Africana

Incorporating "Panda News," the quartely review of World Wildlife Fund-Kenya.

GUEST EDITORIAL: SOLOMON OLE SAIBULL,

Minister of Natural Resources and Tourism, Tanzania

The Serengeti and the rest are a world responsibility

THERE is a new emphasis in Tanzania's wildlife policies — towards greater protection of the resource and away from any form of "direct utilisation," including sports hunting. This is now applied in our management, research and teaching practices.

As an indication of the changing attitude, the word "game" is being replaced with "wildlife" in describing the *living* resource we are committed to conserve.

I believe that in the past the concept of conservation in East Africa was confused. It appeared that the overriding policy of the "Game Departments," as they were called, was the protection of wildlife for recreational purposes; for providing sport for a relatively few affluent and invariably white hunters.

These people did not hunt for subsistence, nor even to make their fortune. They hunted strictly for pleasure, and since they wanted this to last, they were prepared to help in the conservation of game. In some ways a paradoxical situation — wildlife protection for the purpose of wildlife destruction.

But at least the "pastime-hunters" were concerned that their "game" species remained in existence, whereas the illegal hunter — the poacher — and the trade he supplies have no such concern. And it is on this topic that I should like to comment in more detail.

It started when local residents, mostly of Arab and Indian descent, discovered they could make a comfortable living and even become rich through dealing in the products of dead wildlife, notably ivory and rhino horn.

The beginnings of the business in East Africa were modest, but from the middle of the sixties it grew out of all proportion, causing serious depletion of the wildlife stock which persisted until quite recently.

This has now largely stopped, but such trafficking as there is in poached wildlife and in live animals and birds may be beyond the resources of any single country to control. What is necessary now is international action against the major markets abroad. So long as these markets are allowed to operate without restraint, the elimination of poaching and smuggling in East Africa will be an impossible task.

We know who the smugglers are and we know their agents in the field — mostly African tribesmen. Somali, Kikuyu, Kuria, Chagga, Pare and Maasai probably in that descending order of menace although poaching has spread to a number of other tribes. But due to their wide-ranging nomad wandering in East Africa, the Somali are the most notorious and the most elusive poachers. They are also involved in the smuggled export of wildlife "products" and so are a complete chain in themselves to the markets.

Arabs and Indians rarely engage in the "field work," but they are the recipients of African poaching. They are the smugglers, the traffickers, the fat middlemen who connect the poachers to the overseas buyers.

These chains must be broken somehow, and broken decisively. The governments in East Africa can individually step up their action against local operations. Improved co-operation between neighbouring countries against poaching and smuggling would help. But the decisive action would be the closure of international trade in endangered species and the regulation of the market for other species and their products.

I must emphasise, however, that what I am suggesting would to some extent hurt the fragile economies of some countries, such as Tanzania. The consequence would be to reduce legitimate State "utilisation" of wildlife, — and this, I think, ought to be made good through increased support for the local conservation effort by the international community.

At present, international demand for wildlife products exceeds the capacity of the trade in East Africa to supply it. This increases the profitability of both legal and illegal dealings in wildlife and the result is a continued progress to extinction of a number of species, most obviously the black rhino.

It is therefore imperative that the world demand be reduced and thereafter strictly controlled in respect of threatened and endangered wildlife. Otherwise, one by one, these species will disappear forever from the face of the earth. And this "One Earth" we have will be the poorer for it.

In East Africa, we understand that the rhino, the elephant and other species are

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Prof. CHARLES GUGGISBERG is one of the most prolific authors in East Africa an authority on wildlife and a noted historian. In this article, he looks back on thirty years in Kenya and claims that in some ways the state of the game is better now than it was then.

WHEN my wife and I arrived in East Africa in 1946, Nairobi National Park was just about to be gazetted. I knew that wildlife had suffered badly during the war years — enormous numbers of animals had been killed on the Laikipia Plateau and elsewhere in order to feed the Italian P.o.W's, for instance. But the creation of a national park close to Kenya's capital city seemed to indicate a definite turn for the better.

