lovely horizons seen through the arching branches, the whiffs of incense from the Mlanje cedars. These aromatic trees are peculiar to parts of Nyasaland and Rhodesia and can be smelled from quite a distance. Mlanje mountain itself, with its aura of mystery, was hiding its 9,000 ft. crown in the distant mists of heaven—high among the Zomba Highlands which rise like a skipping of rams in folds of rounded hills.

In the space of the single hour it took us to climb the 6,000 feet of Zomba Mountain, we passed through a whole series of vegetation belts, or life-zones as the Americans call them, graduated to the varying climatic conditions: from warm rain-forest to dry uplands, grasslands and thick stands of mimosa and petula. Once on the col, there was a chance to get out of the car and pick flowers: pale blue lobelias in cascades, yellow St. John's-wort, the intense blue spikes of pycnostachys, the spirea-like vboza, crowns of orange leonotus, red-hot-pokers and tall-growing ageratum, also lovely pink dombea shrubs; and as one climbs farther up, bracken, just the same identical species as at home, and tree-ferns, which actually get frostbitten in winter; masses of the osmunda we

make such a fuss of in England; philippia heathers up to fifteen to twenty feet high, heaths, alchemilla the lady's mantle, and lovely proud torches of *Vellozia splendens*. This was once abundant, but as the natives use its branches for scrubbing-brushes, it has retreated, like the eidelweiss in Switzerland, to inaccessible spurs in the rocky cliffs.

There was too much traffic for wild animals to show themselves but we were told of leopards, duikers, bushbuck, forest hogs and the like. And Julian added to his already copious list a few rarer birds such as Stanley bustards, olive pigeons, beautiful Livingstone louries, beside kestrels and francolins.

Zomba summit is now crowned by a radio station, and the road winds up to it through considerable deposits of bauxite. How devoutly one hopes their exploitation will not be allowed to spoil that splendid Highland.

We descended again towards the half-way shoulder, and stopped at the tea-house among a stand of Mlanje cedars to enjoy delicious Viennese pastries and the incense-scented smoke of the cedar fires, with roses and peaches, zinnias and petunias all round us, the view rolling mistily blue and transparent, receding in endless folds below.

Next day, on our way to the airport, we stopped for a short visit to Dr. Banda. We found him in his modest surgery, just finishing with his last patient for the morning. He told us he saw about forty to sixty every day. The table in front of him had bottles of vitamins, antibiotics, the latest preparations. I longed to ask him about the T.B. unit recently rejected by his party, but Julian was off on Wild Life Conservation. Banda listened attentively, nodded his head, spoke of the need of the people for more land to cultivate. Julian mentioned the need to educate the people to respect their land and its wild life before it is too late. Dr. Banda leapt at the word: "Education, yes—we want that, badly—but not *police*. My people are thrown into prison if they plant maize when the agricultural

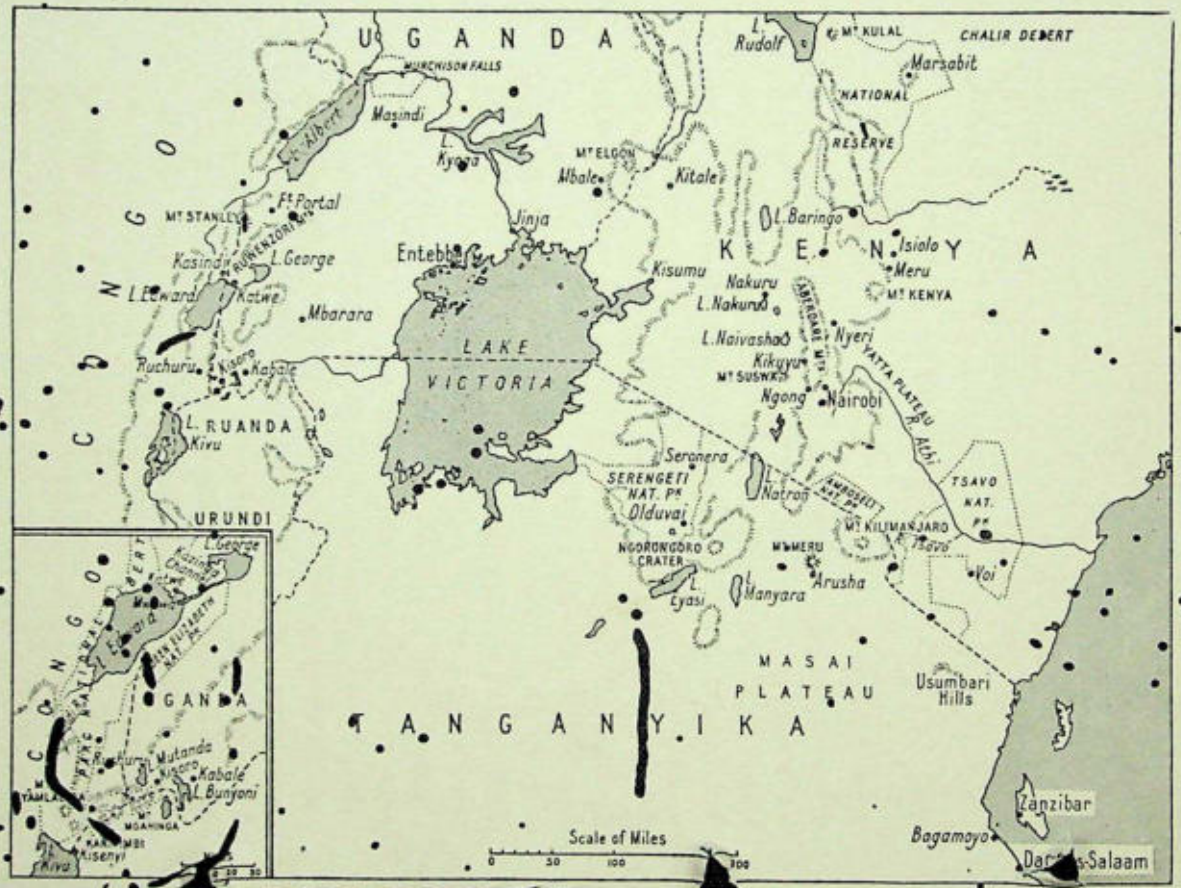
experts told them to plant potatoes—they don't understand, they do what they have always done—nobody *explains* to them, they just arrest them. Six months in jail, and wife and children starve!" Julian then spoke of the population problem, and asked what he thought about it. Dr. Banda evaded the question and said that anyway Sir Roy Welensky was always asking for more white settlers!

I wished we could have had a longer time with him.

Blantyre Airport still had no news of the cameras; nor had Salisbury, where we touched down on our way to Nairobi. We flew over Lake Nyasa in the Rift trough, seeing the shore plunge deep under the water; then right across Tanganyika Territory, and the vast empty-looking Masai Plateau, with unknown rivers winding below us. Peering through the windows, we tried in vain to discern the features of this immense land, failing to find even a familiar place-name on the map.

We landed at Nairobi Airport two hours after sunset.

III. EAST AFRICA


U G A N D A
C O N G O
K E N Y A
T A N G A N Y I K A
L. Albert
Murchison Falls
Masindi
Kyoga
Mt Elgon
Mbale
Kitale
L. Rudolf
Mt Kulal
Chalir Desert
Marsabit
National
Reserve
Ft Portal
Mt Stanley
Ruwenzori
Kasindi
L. George
L. Edward
Katwe
Mbarara
Entebbe
Jinja
L. Baringo
Isiolo
Meru
Mt Kenya
Kisumu
Nakuru
L. Nakuru
L. Naivasha
Aberdare Mts
Nyeri
Kikuyu
Mt Susuwa
Ngong
Nairobi
Yatta Plateau
Athi R.
Lake Victoria
Ruchuru
Kisoro
Kabale
L. Ruanda
Kivu
Urundi
Serengeti Nat. Pk
Seronera
Olduvai
Ngorongoro Crater
L. Natron
Amboseli Nat. Pk
Mt Kilimanjaro
Tsavo
Tsavo Nat. Pk
Voi
Mt Meru
Arusha
Manyara
L. Eyasi
Masai Plateau
Usumbari Hills
Zanzibar
Bagamoyo
Dar-es-Salaam
Scale of Miles
0 50 100 200
Ruwenzori Mts
Kasindi
L. George
Katwe
Kisoro
Kabale
L. Bunyoni
Mutanda
Ganda
Moahinga
Kisenyi
Kivu

19. Arusha

Masai and their beauty – the new National Park of Ngurdoto

Next day at noon we were back at the airport to fly to Arusha, this criss-cross being the quickest way by air. And at last the lost cameras caught up with Julian, who wreathed himself with their various straps: two cameras, telephoto lens, light-meter and a large pair of binoculars, all upon his person.

It was a short flight from Nairobi over the Kenya Highlands, the savannas of dry-looking land broken by rounded hills, with Kilimanjaro lying ahead.

At Arusha we were met by the new Director of National Parks in Tanganyika, John Owen, our guide all the time we were in Tanganyika.

Arusha itself with its cosy individual character, is unlike any other town I have seen in Africa. It was built by the Germans when they owned the province; they also built the road leading out of town, on which we met many Masai marching proudly and arrogantly with an accomplished feline grace. They have fine hamitic features; their tall body is entirely dyed with ochre clay mixed with fat, and decorated with copper discs and beads; their hair is also moulded with clay and disposed in many neat plaits, the front clasped with bands of copper and beads over the forehead. Their single garment is a terracotta-coloured cloak tied on one shoulder; they carry nothing but a spear or a stick and herd their status-

promoting cattle all over the land, whether suitable for grazing or not, thus creating problems for the well-meaning agronomists.

Their women do all the work except herding, yet contrive to move like queens; married women shave every hair off their heads, which are then polished with red clay; enhanced by circlets of beads, copper earrings and circular necklaces, the Yul Brynner effect is surprisingly beautiful. Both men and women look like classical Tanagra figures translated into African terms.

To begin with, John Owen took us up the Ngordoto Crater, a very recently created National Park, only an hour's drive from Arusha. We climbed a bumpy track off the main road, zigzagging through a tangle of tropical trees, as far as it went. A few steep steps, and one found oneself perched on the rim of the crater itself, a bright-green bowl about a mile across. On its flat floor, an eye of water shone between tall reeds where some elephants were feeding; a buffalo herd grazed peacefully not far from some zebra and antelopes; they looked like Noah's Ark animals playing at Genesis. The grass was vividly green in the sunlight, with pools of shadows under well-spaced trees, the grassy rim rising to a shallower lip just opposite our viewpoint. Below us it dropped almost vertically, its mantle of trees anchored to the cliffs. We stood on a flat rock projecting like a box in a theatre; the sun shone warm but tender; monkeys chattered in the old trees around us, a kestrel floated above in legitimate expectation of a small rodent for its supper; down below, unsuspecting in their ancient freedom, the many seen and unseen creatures lived their daily round. The crater is sufficient unto itself, a complete ecological community, self-contained and balanced. The trace elements leached out of the volcanic ash bring out a luxuriant greenness.

In its absolute naturalness, it exists untroubled, remote and enchanted.

I longed to explore it.

"Couldn't we take a walk down there on that green slope?" I asked the keeper of this little Garden of Eden. "Not easily," he answered. "Last time I was down there making a census, I had to run for my life from some buffalo." But, he added, "it was well worth it."

As it was in the beginning, is now and ever shall be, for ever and ever, amen. Within this green cup dwells a feeling of eternal peace: it is almost too good to be true.

We returned in a spectacular sunset, staged round Mount Meru—its great cone nearly as high as Mt. Blanc—towering high above us.

20. Lake Manyara

The eastern Rift – the lake and its water-birds – the ground-water forest – Morgan Davies and his trapped leopard – spying on elephants through a telescope

On the map, Lake Manyara is but some twenty miles from Arusha, but it seemed to take a long time to reach it. The road traverses a wide arid plain, too dry for crops or cattle. There was nothing much to look at until we reached the eastern scarp of the trough in which Lake Manyara lies.

At this point we were actually dipping down into that famous Rift Valley which fires Julian's imagination. It is, the geologists tell us, the result of a peculiar system of faults and pressures. Starting from Lake Nyasa in the south, it stretches right through the continent, forking at the north end of Nyasa into two branches: the western runs north through Tanganyika, across the Virunga chain of volcanoes and Uganda, and contains the western chain of lakes, Tanganyika, Kivu, Edward, and Albert. The other north-eastern branch, after leaving the soda-encrusted shores of Lake Manyara, Natron and Magadi, narrows to a deep trough containing Nakuru, Elmenteita and Naivasha lakes. It almost disappears among the massive Kavirondo mountains, but reasserts itself to form the narrow gorge harbouring Lake Baringo, before opening up again into Lake Rudolf, and on to Margarita and Shala beyond the Abyssinian border. From there up to the

Red Sea, narrowing again in the Dead Sea and the Jordan Valley, to peter out beyond the Sea of Galilee. The Rift itself resembles a sunken corridor or trough between two parallel facing scarps. It is a sort of engulfment, varying from twenty to forty miles in width, like a deep wrinkle in an old face: a six thousand-miles crack in the crust of earth.

Lake Manyara fills a shallow depression within the Eastern Rift, never more than two feet deep except at the mouth of permanent rivers which rise in the western scarp. To the east the land gently undulates in a series of steps, but the western escarpment rises steeply to a height of 1,000 feet. Permanent rivers have cut deep gorges into this scarp, and maintain the swamps and forests which shelter a great concentration of big game as well as magnificent trees. Hot springs indicate the position of the fault-line at which the land was lowered during the formation of the Rift.

So we crossed the Rift, dipping down gradually into it and rising again to wind our way by a twisting road on to the top of the western scarp, till we reached the brand new Hotel Manyara. It was not quite finished, the soil still gaped among mixers and tractors where one day the garden will grow. But it showed a bold inspiration, perched on the very crest of the Rift, with an immense plate-glass eye opening on the lake. The living-rooms and suites follow the contour of the Rift wall, each with its own look-out point.

The sun beat down and bleached the sky and the land in an almost continuous haze. We waited till mid-afternoon to descend to the Lake Manyara Reserve (now—1962—a National Park) on the Rift floor 500 feet below the hotel.

Winding through slopes of open thorny grassland, we reached and plunged into the ground-water forest, along two deep ruts cutting through the moist black earth. The forest is

like a picture by Rousseau, immense buttressed trees hung with festoons of lianas, strangling creepers and chattering monkeys. Among the thick undergrowth lie the trunks of decaying trees sprouting vigorous offspring. Baobabs swell their glistening bodies, bare of leaves but bearing their crop of sausage-like fruits. We cross a few streams flowing from springs at the base of the scarp, fording them against strong currents. The ground is often water-logged, growing phoenix palms and fine green-barked fever-trees. It is a wild, astonishing forest—unnatural in that dry climate and entirely due to the streams pouring down or springing out of the scarp to flow into the lake below. The canopy of vegetation holds the humidity and preserves the forest from fire, so that the trees grow to their full maturity and splendour, some of them covered with tantalising flowers, gleaming like waxy white carvings high up on the dark foliage.

There were elephants and rhino roaming about, but our goal was the lake-shore, where Mr. Owen has had a hide built among the birds.

The forest ceased as abruptly as it began, opening on half a mile of open savannah with palms and acacias over thin grasses, visited by zebra and antelopes. After this, the shrinking lake stretched a dry soda-encrusted shore, where we left the Land-Rover. The ground soon softens into mud across which we slithered and sloshed, towards the minute canvas hide. It was quite an achievement to integrate ourselves into so small a box and to balance on the two chairs half sunk into squelchy, smelly black guano. The bird population whose territory we had invaded protested noisily at our intrusion, but soon forgot about us. We sat very quiet, watching through the slits of the hide.

There must have been hundreds of pelicans, sacred and wood ibis, spoonbills and hammerkops, large and small white egrets, thick-knees and stilts, sandpipers on migration from

Europe, plovers, marsh-ducks and all. They were congregated on the shallows, busily feeding, spoonbills skimming the mud with their flattened-pincer beaks, egrets darting to and fro for a quick successful spike, hammerkops more clumsily grabbing the small silvery fish. Packed as close as a holiday crowd, shaking, necking, beaking, squawking, jostling, they were possessed with an unappeasable hunger, and seemed to find unending supplies; yet they stole each other's prey and protested angrily, hammerkops raising their crests like hoopoes, wood ibis fencing with their necks. As noisy as people at a successful cocktail party, they all seemed to be after the same sort of food.

The lake is soda-impregnated, but there are some pure springs bubbling up just where the pelicans were feeding, a little distance from us. They constantly returned to this particular spot, pushing each other out, taking off with great heavings, landing back on top of each other. Their feathers lay like carved petals on the square shoulders and powerful wings; the fleshy sack under the beak glistened rosy pink. And all the time, in an apparently ceaseless climax of activities, the gabbling and gobbling of the whole population continued, communicating a sort of fever of intensity among them all.

Through the slits we watched with a compulsive fascination, almost—but not quite—forgetting the smell and the flies. The flies were also possessed with that same unappeasable hunger, in this case for our blood, and we had forgotten to bring any defence. They were devouring us—and had been for the last hour. The chairs meanwhile had sunk a bit lower and at a dangerous angle: we extricated ourselves by clinging precariously on to each other and to the collapsing hide, and finally emerged ankle-deep in guano mud. We disturbed a great flock of wood ibis who took wing and circled out and back again, to land squawking on the dry land; in the distance,

skein after skein of flamingoes wheeled over the lake, melting together in a flickering cloud of rosy wings.

We drove back as the sun began to set. There is no twilight in Africa; night falls like a stone down a well. We reached the trees engulfed under a darkening sky—immense and sinister, they merged into their own shadows and reached above our heads to make a shrinking tunnel, pierced only by the two needles of our headlights. The Land-Rover lurched and plunged on the broken track, roared its way through torrents whose rush seems to have doubled in noise and intensity. I began to wonder how I should like to spend the night here with a breakdown, in this forest which now assumed a sombre and malevolent power.

We emerged after what seemed an eternity, and with some relief returned to our perch on the rim; to a bath of kipper-smelling water, a drink at the smart bar and a tranquil evening by the welcome fire.

The young warden, Max Morgan Davies, joined us for dinner. "Two nights ago," he told us, "I had a strange experience. I had sent my boy off early after he had fixed my room for the night. But when I went to bed, I found the place in the most extraordinary mess—cover pulled off the bed, sheets off and blankets missing, no pillows, and my clothes all over the place. I called the boy back, and of course he swore everything had been fine when he left. So I decided to watch for whoever or whatever *had* made the mess. After fixing three bells in the open window, I went to bed with a flashlight in one hand and a revolver in the other. Sure enough, " it " came back. The bells tinkled, I flashed the light—and there, half-way through the opening, was a full-grown leopard staring at me. . . . He gave a snarl and backed out. Oh no, I said to myself—not so easy. So I set a trap on the veranda and went to sleep. Not for long, for, of course, that leopard returned for whatever he had come for, and got himself

caught in the trap. Safe enough, I thought. To-morrow I shall get him taken to the Reserve and released there. But I hadn't reckoned with the leopard's mate: she had followed him, and I could see her marching up and down outside the cage, muttering curses and advice, no doubt. And believe it or not, while I was out fetching a van to transport the animal, the leopard managed to bend the steel wires apart with his teeth, made a narrow opening and somehow squeezed himself out, leaving a lot of fur behind! They had both disappeared. My boys followed their tracks in the bush, and retrieved two blankets and a sheet, as well as a jolly good pair of trousers and a jersey, scattered all over the place!"

We heard nothing that night but a great wind which beat upon the cliff like sea-waves, making straight for the open slits of our windows and freezing me in bed.

Next morning, while Julian was having a conference with Owen and Morgan Davies about the Manyara Reserve and its problems, I escaped to the view-point gazebo where the management of the hotel has provided two efficient telescopes for its guests. The scarp drops steeply down to the ground-water forest we crossed yesterday; the lake shimmered colourless in the morning light; beyond, ridges of undulating land, sparsely wooded with thorn acacia, euphorbia and prickly commiphora stretched into the unknown. Large herds of buffalo browsed peacefully, but I looked in vain for kudu and other antelopes.

In clearings of the thick forest canopy just below, two families of elephants were feeding leisurely, unconscious of the telescope's prying eye. They seemed to eat anything green: adults raised their truniks to leaves on branches, the young combed theirs round tufts of grass and toyed with a few blades. A baby was being suckled by its mother, its small trunk thrown

back over its face while it reached for the udder with its lips. I wonder why the udder is under the front legs of the elephant: a very sensible arrangement, but surely unique for terrestrial quadrupeds.

The bird flocks on the shore showed only as white blobs until a cluster of flamingoes rose unanimously, to circle over the lake again and again.

It was hot, even in the shelter; the wind which pounded all night had died, the sun clamped down and burned the land.

21. Ngorongoro

The great crater – the tranquillising experiment – lions – hyenas at the dead gnu – elephants on the road – elephants excavating mineral salts

Everyone interested in Africa has heard of the Ngorongoro Crater. The first Europeans described it as an Eldorado of wild game, containing the whole of creation—or nearly.

When the territory belonged to the Germans, the entire crater was leased to two German farmers, the brothers Seidentopf. They built a homestead under the shelter of trees by the spring, put in 1,200 cattle, bred ostriches and tamed zebras for farm work. They also organised colossal hunts for German colonists, and killed so many lions that trophies were reduced to tails. When the colony became British, the white farm was cleared out of the crater, and Masai cattle and wild animals shared its food and water. Gradually, however, more and more Masai cattle came in, packed for the night in the thorn enclosures called manyattas. It is Masai territory; a long-established group of resident Masai live on the crater floor, and Masai from the surrounding areas are driving their cattle in ever-increasing numbers down the flanks of the crater and threatening to destroy the forests round its high rim.

After traversing a plateau covered with giant lobelias and wild ginger palms, tall elephant grass and leonotus we reached the crater by lunch time. Mr. Phersen the district officer was putting us up. From the porch of his house perched on the

inward-facing rim of the crater, one saw the whole immense circular cup, nearly 14 miles across and about 1,800 feet deep, marked here and there with dark patches of forest on its steep inner slopes. The grassy floor was sprinkled with tiny black dots: "gnus and zebras," said Mr. Phersen.

"I have been thinking," said Julian after lunch, "if whales had fleas, they would stand in the same size relation to each other as the crater to the gnus." We absorbed this illuminating comparison and prepared to descend into the crater. The road took five years to cut into the hardened volcanic ash of the rim, a series of steep segments interrupted by tight zigzags, which the Land-Rover copes with in low gear. I love going slowly and looking for things: it's almost as good as being on one's feet.

"Elephants often come here at nightfall," said Mr. Phersen, "they dig their tusks into certain places on the face of the cutting and loosen crumbs of ash, which they eat. It contains some sort of mineral they need. They're awfully clever at finding it in odd places and they'll walk for miles to get it." Great gourmets, elephants are, and wise dieticians. Having gorged on Mkuma or Musuku fruits as soon as they are in season, they embark on a medicinal pilgrimage for saline earths which they find in such curious places as anthills and special volcanic rocks. A good hunter keeps a sharp look out for the tusk-marks of these explorations, as they can reveal a particularly large tusker to track and, alas, to kill.

At the bottom of the crater we made for the old farmstead, and joined the game-marking team and their tranquilliser outfit. Eight young specialists were trying out new methods for marking wild animals to study their movements, or for transporting them to other regions. They showed us the aluminium phials full of a particular chemical which, when shot by an air-gun into an animal, slowly drips through a special valve contrived to give just the right timing. The

problems of how much tranquilliser for what sort of animal have to be solved by trial and error; surprisingly small doses will kill an elephant but hardly affect an ungulate.

We all set off for a demonstration, following the outfit in two jeeps which slowly circled round a herd of gnu, choosing a specimen to be marked. A quarry was shot with the air-gun and followed around for quite twenty minutes. It was a female followed by her half-grown young. She must have been particularly obdurate, for she seemed endlessly to wander in and out of the herd, twisting and lolloping, till she was finally overcome by the effects of the tranquilliser and fell to her knees. The team leapt out of the jeeps and carefully blindfolded her, arranging a cushion of hay under her chin. They injected her against shock, took her rectal temperature, punched a plastic disc in her ear, and painted both horns, one blue, one yellow. Finally they cut off the long hair of her tail and sheared her mane; the animal can thus be detected at a distance. Meanwhile the young gnu was watching, never out of sight. He trotted all round the group, stopped to look, shambled off again in a bewildered sort of way. The rest of the herd took not the slightest notice of the affair.

This actually was a small drama, for the gnu lay panting for a long time while the team stood by, watch in hand: her horns garish with quick-drying paint, the harness ready to unclasp, the stage set for her leaping up and galloping off to rejoin the herd with her young. But something had gone wrong. Instead of shaking herself up she started hiccupping, and though the vet and his helpers massaged her and stroked her belly, she gave a last twitch and died, her eyes glazing, reflecting the pale-blue sky. We all looked on saddened; the little gnu watched from a distance, made another circle and returned, waiting.

The group discussed the reason for this unexpected misfortune. It appears that resistance to the drug is altered when

the animal is a nursing mother; she could not react quickly enough and in fact drowned in her own rumen. This was a great disappointment, one of the few in their experience. (The method of tranquillising animals has been perfected and is now giving good results: it is used widely for transporting even rhino and elephants.)

The crater floor is a vast flat plain, almost treeless; 150 square miles of good pasture, with water trickling and pooling from crater ridges; mostly tawny grass, with patches of grey sand marked with many footprints.

"Let's find some lions," said Phersen, driving towards good lion-cover of high and yellow grass. Sure enough we came upon a group of them languidly waiting for sunset and the hour of hunting. We almost ran over them, lying there indifferent, their terrible beauty relaxed, their amber eyes void, with bugs and flies climbing up and down the tangles of their manes. This was a hollow hour in their lives—I expect there are many such, with no play, hunger, quarrel or love-making. Nearby a large herd of zebra grazed unconcernedly, the foals gambolling together, with legs up to their shoulders, their baby-coat in long-haired white and reddish stripes. How graceful they are—till they grow up into round barrels fitting the skin like a balloon, neither a donkey nor a horse, a lovable comic of the bush. Why are zebra always so fat-looking? I was told they harboured an incredible number of parasites, to feed which the host has to eat a great deal more than a normal amount of grass. Zoos have discovered that they can save a good deal of the cost of their food by thoroughly "worming" newcomers.

There were masses of birds: crowned plovers, storks, crested cranes, francolins, guinea-fowl. Vultures circles in the sky. And no wonder: they have detected the dead gnu, to which we now returned. One single hyena hunched on top of the carcass kept at bay some fifty vultures, other hyenas and

Stripes and shadows. A couple of Burchell's zebras sheltering under a thorn-bush, making the most of the shade in the noon-day heat

Creatures of the open savannah. *Above*, a parade of giraffes ambling peacefully along. *Left*, a hen ostrich and her nest

jackals. He stood there defiant, black death-smelling snout dilated, mean eyes on the defensive. He tore another strip off the half-eaten gnu, then, looking at us suspiciously, decided to leave; he slunk away followed by his kind. Instantly the vultures leapt on to the carcass, snarling and growling at each other, lurching about, forcing their way through, snaking their heads into the cavern of the ribs, surging and obscenely devouring. There appeared to be no pecking-order in this lot, but they kept away a large red-beaked vulture with white legs, which in turn chased back another with a white necklet at the base of his long bare neck. Neither dared challenge the mob; they waited with a certain dumb dignity until the others had gorged their fill.

We moved on—seeing no sign of the young gnu and hoping therefore that he had rejoined the herd and could look after himself—past the pool where could be heard the chorus of frogs and the deep staccato rumour of hippo, about to come out to feed. The sun began to set. Under the inverted bowl of the sky the light quickly drained away, shadows gathered in the crater's cup, violet darkening to purple and indigo. At the foot of the steep wall three strings of black and white Masai cattle slowly wound their way back to the manyattas, obedient processions of several hundred beasts.

The lions were now alert, sitting on their haunches; the black spots of their ears just visible over the tall grasses, they watched the game. Gazelles leapt away as we passed; zebras arched their necks, hardly moving, expectant; gnus, with that guilty-conscience look, twitched their tails and listened. It is a moment of tenser awareness, just before the crater swallows the night at one gulp—a moment of suspense and vulnerability.

I longed to stay and watch the nocturnal creatures creeping out of their holes, the lions making their kill, the youngsters gathering round the reassuring smell of their mothers, learning this world of night so different from the sun-drenched heat-

obsessed world of day. It seemed to throw us out of its darkening orbit as we climbed back into the Land-Rover, put on full headlights and drove cautiously round the blind corners, in case we met elephants. This was their time of salts, when they come to the cliffs for their daily dose.

We were lucky, and had no such encounter. But a guest for supper arrived late, eyes blinking and inflamed, covered with dust and rather shaken. He was driving on this cliff road when he suddenly found himself a bare five feet behind an elephant. He quickly switched off his lights, but the elephant, luckily unable to turn, swung his trunk, sprayed the open Land-Rover with clouds of dust and walked away. It was sudden, unexpected and most disagreeable. The poor man ruefully patted his eyes with a damp cloth.

As we were sipping our whisky by the blazing fire (up there, nights are cold) stories of such meetings were told to semi-curdle our blood, though they have their comic as well as their dangerous angles. There was the story of a man driving an old car up the hill, meeting an elephant head-on. The elephant approached and looked for an opening with his inquisitive trunk; the man quickly shut the windows, but meanwhile the engine stalled. The elephant then moved to the rear of the car, still prodding and fumbling, while the desperate man at the wheel expected to be heaved down the cliff any minute. Still the engine refused. By now the elephant had got annoyed with this contraption, inserted his tusks below the bumper and jerked; the tip of a tusk broke, the car jolted forward and miraculously the engine started with a roar and [illegible] just in time. At first his story wasn't believed, but the broken tusk was later found wedged under the bumper.

Then there was the car which ran into an elephant from behind and crashed into its back legs before either knew what was happening. The elephant sat down with a great bump, smack on to the hot radiator—leapt up with a furious scream

and streaked off, *le diable au derrière*. There wasn't much left of the radiator.

I was sorry not to see any elephant or rhino on this trip. The rhinos are being killed by the Masai at an alarming rate, always, they say, in self-defence. Phersen reported the year's total of killed rhino—found minus horns by his scouts—at thirty-six. This year there are six or eight pairs left in the crater. Next year there may be fewer.

22. Olduvai

The long and dusty journey – the Serengeti Plain – Leakey's camp – Zinjanthropus boysii – Dinotherium giganteum – giant creatures of the Pleistocene – geology, present and prehistoric – barchan dunes

Next day we set off along the rim, just above the early morning mists which still filled the crater. It looked even larger and more spectacular than in sunlight, its circular edge holding a sea of mist, white against green, muting all life.

We drove on through a landscape of small green volcanoes and the draped folds and ridges of older eroded craters; open savanna with but few trees, mostly euphorbia and acacia, a few giraffes and antelopes, Grant's gazelles and ostriches. The soil was dry and the fine dust of the track flew in at every pore. We navigated round holes and shallows, floundering like a ski-novice in soft snow, keeping a laborious fifteen miles an hour. The land became flatter and vaster, stretching to a monotonous horizon, with here and there clumps of commiphora, bare of leaves but showing their armature of curved thorny branches; acacias spilling vervet monkeys; and thriving settlements of gall acacias, the round two-thorned balls distributed on the prickly branches like fruit, each the home of a colony of ants.

We ate peppermints, we had a puncture, we got hotter and hotter, and there was never a soul in sight. In the middle of this emptiness, an absurd sign-post pointed the way to the Olduvai Gorge, still many desolate miles away. We abandoned the

track, for it had been ground into a soft rut of dust with deep holes: jolting against each other, we bumped uncomfortably through the open bush.

This is the fringe of the Serengeti Plain, the scene of the yearly migrations of hundreds of thousands of animals. They start just before the rains fall, swarm in unbelievable numbers, and spread in endless streams of hungry mouths. When the good grass in the central Seronera plains is eaten up they begin a long trek covering hundreds of miles, walking in single file along determined tracks. The full extent of their circuit was not known before Bernard Grzimek and his son Michael flew their small plane over the plains, counting and analysing the herds and finally charting their age-old migrations. Michael died when his plane collided with a vulture and his father later published their findings in a remarkable book: *Serengeti Shall Not Die.*[1]

The Serengeti has been, since time immemorial, a main stage on this migration route. Its vegetation flourishes only with the rains, when the new grass shoots up out of the desert; the herds somehow time their arrival to this event, when they can find food with a high protein content; they eat the first shoots and move on, to return in due time when new shoots have grown. They are in a sense compelled to move, for if they remained on the limited area of the central plains, they would starve on the desiccated woody stems of the tall grasses during the dry season.

The rains fall and the desert blossoms. The new grass shoots up, wildebeest and zebra give birth to their young, the multitudes swarm on and on, leaving a few trampled bodies behind. Lions, hyenas, wild dogs and vultures, ravenous camp-followers, harass and devour the unlucky newborn, clean up the casualties, fatten on the surplus of abundance.

For us passing through on this August day, there were no

[1] Hamish Hamilton, 1959.

green shoots and happy herds. The empty plain stretched out—Hemingway's "miles and miles of bloody Africa"—the heat swelling from the dust in a trembling haze under the brash glare of the equatorial sun.

We passed a deserted Masai manyatta, protected by its thorny boma: in the wide enclosure, a few huts of mud and cow-dung plastered over saplings (no wonder there are no trees left for miles) wait for the seasonal return of its occupants. We explored these low, oval huts, with stones marking the hearth, sticks where the bedding had lain; an empty tin of sardines in the hearth no longer surprises us. Just outside blazed the unexpected beauty of an impala lily in full flower.

Mr. Owen seemed to have some hidden radar equipment, for out of this uncharted emptiness he followed an invisible lead and we found ourselves suddenly confronted with a group of trees and a welcoming Louis Leakey, just in time for lunch.

This was Leakey's Camp 5. Thorn-bushes sheltered an enclosure, within which were gathered the living units: a large open shed containing two refrigerators, a table for meals and a larger one for fossils; radio equipment, files, books and many boxes and cases, including a safe. Under the dining-table, a basin of growing grass—purge for the cats. Beside the shed stood a spacious aluminium caravan used as a bedroom by the Leakeys. A number of tents completed the circle. The dust made a soft carpet everywhere.

We met the two cats; then progressively, the five Dalmatian dogs, which had been imprisoned in the van to curb their exuberance; Leakey's two sons, Mrs. Coryndon with two small daughters; and, finally Mary Leakey, disembarking from a Land-Rover with quantities of small fossils in cigarette tins.

Louis Leakey we had met before. In 1929, Leakey, then a very young-looking but already remarkable paleontologist;

took me to see the prehistoric caves near Elmenteita. His central interest is the discovery of man's origin and early development on earth, and everything connected with this problem is grist to his mill. The Upper Paleolithic obsidian scrapers and blades of Elmenteita have been replaced now by the first man-made tools of Olduvai. And early in 1959, his wife Mary discovered the skull and upper jaw of *Zinjanthropus boysii*, the pre-human australopith, presumed ancestor of man. Experts are trying to discover the age of this skull; at the moment it varies between 1,700,000 and three-quarters of a million years.

After lunch Leakey undertook for our benefit a complete survey of the geology, paleontology, vulcanology, and evolutionary prehistory of East Africa, as revealed in this incredibly rich site at Olduvai. He drove us to a jutting promontory dominating the wild gorge, which looks rather like a section of the Grand Canyon in miniature. From where we stood, we saw the cliffs exposed almost vertically by erosion and landslides, showing their successive strata in different tones. Just opposite our view-point, he demonstrated a discontinuity in the strata due to a fault; this particular fault attracted the attention of the first paleontologists in this region, and in fact was the lead which opened up one of the richest fields of fossils, from fish and giant mammals and birds to earliest man.

Or, rather, to the forerunner of man, for *Zinjanthropus* does not quite deserve the title of man; hardly a hunter, he was still living partly on vegetable food and only beginning to catch animals to eat—small animals, however, or the young which could easily be trapped and killed. His only implements were sticks and primitive spears, and the pebble-tools which he fashioned to suit his simple needs. He apparently did not know the use of fire.

Conditions are rarely suitable for the formation of fossils: that is why they are so few and far between. There must be a sudden extinction of life and, simultaneously, a covering of

the site with a protective layer which will preserve its contents. Such conditions apparently prevailed here, and innumerable fossils of mammals, reptiles and birds, as well as shaped stones and tools, found everywhere up and down the gorge, are piling up on the big table in the shed, in sacks all ready to be despatched to the Coryndon Museum, and in heaps not yet analysed. But the really important find was the key fossil of *Zinjanthropus*; Leakey is determined to find the rest of him, or as much as can be retrieved after the hazardous upheavals of time.

Infected with Leakey's enthusiasm, we departed from our elevated promontory, and found our way down the worn lip of the gorge, where the scree became very steep and rugged. Scrambling about was a treasure-hunt, for at every step rough stone axes and scrapers litter the ground.

Four digs were now in progress, with a team of six excellent African diggers, Jonathan Leakey and some students, working under the guidance of Louis and Mary Leakey. Louis explained how the various strata, interlarded with lava-flows and beds of ash, are graded down from the top to the lowest, Bed One—dating back perhaps to 1,700,000 years, from which the ladder of evolution ascends in layer after layer of decipherable material. The job is to clear and analyse these layers, grain by grain.

Great walls of solid ash deposits in the vertical face of the cliff have been excavated. The *living floor*, the place where *Zinjanthropus* camped and left his traces, is revealed and with a dentist's probe, every square inch is detached and later sifted for analysis. We bent over the kneeling figures dedicated to their minute dissection of a few thousand years, and examined the little pile of objects extracted from the soil: bones of fish or bird, the jawbone of a shrew or the tooth of a pig. We even tried our hand at this fascinating game, fired by the idea of being the discoverers of another human skull! We were

promptly discouraged, appalled by the immense expenditure of patience needed for this very specialised labour.

We left *Zinjanthropus*' living-floor for site 3, where the great panoply of a *Dinotherium giganteum* skull lies embedded, its four-foot tusks laid out and flattened into the volcanic substance. The front of the face has been partly destroyed, but the skull and tusks, carefully painted with some vinyl preparation, shine rust-coloured at our feet. The giant *Dinotherium* lies there, colossal, waiting for its delicate extraction with pin and paintbrush. The whole skeleton is probably hunched behind those tusks, and Leakey's team have a long and thrilling work before them. Meanwhile the men reverently replace the cover-sheet: it is not yet ready to emerge from its stony sleep.

This brief confrontation with a near-relative of my beloved elephants, this incontrovertible witness of Africa's obscure pre-adamic past, shook me deeply. To see it here, in the very place where it had its being and its dying, is a very different thing from seeing it in a museum, supported by iron struts and footnotes. I began to visualise it, as Julian described it, with its four-foot tusks protruding downward from its lower jaw, used solely as implements for ploughing-up roots, but not also as weapons, as with their collaterals the elephants. Did these giants then never fight? And why, to begin with, were they giants? Leakey showed us the bones of an ostrich thirteen feet high, (to-day's ostriches are only eight feet), a giant pig's tusk as large as an elephant's, ram's horns with a twelve-foot span; giraffes twice the height of our present one, but with a shorter neck: a whole population of immense animals, once inhabitants of Olduvai, whose successors are the diverse wild creatures we have been seeing, shrunk and diminished from that extraordinary gigantism.

Why then were all these herbivores giants? Leakey suggests that they lived among an abundance of mineral trace-elements leached out by pluvial rains from the active volcanic ash into

the green vegetation, a sort of food-of-the-gods, available to herbivores.[1] The flesh-eating men and proto-men of this time were small and stocky. Predators, and most of the birds and fish were of normal size, not unlike our contemporary ones.

It is impossible to imagine this valley as it was then, before the upheavals of volcanoes and earthquakes which created completely new features in the landscape. Because of the mass of fish and bird fossils, Leakey deduces that this was once a great lake, possibly connected with Lake Victoria. We tramped upon its erstwhile shores, where ancient man, evolving slowly from *Zinjanthropus*, did his fishing and hunting, where he fashioned those tools which now litter the place. At every step we picked up fragments of bones, hand-axes and scrapers; enough for us to set the scene, and to people it with the tool-making, squat hominid to whom the fragile skull belonged.

It was, actually, Mary Leakey who found that skull. "How did it happen?" I asked. Mary, trained as a student of paleontology, had spent two or three seasons in the gorge, determined as Leakey himself to leave no stone unturned in searching for the earliest human link. It was the last day of the season. She had left Louis in camp with a bad cold; vaguely she cast her eyes over the cliff where a recent fall had left a fresh grey patch—and saw what looked like a human tooth, just emerging from the rock. It was, in fact, two hominid teeth. She dashed back into camp, shook Louis up, his cold cured by this magic, and off they rushed to the site; jubilating, of course, but to my mind almost inhumanly cautious and patient. In fact, before a grain of ash could be moved from those enticing teeth, before they could prospect for the hoped-for remains of the jaw, the spot had to be measured, photographed, sited in absolute relation to the rest of the gorge, and so forth. And only then was the slow, delicate, exquisitely tantalising labour

[1] Danish farmers are now experimenting with feeding mineral trace-elements to their pigs.

begun, revealing what turned out to be the dome of a human skull and the upper part of its face and jaw with curiously large teeth. Just that, and no more: but what a leap into our ancestry it represents!

Jonathan, looking mysterious, approached to say he thought he had found a human bone. We all scrambled back as fast as we could. The bone was a fragile tiny thing, lying neatly cleaned on top of the grey crust. "Yes, a human phalange—probably the third digit," said Louis. That evening, in camp, Louis and Mary took out a box of skeletal samples of a human hand, compared the little bone carefully with its present-day type, confirmed, labelled and packed it away together with the five other bones of a hand they have hitherto discovered.

Slow work, all this; slow, minutely patient and persevering, to sift through the huge pile of fragments, in spite of the heat and the dust, just in case. We sat under the hurricane lamp while the day's finds were analysed; notes were taken, checks and counter-checks; a disturbing familiarity with unknown creatures, with names I had never heard of, was displayed all round. Raised from the dust, fantastic animals wearing their giant bones seemed to stride round the camp, claiming attention, a desiccated phantasmagoria.

Yes, I will have another whisky. I am losing ground; I am falling down those cliffs at a thousand years a second; perturbed yet fascinated, I humbly reflect on the relentless evolution which has linked me, across this million-years gulf, with the white bones under the cliff.

Off they are again: geological upheavals, trap-door-faulting, inselbergs, rifts, landslides, volcanoes. The earth heaves up a vast new range, cracks apart, yawns precipices, squirts boiling lava. Some mineral witnesses of these changes are here still, providentially preserved, and the geologists tap

and measure, recognising former features under the modern lineaments of the land. To them, it is almost clear: conjectures become diagrams, their probings of the earth's crust turn into delicate maps in Indian ink. Supper is delayed while they discuss yet another earthquake, and Leakey fishes out yet another geological map.

The wind blew cold, a young moon flitted between the naked thorn branches, and not far away, hyenas laughed their ululating call to death. All night long they crept around the camp, round the tents, where their footprints showed the next morning. We laced up our tent door-flap and slept uneasily.

But next morning, the sun shone his reassuring beams, older still than Olduvai gorge. A bird ceaselessly repeated the only tune he knows, pouring out his soul in the same mi-re-do, again and again. What is it? A canary? An African sparrow? "Oh, no," said the geologist with one foot in ornithology, "that is the chinspot puffback flycatcher." And so indeed it was.

Mary packed up to go to the site, Mrs. Coryndon joined her with the two children: they will play and read in the shade while mother continues where she left off yesterday. Louis was leaving for Nairobi to attend to his museum, Jonathan drove off to fetch water, fifty miles away.

Soon it was our turn to leave, going to Seronera. We departed in a cloud of dust.

That day we drove for about three hours, the only Land-Rover over the endless plain, waterless like a biblical punishment, its fine dust in our hair and eyes, nose and mouth. We stopped on the way to see a curious phenomenon of nature, as ephemeral as the Olduvai gorge is long-lived. It was a barchan dune, a crescent of moving sand, sharply crested, made of the finest sandy ash, whose ever-moving particles are pushed by the

prevailing wind, up to the knife-edge where gravity takes over, impelling their descent. We climbed the thirty odd feet to the top watching the grain-by-grain procession of this almost fluid crescent, its two horns advancing minutely over the desert plain. The whole crescent marches forward, its hundred foot width almost constant, scooped up by the wind-current which rolls it along. The outer surface was covered with footprints of birds and small mammals, hunting for insects which had been overpowered and buried. There were about ten of these live sand-dunes advancing over the plain, three of which have disintegrated—for no more plausible reason than for their being created, out of the quantity of loose sand all over the Serengeti Plain.

On and on, the plain goes on for ever: empty and void save for small birds flitting from acacia to acacia. The grass was sparse and burnt dry. We lurched about in the deep ruts of the track, hot, dazed and constricted. It is a no-man's-land, and one would think also, a no-animal's land. A place of non-being, suspended in torrid heat—expectant no longer but resigned to its mean infinity.

23. Seronera

Lions at a pool and a kill – lions in general – the great dusty plain and its thousands of animals – wild-life in danger – animals in zoos – the brooding ostrich – ostriches in general – plane flight over the western Serengeti – the perfect rainbow

The next thing we knew was the smell of a river, an indefinite greenness in the air, and the plumes of phoenix palms etched below us. It is the Park, a great plain within hills, with here and there a kopje under its crown of granite rock and tufted vegetation. We descended a sharp curve, down to the river which here makes a welcome pool with a gentle beach. On it, supine and voluptuous, lay a group of lions at their siesta; father, mother and a cub: a little farther under a tree, a solitary female and still farther a large black-maned lion, not on speaking terms. Indifferent and aloof they turned a glassy look towards our Land-Rover. "Another of those smelly things?" one could almost read their mind.

We drove on, to the warden's house. Mrs. Harvey received us, and took us straight to the guest-house for a welcome bath. We shared our bathwater with lions, so it was richly coloured, but wet and refreshing after the hot drive; we changed and rejoined the party. The veranda opens right on to the open savannah among a group of shady trees with transplanted wild orchids and a bird-bath. Mrs. Harvey keeps a small tin full of insects and moths, which she feeds to

the birds. Tits and bulbuls, sparrows and fly-catchers, flit in and out of the veranda, pecking at the food.

After lunch, Mr. Harvey took us out in his Land-Rover. We drove slowly along the Seronera River, in the luxuriantly green shade of albizzia and giant palms. The river never dries up entirely; lingering in pools even at the driest time, it winds placidly, resting in the shade of the grateful trees, quenching the thirst of sandgrouse and river-rat, of predators and their various prey.

One was at peace with this world. After yesterday's crossing of that immense empty plain, void of demanding life, it seemed right that lions should devour a freshly-killed zebra, its entrails spilling peach-coloured on the green grass. The young were tearing at the flesh, lifting blood-stained muzzles for a second to watch us, reassured by parents dozing, blinking placidly at flies, yawning. The whole scene was curiously tame, as if the lions, well-fed and domesticated, were expecting and accepting a visit from their keeper. Julian remarked on this, and Mr. Harvey explained: this pride had two females who cubbed about the same time; one of the mothers went lame after a few weeks, and died, so her young were taken over by the other female. But seven cubs were too much; her milk began to fail and the hungry cubs pulled so hard that the teats became swollen and painful. So the lioness refused them and half of them died of hunger. There were only three left now, and she seemed better able to cope, but last week he had to get a zebra killed for the pride. "Why, do the lions not kill?" we asked. Harvey seemed just a little abashed, looking at the virile and dauntless male haughtily profiled under the tree. "Well," he conceded, "the females do most of the work. . . ." "Makes me ashamed for my sex!" I heard Julian mutter.

We forded the river just a few feet away from the pride. The land beyond the shade becomes savannah, with dry and

sparse grass, but useful grazing, nevertheless, for herds of gazelle, topi, kongoni, zebra and gnu. They were feeding close to the satiated lions, reassured by the loss of one of their number, relaxed now and almost careless. There is no mourning for the victim, no questioning the abrupt law of life and death. The prancing zebra, the graceful doe, will continue to feed the pride, while vultures and hyenas, jackals and smaller fry, mysteriously apprised of the kill, cautiously approach to wait their turn at the feast.

After feeding, the lions stretch, yawn, digest and sleep. They have an enormous capacity for resting, and spend ten to fifteen hours of every day at it. Unlike the herbivores who have to pack a huge volume of vegetable matter per day—elephants 200 to 300 lbs., hippo 200 lbs., rhino 2-3 bushels—lions eat their ration of solid flesh in at most an hour. The meal contains all the calories and elements they need.

What do they do with themselves, their proud King of the Beasts selves? The cubs gambol and play like kittens; they climb over the adults and tumble about, they spar with each other, they stalk father's black-tipped flicking tail and give it a quick bite; when they can find them, they make toys of ostrich's eggs and roll them playfully around. (Joy Adamson gave her cubs an old tyre which was a great favourite.) Later, they have to learn the lessons of the bush: to freeze, creep on their bellies, stalk their prey noiselessly, and give the bite of death. The adults don't play. They sit and mooch and look bored. They are not interested in their kingdom except as meat for their bellies. Having no enemies but man (and a number of parasites), they need not, like their prey the herbivores, stay on the alert. And during their leisure hours, provided they are left alone, they assume this benevolent indifference towards all beings, often taking themselves away rather than risk unnecessary conflict. Seeing them thus relaxed, enjoying the soothing shade and the satisfactions

Wild life behind bars. Guy, the 15 year old male gorilla, weighing 454 lbs., in the London Zoo

Above, watering time for Masai cattle at Amboseli; they have reduced the surrounding land to a dusty waste, but the lake and its aquatic fauna are left undisturbed. *Left*, a Masai herdsman persuaded to stand for his photograph

of digestion, one is not to forget how ruthless they can be. Their ancient fame is built on the successful use of fearful claws and fangs, fitting them for their role as killers.

There is still much we can learn about lions, and much ground to clear between legend and fact. Ancient bestiaries approached the subject with a minimum of scientific data. In the Physiologus we read:

> The Lion is the King of Beasts. Like a King, he takes only one wife. He is a mighty beast and you can tell his nature from the curl of his mane. A lion with a short curly mane is peaceful, while one with straight hair is ferocious.
>
> . . . There are three main things to remember about the lion. First he has a beautiful tufted tail, and when he goes for walks up tall mountains, which is his wont, he is sometimes spied and pursued by hunters. The lion then uses his tail to erase his own tracks from the ground, so that the hunters lose his spoor and cannot follow him.
>
> Secondly, the lion is ever on guard, for he sleeps with his eyes open.
>
> Thirdly, the lioness bears her cubs dead. She mourns over them for three days; then the lion comes and breathes life into them. This is a parallel to the death of Jesus, for on the third day the Father Almighty came and raised him from the dead.
>
> . . . He eats only on alternate days. Being careful of overeating, when he has had too much, he puts his paw into his mouth and removes the extra meat. He will not eat from a former kill, for he dislikes left over food.
>
> When the lion is sick, he searches the forest for a monkey which he eats to be cured. He fears a cock, especially a white one, and the sting of the scorpion,

and the snake can kill him, though he can crush them with his paws.

Herodotus's statement is even more unfounded:

> The lioness . . . brings forth young but once in her lifetime, and then a single cub; she cannot possibly conceive again, since she loses her womb at the same time as she drops her young. The reason of this is that as soon as the cub begins to stir inside the dam, his claws, which are sharper than those of any other animal, scratch the womb; as the time goes on and he grows bigger, he tears it ever more and more; so that at last, when the birth comes, there is not a morsel of the womb that is sound.

It is curious that so few of the lion's facts of life were observed and reported in classical and medieval times. Yet lions were, right up to the beginning of the last century, so much more numerous and widely distributed than now—right along the eastern Mediterranean coast, throughout the Near and Middle East as far as western India—in many places treated as sacred and even deified. But, if observation failed, imagination and superstition throughout the ages built up a fabulous lion-image, with terrifying attributes and fear-creating aura. Samson, David, Hercules and many others, by killing lions acquired immortal fame. They probably ate their heart as well, thereby absorbing the essence of fearlessness.

This is, however, only one of the many desirable qualities which emanate from the King of the Beasts. Thus Dr. Guggisberg in his *Simba* quotes Sir Alfred Pease, visiting North Africa in 1892:

> As we strolled along the dusty road, I saw a very fine maned lion, freshly killed, being carried on a donkey

which staggered along under its heavy burden; the lion's fore-paws scraped the ground on one side and his massive head hung down in the dust; on the off-side the tip of his tail trailed from time to time on the road. An Arab led the donkey, and two other natives with big sticks in their hands walked alongside . . . I asked them where they had killed the lion. "Mackash mot" (not dead) said one of the Arabs, and then another gave a tug at the stout rope which was round the lion's neck. To my infinite surprise, the lion scrambled off the donkey and was led towards me . . . I was told that this was a sort of sacred lion they took from place to place, and that everywhere it was in great demand for the exorcising of evil spirits, curing the sick and driving away the plague.

In their role of the largest and most life-destructive of all carnivorous animals, it is only natural that lions should strike the imagination of men. The lion, after all, shares with the gentle and fastidious unicorn our Royal Coat of Arms. Several African tribes also have the lion for their totem, and men of the clan have been known to feed hungry lions in the bush: they also claim an almost incredible affinity between certain men and wild lions, going far beyond tolerance of each other; this is tied up with mythology and folk-lore and needs to be carefully disentangled.