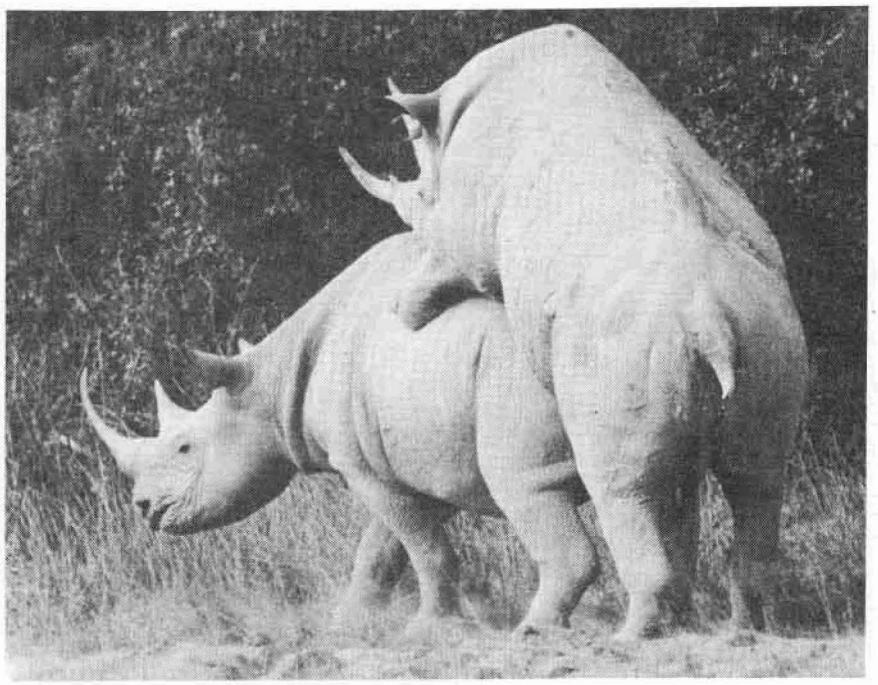
Game reserves had of course been in existence for a long time — without them the animals could not possibly have lasted through the first three decades of the present century. They had been set up after East Africa was split between Germany and Britain towards the end of the last century by administrators sent out by the colonial powers! Among them, were many remarkable men who took a lively personal interest in the little-known areas entrusted to them; in the peoples they had to rule — the German, Merker, and the Englishman, Hollis, wrote fundamental books on the Maasai long before the First World War — and in the wildlife they encountered on their safaris. Some, like Sir Harry Johnston, H. von Wissmann and Sir Frederick Jackson, were keen naturalists before they joined the colonial service, and they devoted all their spare time to the study of the fabulous array of animal life for which East Africa was rapidly becoming famous.

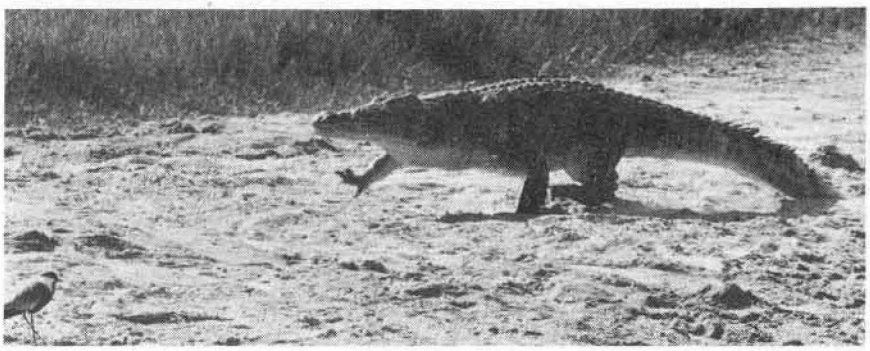
They clearly saw the dangers that the advance of civilisation would bring to this remnant of the pleistocene fauna, and they took steps to safeguard it for future generations. It can be said that their efforts were successful beyond anything they could possibly have visualised. Strict game laws were drafted, which put an end to indiscriminate slaughter. In German East Africa, as early as the 1880s, von Wissmann, the first governor, formulated a set of excellent regulations and took special measures to protect the much depleted elephants. A sportsman visiting the country was allowed only one of these animals, for which he had to pay 500 Rupees.