To-day, taking to heart Herrick's lines to Electra:

Love begets love, then never be
Unsoft to him who's smooth to thee.
Tigers and bears, I've heard say
For proffer'd love will love repay . . .[1]

our understanding of wild animals has made great strides. No

[1] Quoted to me by Mr. Jack Cotton at a dinner party.

longer paralysed with fear of them, nor impelled by the desire to kill them, we are learning the gestures which will disarm their fear of us, and some human beings have established links of familiarity unthinkable a few years ago. Joy Adamson opened our minds to a whole new world of understanding with her books about Elsa the Lioness and her cubs. And recently, Norman Carr, in his *Return to the Wild*, has published a fascinating account of two male lions he brought up almost from birth, keeping them about him without any restraint whatsoever, until at the age of four, he left them in a chosen territory to live their wild lives. A pair of lions can develop their own characters much more normally than a single one in human companionship, and their story is told with honesty, insight and humour. Incidentally, Norman Carr confirmed the rumour that lions are apt to be cannibalistic.[1]

In fact, the more we learn about wild animals, the more amazed we are. Catholic dogma denied beasts any sort of "soul" and thus condoned much cruelty towards them, encouraging indifference and ignorance about their true character. During the last hundred years, however, observers have begun to study the private lives of animals—without preconceptions but with scientific methods and sympathy—and describe extraordinary patterns of behaviour and social collaboration. It is even proved that some of them, like for instance, the dolphin and the elephant, have a high intelligence quotient and are capable of individual initiative and complex emotion. Man, at the top of the evolutionary ladder, begins to realise, not only his unique essence but also his links with the whole animal kingdom, his common ancestry with all living organisms.

But to return to Seronera: the savannah stretches its tawny

[1] Another valuable study of African wild animals brought up by human beings is Wynant Davis Hubbard's *Ibamba* (Gollancz 1963).

pelt to a blue scarp in the distance, above the green horizontal line of the acacias. These are really sparse as in a parkland: black trunks fanning out into crooked branches holding the flat canopy of their foliage. Under the trees, groups of animals shelter from the heat: Grant's gazelles with their tell-tale diagonal stripes edged with white; kongonis with narrow faces prolonged by curiously twisted horns over the long ears which from the front look like a second pair of horns; impalas twitching their ever-vibrant tails; giraffes showing above the tree-tops, languidly licking up their thorny meal as from a dish; zebras and wildebeests restlessly moving about, disturbing the little birds, warblers and fantails. The river curls back towards us; on its banks a fish-eagle and a hammerkop glare at each other; the hammerkop's nest is close by, an immense bulge four feet in diameter, made of twigs and mud firmly if clumsily wedged in the fork of a tree.

We drove on and found ourselves at the place we crossed this morning, the little beach by the pool, and still at their siesta, the black-maned lion and his estranged mate. "What a pity," says Mr. Harvey, "I had hoped to leave you for a while at this observation hide. But it is a bit close to those lions. . . ."

We cannot get out, but we can sit and watch from the Land-Rover. Flights of sandgrouse are now arriving to drink, but on foot, for they land some way back and walk cautiously down to the water. Two by two, with long pauses, they drink without raising their heads, in a slow ritual. Skeins of wood ibis and pelicans move to their appointed place across the sky. Calls of pigeons and doves surprise us with their too familiar doings. On the bank, outlined against the sky, Grant's gazelles approach, tails twitching. They too want to go to the water, but the lions clutter up the place, and they take no risk: even though, having seen their enemy, they

know they can leap out of reach. It is the unseen lion they fear, for it will pounce out of high grass, giving them no chance.

We left them at it—at the age-long adventure of keeping alive, each in its way among the mixed community, each one a link in the full circle which unites them ecologically. It is a world which exists in its own right; it existed before man, and did very well without him: for it is based on natural laws, not of right and wrong, but of joy and cruelty, life and death.

One could watch it for ever, and like Walt Whitman say:

I think I could turn and live with animals, they
are so placid and self-contained.
I stand and look at them sometimes half the day long.
They do not sweat and whine about their condition,
They do not lie awake in the dark and weep for their sins,
They do not make me sick discussing their duty to God.
Not one is dissatisfied, not one is demented with the
mania of owning things,
Not one kneels to another, nor to his kind that lived
thousands of years ago,
Not one is respectable and industrious over the whole earth.
So they show their relations to me, and I accept them,
They bring me tokens of myself, they evince them
plainly in their possession.

We drove back to the warden's house where the usual conference was starting. It is pretty well the same story everywhere: the National Parks are operating on a shoe-string, and there is less and less room for the wild animals. Time is getting short, and the point of no return closing in. Some pessimists say: "It is all doomed; why waste energy and

tears? There is no hope whatever of saving wild game from extinction now. All we can say is how lucky we are to have seen as much of it as we have. "Within fifty years at most, large wild mammals will only be seen in zoos."

The other day, Julian and I went to the London Zoo. In a cage made of concrete, with planed boles of trees as fences, two white rhinos stood, side by side, facing us. They filled the space with their size, but the splendour of their power had gone: they might have been, themselves, made of concrete. Their folded hide had a synthetic, a pallid look, and their horns, symbols of their now useless pugnacity, had been clumsily grated down like cheese against the gritty edges of the cage. Two tragic giants, safe in their prison, well cared for and fed with carrots, admired and petted, they are but a very poor half of themselves and might almost as well have been stuffed.

Perhaps more than any other wild creature, great pachyderms like elephants and rhinos need their full environment to achieve their true dimensions. Having seen them in Africa, alert and active and full of the hungers of life, one looks at them in their constricted captivity with immense compassion.

What is to be done? The conflict of expanding populations and wild lives can only be solved by the creation of more and bigger National Parks, and above all by the realisation among Africans that they possess an invaluable asset and treasure in their wild animals, and one which can be made to pay.

We returned to our little guest-house; the night was scented with the smoke of a distant bush fire, added to the pungent odours of Africa, compounded of earth and oils of thorns, of sweat, and dung of lion and dry grasses; an exhilarating and compulsive smell, an essence of the land.

All round the house, the dassies crunched the acacias' curly pods. These rock hyraxes live in the kopje just at the back, in granite crevasses among thorn-bushes. In the half darkness we could just see their compact little shapes sitting up at their meal, like rabbits. Although I am conditioned to believe everything Julian says on his own subjects (for what better horse's mouth could I find?) I find it hard to swallow the point he makes that dassies are related to elephants. After all, there are limits to one's faith. . . . We went to sleep snug inside the mosquito net, listening to the hyenas' unanswerable questioning and the chorus of lions; projected as by a pair of powerful bellows from the lion's belly, the challenge is heard for miles around, and answered from the four quarters of the dark plain: it is the time of hunting.

Morning brought another wonderful day. Among other inhabitants, we visited the ostrich sitting on her nest. She had chosen a place close to the track, in high grass, her long neck stretched up like a periscope with its unblinking flat eyes, rising at right angles from its own billowing feather-bed of wings, over two yards in spread. The nest overflowed with large white eggs of which the bird took no notice, possibly knowing she covered all she could cope with. The warden was anxious that no one should disturb her, and we drove very gently by. But alas, the fire which had been lit by marauding Masai some days ago was creeping nearer, in spite of all the strenuous efforts of the staff to beat it back; next day, the nest was found deserted, the eggs already devoured.

An ostrich looks like a disastrous mixture of the wrong avian parts. Its bald head, the size of a small fist, fitted with large discs of eyes, its brain-case no bigger than a hen's egg; its neck a long thin tube, naked and grey, an immense angular bird-body, with surprisingly large, soft, flightless wings fringed with white; the whole supported by two gigantic drum-sticks

of legs, the thighs indecently naked and pink, like raw legs of mutton at the butcher's; the whole equipage hinged amidships and managing, perhaps by having so small a head to counterbalance, to keep out of shipwreck. The creature is almost incredibly stupid and nervous when frightened; it lurches like a drunken ship, twists and swerves at a great pace, easily covering nine feet in a single stride. Only an acrobat could hope to recover a centre of gravity so dangerously impaired, and even the most agile ostriches may come to grief under these stresses. Their legs are surprisingly brittle and can easily break in jagged splinters, in which case the bird is doomed.

Yet, these same legs can eviscerate a hyena or a man—or another ostrich, when they fight out their rivalries. The challenge to their rivals is most peculiar: it begins by "booming" as they call it in South Africa. The male does this by inflating his throat and resonating three deep roars said to be very like the roars of a distant lion. He then sits down, flaps his wings alternately and rolls his head back from side to side, flapping it violently and noisily against his bony body, giving himself what look like painful smacks. Then drawing himself up on tip-toes, he stands in full defiance with neck upstretched to the utmost. "What time she lifteth herself on high, she scorneth the horse and his rider," said the Book of Job. And indeed the horse and his rider had better make haste to get away, unless they want trouble.

Their courtship display is full of graces and cabrioles, wings outspread in their full beauty, the white fringes drooping over the ugly legs, the rear end sticking out grotesquely like the "pope's nose" that it is, but tip-tufted with a gallant panache of white feathers. The courting male becomes a semaphore, waving one black wing after another in a great arc, while its bulging neck and thighs blush to a deep pink. The dance becomes a ballet, with two or three females taking

part, bouncing the eiderdown of their brown wings in the most enticing manner.

A nest is then scooped out of the earth and two or three females lay their eggs in it, until it overflows. The male usually sits from sundown till daybreak, ready to defend the eggs against the many predators of the night. A less conspicuous brown female broods all day under the burning sun. Their wings are used to shade the eggs: for on these treeless plains, the heat of the blazing sun could easily cook them, even through the thickness of their shell. Perhaps the miracle of the ostriches' wing-feathers, weightless yet so finely laced, is in part the outcome of this need.

The chicks are charming; tiny, with speckled head and neck and long coarse riband-like feathers on their back, a perfect camouflage among sand and grass and twigs. The parents march them out in search of food, proud and solicitous, periscopes sweeping the horizon. (Zebras often avail themselves of such sentinels.) Should danger arise, the mothers, who have no known voice, rustle their wings in a crinkly manner which serves as a warning signal, and hustle the family off, while father fights the intruder.

Yet they soon despair: when injured or ill, they stretch their neck out flat in front of them on the ground, in utmost prosternation and proceed to die. They also lie down to avoid detection, not so much "putting their heads in the sand" as altering their unmistakable outline by doing so.

Ostriches have many predators: the egg, equivalent to two dozen hen's eggs, is highly valued as food both by men and wild beasts. Bushmen take great care of a growing nest, from which they daily extract one fresh egg, which will be replaced by the laying hens up to a total of fifty or so. They use the shells as containers for their water, as material for their bead decoration, and also find the young chick, whether before or after hatching, a great delicacy.

But enough of the ostrich—strange though they be, and rightly rooted in biblical lore. And not disdained by the Egyptian Pharaohs, who used an ostrich feather as the symbol of justice, or by the Popes with their great ostrich fans.

In the afternoon, the Chairman of the Tanganyika National Parks, Mr. Hunter, took us up in his small plane and flew us right over the Serengeti Plain. The first rains of the season had just fallen on the west side of the ridge, the ground was glistening like a thin mirror between charred stalks left from burning. The Seronera River twisted its capricious loops between a double fringe of palms to join the Palm River, identifiable now only by the thin green line of determined palms sprouting in the sand. Farther on, the great plain between distant ranges of hills was dry and apparently deserted. But as we flew lower, small dots began to move: elephants, buffaloes, giraffes, antelopes; ostriches, gnus, kongonis; zebras, warthogs and gazelles. We noticed a few rhinos; vultures appeared to streak backwards below us, and finally, in the far distance we saw the shimmering haze of Lake Natron.

This stretch of land is known as the corridor; the herds in their migration trample through it in their thousands, then climb over the humpy ridges spilling across the volcanic folds and churning round again.

We turned back, to a scene utterly changed: now we faced a sky of inky blacks and purple sooty greys, hung like doom over the darkly livid and expectant earth; and suspended imperially all round us, the perfect ring of a rainbow, its spectrum extravagantly brilliant and almost tangible against the looming sky and the variegated earth; the little plane inescapably poised at its very heart, moving precisely within the illusionary circle.

From this enchantment we flew into rain-sodden depths, rain like glass rods breaking on our wings and roof, crashing

down on to the thirsty soil below; but by the time we landed at the small airstrip, the tantalising curtain of rain had swept on, just out of reach of our dry patch of plain.

To keep the hyenas from eating the tyres, the plane was wheeled into its fold and safely shut in.

24. Dar-es-Salaam

Flight over the crater highlands and an active volcano – Government House – the Museum – Colonel Meinertzhagen on the slave trade – Bagamoyo

Next stop Dar-es-Salaam. The pilot of the small charter plane accommodatingly took us right over the splendid grey ash cone of Ol Doinyo Lengai, the Masai's Mountain of the Gods, a still sub-active volcano, puffing out clouds of sulphuric gases. A minute later we looked down into its neighbour the Embegi volcano, now extinct, its forested crater containing a lake. Clouds of flamingoes were whirling like pink snow below us, shimmering against the blue water. The sides were very steep, their deep ravines thick with ancient forests. Such an intimate view of this farouche lonely giant could never have been achieved in any other way.

We also flew right over Ngorongoro itself, so high above its wide green circle that none of the thousands of animals were visible.

The land around was dotted with smaller craters, further witnesses of a past busy with volcanic activities, some still filled with white ash and some with velvety vegetation. Much burning had been done on the shoulders between them, leaving the ash skeletons of trees prone upon the earth, like delicate botanical specimens.

At Arusha we landed to refuel and to part from Owen,

then flew on over the crinkly surface of the land while Julian pored over the map, disentangling rifts from other valleys and pointing to distant landmarks. At last we saw the coast-line with its coral islands and lagoons, the sea glaucous-green and empty, curling into the foamy edge of the beaches; the black earth bursting into vivid vegetation.

Zanzibar was in clouds; we flew over Bagamoyo, point of departure from which so many caravans set off into the interior; and finally over the long narrow-mouthed harbour of Dar-es-Salaam, flourishing with many ships, to land and drive straight up to Government House.

Here at Dar-es-Salaam we have descended from the high arid plains of central Tanganyika to the coral sea-level of the Indian Ocean, with its humid heat and exultant greenness. The roads were lined with brilliant tropical trees, the red trumpets of Spathodia, the yellow of mangoes, the pink of impala lilies; the drive through the gardens of Government House was lit with the yellow candelabra of cassia, its floor golden with the fallen petals. The house, originally built by the Germans in the Arab style with islamic arches and windows, was cool and dazzling white, set among towering trees with dense foliage.

We spent the afternoon in town, shopping and visiting the museum. This contains interesting collections of all kinds relating to the country; relics of Livingstone, Speke and Grant, Stanley and Burton, who all started their voyages of exploration from this coast; and above all—for it is impossible to forget it—implements and eye-witness records of the slave-trade, such as the actual yokes and chains which linked together processions of captives. Among animals, only ants practise slavery: did they ever descend to such depths of cruelty as men did, here in Africa—Arabs, Europeans and Africans alike?

As Livingstone and other travellers testified, the wooden

yoke was not merely round the slaves' necks, but had entered into their very souls.

The following passage from Col. Meinertzhagen's Kenya Diary gives us a candid sidelight from a participant of the trade:

> I returned to-day from a most interesting visit to the old slave emporium at Quitale . . . where the Arabs collected their slaves before their final march down to the coast at Bagamoyo. I was originally put on this by an old Sudanese called Mbarak who served under Tippoo Tib as a soldier, and spent many weeks at Quitale. . . . Old Mbarak took me round the stockade, explaining what went on in every corner of the camp. . . . He showed me where the Arabs slept, near the entrance; where the girls were kept; where the boys were kept and where they were castrated; and where the men were kept constantly shackled in eights to a heavy log with iron chains. I shuddered to think of the cruelty which must have gone on here: young children raped, boys castrated and left to recover without antiseptics, and the men bundled down to the coast under cruel conditions and simply shot if exhausted. . . . The only definite statements he (Mbarak) made were that the castrated boys were best looked after as they were the most valuable, but that over 50% died before they reached the coast; the girls were not shackled but went free and were raped both at night and all through the day whenever the caravan halted. About 10% of the men died from fatigue and undernourishment; . . . I asked him if he enjoyed it all. He said: "Plenty food, plenty women; very lovely."

Julian was busy all next day with officials and conferences,

seeing Mr. Nyerere and talking about National Parks, so I went to Bagamoyo, about forty miles away.

The road follows the coast most of the way, cutting through plantations of sisal and flowering mangoes, pineapples and baobabs. Raising clouds of fine dust we drove through many roadside villages, their huts built of thin wooden posts set closely together, even inside the main living-room.

The people were gathered in happy gossip; there was a feeling of holiday in best clothes, and much beer-drinking going on under the mango trees. It was election day. All along the route, flags and posts indicated the polling stations, and women and men flocked in to vote, with light-hearted purposefulness. There was only one candidate, an African administrator, who was duly elected without any trouble.

Burton's starting point, the old village of Kaole near Bagamoyo, is now a handful of sleepy cottages with carved Arab doors. A little farther, among a bushy wilderness of scrub and palms, stand the ruins of fourteenth and fifteenth century Arab mosques and houses, with their typical moorish arches and curious arabesques.

We returned to Bagamoyo town, through groves of waving palms sheltering rope-making and sisal-plaiting concerns, past the old fort which housed the many millions of slaves, parked like beasts in its dark cellars, on their way to the Town Hall where voting was in progress. Outside, squatting in the shade by the wayside, groups of black-shrouded Moslem women hastily drew hoods over their faces, obstinately bending their heads. The men stood by. Inside, two officials sat at a table, calling out names in a lugubrious chant; two at a time, the black shapes entered, words were murmured, they were directed to canvas booths and recorded their votes. The chant called up the next two electors, the elections proceeded, with lingering patient calm. I noticed the women unveiled themselves for this ceremony, their faces completely blank.

East African Coast. *Above*, Bagamoyo, with coconut palms fringing the old harbour and the Indian Ocean beyond. *Below*, a reminder of Arab domination. Fourteenth century Moslem buildings at Kaola, near Bagamoyo, now being excavated and restored

Above, a vigorous fruiting baobab with handsome bottle-shaped trunk growing in the lush soil near Bagamoyo, on the Tanganyika coast. *Below left*, a baobab eviscerated by elephants. *Below right*, J.S.H. and a buttressed Pseudospondia in the Meru Park. The roots in front anchor the tree by stretching out horizontally, as those behind dip into a stream, while the buttresses give stability to these great and beautiful trees

with no trace of smile or joy: this was evidently a new ritual which must be performed with proper dignity.

The Museum was just beginning to unpack its treasures of old Arab antiquities. We drove past the large church and mission house suddenly coming alive with streams of African youths in blue shorts pouring out of its portals, bouncing with pent-up energies. This is the place to which Livingstone's faithful black servants brought their dead master after an extraordinary 1,100 mile journey through bush and tribal wars, and laid him to rest in the chapel, since rebuilt.

In the harbour, on a glassy sea sparkling in the noon-day heat, a few dhows stood at anchor. The wide main street with its casual small houses was almost deserted, the carved doors closed; the palms and flowering spathodias cast a blessed shade. The heat dulled the senses and lulled the memories of all that I had read and imagined about Bagamoyo. It had now assumed the innocence of its present state, still protected by its dusty roads from tourist invasion and seaside development, still hiding under its tropical screen the ruins of its former glories and infamies.

25. Amboseli

Zanzibar from the air – dust at Amboseli – the new water – rhinos – the death of marginal land – home in the dark – giraffes under Kilimanjaro – giraffes in general – homosexual and heterosexual courtships – watering of Masai cattle

We left Dar-es-Salaam with only a bare impression of its coral coast and exuberant vegetation and off we flew in a two-engined plane bound for Amboseli, two hours away across the Kenya border.

Our pilot agreed to make a small detour to Zanzibar, the Island of Cloves, with its wide inlets and dark plantations, dhows on blue sea with sharp white-winged sails, sprinkling of reefs and rocks; the straggling city and the sultan's palace showed up tantalisingly just below us. Back over the mainland, we flew alongside the Usumbara Hills and above the deep crater lake of Chala, then for miles over fertile volcanic soil, with irregular patchwork cultivation and clusters of native huts.

In the sky some fifty miles away, like a floating mirage, rose the snowy hump of Kilimanjaro, white crest of the immense volcanic mountain which slopes gently down to the Kenya game plains. Julian was at his maps, deep in geological contemplation, so much absorbed in tracing lava flows and volcanic upheavals that he never noticed the sudden lurches and bumps of the fragile plane, but I began to feel the need of a bath of sea, which our faithful peppermints failed to re-

place. We appeared to be lost over a desert: a shimmery haze floated up at us, there was no sign of an airstrip and its inviting airsock. Lower and lower we flew, discerning leafless stunted trees; the pilot, scanning the sandy wastes, then pointed out giraffe, elephant and rhino, sure signs that the Royal National Reserve of Amboseli was below. We landed and met Colonel Mervyn Cowie, Director of Kenya Royal National Parks, and the Warden of Amboseli, Captain Taberer, with his wife and daughter.

My first impression was of dust: pervading, persistent, penetrating and excessive. Dust of volcanic ash from the flat and desiccated plain stretched under the ruthless sun; dust which seeped like a vapour into eyes and nostrils, hair and skin, and smothered the coarse bristly grasses and leafless thorns. It would need, I thought, a terrible lot of cups of tea to rehydrate my soul.

The Taberers took us to their house on the edge of the camp, where a small bird-haunted garden full of petunias and geraniums, cassias and many-coloured ipomeas had miraculously been created out of this very dust. There was even a small swimming pool, showing a cool ripple of clear water. Our own little guest-house nearby was welcoming with flowers, under the shade of tall spreading acacias.

A part of Amboseli has been touched by an Act of God: in 1958, after some tremors of Kilimanjaro, but with no other warning and no apparent reason, a spring of clear water rose out of the parched desert, and spilled itself upon the surprised soil. There was enough to overflow into a dry ravine, to fill its wide shallows and still to ripple on, to the delight of man and beast. We saw it that afternoon, with all its green rejoicings, its tall reeds and lush grasses. It had been adopted at once by small migrant birds and a multitude of waterbirds and waders and looked indeed as if it had been there for ever; so did that huge elephant, just across the running water, ankle-

deep in the verdant slough, twisting his trunk round the juicy shoots. Enthralled as ever we watched this monolithic incarnation, progressing in ponderous absorption. We returned later to find him reunited with his herd, still the largest of them all, nobly carrying the curved white precision of his tusks.

Not far beyond the green swamp stretched the desert, and Taberer drove forward gently; for there, quite close to the track, lay the Three Musketeers, an amicable trio of black rhinos who enjoy a sociable dust-bath hip to hip. Covered with a thick film of powdery sand, eyes shut, ears and nostrils twitching, they took their ease with blissful nonchalance. We, of course, remained at a respectful distance, content to gaze at the three horned snouts disposed snugly on the edge of the dust tub, their spines rising like mountain ridges.

There are many rhinos at Amboseli, for they flourish in its arid expanse varied with swamp and thorny bush. One is likely to meet them, single or in pairs, in odd places of the reserve. The males outline their territory with a trail of urine, and the females promenade their young actively, I imagine in order to educate them. Knowing themselves protected and safe in the Park, they have even grown accustomed to the public. Some, like Gladys and Gertie, became famous for their tolerance and their magnificent horns—until they fought a royal battle and Gertie's was snapped off its pedestal. The rangers picked it up later, and showed it to us: it was thirty-nine inches long, compacted of bristly hairs with a subtle upward tilt at the end of its almost horizontal thrust. When we saw her, Gertie had begun to grow a new horn looking like an up-turned comma, as well as producing a son curiously born without external ears. We heard lately that poachers had killed her for that bit of horn.

One afternoon, we were driven towards the far-off, gently rising slopes of Kilimanjaro. It was a long drive, through

various kinds of country, first through a pleasant cool forested land, then through a wide strip of staly laterite with literally not a blade of grass nor bush or tree, its soil fissured with dark cracks, crumbling under our feet. This, Taberer told us, was the result of overgrazing by Masai cattle on marginal land. A lot of Africa is marginal in this sense, a thick crust of laterite painfully growing a scanty vegetation. Wild animals in their variety, covering great distances and feeding on different types of vegetation, make a living on it, but cattle graze it to a desert without satisfying their hunger. It was a shocking sight, and one was appalled by so total a destruction —as if an atom bomb had done its worst. The only life in all that space was a group of ostriches, striding like ghosts in search of food.

A few miles farther on we came upon a bit of bush out of which an explosion of rhino suddenly startled us. The drowsy afternoon was disrupted by two frantic bodies with their tails up and their horns pointing straight at the Land-Rover which, only just in time, spurted forward out of reach. Having rather short legs for their huge bodies, one expects them to have some trouble—a protest of matter being flung about—when they hurtle themselves along with such passion. It was frightening, but it was even more thrilling to see such a display of compact agility. They galloped after us for a short spurt at some thirty-five miles an hour, then decided to turn —which they did in their own length, like a London taxi.

It was late and dark when we set back for camp, driving with headlights through a trackless wilderness. The land we had crossed not long ago had lost all remembered features, and had acquired for me a new character, uncannily remote and detached, purposeless and provisional, a canvas from the untutored action-painting of some giant moron. Here and there a sudden twin prick of light, the startled eyes of some nocturnal hunter, desert fox or jackal; a rare antelope bound-

ing out of range, a hyena's diagonal smudge through the burnt grass. We stopped for a moment in the bristling silence, where a bustard had streaked to cover, in a muted flurry and palpitation. In the enfolding darkness, it gave one the feeling of intruding in a net of furtive activities, of being swallowed up in a closed circuit.

At last the lights of camp twinkled through the trees, and we drove towards them on a recognisable track which led past the water-tanks recently built by Taberer. A herd of elephants were gathered at their drinking, their separate masses looming only one tone lighter than the dark background. Headlights off, we silently glided by, causing no disturbance among the group.

Next day was our last at Amboseli, and we made the most of it. Julian got up early for a pre-breakfast prowl, binoculated for small birds. I decided to take advantage of the morning sun to wash my hair of its crust of dust, then sat drying it outside the bungalow with a book. But it was quite useless to try to read: glossy royal blue starlings were catching insects under the acacias, bulbuls fluttered round, a beautiful bustard, with a black shield pinned across its front and black and white stripes breaking up the outline of its proud neck, was breakfasting on juicy caterpillars; buffalo-weavers scrabbled in and out of their untidy nests hanging high in the trees. The cool peace of morning was announced by the decrescendo call of the dove, the " quik-quik " of the long-tailed shrikes. Beyond, the plain stretched its tawny miles, with dusty-green acacias rolling to the base of the vast mass of Kilimanjaro, itself slowly clearing from mist.

Then began the slow elegant procession of giraffes coming to drink, a hundred yards away, marching in single file like a fashion parade, silhouetted against the grand decor of the gigantic mountain. I counted ten of them, guarded by a big fellow much darker than the others. They ambled, dignified,

and unhurried to the edge of the tank, hung about for a minute, until satisfied there was no danger, then shifted their front legs apart to adjust their measurements and lower their heads to the water—for this is one of the curious consequences of having legs longer than your neck. Why, I asked Julian, didn't nature fix things better? Just a few more inches on the neck, and you would have had no trouble at all!

But nature seems to have done the right thing again: "A longer neck would mean a higher pressure for the blood circulation to overcome. There are all kinds of complicated adjustments necessary when your head is at such an altitude and you have to lower it some eighteen feet every time you drink. And then, think of ruminating—already the system is like the Rockefeller Centre elevator; add two or three floors and you would never get your transportation done. . . ."

Giraffes are very fond of saline sands and can be seen, their legs wide straddled and their necks curved down, nibbling the dry crust of salty soil; but whereas they can suck up water without lifting their heads, they cannot do this with solids, and to avoid the constant raising and lowering of their necks, they stuff their cheeks with as much as they can take, and then arise to chew and swallow: the ball can be seen descending the long pillar of their gullet, ascending again later in the ruminating process.

Giraffes have few enemies, and lions seldom tackle them; but their young—like the young of all animals in the bush—can be harassed and devoured by lions, wild dogs and hyenas. Experience has shown mother giraffes that it is safer for the baby to be left hiding in high grass some considerable distance from the feeding adults, for predators will follow moving objects rather than hunt about the wild savannah. The only trouble is that if, by accident, a baby giraffe is flushed and takes to flight, it has no idea of where its mother might be, and generally runs in the wrong direction, far from help.

Miss A. C. Innis (of Toronto, Canada), spent over 450 hours watching wild giraffes who had strayed into a large cattle ranch in Transvaal. In her communication to the Proceedings of the London Zoological Society (1958) she describes their curious courting habits, almost entirely limited to sexual play among the males. The bulls gather together, gently rubbing head or neck on one another's head, or along the neck and body; this "necking" arouses a male to the extent that he will stand behind and mount another or several males. They may begin to neck, then spar lightly and even fight fiercely, with heavy blows from their heads taking the place of the gentle rubbing. Then they may stop fighting and mount each other again, indiscriminately, throughout the year, and also when females are present. No explanation is offered for this homosexual activity, which has often been noted by other observers.

Serious fights occur only between males, presumably for leadership. On one occasion witnessed in the Kruger National Park, the vanquished was laid senseless for twenty minutes. Heavy blows are directed to the rival's body and legs, necks may be twined together and bodies push each other. These fights are so frequent that the hair on the horns is worn completely away.

The nuptial courtship consists in the male laying his head on the female's flank, licking or gently biting her tail. The female responds almost automatically by urinating in his mouth, and he, having tasted, curls up his lips in giraffic fashion, sometimes spitting out the liquid. It is thought that by doing this, he can ascertain the timing of the oestrous cycle, and judge when the female is coming into heat. Several males may be seen collecting urine from the cows, but normally only the leader mates with the females when they are on heat.

The giraffe's maternal instinct is feeble, especially compared

to the elephant's. The young are often weaned at two months and, perhaps as a safety measure, begin to browse on bushes as early as six weeks old. I wonder if the mother's behaviour could be due to the difficulty of getting sufficient nourishment out of acacias and such-like trees, which in winter give but thorny twigs, and the eating and chewing of which absorbs the best part of day and night.

As far as one can judge, the giraffe is not remarkable for his intelligence. Thanks to elongating himself in a wonderful manner, he has established his feeding grounds at sixteen to eighteen feet above ground, where he faces no competition or danger; and where maybe, he is too safe and lacks the incentive to "better himself."

As I watched my giraffes, which having drunk their fill, reassembled their legs and proceeded with great dignity towards the plain, I almost agreed with the cockney who said, "There ain't no such animal." Giraffes are, indeed, a most peculiar invention of evolution.

After breakfast, Taberer took us to see his hydraulic works: the drainage system of the new flood-waters. To preserve the lake-shore with its varied aquatic birds from being trampled into mush by the Masai cattle, he has built for their special use a set of waist-high troughs controlled by taps. The Masai co-operated most honourably, and agreed to water their cattle only at the new drinking troughs.

We arrived at the peak of the watering of what must have been 5,000 head of cattle; three painted Masai morans[1] in ochre, clay and brass hairclips, wearing rust-coloured cloak and long spear, were turning the taps on and off, regulating the cattle traffic with the most admirable precision and order. Herd after herd marched forward, nuzzled in the clear water to drink their fill and withdrew to the right, while the next herd was signalled forward to take its place. As far as the eye

[1] Young unmarried men, formerly warriors and hunters

could see, regiments of cattle were lined up, obeying the signal to stop or advance, patient and disciplined. The land all round has been reduced by their tramping to desert waste, sandy dust that flies off at the least puff of wind, that rises in clouds round the herds; their manyattas are some miles away, and this is the nearest water.

Before the miraculous rise of the water in late 1957, all these thirsty animals had to trek for many miles to the shrinking swamp at Ol Tukai, and their comings and goings kept much of the larger game away. Now that water flows, the whole picture is changing. Instead of a vast dustiness devouring all, green grass creeps into the desert and is spreading its slow benefaction. It will be fascinating to watch its further progress and its compound ecological interest.[1]

[1] Since writing this, droughts, succeeded by great floods, have caused enormous damage and consternation.

26. Tsavo

Flight into the Park – Mzima Springs – camp by the Athi River – elephants at the river bank – more about elephants – the Yatta Plateau – dying buffalo – the Elephant's Foot – gerenuks and their habits – Capt. Sheldrick's station at Voi

We left for Tsavo Park about ten o'clock, flying in a Cessair one-engined plane, with a seasoned Polish pilot who knew the country well, and our friend Mervyn Cowie to look after us. Tsavo lies east of Amboseli, under a high range of volcanic origin, whose lava had flowed down in great splurges, right over the plain. This black porous matter surprisingly supported a green mantle of trees on its jagged slopes. As we flew towards this high backbone, we noticed a long wreath of smoke curling up on the mountain. "That fire has been going on for weeks," said Cowie, "it is too high to be dealt with, across these difficult gullies of sharp lava, and it will just go on burning until the rains come." Meanwhile, advancing on a front of several miles, it destroys forests which were slowly turning the lava into soil and making at the same time a precious cover against erosion. Fire again: the constant menace. This particular one was advancing like doom on the flank of the ridge, leaving a blackened desolation behind it. With luck, the forests might be replaced in about half a century—but it could also happen that the conditions are utterly altered so that nothing will grow there any more. And so another few

thousand square miles of this much abused land are written off in exchange for a pot of honey or some such trivial cause of the fire.

Unlike Amboseli with its blessing of unexpected water, the Tsavo district was suffering from an unexplained drying up of several of its rivers. It makes sad reading: the Kibwezi, the Wanduli, the Masongleni, the Darajani, the Mtito Andei rivers, and many others once seasonal, have entirely ceased to flow. And wells, sunk in formerly good areas, now give nothing. The fearful truth is that the water-level is sinking, and many square miles of this vast district, once filled with grass-eating game, are now threatened with serious drought. The game was moving away or dying of thirst and hunger.

The only waters still permanently flowing were the beautiful Mzima Springs. These rise among a company of ugly black lava ridges whose cracks anchor improbable trees. The red-ochre road descends and rises along a few switchbacks through dry savannah, till suddenly one is surprised and enclosed in a green enchantment. It is an oasis overarched by a leafy dome of palms and trees carrying scented white waxy blossoms; between the boulders, the rhinestone twinkle of pure water gushes out in several springs at the rate of fifty million gallons a day, pouring down in a succession of laps to fill the long pool. Some of this water is now tapped just above its emergence between the rocks and taken all the way to Mombasa where it is used for watering the ships and the growing population.

The main pool, fringed by luxuriant vegetation, harbours hippos and crocodiles in the unexpected lavishness of water; water now no longer crystal clear but rich and soupy with dung and churned-up mud. An observation post built for under-water film-work has wisely been left for visitors like us; we descended below water-level to watch this subaqueous other-world. Crowds of fish came nuzzling to the

plate-glass window, collecting the crumbs fed them from above. Among them was a very odd creature called labia; its prehensile lips are joined vertically like the manatees', and are used for browsing upon algae. Farther away, hippo could be seen bouncing on the floor of the pool, their weight in suspension; from time to time, dopey with their eternal soaking, they floated up to breathe, " vast fondures swimming in space "—then effortlessly descended again.

Tsavo Royal National Park is large, even for Africa. It covers over 8,000 square miles between the Tsavo and the Athi rivers, north-east of Kilimanjaro, traversed by the railroad made famous by the famous man-eater lions of Tsavo. We had a grand view from the top of Poachers' Point across skipping small hills rising in a landscape bathed in hot hazy light, burnished by the morning sun. Later the summit of Roaring Rocks opened another prospect dominating a huge plain extending towards the now setting sun. We were there just in time for sunset, with a cloudscape framing blue mountains and Kilimanjaro burning coral-red, floating without substance high into the sky. Abruptly, the sky becomes purple, the clouds deep smoky-grey; the last shred of colour evaporates into the brusque shadows. The play is over and night falls.

We descended the steep scarp, arrested suddenly by the pungent aroma of lion. My nose twitches in the certainty of it; I turn round expecting to look into a pair of yellow eyes and meet my end. " Baboons," says Mervyn Cowie, " who have not learnt about Amplex."

That night after a long drive on the red road unwinding in our headlights, we slept at Warden Marshall's. On the way we saw elephants feeding nonchalantly; then giraffes, impala, dik-dik, bushbuck, at their private ventures. More elephants ambling ponderously crossed the road just in front of us: we politely gave them right of way, turned off our lights, waited

silently, while they, lords undisputed, suspiciously considered us with great ears flapping.

Marshall's house is close by, some hundred feet from the borehole where the elephants drink. When this runs dry, the elephants smell out his garden tap, and, having learnt how to turn it on, satisfy their long thirst. They have not, unfortunately, learned how to turn it off; neither, to Mrs. Marshall's distress, to respect the flower beds and fences.

Captain Sheldrick, the warden at Voi, fetched us next morning, and guided us in his Land-Rover through an angry stretch of bush, anonymous and lifeless; along a track winding between indifferent trees and shrubs. The only remarkable things were the baobabs, which had all been stripped and excavated by elephant tusk and trunk: the mass of coarse fibres which compose their bulk had been ripped and savagely shredded, and was hanging limp and dishevelled from the swollen trunks. Some trees still stretched their knobbly limbs towards the sky, in a last effort to survive; others had given up and collapsed in total defeat. Not a tree was left untouched. This was due to the prevailing drought; thirsty elephants will destroy a whole tree for a few gallons of sap.

We continued through this doomed stretch for a good hour, more and more depressed by such desolation. Then the track dipped steeply down—and suddenly at our feet the Athi opened its winding perspective of blessed waters between wide banks, with sandy promontories stitched with palms. We stopped to gaze our fill and nearly shouted "*thalassa!*"

Camp had been prepared on the far bank. Between sticks roughly marking the ford, the Land-Rover navigated cautiously in lowest gear, crossing pools and sandbanks. On the raised bank the tents stood among tall trees, doum palms, gardenia, poplar, dracaena with hair-like fibres

hanging down their trunks. The dining tent looked inviting with its fresh table-cloth laid for lunch. We sat under the open flap drinking a cool shandygaff while a soporific midday heat stilled the land—all but the sparkling murmur of the river and the occasional noisy landing of Egyptian geese.

Camping like this is a delight; added to every essential comfort one has the sense of being in nature's confidence, of sharing a timeless and embracing destiny.

Lunch, a short rest, and we were off again, recrossing the ford to the track on the other side of the river, plunging up and down dry gullies which in the rain gush forth torrents, while the river rises up to eighteen feet. By four o'clock, the wild life was coming down to drink; bushbuck, hippo, impala, giraffe—watchful but unhurried. We crept down the bank to watch a herd of elephant standing across the water, splashing red mud and sand on themselves, preparing to suck up their long drink. They were suspicious, and soon the leading cow gave the alert and they marched off, heaving and lumbering up the steep bank; large and small bunched together, they gave one last angry trumpeting as they rounded the next shoulder.

In a thicket on our right, a young bushbuck, two weeks old at most, stood in frozen immobility. His mother had gone down to drink and he was waiting where she left him, lonely and defenceless; his chances of survival seemed very thin, standing there in the bush with lions roaming round.

Except for the fringes of the river, the land is dry with relentless drought. Acacias stand gaunt and grey, baked to death; the devastated baobabs and commiphoras lie in untidy skeletons. Commiphora grows square trunks much tormented and twisted, ending in thorny claws. In full vigour it looks like a Caligari décor waiting for its ghoul; when it lies prone with roots exposed, it becomes an unforgettable symbol of destruction.

Suddenly through the maze of dead trees a rhino snorted suspiciously, ears twitching, tail up, ready to charge: then just as suddenly he turned away and smartly trotted off. We surprised an elephant on his way to the river; he too gathered himself threateningly—a front view of inexpressible majesty, the pliant trunk bellicose, the noble forehead framed by sail-like ears—then he too swerved away, turning his untailored backview towards us, his too large baggy trousers of crinkled rubber centred by the unimpressive ropy tail: an apologetic and endearing rump.

Julian, who is a great raconteur, has a favourite New-Yorker story whose innocent humour I have lately begun to appreciate. A man back from an African shooting trip, shows his friends all his trophies, saying, "Some people collect heads; but I'm different." The picture shows a grand array of the hindquarters of various animals. Observing these in the wild, one begins to relish their rich variety and their expressiveness; they also serve for the display of signals to their comrades. Waterbucks have a white disc on their posteriors, looking as if they had sat on a freshly painted lavatory seat; bushbuck have sat right into the pail of paint; impala show a black streak edged with white, very chic—while baboons carry their club-colours in vivid, if indelicate, tones. Elephants, to return to them, having better means of communication, merely show a retiring unimaginative backside; as they trundle away, humped and apparently boneless, they arouse an extraordinary feeling of sympathy. They almost look as if they were human beings who had been turned into elephants by a humorous magician.

A pair of lions lay on a sandy bluff, waiting, watching; there were fish eagles on high, wood ibis and goliath herons on the banks, Egyptian geese in the pools, plovers and kingfishers all fussing around, a bizarre community knit together by the river and its provender.

Scales and whiskers. *Left*, a male Agama lizard on the Warden's house at Seronera, about 9 inches long, brightly streaked with red and yellow; he tosses his head up and down whenever he is alarmed or threatened by a rival. A leopard yawning. Its whiskers, like a cat's, will guide him through narrow paths

Above, a hill village in the Kigezi district of Western Uganda, with its tight cultivation terraces spreading right up the hillsides. *Centre*, J.S.H. beside a thatched grainstore in a Nyasaland village. *Below*, a new African township on the outskirts of Johannesburg

Night was falling and we had to get back. We passed the glade where the young bushbuck was standing no longer; the place where elephants had been bathing—and there they were, returned at dusk to finish their drinking, their wet backs shining in the moonlight.

Headlights blazing now, we lurched and climbed over brinks and roots. We picked out some lights ahead of us, which, of course, must be the camp. "Not yet," says Captain Sheldrick; "it's a giraffe's eyes reflecting our beams"—two yellow lamps suddenly lit and quenched in the tangle of the trees. The darkness thickened. A glimpse of moonlit river flashed here and there as we forced our way under the canopy of river trees.

We recrossed the river, our headlights picking out the guiding sticks. A blazing fire welcomed us; the boys were bringing in our bath-water. After dinner, we sat by the crackling fire, enfolded in the gentle peace of limbs and spirit, listening to the rustling palms and the ripple of the river under a milky moon. The night was warm and still; we went to bed listening to the sound of Boscop owls hooting.

Next day we were up at dawn and off to the Yatta plateau: a sharp climb of 300 feet or so up a steep scarp just behind camp to reach an endless flat laterite wilderness. The view from the top was aweing, the Athi River at our feet and the immense bushland beyond, brooding and desolate. Up here the vegetation was a little less meagre, but it also had been ravaged by hungry beasts. Sheldrick told us that the animals have to go far inland to find enough food, then trek back to the river—the only water around here, a matter of more than twenty miles.

We bumped along, looking in vain for signs of life; here and there the improbable impala lily blossoms, but all else was dry and lifeless. Yet we felt we were being watched: we stopped and looked again through the brown dry sticks and

yellow grass. "Yes—look—a couple of buffalo." The cow was sick, her rheumy eyes were blind, her head drooped and she could hardly stand. The bull remained close to her side: we could hear his breathing and see his watching eyes, his alertness patient and subdued to her need. Apart from the herd, they waited; we left them to their fate.

As we drove on my eye was caught by curious rounded boulders which struck me as out of place on this gritty soil. Could they be granite, left stranded miles away from their place of origin? "No, it's Elephant's Foot," said Mervyn Cowie. A strange plant humped on the surface of this inhospitable ground, with a carapace the colour of elephant, it stores moisture within its thick protective crust and anchors itself with small tap-roots; inside the leathery bark, we found a system of fine fibres and here and there from its bulging cheeks a thin bush straggled up. It waits for rain with the blind patience of desert vegetation and continues meanwhile to give a very good imitation of a boulder.

The Yatta plateau stretches out into seeming infinity. We had enough of its arid emptiness and turned back, descended the steep track without seeing the two buffaloes, and continued south to the airstrip. This is just a rough field close to the river from which trees and large stones have been removed. To guide the pilot, Sheldrick and Cowie started to light green branches for smudges. Sometimes it is also necessary to shoo away rhino and gerenuk; in fact we have just seen a ponderous rhino cross the road and trot away.

We reminded Cowie that in spite of his promises, no gerenuk had come our way—but we talked too soon: a sudden golden-brown arc touched down and leapt forth again, followed by several others, right in front of us. A lovely surge of graceful power, the gerenuks flew past, their necks as long as their long legs. They jumped away at different angles, ever changing direction in the air, zigzagging like fire-work

squibs. This is a grand device for evading capture by predators, and the gerenuk performance is even better than the impalas.

Gerenuks are the antelopes' attempt at becoming giraffes; to get the foliage out of reach of other antelopes, they stand erect on their hind legs with long necks fully stretched, browsing vertically. No one has ever seen them drink water: they apparently get all they need from their food, but make the resultant fluid last longer by drinking each other's urine; they are even fastidious about its sex, the males drinking the females' and vice-versa; the young content themselves with either parent. This strange piece of physiological economy, which is shared by Grant's gazelles, has been observed in nature as well as in captivity.

The plane, like a huge insect, buzzed down and landed. We climbed in with Sheldrick who was taking us to Voi, his station.

Before visiting his tame elephants, he showed us the strangest objects I ever saw: a rhino foetus and an elephant foetus in glass jars. Both about a foot long, they were the most exquisite miniatures of the adult giants; pale cream, like a wax carving, the rhino was fully formed down to its hooves, its long triangular head ending in the pedestal and promise of a horn, its little ears like petals. The elephant was dove-grey with tiny black specks, also perfect in every detail, the curve of its body completed by the curves of trunk and tail. Before they are born, these foetuses will increase their bulk nearly a hundredfold, yet their appearance will hardly change.

We drove down the road towards the bush where the tame elephants are herded; the boy in charge, lounging like any herd-boy under a bit of shade, pointed to thick cover where he thought his charges were browsing. Sheldrick stood on a

culvert and called in a deep rumbly voice something which an elephant would recognise as "*Samson!*". Out of the stillness came a rustle and bustle, and suddenly a grey mass emerged full tilt towards the warden, closely followed by three smaller elephants. Samson was the eldest, at this time about six years old, quite a sizeable youngster; completely tame and obedient, he keeps the younger ones in order himself. I fell for the smallest—four feet high, full of mischief and still wearing his baby coat like a plump grey gooseberry, his trunk foraging into pockets for titbits, cocking his bright little eye.

At this moment a large bus from Mombasa arrived, overflowing with sea travellers on a jaunt while their ship was refuelling. Equipped with sandwiches, they were a sure success. The elephants made straight for the open door of the bus, their trunks busily exploring. In a trice they had shaken the baskets out of the children's hands, scattered the titbits and stuffed them into their mouths. All too soon the feast was over, and they waved disgusted trunks round the impoverished audience. No—nothing more. The littlest elephant took refuge under the tail of Samson. They all then made off into the bush, disappearing from sight as though they had never been.

It is not easy to bring up an orphaned baby elephant, for its mother's milk contains 100 times more albumen than cow's milk. The ideal formula is:—

1 gallon cow's milk,
½ pint of cream,
the white of 24 eggs,
4 lbs. boiled rice.

This was not available to Captain Sheldrick when he became foster-father to a succession of abandoned youngsters, but he evolved his own recipe of mashed sweet potatoes, milk and turnips, and it proved remarkably successful. For the first forty-eight hours, the elephants were restless and rampageous,

but they soon connected the comfort of food with human beings and transferred their orphaned allegiance to the boy who looked after them. They clung to his comforting presence, and would even accept his coat as a valid token. (Konrad Lorenz calls this "imprinting" and, in his fascinating book *King Solomon's Ring*, has described his mechanism of establishing an emotional bond in geese and other animals.) Led to their pasture by their herdsboy, they always return when called; once meeting a wild herd, they joined it and wandered off, but turned and came back when their names were called.

I was full of elephant-love when we took off again in our little plane, to fly over the lower course of the Athi River which looked suspiciously low and where giraffes and zebra and elephants were drinking from pools. The drought had been severe, and continued so. Reports from Kenya later told of the great toll of rhino and elephants dying of thirst and hunger; of vultures, hyenas and jackals gorged with carrion, unable to cope with all the carcasses rotting in the sun.

The earth showed reddish between the brown tree-trunks. We flew low enough to see a great number of elephants in herds, wandering through the maze of dead trees; orderly communities with the very small ones close to their mothers whose trunk waved suspiciously at our noise. Here and there we picked out single or paired rhinos and giraffes—but mostly there were elephants—more elephants, clearly, than food. "And that," said Mervyn Cowie, "is our great problem here." The whole Tsavo Park is on the way to become a desert. As far as the eye could see, except for the tall trees close to the river, it was nothing but a great desolation rusting under the satin sky.

We landed in our rough strip and walked towards the shade of doum palms where a table was laid for lunch. While waiting for it, Sheldrick showed us a long-leaved plant which

grows freely on the sandy bank and is used to clarify water too muddy to drink. Two boys were set to digging up a root, for it is the root which magics, and after a great deal of effort—roots cling deep in this dry land—a large potato-like object was produced, cut in chunks and put in a basin of soupy water straight from a stagnant pool. When we had finished our coffee the basin was examined; and indeed, the muddy silt was packed at the bottom with pale-gold water above. The plant is called courbonia. For what odd reason did nature provide it with this useful domestic quality?

It was our last meal on the Athi, and the boys in kanzus and braided jackets added an air of formality to the occasion and the place: the river struggling through narrow channels between sandbanks and pools, the fringe of trees squeezed by the desertic land—an elemental drama of the dying land and the surviving river. We were the momentary spectators of what looked like the last gasp of life in a large territory, with only the river's frail defence and the hope of rain before its extinction. Common enough in modern Africa, it was a poignant picture. Watching the water running blindly in its shrunken bed, I was not far from invoking an African god of rain.

Whatever it was that did it, we heard a few months later that the rains had come at last—but in such violence that rivers swelled out of their banks and floods covered the land. After the disasters of drought and the ruin of the habitat by the famished animals came the news of drowned herds and the washing away of crops. The land has been so much abused that the elements find no resistance: fire, drought or flood, all ravage and destroy. Such is the power of life that the ancient earth will make yet another effort to recover; but every time the burden is greater and the recovery less complete.

27. The Aberdares

The forest flanks in torrential rain – the upland heaths and summits under a clear sky – Queen Mother's chalet and waterfall – Giant Forest Hog – Kikuyu on the road – Nyeri

Our next journey was to the Aberdares National Park. It was a grey day, cool to cold, overcast. We stopped in Nairobi for some shopping. Julian and Mervyn Cowie dictated and signed a lot of letters, people bustled around in their city ways and the New Stanley Hotel disgorged its clientèle in every direction; no room to park, what with limousines and caravans and Land-Rovers and box-body vans; Nairobi, like every other city, is bursting its seams.

At last, with great relief, we were off. We passed Lake Naivasha with its Crescent Island, European farms and small Kikuyu homesteads on the foothills, and turned towards the mountains. But the rain began to fall, a steady downpour, a wall of rain. The roads got bad; more rain and worse roads. Cowie's Land-Rover churned firmly on between fields of green wheat beaten by rain, the only moving object in this torrential punishment.

The Aberdares are 10,508 feet high. They rose ahead of us, in cloud and vapour, darkly. I did not believe we should ever get there, but Cowie drove on, navigating between ruts of the flooded track. We got to a gate. It was closed. A notice said the Park would not be open to visitors because of the weather. Mervyn Cowie proceeded, opened the gate and went through.

The next gate was also closed and again we proceeded. Its nose pointing heroically upwards, the Land-Rover faced the torrent on the track and the deluge from the skies.

The road cuts right through the mountain rain-forest, a true virgin forest feeding on the abundant rains and its own permanent bed of humus, creating, dying, and recreating itself in a perpetual cycle. The result is a monstrous map of vegetation which now engulfed us, its full range of greens varnished by the rain. It rose into fantastic arches and caves, thrust out branches clawed at by undefeatable creepers, their festoons swinging from tree to tree, with dense brambles and bamboos below. Mother Nature unleashed, cannibalistic, non-discriminative, fierce in her blind urge to life, and having, totally and finally, the last word.

The high banks on both sides were bright with cascades of intense blue lobelias and other small flowers, but this was no time to stop and botanize. We caught up with the warden, David Lovatt-Smith, who had been rescuing a party stuck in the mud.

He was on active patrol during the Mau-Mau troubles and told us of Mau-Mau bands hiding in the tunnels and caves of this very forest. The British had built a sort of fort which they called Jerusalem and from which they issued forth, patrolling within the dangerous mazes, always expecting a poisoned arrow in their back. But surprisingly, these Mau-Mau never used poisoned arrows, which could have given them immense advantages in a guerrilla war where silence mattered above all. Having so few guns, the Kikuyus made them out of old locks and bits of pipe, made powder which often exploded in their own faces, to fight in what they believed was the modern way. The savage forest was, nevertheless, on their side.

The rain lessened and soon stopped altogether, leaving the mountain scoured and sluiced, dripping down diamonds and

exhaling clouds of vapour. We dismounted not far from the top and sniffed the pungent "Après la Pluie" smell of the forest; a smell of decay and growth, both sinister and exultant. Out of the sub-aqueous green gloom made by the arching branches, we reached open moorland, with the sky above us at last; it is the end of the mountain rain-forest, its exuberance giving place to another order of vegetation. At our feet spread a carpet of lady's mantle, alchemilla, with its grey-green leaves radiating in orderly patterns, growing a couple of feet high, as well as banks of heathers. We began to survey a distant horizon and views of valleys clothed with forests of heather-trees tall enough to conceal elephants. Waterfalls like white ropes spin down between giant lobelia and senecio; clear streams run between green banks, carving their meanders on the open land. The contrast between the rain-forest of the Aberdares' steep west face and this plateau dipping softly to the east is sharp and absolute.

We stopped for lunch in the Queen's Chalet, opposite the Magura waterfall, a green resting place built for the Queen Mother on her last visit.

Ditk Meinertzhagen might have been here on this very spot in 1902, a young man making maps, tracing rivers to their sources; a soldier interested in the geography of this new country and its animals and plants; no roads then but winding paths, animal tracks, wild moments in the wilderness. His were the first maps of the Aberdares, and his too, the first discovery of that wild giant forest hog of which he later shot a specimen for the British Museum and which was called meinertzhageni after him.

As we were descending on the other side, the stretch of straight road was suddenly interrupted by this very creature, this monstrous pig with long black hair and long hanging ears, who stopped in his tracks, fully exposed to our eyes, for a full ten seconds, then as suddenly disappeared into the

bamboos. We could hardly believe our luck. For the creature is elusive and rare, and few people have seen it by day except for glimpses in dense bush.

Tall bamboos framed the road now, so thick as to be impenetrable. A few dark trees, cedars and wild olive and podos, reared up above them; Sykes monkeys perched aloft, and colobus, gambolling from branch to branch, flung themselves on to the heads of bamboos as on a mattress and bounced off flaunting their preposterous white fringes.

The edge of the road was a rumour of foliage disturbed, of sudden leaps back into the depths—antelopes, waterbuck, duiker or klipspringer: inquisitive, but not foolhardy enough to stay.

Gradually we got lower and eventually out of the Park into the Kikuyu Reserve. Huge stands of podocarpus have replaced the wild trees, and we began to meet parties of Kikuyu collecting wood for fuel. The man walked ahead with hands in pockets, slouchingly; his women, poor beasts of burden, trudged behind, bent double under immense loads slung from bands round their forehead. They gave us surly looks.

Our journey ended at the Outspan Hotel at Nyeri. Here we had to choose between spending the night at Tree Tops to watch the game, or flying right across country to the southern end of Lake Rudolf. We chose the latter and embarked with Major, Grimwood the Chief Game Warden of Kenya, very early next morning, prepared for four hours, flying with Colonel Cowie's son piloting the Cessair plane.

28. Lake Rudolf

By air to Lake Rudolf – the Teleki volcano – the Isle of No-Return – Mt. Kulal, Chalir Desert – unauthorised descent at Marsabit – Isiolo

This was our most extraordinary geographical voyage. We flew for about 200 miles low over the land between Nyeri and Lake Rudolf; a vast volcanic mantle of lava, descending from the high scarp of the Eastern Rift, cut into by dry river courses. Though bare of trees and apparently sterile, it is nevertheless used by Samburu and Turkana people and their cattle. This land was once full of game. It is now denuded of its vegetation cover, eroding rapidly towards desertic conditions, yet still just supporting these nomadic pastoral tribes who are destroying what is left of it. One wonders how animals can survive with so little food, and for many months so little water. Some of the cattle live five days away from water, and are actually watered only once every fortnight. Their herdsmen, like the Masai, live on the milk and blood of the cattle.

The river systems were dry, fanning out in sensitive capillary tracings like the veins of interlaced skeleton leaves, contesting their watersheds to the last inch. Ancient volcanic cones were scattered everywhere, with their slobber of lava over the sand.

As we approached Lake Rudolf, the physiography hardened into violent chiselling of gorges with black ridges and abrupt

shelves, petrified cauldrons dark with recent calcinations. The last recorded eruptions were in 1880, and though all now seems at peace, who knows when the crust may not explode again to pour forth its boiling lava. The lunar landscape shows no mercy, no green spot, but a black and yellow tigery pelt encircling the bluest miracle of contrast, Lake Rudolf. It is, could not be, anything but soda, the last bitter truth to its discoverers. The far shore was not visible, all we saw was a desert of brilliant blue.

There is a strange attraction in this dead landscape—this lake which was a legend until Count Teleki discovered it in 1887, with over a hundred porters dying from hunger and thirst on the way. Flying lower, we gazed down over the Teleki Volcano, a small dry crater of pale-grey ash, and perceived a flock of flamingoes close by over the water, a transparent pink flickering cloud which coils and twists and spreads—the only live things we have seen for miles. Farther we flew alongside the Isle-of-No-Return, so-called because of the expedition which came to grief there. The surface of the lake was flecked with wavelets, its shores scalloped with bays. Here too there was no sign of life. We turned at right angles over more deserts, more ancient petrified lava, towards Mount Kulal and its green-black cover of primeval forest. This part of the Rift's eastern wall rises steeply before us, looking immense and unsurmountable. But we ascended the aerial slope and flew right up and over the top. The ridge is knife-sharp, slashed in the middle by a deep gorge, and drops acutely down into a hundred folds and grooves, like a fan of tightly pressed pleats covered with dense dark vegetation. Too steep to hold rivers, the deeply eroded gorges claw at the sharp edge, at right angles to the ridge.

After the stark nakedness of the deserts below, it was strange to see this upheaved ramp so richly forested; it was also, we were told, the home of many wild animals and

favourite grounds of elephants, until they were shot out by Abyssinian and Somali tribesmen.

To the east stretches the Chalir Desert, sixty miles of baked sandy clay which was once a lake. On its white shore live some few surviving tribes, primitive and isolated, dwindling and discouraged, but mysteriously anchored to an unknown past manifested in stone mounds each containing one burial.

It was now getting very bumpy. We flew over more craters, green now and holding water like a cup. We passed Paradise Lake, another crater still green but now dry, where Osa and Martin Johnson lived for a year, filming the then abundant, now vanished, wild life. We flew over Marsabit Mountain, densely forested with deep wrinkles like Kulal but not so impressive and with settlements creeping up into its heart.

We were getting tired, overdone with the grimaces of this geography: an old queen whose sap is dry in her breast. I found myself less fully occupied in following my eyes—in fact, I found time to get frightened. Julian is never frightened, but he demanded to be let out for other reasons. Our young pilot descended on the Marsabit Airstrip, a scratch in the gritty soil; with earth flying in clouds of dust we rumbled and hiccuped to a standstill. Julian disappeared round a corner, and out of the silence and emptiness an army lorry came roaring at the little plane. "What the hell do you think you are doing?" a voice unkindly shouted. Young Cowie explained but failed to convince the Northern Frontier District official of the necessity. "You will be reported for landing without a permit—you should know better—get off at once."

Julian was retrieved and we were off again; beyond Marsabit Mountain and straight on now for Isiolo. All forest ceased, succeeded here by lava grit, craters and petrified cones, red cratches of road and decayed flanks of hills. More dry river-beds wind their scars but they failed to break my heart

any more; I was just muzzy and longed to land. We were to meet George Adamson, Game Warden of the Northern Territory, and Joy Adamson, his wife; and eventually we hoped, Elsa the Lioness. We were all hungry, for it seemed ages since we left Nyeri; the midday heat made unexpected air-pockets through which we fell. I kept quiet and sucked a meditative peppermint.

The little plane hummed on, our young pilot intent on his approach. It was his first landing at Isiolo, and the strip was very rough. It was in fact very hard to make out at all. He descended to reconnoitre, and rose again to go round the block, a vast circuit which needed another peppermint. We returned into our private selves, each one of us ensconced in personal thoughts, like a sea-anemone retracting its tentacles.

We made, of course, a perfect landing, even though the wind shook the little wings and nearly turned us over, and the wheels bumped crookedly over the hummocks. All safe, but stiff as pokers, we had arrived at Isiolo.

29. Isiolo and Elsa

George and Joy Adamson – Isiolo Game Reserve – reticulated giraffes and Grevy zebra – packing for the visit to Elsa – the Meru experiment, a new Tribal Park – Elsa and the Adamsons

George Adamson looks just like his photographs, with a short pointed beard, and bright blue eyes with the piercing vision of hunters and sailors.

In the bungalow on the other side of Isiolo we met Joy Adamson. She is Austrian by birth, has a small round gay face, brown as a berry, a tiny nose, fair hair in curls round her head, and wears her neat figure well. Having read and admired her book, *Born Free*, I knew she must be a person of character and firmness. She certainly was—she promptly took charge of our needs and supplied us with everything, including lunch. Words came tumbling out; quick, enthusiastic, irrepressible.

In the afternoon, we went for a prowl. Isiolo is not in a National Park, but part of the vast Northern Frontier District Reserve. People can only shoot wild game after obtaining a permit from the game warden. In fact, as we drove off towards the bush, we met a white hunter (blue-eyed again!—occupational feature obviously) with two clients, on his way to call on George Adamson. "Where can we find sandgrouse?" he asked. "Why aren't there any greater kudu? What about oryx?" I shut my ears disapprovingly. As the

cars separated, he threw a negligent "Any old lion to spare?" Let it be said, however, that this properly controlled hunting constitutes no danger to the animal population; it is the non-selective hunts and poachings which massacre hundreds of animals at a time, including gravid females, which are the threat.

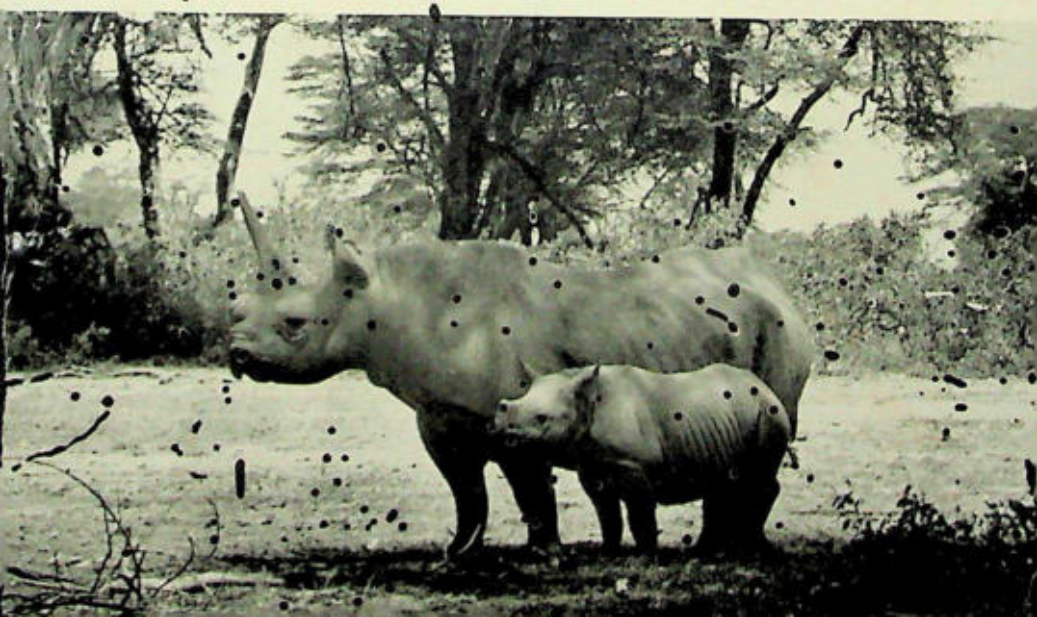
That afternoon we saw several magnificent reticulated giraffes, with strangely abstract broken markings etched on their glossy hides; and Grevy zebra, with stripes half the width of the common Burchell's zebra, and a larger but altogether finer and more elegant general build; also many gerenuk, bustards and ostriches, and in the marshy land, an elephant, very suspicious of us, which we were glad to leave behind. More beautiful giraffes quite close gently endured us amid brown acacias and tall, yellow, dry elephant grass.

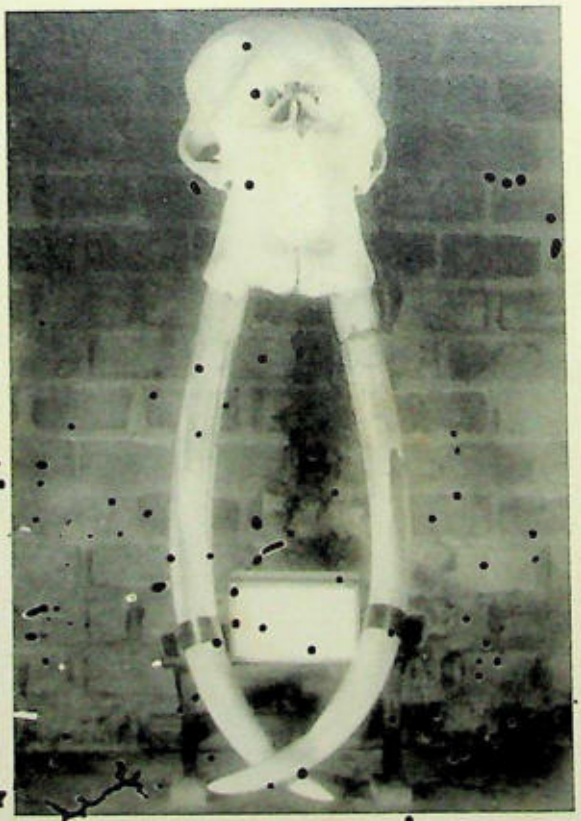
The town of Isiolo has a few administrative houses containing some thirty European residents in all. (Thirty years ago, there were three.) The rest of the town is Somali, rather sordid tin shacks.

What we really wanted to see was Elsa; but Joy was reluctant. It was too soon after Billy Collins was so strangely accosted by Elsa. Joy was afraid Elsa might go even farther with another VIP, which would be poor publicity; and also that her feelings might be hurt if we just came and went without staying the night as usual. In fact, Joy had to be persuaded. In the end, under Julian's insistence and George's reassurances, she gave way, and we started planning our trip for to-morrow. She and Major Grimwood were to go ahead with the Elsa-proof Land-Rover and make camp at Kinna, where we would join them with George, young Cowie flying us there in under one hour to their five on a bumpy road.

Isiolo. A broken night; first I had an untidy nightmare, then

Above, a new-born elephant, still covered with its "gooseberry" hair, sheltering under its large mother. To reach the udder which, in elephants, is placed at the front end of the female, the baby props himself up against the front legs of its mother; it sucks with its mouth, keeping the little trunk thrown back over its face. *Below*, black rhino mother and year-old young, starting to grow its posterior horn, while the cow has lost her anterior one





Wood and Bone. *Above*, J.H. examining a large shapeless Elephant's Foot (*Dioscorea elephantipes*) on the Yatta Plateau. Looking like a stranded granite boulder far from home, it puts out straggly branches with small leaves. The dark foliage in the background belongs to a different plant. *Left*, memento mori: the skull of the ancient lone bull, Methuselah, in the Museum of the Murchison Park, with tusks weighing 250 lbs. each

was woken up before five by a regular tap-tapping, an ominous silence, followed by more taps. I got up and groped my way to the sitting-room whose outer panel is left wide open to the veranda and the bush. Any elephant or lion could just walk in. Indeed, as Joy Adamson told me yesterday, they often come past; one fine morning she looked out of the window and saw an inquiring trunk only about a yard away.

The taps only stopped when daylight came, and with it an early cup of tea. The tea-pot had an ingeniously carved wooden lid in place of its original china one: I wondered if Joy Adamson made it. She started as a sculptress, then did a most remarkable series of botanical drawings of the high mountain flora of Mt. Kenya, now in the Coryndon Museum. Later, just before the war, she embarked on a series of water-colour portraits of tribal Africans in their ritual apparel. The Governor gave the scheme his blessing, and in three years she produced a unique gallery of over 400 portraits with descriptive notes; every ornament in its proper place for its special reason. I later went to see this collection in the Coryndon, and was greatly impressed. Apart from their artistic merit, the anthropological value of such records is considerable. To-day, few Africans wear these outfits, which are considered barbaric and backward, nor do they remember their ritual meaning; they much prefer European cast-offs.

I considered my tea-pot lid, and gratefully drank my tea. The house began to hum, for everything had to be packed up, bedding, food, commodities. At breakfast, my taps were discussed and explained; it was a species of woodpecker doing his courtship-drumming on the roof instead of on a tree.

Two Land-Rovers were drawn up. George was supervising the mending of a puncture while Joy organised the packing. It was a high-pitched performance which we could do nothing to help. So we sat on the veranda steps watching squirrels and bulbuls feeding and drinking at the bird-table

under a wide acacia. The bush all round was flat and anonymous, but in the distance blue mountains framed the horizon. It was already very warm.

After two hours of eruptive activity, the Land-Rover with Joy and Major Grimwood moved off, filled to the brim with camping equipment for three weeks, for David Attenborough was due in a few days to take a film of Elsa.

We followed in the Cessair. Flying first over the range strewn with little volcanoes all tightly cultivated by an expanding population, we approached a wilderness with a small red air-strip waiting for us in the middle of it.

We were met by the young warden of Meru, Mr. Wateridge, bright nut-brown eyes this time and tattooed arms. He had just left hospital, after being savaged by a buffalo. He was shooing a herd away from some shambas, not knowing that one buffalo was still behind him; it tossed him twice and stamped on him, finally losing him in thick grass. His ribs were smashed and he had trouble with lungs and heart, but he was now back, ready for more.

Camp had been set up by Mr. Wateridge. We ate our sandwiches, then rested and gasped on camp-beds while the dust gently coated us with ochre. A narrow river flowed almost at our feet, edged with great ficus, pseudospondias buttressed like cathedrals, and palm-trees crinkling in the hot breeze.

Wateridge explained that Meru is an experiment of tribally-sponsored conservation; a Tribal Park. The Africans have appointed him as warden and he hoped to make it an interesting tourist attraction in a year or two. He also told us about the curious shrub which grows round here, Qata edulis,[1] chewed by the natives as an energy-giving drug and sold as far as

[1] A narcotic stimulant used widely in Abyssinia and Arabia. It makes the user garrulous and happy at first, but destroys the body and mind of addicts.

Aden where it has a ready market. As it must be fresh when used, it is rushed by lorry to an airport and flown to its destination. Cortisone is also made from it, and it brings a considerable revenue to the district.

By the time the Land-Rover arrived, Joy was reconciled to our seeing Elsa and the cubs, but she made us solemnly promise to remain in the Land-Rovers, to make no noise or in any way attract their attention. We swore. She also warned us that we might not see them at all. So finally, in a state of qualified expectation, we set off in two Land-Rovers: Joy, Major Grimwood and I in the first, the others following in the second. It was a fascinating drive, for Joy talked of Elsa the whole time, imitating her throaty little purr, her inner muted "hrumph," the voice she used to communicate with Joy and with her cubs. She described how, at any sign of the unusual, Elsa crouched forward with her black-tipped ears flattened, absolutely silent; the cubs recognised the signal and soon learnt to obey its warning—they lay and watched without a sound. Even if she moved forward, they waited in frozen immobility for her return.

To show her affection, but perhaps also her power, Elsa often took a cub by the throat, holding it gently in her maw. Joy herself had been thus held, and accepted the gesture by staying absolutely rigid and still—a moment, I thought, of perilous intimacy.

Only with complete understanding and faith could one cope with such demonstrations. This certainly existed between Elsa and the Adamsons. That she so curiously invaded the tent of Billy Collins on his first visit, and on the second night actually took his head in her mouth, leaving the marks of her teeth clearly upon his temples, was inexplicable to Joy. Jealousy? Assertion of power? We shall never know. Elsa, alas, is dead now, the ménage-à-trois is dissolved—and there may never be another experience as complete and remarkable

as that which bound together this lioness and these two human beings.

I asked Joy if she could explain not only the taming of Elsa, which in itself was not extraordinary, but the special link of mutual understanding and trust that she described. Lack of fear on both sides, total faith in each other, and the unusual intelligence of Elsa were, she thought, the main basis for this success. Possibly, she admitted, the fact that she actually held in her hands the meat with which she fed Elsa, helped to create a link, and to seal the compact of what one can truly call "love"; for animals, unlike human beings, rarely bite the hand that feeds them. The gift was a sort of ritual, part of the bond which established their relationship.

On the occasion of our visit a goat was also brought, and was killed before arrival. After reaching the usual camping place and rendezvous, George stood in the clearing and fired his rifle in the air. We all waited. There was no sign of Elsa; so we were allowed to walk down towards the river to the enchanting place of great trees spreading over rocks with sandy beach and murmur of water, where Joy used to do her writing and sketching, while Elsa played with her cubs. A second shot, and soon we heard a chatter of baboons. "Elsa is coming," said Joy, "the baboons always give warning." We piled back in the Land-Rovers.

At last, bounding out of the bush in great easy strides, there was Elsa, leaping towards Joy whose outstretched arms moved forward to defend herself from too powerful an embrace; even then she was nearly knocked over. The two of them, Elsa's paws on Joy's shoulders, stood there like old friends meeting again. The cubs were close behind, led by Jespah, the favourite son. He was a gallant little lion, with ears cocked and eyes alert, ready to protect his mother. Joy did not touch him, but kept stroking Elsa's sleek head, calling her name and fondling her gently, while Elsa clearly returned all this affec-

tion in her own manner, her tail sweeping in wide curves as she nuzzled up to Joy. It seemed absurd, seeing this loving demonstration, that we should be cooped up like dangerous animals, and not allowed to do our own bit of loving, but we had promised. The lions were led to the goat, but they were clearly not hungry; the goat was pecked at, its testicles ripped off; it was abandoned, returned to, and finally seized by Jespah, who managed to drag the carcass towards the edge of the clearing. First he pulled it backwards, then taking firm hold with his teeth he dragged it forward between his front paws, in good lion manner.[1] He dumped it before his siblings, and they all sat there in the back row, watching, rather aloof. Elsa meanwhile had leapt on to the second Land-Rover and was posing there in full majestic beauty, while first George and then Joy, patted her paws and fondled her soft chin and velvet muzzle. Like a kitten demanding a caress, Elsa leant against Joy's hand with an expression of lazy contentment on her face. In the stillness only her deep " hrumph " was heard, and Joy's answering murmur.

Elsa then nonchalantly stepped down from roof to bonnet, from bonnet to bumper and on down; she stretched her full length, yawned with relaxed dignity, lazily licked her chops, and finally rejoined her cubs with an unhurried slouch.

This was the cue for our departure; we set off as quickly as possible so as to leave her no mistaken hope. Joy continued with the Elsa saga, as one talks of a wonder child. The sun was about to set, and we had ninety minutes' drive back, by hump and by ditch, crossing a quite sizeable torrent and the place where the elephants feed. We got back to camp without mishap.

[1] The sheer muscular strength shown by lions in towing their kill is extraordinary: a black-maned lion was observed dragging the carcass of a dead buffalo some sixty-two feet to the shade. The carcass must have weighed at least 1,200 lbs.

Next day I woke up at first dawn, in the cool expectant silence. A short moment of suspense precedes the sunrise, like a breath exhaling one kind of life before assuming the next, in a strangely reverent stillness which affects all creatures. The sun bursts with sudden flame, flooding the tops of trees with orange light. Birds tune up and monkeys stir on their perches.

The boys woke up and shook the embers to make our early tea; they soon arrived with clinking trays, laid them on the floor and left us to get out of our mosquito net cocoon—best done one at a time. Julian put on his red dressing-gown and binoculars, his hair at several angles, like a humanised secretary bird. By the time he had drunk his second cup of tea, the sunlight had swept down and burnished his red gown.

This was our last morning. Once again, it was sad to go—to leave a place where one could so willingly have stayed on, in single-minded content. From the little plane, we resumed our bird's eye view of the country, its dust and ashes, then its greener land covered like a Paul Klee drawing with the irregular strips and patches of African cultivation, the round bomas enclosing a mushrooming of huts, the glass mosaic of rice polders.

We landed at Nairobi, where our young pilot was advised that his air-licence would be suspended for unlawfully invading Marsabit, the D.C. having circularized all the important departments in Nairobi with his cry for vengeance. But after all it was not Ian Cowie's fault, Major Grimwood intervened, pointing out that really Marsabit Station should take the rap for not providing proper accommodation for the purpose for which it was required on that occasion.

30. Entebbe

Flight to Entebbe – Lake Victoria and Jinja from the air – Entebbe Botanical Gardens

This time a large Dakota took us to Entebbe; we started in thick fog, clearing after a short while. A young African and his new wife were on board—she with her eyes round like a frightened doe, smoking desperately in utter silence. He seemed calm enough. We flew over Suswa, a gigantic caldera with high outer rim sharp as a china cup; then right over the fabulous Rift Valley, the wide green corridor edged all along with its double ramp, strewn with lakes and craters of dead volcanoes: here very clearly demonstrating its double geological fault.

After the burnt plains, Uganda looked explosively green, moist, rich with fertile sap, exuberant. Tea and coffee, corn and maize, a quilt of abundance stretched as far as the shores of Lake Victoria. Even the doe-eyed African woman woke out of her trance of apprehension, and peered down amazed and thrilled. We landed at Kisumu, the air heavy with tropical moisture; one was glad to take off again, following the edge of Lake Victoria with its myriad green islands as far as eye can reach. Here was Jinja, where the White Nile is born out of the lake—already large and powerful, falling and foaming and thrusting in its lusty beginnings. From my aerial perch I thought of the heroic explorers who mapped this land on foot—who traced these rivers and named these mountains. It

seemed too easy now, vaulting into the skies and just opening our eyes on this living map which they inscribed step by step.

Entebbe is all garden scenery—a scenery of ever-flowering plants, well-groomed emerald lawns with avenues of jacarandas, cassias, bougainvilleas, bauhinias, passion-flowers and many others, all splashing with tropical prodigality. It is warm but not too hot, beautiful but not overpowering, spacious and peaceful. The lake shimmers between borassus and royal palms.

Tall and handsome, the Bagandas have their own style in clothes, the women particularly magnificent in colourful cottons, brocade or velvet draped from waist to toe and held on the hips by a broad band. Thirty years ago they looked even more beautiful with their shoulders left bare, the proud neck holding a well-groomed head; nowadays, the fashion has changed, I was told owing to missionary zeal, and they wear puff sleeves and a high-buttoned yoked blouse tucked into the wide belt.

The Botanical Gardens go in for fantastic vegetation: avenues of musanga stretch their Monstera-like leaves high up over our heads, their trunks gothically buttressed; the Stictocardia's liana stem carries its red trumpets to the tops of trees where nectar-foraging birds will pollinate them; Solandra grandiflora opens its golden cups a good five-inches wide. Pergolas are draped with the morbid urn-like flowers of aristolochia, their crinkled cups marbled by tiny veins in dark purple on a dirty-white ground. Outsize hornbills sit on royal palms and sunbirds flutter everywhere. The décor is so lavish that many African films shoot their tropical-forest scenes in these gardens. On this Sunday morning people arrived with picnics and bicycles, Indians in their bright saris and Bagandas in flowered brocades, themselves not unlike these exotic flowers and birds. Little boys, squatting on palm fronds, tobogganed down grassy slopes.

31: Murchison Falls Park

The comforts of 1960 compared to our foot safari in 1929 – Masindi – the Murchison Falls Park – elephants and dustbins – the birth of an elephant – the Falls – hippos at night – up river in a launch – fish eagles, hippos, elephants and crocodiles – crocodiles in general – Methusalah the ancient elephant – the pansy-elephant – ivory

When, in 1929, we first went to Uganda, it was a very different sort of journey from this one in 1960. In those early days, one needed a lorry filled with camping equipment, food and drink, and one drove as far as the roads went—which was not a great distance. Then one collected about fifty porters who distributed the loads on their heads, and one walked at the head of the long file of legs, spending the nights at Rest-houses which were built as relays for the district officer on his rounds and for occasional visitors. These rest-camps were a set of huts in which the camping equipment was unfolded to be repacked the next morning at dawn when the column set off again.

This time, however, we were older, and certainly grateful to sit in a comfortable car, with Ali the chauffeur attending to us, and the comforts of hotels waiting for us at the end of the day—even if sometimes we hankered for the intimacy of those wild paths winding over the face of the land, advancing twelve to fifteen miles a day, taking whatever came in the way of meals and baths, jiggers and snakes. No National

Park had then been created in East Africa—in fact, in the entire region, there was only the Parc National Albert over the Congo border, just opened in 1928, to which we walked by way of Kigezi and Lake Bunyoni to Ruchuru and Lake Edward. The purpose of our present visit to Uganda was to see the great new Parks, and we were looking forward immensely to this trip.

We made Murchison Falls Park in one lap from Entebbe, lunching on the way at the Masindi Hotel. Masindi was the capital of the old Bunyoro kingdom under the great chief, Kabarega, and the scene of a terrible battle between his native forces and those of Samuel Baker. The war, which was a bloody and deadly one, finally ended in 1873, when Baker, attacking his enemy with a new kind of fire, the "Hale Rockets", was able to write: "In the end, every opposition was overcome: hatred and insubordination yielded to discipline and order. A paternal government extended its protection through lands hitherto a field for anarchy and slavery. . . . The White Nile, for a distance of 1,600 miles from Khartum to Central Africa, was cleansed from the abomination of a traffic which had hitherto sullied its waters. Every cloud had passed away, and the term of my office passed in peace and sunshine. In this result, I humbly traced God's blessing."

I don't suppose Baker would have recognised this Masindi and its neighbourhood. A wide road cuts through the land, through the peaceful town, bordered by bungalows with flowery gardens; Africans rode shiny bicycles, with their girls in European clothes on the pillion; more sedately, women in lovely draped gowns walked along the road like queens. They all looked purposeful and happy, smiling back with flashing teeth—"hatred and insubordination yielded to discipline and order." The page is turning once more and one wonders what the future will write on it.

After lunch we set off again towards the Park, through a torrential downpour which blotted everything out. The road got bumpier and the heat muggier; we seemed to be diving through a green wash of blurred vegetation. But such is the way of these tropical storms—it stopped as suddenly as it began; the sky cleared, crested cranes and wood ibis resumed their stalking, we stopped the car to pick Gloriosa lilies by the wayside. We soon entered the Park gates and met its warden, Captain Poppleton, in the royal Land-Rover, with higher seats which gave a far wider view, and off we went into the Park.

An undulating plateau of lush green grasses opened before us, alive with elephants—so many that we lost count. We were transported with incredulous enchantment. So intensely the proper inhabitants of this green vastness, they were like the whales in the sea, there in their own unquestionable right. It was a fantastic sensation to be thus among them, to watch them ambling past, hardly noticing us, feeding without haste on the plentiful supplies. Some were taking their ease in the shade of trees. One was resting his tusks in the crotch of a branch as if tired of their weight; the trunk swung over them like a man's raincoat over his arm, and well might he be tired, with perhaps 150 lbs. hanging from each side of his upper jaw. They were mostly in small family groups, each intent on its own affairs, peacefully crossing each other's path with a mere inquiring of their up-turned trunks. A few young ones had gathered together and seemed to be having some sort of game with their little trunks, guarded by an older brother.

Our talk, of course, was all about elephants. Captain Poppleton shares the elephant mystique, and has spent many hours watching them. He told us, among many other things, of his unique experience in witnessing the birth of an elephant. This is his story as printed later in *Oryx*:

On Dec. 21st, I heard a great commotion in the bush, and

found that it was caused by a herd of elephants. . . . On the left there was a closely packed mass of animals all facing outwards. In the centre of them was a small black slimy object, which turned out to be a new-born calf. The birth had clearly just taken place because the mother, easy to identify by her condition, and another cow elephant, were removing the membrane covering the calf.

The maternity group consisted of six adult cows and five young calves, with a young bull elephant looking on about fifteen yards away. Some of them guarded and assisted the new-born baby, nudging and pushing the little fellow, using their trunks and feet to try and get him up. Others took the membrane bag which had been removed from the calf, and threw it into the air so that it spread out like a blanket. Vultures had now appeared, but the cows would chase them to ten or fifteen yards distance and then rejoin the group. Except for one bull, any other elephant which approached was driven off by the cows. The new-born calf, a bull, had a thick covering of hair, most noticeably on his head. At this stage, he was spreadeagled and unable to stand.

For about ten minutes, the trumpeting and screaming went on. After half an hour, the herd moved away, leaving one adult cow besides a bull calf about seven years old, obviously her son. For about fifteen minutes, the mother and the other cow continued to coax the baby to its feet; then the other cow left them and followed the rest of the herd.

Two hours after birth, the baby elephant took its first stumbling steps; they ended in disaster for it fell forward on its head and rolled on to its back. Its mother and brother gave it no rest but forced it on to its tiny feet. The young bull was very attentive to its new brother, helping the little fellow to stand by passing his trunk

round its stomach, both from its side and from between its legs. The baby was still very weak on its pins and fell over time and time again, often giving an alarming grunt.

Two hours after birth, the mother dropped the placenta. She played with it and even started to eat the outer skin.

Soon the young bull lost interest and, after circling the area emitting the most frightful sounds—not normal trumpetings and beyond my powers of description—disappeared in the direction of the herd.

During the next two hours, the baby elephant covered about a hundred yards. When eventually I left him and his mother to themselves, the pair seemed happy and content.

Captain Poppleton added that this was one of the rare occasions when he had come out without his camera; he never again had the luck to see the birth of an elephant.

But he also wanted to show us the Murchiston Falls. So we rumbled on, over quasi-roads, reaching a high plateau from which the land unrolled for miles in all directions. Pointing to a silver band some distance away, "That," he said, "is the Nile."

We were soon descending a steep ridge within hearing of the sound of tumbling waters, and ran towards the tumult. Here, in sharpest contrast with the mile-wide Victoria Falls, the river is squeezed between two rock faces only twenty feet apart, to fall at the rate of a thousand tons every second between almost vertical walls. The energy and power are contained within, rebound from side to side, in a vehement and furious assault. It is as if two colossal magnets, tearing at

these million drops of water, were challenging their inmost cohesion. The mass crashes in a foaming arch into the pool below, and resumes its liquid state.

After this abrupt leap of a hundred and thirty feet, the Nile composes itself, swells between wide banks, tranquilly blue and full of hippo, crocs, and fish (Nile perch of over 300 lbs. have been recorded). It reaches Lake Albert and immediately flows out again to find its outlet in the north, beginning its long journey through swamps and deserts, until in due time, this legendary Nile reaches the land of Egypt.

The Park hotel was on the other side of the river. We crossed by ferry and were deposited in the Queen Mother's pavilion, with its veranda and wide windows opening above the winding expanse of river. We sat and contemplated; we had tea and a bath; and Ali insisted on driving us the 200-odd yards to our dinner at the hotel, in case we met the "domestic herds" on the way. These are bands of hippo and elephants who have discovered the secret joys of dustbins. They come along at nightfall and forage. In fact, there was a very large and greedy elephant nicknamed "The Lord Mayor" who would stop at nothing to get his titbits, digging into cars, and even overturning them and squashing them when they disappointed him. In the end, sad to relate, he became so reckless and so dangerous that he had to be shot.

We did meet the domestic herd the following day, just before nightfall; there were about six of them, the younger ones in front guarded by an old cow, making their leisurely way up the road past the hotel. All pedestrians had taken refuge in bungalows or cars, as we did, for one never knows when the old lady might not take offence and slash out with that powerful trunk of hers. Her ancient bulk trundled past, head wagging and trunk swinging, keeping her weighty

thoughts to herself. It was too early, evidently, for customs: the procession disappeared down into the valley.

"Julian."

"What is it? Can't you sleep?"

"You are snoring."

"I am NOT."

"Then it must be a hippo under my pillow."

We went out on to the veranda where hurricane lamps had been posted to keep off non-human visitors; the night was very black with few stars, velvety warm, full of grunts and snorts and the wooing of frogs. The hillside all around us was alive with hippo who had come out to feed, but we could not see a single one of them; they heaved everywhere, noisily but invisibly, almost at our feet.

Just before dawn the rain began. It felt as if we had been chucked under the Murchison Falls, and were being pounded by the river itself. We wondered how to get across for breakfast when Captain Poppleton floated up in his Land-Rover and gave us a lift. He had been down to the ferry to make all safe, and had encountered a new torrent where yesterday the road had climbed. It was a grand sight, this enormous rain flattening the land, pelting at it with rods and flails, tearing at the naked soil till the bones of stones were bared.

By ten o'clock the rain had stopped, leaving the road a quagmire, which, however, surprisingly quickly drained itself clean. The new torrent resorbed itself with a last flourish of its angry tail, and all green things reasserted themselves. The Nile was bulging over its banks, with rafts of black hippo and green drifts of Nile cabbage.

Later that morning we took the launch and went gently chugging up the current towards the Falls. It was already

very warm. Hippos were at their soaking and snuffling; elephants stood heraldically on the banks; under the shadows of tangled trees, crocodiles looked like untidy logs. Round these heavy-armoured cataphracts of the river, spur-winged plovers pecked about in a neighbourly way, while common sandpipers groomed the great reptiles, who lay with their mouths open, accepting the ministrations of the birds. This is a friendly relationship, a sort of symbiosis in which both get some benefit: the birds feed on the nematodes and leeches which beset the crocodiles, and give warning of danger; they also get protection from marauding monitor-lizards by laying their eggs within a few feet of the crocodiles. It is very seldom that a crocodile snaps the birds up by mistake.

Julian had just been reading Hugh Cott's monograph on crocodiles, and told us that at a certain stage in their growth they collect and swallow a quantity of stones as ballast, like cargo in a ship's hold; this helps them in submerging and gives them the right centre of gravity for walking on the bottom of the river. An animal weighing 200 lbs. on land will weigh only fifteen pounds in water, and these gastroliths are essential to the crocodile in his aquatic activities.

We hung about their resting places for quite a while, for we were longing to hear their mating call. Cott calls it:

> a terrible bellowing. The full roar, uttered with the head elevated and the jaws widely agape, is loud, deep-pitched and long-sustained, and sounds like the roll of a big drum. Pairing takes place in the shallows and is preceded by a nuptial display in which the female rears her shoulders out of the water and points her gaping jaws to the sky, uttering a creaking and groaning sound.

He goes on about their reproductive habits:

> She lays her clutch of eggs in a hole about eighteen inches

In the Aberdares: a lovely waterfall opposite the Queen Mother's Chalet. The river winds through Alchemilla heathland to fall down an unexpected cliff into a dark pool shaded by high crowns of giant senecios and tree heathers

Strange domestic animals. *Above*, Ankole cattle from Uganda. Famous for their beautiful lyre-shaped horns, so large that they sometimes equal the animal in height, Ankole bulls were sometimes used in battle charges. *Below*, Fat-tailed sheep in Tanganyika; the tail, which stores fat like the buttocks of steatopygous Hottentot women, is a great delicacy

deep, and remains, hissing, if in attendance. At hatching time, the young develop astonishing vocal powers, and may be heard chirruping through a foot or more of earth. Their cries are the signal for the mother to unearth the eggs, as the hatchlings could never struggle through unaided. The young, measuring 18 cms. at birth, have a mass of yolk large as a hen's egg which provides reserve of nutriment for several months. For a time they remain gregarious and vocal, their loud yappings being a means of communication between members of the pack. They hide in papyrus debris, very active and alert and ready to jump at any insect. Many fall victims to adults of their own species. Between the ages of 2 and 6 years, they tend to disperse widely, only coming out of retreat when they graduate to adult life. This marked segregation of juveniles from their elders has doubtless been forced upon them by the habit of cannibalism.

In vain we waited for the rolling of drums, and never saw the expectant female waiting for her mate. We watched them with due respect, their jaws opened in a permanent yawn revealing fangs sharp enough to snap a man's thigh off at one bite.

So far as I know, there is only one record of a crocodile who has been tamed and become harmless and playful, but it had been shot through the shoulder and jaw and was partly paralysed. It was intelligent enough to ring a bell for its dinner, it recognised its friends and was even renowned as a baby-sitter. Its fascinating story is told in Mrs. Violet Campbell's *God's Children With Tails* (1961, Herbert Jenkins).

There was Mbo Lutembe, worshipped for years as a god, or at least a minor divinity, on the shores of Lake Victoria, and used by the natives, until the British intervened, to give "snap" judgments in trials by ordeal. If Lutembe was

hunger, the accused lost a leg or an arm, and were therefore guilty of what they were accused of. If he was not hungry, they were accordingly innocent. Lutembe had his special priests and familiars who knew his habits and called him by name when he was wanted. He actually saw him in 1929, and took pictures of him as close as four feet; he must have been very old already then, and had established his rule over a wide bit of coast, excluding all rival males. No one knew how old he was when he died.

But I wanted to know more, much more, about the elephants; and Captain Poppleton continued his elephant saga. He was patrolling the park on one of his usual tours when he heard the most pitiful trumpeting going on, so appealing that he felt he must fly to the rescue. He came upon two male elephants. The noise was coming mostly from the larger one. He was pursuing the other who fled before him, occasionally giving an angry bellow, in fact rejecting the amorous advances of the older bull, who kept reproaching him with heartrending arguments. They went round in circles, discussing the matter, hopelessly. Finally, the old boy laid himself down screaming his frenzy of frustration, while the other went off to a small bank nearby, and thereupon heartlessly squatted down upon his haunches. Poppleton laughed so much that the spell was broken, and both elephants made off at full tilt.

Then there was Methuselah, a scarred and very ancient elephant, slowly dying of old age in the place he had chosen for his last years—by the river so that he could easily drink, and close to clumps of lush grass so that he could easily eat. In this retreat, from which he never moved, he was constantly attended by a younger bull. For two years, the warden and his scouts watched this old creature, yet never got near enough for a photograph, for the young squire would fan his ears and aggressively chase the intruder

away. Finally, at a great age, possibly eighty or ninety, Methuselah died. The herd assembled round the corpse, joining the young guard in defending it from hyenas and jackals. They only left the body when the warden and his scouts fired into the air to disperse them. The skull of Methuselah now stands hollowed like eroded sea-rock, immense and magnificent, in the Park Museum. The tusks are fourteen feet long, gently curved forward, smooth like solidified cream, true-grained all through.

Ivory has always fascinated me. What is this substance growing so casually out of the body-material of beasts, these extravagant incisors used by them as tools for digging or defensive weapons, and taken over by men to make every sort of imperishable object? The famous Victorian anatomist, Richard Owen, lecturing before the Society of Arts in 1856, gave this learned definition:

> The name Ivory is now restricted to that modification of dentine or tooth substance which in transverse sections or fractures show lines of different colours, or striae, proceeding in the arc of a circle and forming by their decussations minute curvilinear lozenge-shaped spaces. These spaces are formed by an immense number of exceedingly minute tubes placed very close together, radiating outward in every direction. It is to this arrangement of structure that ivory owes its fine grain and almost perfect elasticity.

When you come to think of it, every tissue in every living creature is its own precise miracle, but few have achieved so remarkable a crystallisation of solid matter as ivory. It is a substance of the highest integrity, a wonderful medium for carving, for its true grain responds to the most delicate sculpture: at any depth, a smooth surface will acquire a gleaming sheen simply by rubbing the palm over it. Ivory, whether of mammoth or hippo, was used as early as Upper Paleo-

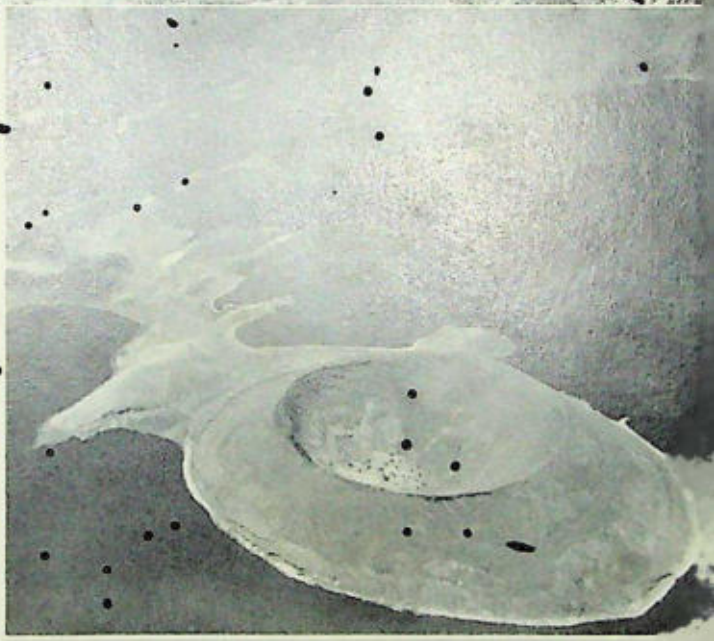
little times to make significant and sacred objects, many of which have survived to this day. The figurine of Lespugne, found in the South of France, is a singular and exquisite relic of some 27,000 years ago. Later sculptors contained their figures in obedience to the curve of the elephants' tusk, and artists in the Middle Ages often transferred to their Madonnas of wood or stone the same questing poise inspired directly by this natural curve.

Billiard balls, piano keys, knife handles, bracelets, toilet articles, false teeth, *objets d'art*, inlays, crucifixes—the modern uses of ivory are endless. (Only the other day the London Auction market disposed of four and a half tons of ivory at about eighty pounds a hundred-weight, principally to piano firms.) And when the tusk has been cut and apportioned to its various uses, the remaining dust goes to make Indian ink, and formerly was even pulped to make a medicinal jelly: Dean Buckland gives a detailed recipe for its preparation.

Elephants' tusks can weigh anything up to two hundred and fifty pounds each. Large tuskers predominate in certain regions, possibly partly due to some minerals in their diet, but partly to genetic reasons; being, however, particularly hunted and harassed, they have become increasingly rare.

There is a legend that elephants will remove the tusks from a dead comrade and carry them to some selected place, though it is much more likely that the stock-piles which have been found have been made by human beings. But it has been repeatedly observed that herds will gather round a dead beast, pull at the tusks, prod and nudge the body in an effort to shift it to its legs and push it to a safer place. There are innumerable examples of elephants being affected by what happens to one of their number and helping each other whenever they can. Two elephants will escort and support a third one between them, or push a young calf up a steep bank by putting their

Volcanoes ... magnificent ... Virunga ... borders of ... Congo, giants ... the sky: Mulhav... Mgahinga, ... *Centre*, the pale-grey ... volcano with its black lava ... field protruding into the bright blue waters of Lake ... olf. *Below*, on the way to Da... s-Salam we saw Ol Doinyo Lengai, the Masai Mountain of the Gods, rising above a land tormented with volcanic activities



Above, in search of gorilla, 1929. M.J.H. under giant senecios and giant heathers at 11,000 feet on Mt. Karisimbi. *Right*, thirty years later, M.J.H., Reuben and J.S.H., in search of gorilla at 9,000 feet, on the forested slopes of Mt. Mgahinga

trunks under his hindquarters, to trundle it along like a wheelbarrow. They organise the rescue of a pit-trapped comrade by forcing down the earth round the brim of the pit until a bridge has been made for escape. They even know how to dam a stream to form a bathing pool.

Many reliable observers have recorded strange elephant gatherings at certain times of the year, in answer to an apparently definite call or urge. They come from great distances, congregate in vast numbers, mixing and conferring together before dispersing again to their separate haunts.

Their vast size, intelligence and longevity combined with their unique invention of a trunk, has made them undisputed Lords of the Forest. A great volume of knowledge is being slowly gathered about these sagacious and versatile personages, yet we still consider them with surprise, almost with incredulity . . .

Our time at Murchison Park drew to its end; we spent a last afternoon wandering through its wide and varied expanse, between the two loops of the Nile. From a cliff dominating the valley, rejoicing in the cool breeze and the extraordinary beauty of the landscape, we watched the herds of animals and the flocks of birds intermingle and thrive on the rich pasture of their peaceful world.

Next day we drove to Fort Portal; first back through Masindi and then through miles and miles of rank fertility bursting in palms, papyrus and creepers. In the middle of what at first sight seemed empty uncultivated country, we passed about a dozen schools, disgorging lively young Africans in bright blue, green or red uniforms.

Nearer the town, the road improved and traffic thickened: mostly hordes of boys and girls on bicycles and motor-cycles whistling past in contagious gaiety. It is lovely scenery,

with groups of neatly thatched huts in shallow valleys, or on small rounded hills; with tea estates, forest reserves and pine plantations, flourishing agriculture with thriving townships. We stopped at the Ruwenzori Hotel, very R.A.C.

Everything looked too vividly green, steeped in lush chlorophyll, with garish Spathodia flowers and dripping exotics. The mountain was overcast and rain beginning to fall. But at dawn next day, Julian woke me up just in time to see the towering white crest of Ruwenzori above the clouds, looming immensely at the end of the garden. The huge range, eighty miles of great mountains, rises abruptly from the plain, with practically no foothills, in evidence of its origin in a gigantic upthrust. The tumbled central crest of black rock, Mt. Stanley, ascends to 16,754 feet, and six main glaciers radiate from the centre of the mountain mass. Snow covered the top in a broken pattern of black and white, sharp jags into the sky.

In five seconds it was swallowed up. We never saw it again.

32. Queen Elizabeth Park

Landscape of green craters – animals and birds at the Kazinga Channel – reminiscences of our 1920 safari on Lake Edward, its hippos and its fantastic aquatic life – Katwe and the salt mine – George Schaller and gorillas

The Africans in charge at the gate were busy escaping from a snake, which had taken possession of the office. I could just see its small head peeking from behind a broom. The boys rolled the whites of their eyes when I tried to open the door, and Ali explained that it was " very bad snake, very large "; the message left for us had to be reached by contortions through the window. This was the nearest we got to a snake during the whole of our voyage.

A natural causeway runs along the Kazinga Channel which links Lake Edward and Lake George; Mwewa Camp where we were to stay is high on a sandy bluff jutting out into Lake Edward. It was noon when we arrived, the heat shimmered on a drowsy world, the sun burnished the lake, darkened with hovering clouds consisting of millions upon millions of lake-flies.

I wish I could have seen it from the air, for a large part of this region is a fantastic bubbling of craters, cheek by jowl, overlapping each other. There is hardly a single slope untouched by the upheaval which, in the late pleistocene, churned up this stretch of land; the Park contains seventy-eight of them, now all covered with a mantle of grass and trees,

with an occasional soda lake at the bottom. It is an enchanting landscape, like the surface of the moon seen through a green telescope. It is also a strange geological phenomenon. According to Mr. P. E. Matthews of the Geological Survey Department of Uganda, these craters were created by a series of violent explosions of volcanic gas and steam, succeeding each other at short intervals, like the boiling of a syrupy mass in a giant cauldron. No lava flowed out of the boiling blisters, the whole episode being halted before it could centre itself in a giant eruption of volcanic fire. This perturbation was apparently related to the upthrust of the Ruwenzori massif in the Western Rift valley, and could have been witnessed by the early Bantu invaders.

We spent a wonderful morning—shown every kindness by the Game Warden, Colonel Trimmer—driving through scenery pitted with craters of every size, climbing to the edge of steep rims from which the eye sweeps down the surprising perfection of circles, each its own untroubled habitat. This part of the Queen Elizabeth Park is like a banquet of gargantuan green dishes, offering delights for every sort of curiosity and appetite. In addition, the shores of the lakes and the Kazinga Channel provide an opulence of aquatic life to be seen in conditions of unparalleled ease and comfort. Euphorbia trees line the banks of the channel, each bearing a marabou perched precariously on its candelabrum; congregations of pelicans wait on the shore for the fishermen tribe to do their shopping for them, mixing peacefully with waders and terns, pied kingfishers and goliath herons. Monitor lizards dart in and out of reeds, intent on eggs and small fry which they devour alive: enlarged on a film screen, they would look a blood-curdling lot with their dragon camouflage. Enormous elephants descend to the water's edge to drink and feed on the lush grasses; hippos snort and grunt, submerging and surfacing in rolling heaps.

On this peaceful Kazinga Channel, under the protection of the Queen Elizabeth National Park, hippos had begun to multiply in an alarming fashion. There was plenty of room for them in the water, but the grassy banks had been trampled into mud for miles inland by swarms of hungry creatures, the food-supply was falling very short of the demand. In fact the hippos were ruining their own habitat. It was decided to cull the surplus, shooting a sample inside the Park and a larger number in the spillover area just outside its boundaries, and selling the much-appreciated meat to the local Africans. This was very successful, and it is clear that similar game-cropping measures will have to be applied whenever a protected animal species gets out of hand.

The south end of Lake Edward, in the Parc National Albert, is really the metropolis of hippos, as we found when we camped there in 1929. This end of the lake is nowhere deeper than four feet, and I remember we were then punted over its smelly green waters in canoes made of strips of bark sewn together with grass fibres, two passengers to one canoe, sitting on hippo-skulls. We had to bale ceaselessly, while the punters took us gently into open water, where we found ourselves surrounded by over 130 hippopotamuses. They were all about us, bulls and cows, young and old, snorting and grunting, ducking and emerging vertically half-way out of the water to fall sideways with a great splash. We got within ten feet of a number of them, with mutual curiosity tinged with suspicion, and it became important not to forget to bale, for we were shipping water over the gunwale as well as through the sides.

We explored the mouth of the Ruindi River—and were dazed and bewildered by the incredible multitude of birds and hippos, the hippos thriving on the surrounding grasses and

deposit their rich nourishing dung in the lake for the fishes and the fish-eating birds. We had unwillingly to share that fertilising mixture, for the lake provided our only water-supply, and our fever had been broken by the cavortings of the lorry which took us part of the way there.

Now, some thirty years later, our trip down the Kazinga Channel was carried out in a steam launch which noisily scattered the animals: there is something to be said for the primitive methods. . . .

There are excellent fish in the channel; with nylon nets and their clumsy boats of rough planks, the fishermen do a fine trade, selling to the Fish-Salting Company and the workers of the salt deposits on Lake Katwe. From time immemorial, this crater lake has provided one of the few sources of salt in the centre of Africa. This essential commodity was originally carried to the salt-starved population of the Congo across miles and miles of jungle and bush on the heads of porters. I remember meeting them on our first safari, trotting in single file with the round bundles of salt wrapped in leaves and tied in long baskets on their heads. Here, then, was the starting point, still rich in supply and exploited for the same markets, but distributed now by lorries on a far-flung network of roads.

At dinner one night, visitors came to see us. They were a party from the now rechristened Parc National du Congo, led by the young director, a Congolese who was not long ago a student of agronomy.

As it was so soon after Independence, and so close to the frontier, we were naturally keyed up for any news that came through; what we heard during those few days was very

much on the lines of much that has been published since. An African ranger who was sent from one of the Uganda Parks to see what help—if any—could possibly be given summed up the position in these words: "The people of the Congo are like chicken with an eagle flying about in the sky over them."

What was important, however, was the assurance that the animals in the Parc had not been massacred, and that some measure of order was being maintained among the African rangers and scouts, in spite of the flight of all the Belgian personnel except Verschuren, and the absence of money to pay the rangers' wages. (Since then, we have heard that the magnificent collection of animals in the Parc has suffered very little damage, and this mostly from poachers who have been more severely punished by the Africans in charge than they used to be by the Belgians.)

We were nevertheless advised to give up our intended visit to the Parc; this was a great disappointment, as we had looked forward to seeing it again after all these years.

One of the visitors from over the frontier was a young American called George Schaller. Twenty-four years old, he had just spent two years in close intimacy with the mountain gorillas, in spite of all the rumours of these animals' fierce intolerance of man.[1]

His professor in Wisconsin, Dr. Emlen, studying the history and reaction of gorilla, came to the conclusion that their reputation for terrifying ferocity was greatly over-rated. Having checked the reports of Africans claiming to have been attacked and savaged by gorilla, he found practically no authentic case of spontaneous attacks by gorilla. If they were interfered with or disturbed, they pursued and attacked the aggressive intruder, bit off a buttock or calf, and honour being satisfied, returning to their territory. Very few men had been

[1] Du Chaillu, writing about gorilla in 1868, describes capturing a baby whose mother he had shot, and hiring 150 natives for the job!

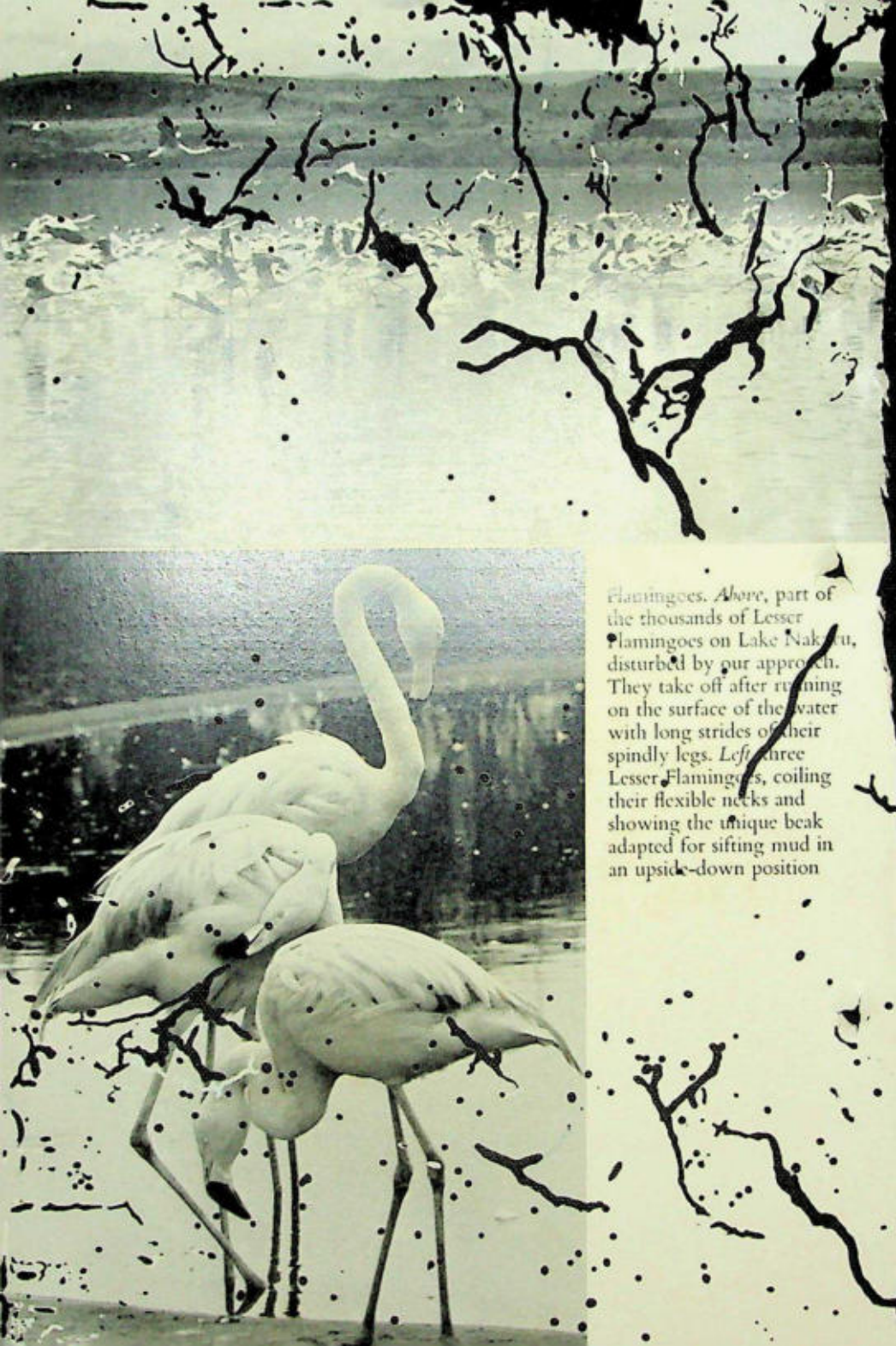
killed unless they persisted in fighting the gorilla, which had then naturally fought back. A great many gorillas have been killed in these encounters.

This assumption required some courage in the testing; Emlen and Schaller went up unarmed, and alone, towards a troop, keeping strict watch on their own movements so as to cause no offence or alarm. The Old Man of the troop was watching too, and suddenly letting off one of his blood-curdling screams, bounded forward beating his chest, till he was within thirty feet or so. Both men remained frozen but (as much as they could) at ease, for the smell of fear has a disastrous effect on wild animals. The gorilla stopped and looked again; as nothing happened, he repeated his challenge, coming a little nearer. Again nothing happened. "O.K. then—but don't forget I am Master here." He returned to his harem and continued feeding, with just a look now and then to make sure. After this performance had been repeated for a few days, the troop took very little notice of our friends and even tolerated their approach to as near as fifteen feet. Schaller decided this was good enough for him, and settled down to his work.

First he just hung around watching what they were doing and eating, keeping his distance and making notes. Later, he took his flea-bag along, and when the gorillas settled for the night, bending bamboos together to make a spring mattress, Schaller unrolled his bed and slept well within sight, sometimes as near as twelve feet. He did not approach any of them closer than this, but after a while, they became so tolerant that they even shared the same branch with him.

At dawn, the animals awoke and set about getting their breakfast off giant parsley, various tender herbs and fruits of the forest; Schaller set about getting his own with a tin and a primus. No gorilla interfered with him. Still later, he took cameras and a cine-camera, which he always used cautiously

Thirty years ago. *Above*, members of the canoe-tribe who ferried us across Lake Bunyoni: as the district had no large trees, the canoes had to be carved-out in the impenetrable Forest many miles away, and carried to the lake. *Below*, face to face. J. H.'s photograph of Lutembe, the sacred crocodile of Lake Victoria, still secretly used by the natives in those days to give 'snap' judgements by ordeal. He died at a great age—a legend in his lifetime



flamingoes. *Above*, part of the thousands of Lesser Flamingoes on Lake Nakuru, disturbed by our approach. They take off after running on the surface of the water with long strides of their spindly legs. *Left*, three Lesser Flamingoes, coiling their flexible necks and showing the unique beak adapted for sifting mud in an upside-down position

so as not to intrude upon their essential privacy. He would thus follow a troop for several days and observe their family life, their inter-dependence, the maternal ties between mothers and babies. Once he saw a mother carrying her dead baby for four days, till finally she dropped it, herself unable to bear the smell. They hold their small babies as we do, cradled in the arms; later, the infant rides on mother's back clinging to the fur.

Schaller had never seen a fight between gorillas—though they often confront each other in fierce challenges. The bluff seems to satisfy their honour, they drop the question and continue their feeding, or sleeping, for they sleep at least eighteen hours a day; as do most wild animals, he added.[1]

He showed us photographs of the creatures looming between drooping branches; suspicious yet inquisitive, their sunken eyes watchful, the outline of their dark bodies merging with the heavy shadows of the tropical forest; they seldom come into the open savannahs to enjoy the sunshine. According to the observations of van Kourland, they must have retreated into dark forest when early man first evolved a weapon with which to fight. Until then, a troop of gorilla or of chimpanzees, more mobile and agile than man, would easily have got the upper hand.

All this was in fact but an appetiser to our projected journey into the gorilla mountains, the great Virunga range of volcanoes rising on the frontier of Uganda and the Congo in the Kigezi district. Schaller agreed to meet us there in a few days, and to come with us to the gorilla forest. We were both intensely looking forward to this trip, which was also a sort of pilgrimage to the memories of thirty years ago. We had then flitted entirely to see gorilla, but this time, with George Schaller as our link, we felt we could hardly miss.

[1] He has published his findings in *The Mountain Gorilla: Ecology and Behaviour*. (University of Chicago Press 1965.)

23. Kabale

Kabale and more reminiscences – Lake Bunyoni – the canoe-men – our foot safari up Karissimbi beyond Africa's Grave – the great volcanoes at close range – the vain hunt for gorillas – the White Fathers and the White Mothers of Lulenga – escorts of black virgins to scare leopards at night

We left Mwewa Camp at about 10.30, with Ali at the wheel, and John Mills, game ranger, Southern Range, to guide us. He took us to the east end of the Q.E. Park, where roam the greatest multitude of topi I have ever seen. The grass was green and they were sleek and glossy with good food, space and security. Over this undulating park-like land, stretching as far as the eye can see and beyond, they moved in long processions; sometimes galloping across our bows or dispersing in small groups which coalesced as soon as the car approached too closely, the bucks defiantly facing us. The skyline was a lovely living frieze of these graceful antelopes, the plain like a moving sea.

On towards the uplands. Soon we started to climb up and over gradients and shoulders and cols trimmed with giant lobelias and senecios and tree-ferns. The views were constantly changing and opening into vistas of more rounded hills, with ever-thickening cultivation right up the steep slopes in terraces and contoured ridges. Bananas grew in the deep clefts where moisture lingered, with maize and finger millet,

sweet and ordinary potatoes higher up. Pressing against each other, the hills were like a flock of sheep marching towards the horizon, laced by the tight loops of the road.

After climbing to 8,000 feet, we descended by a gradual slope to Kabale. This was in 1929, the starting point of our foot safari to the Parc National Albert, by way of Lake Bunyoni and Lake Chahaffi, Ruchuru, Lulenga and Lake Edward. The motor-road—then a mere dust-track—stopped at Kabale and from there we set off, equipped with long bamboo sticks, with 50 porters dressed in single skins tied on one shoulder, balancing our loads on their heads. We had a sort of worm's-eye view of this heaved-up landscape. We crossed Lake Bunyoni in dug-out canoes manned by the chanting Canoe-tribe, paddling among blue and pink water-lilies; the lake shone like a silver-indented leaf, studded with green islands, framed in wooded hills—one of the loveliest lakes I have ever seen. I brought back from this lake a pretty lake-otter skin which I bargained for from a group of young Africans. It was quite expensive, and I heard the reason only later: it is an infallible charm against syphilis.

Now, in 1960, as too rapidly the Humber devoured the miles which we had paced on foot, our eyes scanned the views which held our memories, searching for the images which, at the time, had so deeply impressed us. We rediscovered our Lake Bunyoni, set like a familiar jewel in its sharp green folds. We dismounted where the view unfolds the magnificence of the great volcanoes, the giants holding the sky on their brows: Muhavura, Mgahinga, Sabinio the Father of Teeth, Visoke—and in the east, Karisimbi, nearly as high as Mont Blanc, Mikeno, the Matterhorn of Africa, and the still active volcanoes Nyiragongo and Nyamlagira.

But time pressed, and so, not without a feeling of rebellion, a sense of unfulfilled expectation, did we re-embark and continue our journey. It had now become a sort of double

journey, a counterpoint of inner and outer landscapes, of remembered and of new visions. More and more landmarks fell into place, recalling our young selves walking like ghosts across our present.

And what a walk it had been!

After crossing Lake Bunyoni and Lake Chahaffi we had climbed up and down the low foothills of that volcanic country, and camped where we had that first staggering view of the great volcanoes.

We crossed the frontier between Uganda and the Congo, and started from the White Fathers' Mission at Lulenga to climb into the wild ramparts of Karisimbi. We hoped to find gorillas up the mountain, and the really stiff part of our walk began: first along tracks winding between enormous grasses, prickly bushes and dense vegetation; then a tortuous game path with footprints of many creatures, occasionally blocked by trees pulled down by the elephants.

That night our tents were pitched on a small platform, the porters cutting themselves branches for their precarious shelters; they huddled round a smoky fire, eating the posho mash they had carried in their pouches. This was all they had to eat after that strenuous climb, and the official tariff for this service was threepence a day. It was very cold here at 10,000 feet, and their bare limbs made me shiver. They seemed not to mind and went on smoking their pipes, chatting and laughing together.

The next morning had still been very cold, with drifting mist. By eight we were off to Akeley's Grave through a beautiful ravine edged with giant trees sprouting orchids, then uphill, scrambling on a steep path, past hagenia trees with giant leaves, giant lobelias, giant parsley and giant nettles, the biggest I had ever seen, with stings like the very devil. This was indeed gorilla country. The guide showed us a recent foot-print on the moist earth and some fresh dung—but was

extremely reluctant to follow their tracks. We did nevertheless climb on to 11,500 feet, up to the Rukume Plateau, the guide hacking a way through the giant parsley and the docks and nettles, the tree-groundsels and brambles. Tantalisingly a score of gorilla nests lay all over the place, many among the roots of trees with hanging fringes of lianas protecting their entrance like bead-curtains. Their floors were made of dried grasses and shaped like cups; generally fouled with droppings, some of them layered over with fresh vegetation, showing that nests may be used more than once. Julian made me get into one of the less unappetising ones, and solemnly took a photograph on the heavy movie-camera which had been trundled all the way. I confess I was not happy making this symbolic gesture, and wondered what would happen if the Old Man of the troop came walloping back. We had heard hair-raising tales of their savage attacks, but had been warned that we might shoot only in mortal danger. "The world," as the charming Baron Cartier de Marchienne, then Belgian Ambassador in London, once said, "has been made safe for gorillas, at least in the Parc National Albert" The guide shared my apprehension, and kept watching the waving tops of the giant parsley.

We lingered on this beautiful alpine meadow of the slopes of Karisimbi, alert to any sign of life, but were totally frustrated. The guide had guided us where *he* could be certain of being safe from gorilla. Forced to accept defeat, we descended to camp, crestfallen and tired; next morning we set off to return to the Mission in drenching rain, spending eight hours slithering down the 5,000 feet. There was much spoor of elephant, buffalo, lion, leopard, but never a live beast did we see. No sound was heard from the dark forest, yet it must have been teeming with animals of all sorts.

The Bons Pères at the Mission received us with open arms and regaled us with food and the wine they make themselves,

as well as with the broadest stories imaginable: for Père Hyacinthe and Père Hippolyte, no holds were barred; they kept us in gales of laughter. The White Mothers' Mission where I stayed later for a few days lived under a much sterner rule but they had their own sense of fun. One evening, after sundown, I decided to walk over to the Fathers' to see Julian, just returned from an attempted climb of Nyamlagira, but the Mère Supérieure insisted on providing me with an escort of frisky-looking young catechumens armed with drums, kettles, old tins and what have you, in case I met a prowling leopard in the dark. We all proceeded through pitch darkness to the accompaniment of the most magnificent explosion of noises. Any leopard would have had the fright of *his* life—our racket soon penetrated the walls of the Mission and the startled White Fathers rushed out with lanterns and sticks—and fits of derisive laughter.

Several novices were taking orders at the Lulenga Mission, but their vows were taken in yearly instalments. This wise principle is still applied in Africa by an understanding Catholic Church.

34. Kisoro

On Mt. Mgahinga with Reuben the tracker – visit to the Impenetrable Forest – our 1929 Mucho adventure – Mbarara – fly back to Nairobi

Perhaps a bit too full of our memories, we approached Kisoro, with large warnings "*Ralentissez*" and "Go slow" side by side, put up since the Congo troubles and the Emergency following Independence. For Kisoro is the first centre on the Uganda side of the frontier between the Kivu Province and the Kigezi district of Uganda. This road links the two countries: 4,000-odd European refugees fled in panic through Kisoro to Kampala and farther during early August, '59 as well as great numbers of Congolese and their famished cattle, swarming down the mountains into already over-populated country.

We landed at the Travellers Rest, where we were warmly welcomed by Albert Baumgartel, the British-naturalised German who built it. He is the patron saint of gorillas, their friend and protector, their link for such as us, who want to see but not disturb them. For Baumgartel only tolerates guests whose intentions are pure. Very likely, but for him, the few remaining troops up on Mt. Mgahinga would have been shot by trophy-hunters. His African tracker, Reuben, has the responsibility of knowing where the gorillas are, and of protecting them as much as possible.

During lunch, Baumgartel naturally talked gorilla. He told us the story of a young gorilla he had just sent the London Zoo. The troop of five females had abandoned their old male who was slowly dying of some sort of dysentery and heretofore stinking even to their nostrils, but the young gorilla refused to leave his father, and though only two or three years old, kept watch over the old man until he died, and even then remained by the corpse. Reuben thought the harem would claim him back, but apparently they did not, and the little noseless black-faced creature just sat there, moaning alone. Baumgartel decided to capture him for the London Zoo, at the same time retrieving the carcass of his dead father for the Kampala Museum. And so it came to pass that this baby gorilla is called Reuben after the tracker who found him and brought him down the mountain in a ground-sheet. He was a sad little thing, and still looks sad in his cage at the zoo where we later saw him, even though he has the company of a lively young chimp[1]. How profoundly they differ, these two orphans from the wilds! The chimp is resourceful, amusing, cocky, impertinent. The gorilla seems to brood, the captive of dark memories and hopeless frustrations. He moves more ponderously, the knowledge of fear appears to be upon him. In the evolutionary tree, he is the branch nearest to man, and it is probably why one has a guilty feeling as one gazes at him and his adult brother in their prison; these inarticulate relations of ours, monstrous yet magnificent, reject our pity and remain aloof.

But to return to Kisoro: George Schaller arrived soon after us, and we planned our climb for the next day.

The volcanoes were out in full array; dark-green with prussian-blue sheen, thick dense evergreen forest at the foot, pale-green bamboo forest above: home of the gorillas. We started our climb from the bottom of Mt. Mgahinga, accom-

[1] Reuben died of the November 62 fog.

panied by George Schaller and John Mills. We set off slowly, knowing ourselves badly out of training. Reuben guided us in zigzags up the steep mountain, past little patches of scratched earth among black lava rocks, rich-looking loam, growing beans.

We took many rests to admire the view and catch our breath; for the steepness and the altitude are to all newcomers a considerable strain. Here and there as we ascended, the forest had just been cut and cows were wandering among the bushes, up into the bamboo in search of giant parsley.

Reuben's boys came to report: the cows have driven farther uphill the band of gorillas which had been located just about here, and there was a lot of head-shaking about our chances to catch up with them. We decided to carry on and climb a few more hundred feet—still hoping at any moment to be alerted and to freeze in our tracks with the prospect of gorillas. Alas, the creatures which did in fact freeze us in our tracks were black ants, an army of which we disturbed in their forays; singling out Julian for their attention they climbed up inside his trousers and bit him. There was nothing to do but for him to strip as fast as possible. The column halted while assistance removed the ants.

By that time, we were up about 9,000 feet and moving through the moist and rather sinister bamboo forest; projecting over it was a cohort of tall trees like a procession of Nibelung giants, hung with the pale rags of lichens and lianas; lush grasses were growing waist high among the bamboos. Bent and twisted into a springy mattress, these bamboos were actually the gorillas' nests; unlike the ones we saw on our earlier voyage in the Parc National Albert which were at ground level among roots of big trees, these were about two feet up, and these too, were fouled in most cases.

Nests in plenty, but alas not a single live gorilla. We were bitterly disappointed. Our only hope would have been to

spend the night at the col, and set off next morning in close pursuit. But we were not equipped for this, and had to accept defeat.

We turned back and degringolated down the mountain much faster than we had climbed it, taking in the darkening skies, the glimmer of Lake Mutandá in the grey-blue distance, and the awe-inspiring slopes of Muhavura with their steep clefts and bare inhospitable ridges. At that precise moment the mountain shook under our feet and a great chunk of rocks and dust crashed down the side of the volcano with a booming roar, echoing down into the plain like thunder. It was an earth tremor, a not uncommon event in these parts. We made the car as rain began to fall and met boys and girls from the village with gourds and basins and petrol cans filled at the well, returning smiling under the double douche of rain and the water sloshing over the rims of their buckets.

Meanwhile the Travellers Rest had been invaded by the British Army on patrol exercise, pink-faced Britons with a big thirst. They were joined by the local inhabitants, and the whole place soon buzzed with tall stories—mostly about the "Emergency." Tales of panic and flight, here for the most part considered unjustified, and indeed proved so by the devotion of the Congolese servants; for they had followed their masters a few days later with all the precious belongings which had been left behind.

Having been so cruelly deprived of gorillas on this our second attempt—"Third time lucky," said Baumgartel, "you will see them next time you come"—we took our leave of him and his volcanoes to return to Entebbe. Up and round the winding roads, down and through the papyrus swamps on causeways, passing small fields of black earth with women at work, baby strapped on back, we retraced our motor-tracks,

but made a small detour to see the Impenetrable Forest. This is now a Forest Reserve, preserved as the last remnant of what once covered the rich tropical hills of all Kigesi District. It is like a green carpet tightly fitting the steep slopes and ravines; trees up to 200 feet high rise up above the matted creepers and lianas, thorny vines and pincushion bushes, but the whole forms a single mass of vegetation which surges over the hills and mantles their sharp ribs. The ground below is felted with a thick mat of tangled grasses and green tongues sucking and creating a protective moisture; green in all its multiple tones, down to a final black; impenetrable except to some troops of chimpanzees and gorillas. This single-minded fertility awes and appals: what could man do, faced with such a power, such cannibal agglomerations of chlorophyll?

We turned back and followed the Kagera River; the new road curls and twists along its course, sometimes built on causeways across papyrus swamps. Checking our journey on the map, we came upon Mucho—the name of a small post which we had cause to remember even if we failed to recognise the site. It was the place where in 1929, we fetched up after what I shall always consider an epic march in Darkest Africa.

We had then rashly undertaken a double march from Kinanera, through Kisoro, and, overtaken by darkness, had lost our way and our sense of direction among all the ups and downs of game trails. Most of our porters had vanished somewhere inside a thick bamboo forest quite recently ravaged by elephants, and the official guide had given up. By nine-thirty, having walked since dawn, we were half dead, and going round in circles in pitch darkness. Suddenly out of nowhere an ancient native loomed up, and nodded knowingly when we said Mucho. He made us turn back, and we descended a hill so steep that the flashlight I held only lit the top of the old man's head in front of me. Soon our new guide started calling and yelling across the valley space, and to my fascinated

surprise a voice which was not an echo answered from a great distance. The guide went on intoning long syllables which pierced the almost tangible darkness and the response floated up like a pin-prick from another world. By this thread of sound the old man guided us. For nearly another hour we forced our legs to carry us, desperately tired though we were; walking in a strange daze, I had the extraordinary feeling of being separated from my body. Another half-hour passed, and suddenly out of that thick night there was light, a beacon fire on a small hill just in front of us, fed by insect-like men throwing sticks which leapt forth into great licking flames of joy. Never was there a more welcome sight. One more effort and there we were, in front of an enormous blaze, with mats to sit on and recover ourselves, while one by one, the porters came dribbling by with their loads on their heads—the last one came in while we had breakfast, with a miserable hen flapping on top of the tin-bath. I never understood why these porters had not dumped our silly belongings in the swamps and made for home—but not one failed us, and all for threepence a day!

These reminiscences were crowned that night at Mbarara, where we met Temple-Perkins, now retired D.C., who remembered our visit in 1929 and the young lion he had killed that day, one of the many predators of the district. Little did we know then that that dead lion was the only lion we were to see on our safari. It is a fact that, thanks to the newly-created National Parks, visitors are now able to watch many more wild animals in conditions of wonderful ease than one did thirty years ago, unless one was able to spend a great deal more time and energy walking through the land.

Mbarara, then a small outlying post, is now a flourishing township, with Africans in smart jackets driving powerful lorries and shiny cars. Under their modern garb, it was difficult to distinguish the beautiful Bahima tribesmen we had

noticed before—an Arab type of African with lovely oval faces and almond-shaped eyes. All the familiar landmarks had vanished under a rash of new bungalows; even the D.C.'s house was unrecognisable.

Our journey continued through cultivated fields and pastures where Ankole cattle with their superb lyre-shaped horns browse obediently. We jumped out of the car between heavy downpours to pick purple-casqued and yellow orchids, and the beautiful fireball lily, Haemanthus, which grows in clumps at the foot of bushes.

Ali drove on and on—through Kampala and back to Entebbe wreathed in its multifloral greenery, its religio-political problems fermenting on the eve of Independence. All too soon, with gratitude laced with the sadness of departure, we were back in the plane over Lake Victoria, once more over Suswa and down to Nairobi.

35. Nairobi

Nairobi National Park – cheetahs and gazelles, lions and giraffes – Lake Nakuru National Park and its half-million flamingos

We returned to the hospitable Cowies. Their house is on the edge of Nairobi National Park, which we crossed every time we went to and from the city. Every time also that we had an hour to spare, we drove into its undulating plain under the Ngong Hills, with increasing appreciation of this unique Park cheek by jowl with aerodrome, sky-scrapers and Big Business. It does in fact contain almost every wild animal of East Africa (except elephant—though they have been seen crossing it—gerenuk, roan antelope, sable and some rarer members of the hartebeest group). One day we saw a mother cheetah with her kittens, dishevelled little bundles of spitfire watching us suspiciously; and under a clump of bushes, a small lion pride blinking lazily as we drove very close by them; an ostrich on her nest, upright supercilious periscope scanning the horizon. Giraffes have taken to suburban life and their curiosity can become embarrassing: in fact Colonel Cowie had to install a cattle-grid under the gate of his garden, to keep out these long-legged prowlers.

This is all as it should be, for Nairobi was built on a rich game-plain, and its early days were chequered with wild-life encounters: Colonel Meinertzhagen reports a game of polo on the barrack ground held up by a strolling rhino; lions came window-shopping, and hyenas and vultures made quite a

living in the backyard of the Stanley Hotel. But that was sixty years ago! This National Park was fortunately started before all the game had been shot.

There was, before we returned to London, one more memorable journey—to Lake Nakuru and its flamingos. Having no outlet, like most lakes in the Rift Valley, Lake Nakuru is soda-impregnated and very shallow; descending the gentle slope towards it, one was dazzled by a blossoming of rosy-pink stretching in a solid fringe all along the muddy shore, emitting a chorus of protest and a strong essence of poultry-yard. As we walked nearer, the flamingos cunningly retreated just out of camera-shot, folding and unfolding their spindly legs to step daintily away, with accentuated quackings and squawkings. As we intruded still closer, the nearest birds decided to take off; beginning with a long run on the surface of the crinkled water, they opened the fullness of their brilliant wings, deep salmon edged with black; in slow motion, beat of wings and stride of legs, they spilled themselves into the crowded air. Getting airborne may take them five or six seconds, their stride on the water lengthening as their wings grip the air. Once in flight, they draw up their under-carriage and flap majestically away, to a safer anchorage farther off-shore. Wave after wave take off, while the central mass, too closely packed for flight, cackle and gabble. Endlessly their manœuvres continue; wheeling in wide circles, splashing the darkening skies with a punctuation of rosy-white: a hundred thousand heads with but a single thought.

How many are there? Unimaginable numbers, their single patterns merged in a pink foam, and only discerned at close range: one-third pale-pink neck ending in the small head which carries a shovel-like bill, one-third dark-pink oval body set at a slight angle, one-third backward knee-jointed sticks of legs. They poke that long thin neck into the water, their upside-down beaks squishing a nourishing diet of crus-

taceae or blue-green algae out of the mud, which they also manure and enrich. The bill has special horny plates with which the food is sifted.

Absurd creatures—unconvincing, inelegant fowl; like the ostrich and the giraffe, an extreme conjunction of disproportionate parts, which, however, enables them to make the best job of adaptation to their peculiar environment.

Scientists have just begun to explore their nesting grounds on Lake Natron and Lake Rudolf, and describe their courtship habits. As they are now a protected species, they thrive and multiply. Leslie Brown counted one and a half million lesser flamingos on Lake Nakuru; one and a half to two million on Lake Harrington; a world total of five million (this was in 1957).

But only the other day, we heard of their terrible plight: Lake Nakuru was drying up, for lack of seasonable rains. So well adapted to its rich humus, the flamingos could not switch over to a different diet and, crowded out by their successful breeding, they died in their thousands. The chicks born on a fast-receding shore were trapped by the drying crust of soda round their ankles, and would also have perished in their thousands if a proportion had not been rescued by teams of volunteers.

In this maltreated and precarious land of Africa, the hazards of climate too often can turn into calamities.

36. Return

And so came the day of departure, of good-bye to the wild lives of Africa.

Looking back on our voyage through all these varied and wonderful Parks and Wild Life Reserves, I see it as a pilgrimage to a former aspect of our world. It took us back a million years to a surviving pleistocene community, once the dominant climax of life *before* man—the splendid product of that miraculous process of existing and becoming, in and by which we live to-day.

It was an interdependent community organised to make the fullest use of its assets, balancing the risks with uncanny precision, fitting each species of plant and animal into its appropriate niche: all their separate patterns of behaviour directed towards common survival. And if, inevitably, individuals perished, the species and the communities to which they belonged continued to thrive and to survive.

Until to-day.

Modern man, evolving slowly out of this stream of life, carries evolution's most precious (and dangerous) gift of all: the gift of flexibility and invention. Emerging within this wild economy of nature, at first terrified by its forces and dangers, he soon learnt how to use his cunning and intelligence to master it, and too often, to destroy it. Looking at the magnificent wild creatures of Africa, I realised how easily these iron-clads, these pachyderms and these carnivores had become the victims of man the tool-maker—and how inevit-

ably he had proceeded to destroy the ancient biological creation. Sixty thousand years ago, he invoked various superstitious aids to bolster up his courage for his dangerous hunting; to-day he relies on a fast Cadillac and sten-gun to kill a hundred Arabian oryx in an hour.

One does not return from a journey which took one back a million years without learning to read the writing on the wall; in this case one might say the writing on the face of Africa, large as life for all to see. Hurricanes, volcanic eruptions, tidal waves and earthquakes are cataclysms uncontrollable. But the traveller cannot be blind to the dire consequences of man's gradual dominance over the rest of nature.

It is all too easy to destroy. Unbelievable as it may seem, 90% of the large animals of Africa have succumbed to the pressure of man during the present century, some species disappearing altogether. It is time to take stock of the situation: 10% of an irreplaceable order of creation remains in a diminishing habitat, shrunk by the constant devouring expansion of man and his works.

It is the coming of the white man in Africa which has triggered of this mass destruction of wild animals. Rightly, therefore, do white men now concern themselves with the dismal prospect ahead. The winds of change cannot be halted, and Africa, like an immense ship, rides in the thick of them, with an increasing cargo of human lives and their expectations, and a diminishing cargo of wild lives. Essentially, the preservation of these creatures will henceforth be in the hands of Africans, who inherit alike the benefits and mistakes of our culture, and also its responsibilities.

Julian, who sounded the alarm as early as 1930, will take up the tale of what is being done at this eleventh hour, in attempting to preserve, not merely the memory, but the full dimensions of the incomparable wild life of Africa.

POSTSCRIPT.

Postscript by Julian Huxley

The postscript to our journey was the Arusha Conference held in Tanganyika in the September of the following year. And I must write it, as I was there and Juliette was not.

The Conference on the Conservation of Nature and Natural Resources in Modern African States, to give it its full title, was the first international conference on wild life conservation to be held in Africa. Its high point was the Arusha Declaration. This brief document, signed by Mr. Nyerere, then Prime Minister and now President of Tanganyika, and two of his Ministers, was the first declaration by any government in the world of its belief in the value of wildlife as a national resource and an official commitment to its conservation for the benefit of posterity. I must quote its notable first paragraph: "The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a source of wonder and inspiration but are an integral part of our natural resources and of our future livelihood and well-being."

But the Conference was important in many other ways. It hammered home the surprising fact that vast areas of Africa will deteriorate if brought under cultivation, and can yield much more good meat through scientific game-cropping than through cattle. It underlined the value of National Parks, not only as a major source of revenue from tourism, but as a basis for national pride and prestige. It made it clear

that the preservation of particular species of animals was of secondary importance: the main aim must be the conservation of the habitat. It brought out the key position of ecology as the basic science for emergent African nations, and of the ecological and conservational approach in African education.

It also brought out the importance of educating Africans in the value of wild life, not only its physiological and financial value but also what I may call its enjoyment and interest value. The memorable discussion on this last point was opened by Professor Monod from Dakar. Professor Monod is one of the world's last polymaths. His speciality is fossil fish, but he is also an authority on zoology, botany, ecology and conservation, on African art and history, on museum techniques, and on the Sahara, besides being a writer of interest and charm. he has also been described as an intellectual saint. Frase Darling and I supported our arguments with quotations from English poets and writers (it must have been the first occasion when Traherne was publicly mentioned in Tanganyika!). Peter Scott, Barton Worthington and Professor Grzimek stressed the scientific and aesthetic values of wild life in this overcrowded and over-mechanised world. And Professor Wasawo, who teaches zoology at Makerere College in Uganda, demonstrated by his passionate speech how profoundly Africans can be stirred and uplifted by fine scenery.

During and after the Conference, delegates were taken to see some of the wild life and wild habitats they had been discussing in Arusha. The first was Ngorongoro. We reached the hotel on the centre rim well after nightfall, our headlights revealing an elephant, three buffalo and a couple of zebra on the approach road. (Zebra on the rim are a sign that grazing on the crater floor is poor.)

At 7,500 feet, the night was bitterly cold. But the hotel is prepared for cold nights. There was a glorious log-fire in the huge fire-place. In the bar, crowded with delegates from over

twenty countries, the proprietor brought out his charming baby cheetah to be admired and stroked.

At 6.40 a.m. in the chilly morning, dense mist still obscured the view; but as we waited for the cars it began to clear and we caught glimpses of the opposite rim across the ten miles of crater. By the time we began the descent, the whole scene was in full sunshine, revealing large herds of Masai cattle close below, and group after group of wildebeest beyond, diminishing to mere dots in the distance.

During the Arusha Conference there had been a meeting of the government committee set up by the Tanganyika Government to deal with the still-vexed problems of the Conservation Authority, and some of the expert delegates had been invited to join it—Pearsall, Fraser Darling, Peter Scott, Barton Worthington, Professor Grzimek and myself. It had been decided to hold a further on-the-spot meeting at Ngorongoro, and here we were, gathered by a stream that originated in a spring at the base of the crater wall, together with Fosbrooke, the sociologist (later Administrator of the Conservation Authority), Chief Edward, an educated Masai who looks after the interests of his tribe on various government bodies, Max Nicholson, Director-General of the Nature Conservancy in Britain, and of course the local Game Warden and Forestry and Agriculture Officers.

We sat on the ground in the sunshine in a grove of pine trees; on the other side of the stream a group of Masai men in ochre skins, some propped on their formidable spears, had collected to watch the white man's peculiar proceedings.

The problem here is how to turn Ngorongoro into a real National Park, which of course eventually means turning the Masai out of it. Unfortunately it and all the rest of the Crater Highlands of Tanganyika are on Masai tribal land, and for a long time past a small Masai community, with their cattle, has lived in the crater. Of recent years, other Masai from out-

side have taken to bringing their herds here at certain seasons, not only accentuating the grazing pressure on the crater floor, but illegally invading the rim and its reverse slopes, burning trees and making clearings, even building bomas, while their cattle ruin the forest and its ecology.

Part of our time was devoted to finding out whether the terrible drought of 1961 was the final culmination of a long destructive process of habitat damage by the Masai, or a recurrent phenomenon of the Tanganyikan climate. Both conclusions, it appeared, were true. Eventually one elder recalled that the streams had failed once before in tribal memory, about forty-five years ago. On the other hand, Professor Pearsall soon made it clear that there had also been a serious deterioration of the habitat.

I should recall that in 1956, as a result of the Tanganyika Government's inept handling of the problem, Pearsall had been commissioned by the Fauna Preservation Society in Britain to examine the entire problem of the Serengeti National Park area, including Ngorongoro and the rest of the Crater Highlands; and as a result the government was impelled to set up a high-powered Commission of Enquiry and eventually to establish the Conservation Authority.

Here was a first-class ecological mind, backed by first-hand local experience. It was an illuminating experience to see it in operation. Before the morning was over, we had been able to visualise the crater as it was a century ago, with a fringe of forest hanging from its interior rim, and with the forest on its exterior slopes still dense and virgin. The crater was therefore nourished by more abundant springs, its floor carpeted with lusher green and grazed by a much greater array of ungulates.

The main conclusions seemed clear enough. The potential carrying capacity of the crater, in terms of numbers of wild ungulates per acre, is perhaps the highest in the world. But the habitat has been deteriorating over the past half-century or

longer, and its water-supply has been steadily reduced. It will be necessary to carry out experimental reafforestation on various key spots on the crater's interior wall, at the same time seeing to it that there is no further destruction of the water-retaining forest on its outer slopes. If the place is to retain its position as a unique showcase of African wild life, the outside Masai must somehow be prevented from invading the area with their cattle. But as the place is part of Masailand, before it can be proclaimed a Sanctuary or National Park the Masai will have to be provided with new water-holes in other parts of their area. Incidentally, such expenditure would be a good financial investment if it made possible the establishment of Ngorongoro as one of the world's great spectacles.

The Masai, we were told, were slaughtering an increasing number of rhino. When detected, they always pleaded self-defence: actually one can be sure that other motives were at work—not only does a dead rhino provide hard cash from the sale of its horn, but its killing (with a spear, remember!) provides a gratifying outlet for Masai courage and virility.

Masai courage and virility certainly reach a high level. Only two days before our visit, an eleven-year old Masai herdboy wanted to water his animals, but found an elephant at the water-hole. After half an hour, the boy's patience became exhausted, and he attacked and killed the elephant with his spear. This was certainly extremely brave, but we couldn't help thinking that he might have exercised his patience a little longer. . . .

At the manyatta which the resident Masai had set up on the crater floor, we were surprised that there was no proper boma for the cattle, with strong thorn fence to keep out the lions and hyenas. However, we were told that the local medicine-man-cum-chief had a spell which kept lions off, so that no strong fence was needed; round his hut was a toy symbolic fence, which doubtless served as a vehicle for his magic spell. Well

away from the smelly huts and the women, a group of men were playing M'bao, the complicated game which is played in various versions all over Africa, moving a pebble with great deliberation from one hollow in the wooden board to another. They paid not the least attention to our approach: we might have been common fellows from the street forcing ourselves on the notice of a bridge four in White's Club.

We lunched by a pool where Masai boys were bringing their cattle down to water. Huge rushes, I think giant cyperus, towered out of the reeds, from whose shelter dabchicks (the same species as at home) and little black crakes were calling. Water speedwells were growing in the shallows: a botanist in the party said that they were a British species, *Veronica catenata*. How this common British plant comes to be growing in the middle of Africa I must leave to the phytogeographers.

Later, as we scrambled up the steepening slopes towards the crater rim, a very large bird of prey glided close over us. Its long wedge-shaped tail gave its identity away: Max Nicholson and I gave a simultaneous shout—"Lammergeier, lammergeier," and every fieldglass in the party was trained on it. The lammergeier is a widely distributed species, still to be seen in Europe in Greece and the Pyrenees, and ornithological opinion is now inclining towards the idea that it is an aberrant eagle which has adopted a vulturine way of life. The books state that it practises the strange and indeed unique habit of flying off with the larger bones of the carcasses it visits, and dropping them on rocks to get at the marrow: but nobody seems to have recorded actually seeing it do so, until this day.

This bird was carrying a longish object in its talons. Could it be a bone about to be dropped? It was. Just before disappearing over a shoulder, the lammergeier let go of the bone. But it failed to crack it; for after a few seconds it reappeared with the bone once more in its claws, and dropped it

again. We all rushed off in that direction, and found the bird's bombing range—an area of unusually large rocks unusually densely packed. It was full of broken limb-bones, some apparently of wildebeest, others of smaller creatures like gazelles. In the centre was a specially large rock, liberally spattered with avian whitewash. This was doubtless where the bird perched after its meals of marrow; but it may well have come to serve as a bombing mark, as Max Nicholson suggested. I now regard it as highly probable that Aeschylus *was* killed by having a tortoise dropped on his bald head in mistake for a rock; only the bird that made the mistake was surely not an eagle but a lammergeier.

On the way back we stopped at Manyara. Since our visit in 1960, the Park authorities had built a real bird observatory out in the water, Peter Scott had occupied it the day before: Max Nicholson and I spent a happy but strenuous hour seeing if we could beat his tally. We just did—with a total of forty-four species, including thirty-six water-birds and waders. I had my first sight of painted snipe, that handsome bird in which the hen is brighter-coloured than the cock, and courts and displays to him instead of the other way round. And there were plenty of the pretty little chestnut-banded sand-plover, one of the most ecologically restricted bird species in the world, found only on the shores of highly alkaline African lakes—the soda lakes of the Eastern Rift, and Lake Makarikari in eastern Bechuanaland.

After the Conference I was flown, via Narok, to Seronera in the Serengeti, to join the Mara River party. On the way, we flew over Lake Natron, the largest of the strange soda lakes in the trough of the Eastern Rift. It was indeed strange, looking curiously like a northern lake in the early stages of freezing over: the apparent ice-film was actually composed of "soda"—sodium carbonate and sesquicarbonate—crystallising out at the surface.

It was good to be at Seronera once more in the Harvey's pleasant house, to see the comings and goings of creatures at the bird-table, and the tawny plain beyond, beset with flat-topped acacias, with gazelles peacefully browsing, and now and again a mixed herd of wildebeest and zebras galloping across in a haze of dust. A pair of white-naped ravens, great birds with formidable beaks, had taken up their quarters on the rock kopje that morning, and had scared the dassies so badly that they refused to emerge from their crevices to be fed.

Next day the whole party set off for the long drive to the Mara. Wild country, with a fair amount of wild life. We stopped for lunch at a small patch of high forest centred on a little stream—wonderful buttress trees and looping lianas. Here I saw my first honey-guide in action. The story that honey-guides guide men to wild bees' nests so that they can later profit from the remains was for long dismissed as mere legend by ultra-scientific laboratory biologists. But Friedman's careful studies have shown it to be true. This remarkable behavioural adaptation must originally have been evolved to guide honey-eaters like ratels to their goal, and have been later extended to that other predator of bees, African man. The new and surprising fact which Friedman discovered is that the honey-guide eats neither the honey, nor the grubs, nor the dead bees in the comb. It confines itself to the wax, for whose digestion it has evolved special enzymes, unique among vertebrates (though found also in the wax-moth, Galleria). So long as we were among the trees, the bird kept up its insistent calling, but stopped the moment we moved out into the open.

A big tented camp had been prepared for us at our destination. Close by, the brown Mara River swirled its croc and hippo inhabited waters between high vertical banks. On the tall forest trees beyond, parties of the large woodland hornbill would perch and call. The camp was at the edge of a big

clearing, on which a herd of waterbuck often came out to graze—a pleasant sight for over-civilised eyes.

One day I decided to explore the high forest in a loop of the river. Lawrence-Brown, the head of the safari firm which had organised our Mara River excursion, warned me to be careful, as buffaloes frequented this area. My exploration was very careful, but I saw no buffaloes, though the forest was criss-crossed with tracks.

Passing some magnificent trees on my way across to the other side of the bend, I was rewarded with a splendid sample of wild Africa—the swift yellow river pursuing its course between dense forest walls, with kingfishers and waders along its stream, and hippo trails pushing up its banks.

But when I tried to return to my original point of entry, another aspect of wild Africa revealed itself—the ease of losing one's way, especially in high forest with the sun vertically overhead. Though I knew with my reason that the patch of forest was much too small to be lost in, I was seized by a quite irrational incipient panic. However, I was bound quite soon to strike the other side of the loop again, and then was of course able to find the proper exit. But it made me understand the panic horror that grips those who really lose their way in the wild.

Next day the party was taken to the richest part of the Mara plain, the region where the stampede of big game was filmed in *King Solomon's Mines*. That was elaborately staged, so we did not see anything so astonishing, but while munching our lunch in the lee of a thicket we were vouchsafed a very wonderful natural spectacle. The distant hills, low and rolling, were dotted with hundreds of wildebeest, with some larger black dots of buffalo among them. A pair of secretary birds marched slowly across the foreground, with a dozen stationary giraffes just behind, facing in different directions like giant cranes at a seaport. And then beyond them again, a splendid

troop of seventy or eighty zebras rushed into view as if entering a circus arena, then cantered curving round and settled down to graze just behind the impassive giraffes.

On the next day, two lessons were impressed on me. One was the brittleness of this part of Masailand; the other the fact of improbable historical recurrence. All the country from the Mara River to near Narok is ecologically similar—regular East African plains-game savannah. Or rather it *was* all originally similar to the game-rich paradise of yesterday, whose ecological virginity has been strictly preserved against pastoral African man and his beasts. A bare ten years ago, the northern area was thrown wide open to this alien irruption. And yet, though it has slightly more rainfall, it has by now already been reduced to barren semi-desert, with only miserable remnants of wild game, and the bare soil turning here and there to dust: and it will clearly be degraded all the way to full desert if the invading herds and hordes continue to increase.

It was during the flight from Narok to Nairobi that Mt. Suswa provided the example of historical recurrence. Suswa is a great caldera or collapsed crater, over five miles across, in the middle of the Rift. Its structure is impressive. At one point the crater-rim reaches nearly 8,000 feet: on the opposite side the rim is lower, and has been breached by two big tongues of lava which now extend, cold and solidified, towards the lowest point of the Rift trough.

Its strangest feature is a circular flat area, small and eccentric, rising out of the crater floor and marked off from it by a dark crack. This is the remains of the hard plug of solidified lava that had filled the original big crater of the complex before its explosion and subsequent collapse. The crack, steep-sided and deep, was the result of the weathering of the softer material of the crater floor where the rain had dribbled down from the steep sides of the plug. Its darkness was due

to a circular forest of pencil cedars taking advantage of its shelter and moisture. And in its dense recesses some of the hunted Mau Mau bands took refuge from the British troops during the Emergency. Suddenly I recalled something I learned at Naples over fifty years ago—the fact that Spartacus' slave army took refuge in the crater of Vesuvius (then steep-walled and circular and apparently extinct) and had successfully held out there for months against the Roman legions. Strange parallel between two imperialisms separated by two thousand years of history!

My few days in Nairobi were exceedingly busy, but one afternoon Mervyn Cowie took me on a final run through the Nairobi National Park, and I was again impressed by Nairobi's good fortune (due primarily to Cowie's zeal and persistence) in possessing this marvellous sample of wild Africa within ten miles of the city centre.

Besides all this, there were two major expeditions, north to the famous Treetops Hotel, and south to the drought-ridden areas of the Tsavo National Park.

Many people have written about Treetops, but I must add my own brief testimony. Treetops is a unique commercial hotel. It is unique partly because it is inside a National Park, the Aberdares Park, and partly because it is designed solely for game-viewing. It stands where the forest-covered hills are beginning their climb to the open moorland above, on the edge of a pool whose margins are regularly sprinkled with salt to attract the animals. It has two stories, both provided with balconies overlooking the pool, and a flat roof with views in all directions. It is built on stilts, but one of them turns out to be a treetrunk, whose living branches traverse some of the simple little bedrooms.

Visitors are driven up from Nyeri to within a couple of hundred yards of the site, after which they have to proceed up the steep path on foot in a close group, shepherded by a

warden carrying a rifle in case of encounters with buffalo or elephant. American visitors appear much impressed by the rifle: I don't wonder—I was quite impressed myself.

In the couple of daylight hours left I sat on the balcony and watched the scene. The calls of birds sounded from the surrounding trees. Occasional hawks and hornbills flew across the sky, and waders and little black crakes were feeding on the pool's muddy margins. Out of the forest backdrop came a lone buffalo to drink, and a couple of waterbuck to graze, the female looking sadly like a shaggy grey donkey; then a family of bushbuck, the male with velvety chestnut flanks, camouflaged with a harness of pale yellow stripes. Finally a sounder of warthogs trotted on to the scene: one waded into the water, to be joined by a solitary baboon, while on the roof a couple of other baboons were being fed by visitors; one was carrying a small baby, whose wizened little face was both ugly and appealing.

As dusk began to fall, a cow rhino with her calf came out to drink just in front of the building. But the calf was still suckling and had no idea why its mother wanted to swallow so much muddy water; it was bored, and fidgeted round its mother in a puzzled way. This was the first time I had heard the sounds produced by rhino. The usual one is a plaintive and cat-like mew, very surprising in such a lumbering monster. Rhino also frequently emit a little puffing snort: this is perhaps not so surprising as the mewing, but very ludicrous. After supper (served with a special ritual of its own), searchlights are switched on to illuminate the margin of the pool. Although they are powerful enough to make photography just possible, the animals pay not the least attention to their glare.

Elephants are the great attractions of the night at Treetops. Sometimes a herd of thirty or forty or even a hundred will visit the pool, more usually only half a dozen. On this night

only one turned up, but he was fascinating. He was out to get as much of the precious salt as possible. He explored the ground with his trunk, sniffing and sampling, then twisted its agile prehensile tip into the salty surface, scooped up a sample, and looped it up into his mouth. The performance went on for hours: I don't know how much he managed to scoop up at a time, but even if it was only a few ounces, he must have taken at least a stone of the stuff into his system.

Once he was interrupted by the cow rhino with her calf. As his bulk, dimly illuminated by the spotlight, loomed before her inadequate eyes, she paused, gave her absurd little snort, but then advanced again, still snorting. Elephants are so assured of their natural superiority, their dominant position in the wild community, that they can afford to give way to their inferiors rather than make a fuss. My elephant dignifiedly withdrew a few paces and allowed the intruder, still spasmodically snorting, to pass.

If we were unlucky in the number of elephants, we were fortunate in the matter of giant forest hogs—Hylochoerus meinertzhageni, to give them their scientific name. These huge relatives of the bushpig of East Africa and the red river hog of West Africa by no means always show up at Treetops. But on this night there were eight of them, male and female, young and old. They are the largest of all true pigs, and it was a wonderful experience to see their great dark forms moving across the scene, rooting in the salt-impregnated soil. When I add that at the same moment I had in view one elephant, four rhinos, eleven buffaloes, a troop of warthogs, and a number of bushbuck, it will be seen that my night at Treetops was eminently rewarding.

My last whole day in Africa was spent flying to the Tsavo Park with an informal group—Mervyn Cowie, Director of the Kenya Royal National Parks; Ian Grimwood, Game Warden of Kenya; Phil Glover, zoologist at one of the East

African Research Organisations; and a prominent settler who is one of the pillars of the East African Wild Life Society —who were investigating the lamentable results of the drought together with an excess of elephants.

We got up at four-thirty in a chilly dawn and flew south, well muffled up, to the same bumpy landing strip by the Athi River whence Juliette and I had flown to Voi the previous year. There we were met by Sheldrick, the warden, and shown some of the devastation. Over an area of three or four thousand square miles the trees, already weakened by the drought, had been ravaged by the elephants—pushed over, their branches pulled off, their bark stripped. It was far worse than the previous year. Much of the landscape looked like the battlefields of the Somme. Among the devastation, the branching doum palms remained erect and green. Perhaps they tapped deeper moisture: certainly the elephants had not attacked them.

In the animal world, the most disastrous result was the death of a large number of rhinos—death not from thirst but from starvation: the shrubs they browse on had been killed by the drought. We saw three recently discovered corpses—tragic masses of armoured flesh, already invaded by swarms of maggots.

All the dead rhino's horns had been cut off. Close to the camp (the same delightful camp where Juliette and I had stayed on our visit, and with the same Egyptian geese flighting up and down the river) a series of them was set out on a board. Their striking differences in size and shape (one was even flattened like a giant paper-knife, with a definite edge in front) were evidence of the surprising individual variability of the rhino's growth-processes.

It was a relief to be taken from these melancholy evidences of death to see the measures Cowie was taking to save the remaining stock. He had installed big sprinklers, fed by

water pumped up from the river, and moved on at regular intervals. Already there was a sprouting of green in the thorny leathery shrubs, foretelling good browse for the surviving rhinos within a week or so.

We flew back over the Chyulu Reserve, a beautiful range of high rounded hills, topped in many places by what was a new phenomenon to me—mist forest. Mist forest can grow in areas of quite low rainfall, provided there is regular morning mist to provide the necessary moisture. Unfortunately, as we were able to see from the plane, tribal Africans had, quite illegally, been invading the Reserve, cutting into the forest, starting little patches of cultivation on the slopes, and so launching the habitat on an inevitable downward course of erosion and deterioration.

By next evening I was in the plane, bound for London and home, my mind enriched by imperishable memories and a renewed vision of wild Africa.

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