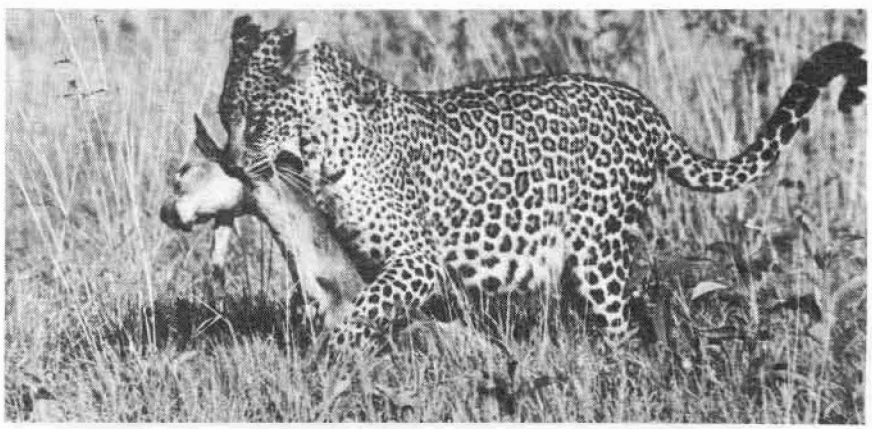
It was soon realised, however, that game laws alone were not enough; that certain areas had to be entirely closed to hunting.

In Kenya, three game reserves were established as early as 1900, designated as the "Sugota," "Jubaland" and "Ukamba" Reserves. The first two later became merged into the *Northern Reserve*, while the so-called Ukamba Reserve was renamed the *Southern Reserve*. Both survived up to the end of the second World War, but it had long been realised that they were too big for effective control.

Plans for streamlining conservation had already come under discussion during the thirties. There were suggestions to turn the part of the Southern Reserve immediately adjoining Nairobi into a national park and to establish another park in the dry bush country of the Tsavo region. But decision had not been reached by 1939, and the terrible events engulfing practically th whole world caused the projects to be shelved for the duration. When they were resuscitated soon after the end of World War II, they at first met with considerable opposition, but this was overcome by a well organised and persuasive propaganda campaign instigated mainly by Colonel Mervyn Cowie, later the Director of Kenya National Parks.







THE GRAND PARADE: pictures Charles Guggisberg.

The long-delayed gazetting of Nairobi National Park was followed in 1947 by the creation of Tsavo National Park, which to this day has remained the largest park in East Africa. The Mount Kenya National Park was established in the same year, and the Aberdare National Park in 1950.

The Northern Game Reserve was turned into the "Marsabit Game Reserve," later to be reduced to the area around and including Marsabit Mountain, and the Samburu Reserve north of the Uaso Nyiro. Buffalo Springs Reserve on the south bank of the river and Shaba Reserve, east of the main Isiolo-Archer's Post road, were added later.

In 1948 an important sector of the old Southern Game Reserve became the Amboseli National Reserve, and in the

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same year, part of the once famous hunting grounds along the Mara River was made into the Mara National Reserve.

On the Serengeti Plains of what was then Tanganyika, a partial reserve came into being in 1929. It was turned into a full reserve in 1937 and, together with the Ngorongoro Crater, became a national park in 1950.

In Uganda, the old-established game reserves along the Victoria Nile and at Katwe on Lake Edward were gazetted national parks in 1952.

Thus, during the years immediately following the war, conservation seemed to make excellent progress, with a considerable number of parks and reserves established on an apparently sound foundation. But to visit these areas, you had to be prepared to drive on often very rough tracks and to carry camp equipment and provisions. There was a permanent camp, on the rim of Ngorongoro and, at Amboseli, a camp built by a film company was turned over to the national parks' authorities which made it available to visitors at the beginning of the Fifties. Another simple lodge was soon afterward opened in Ngulia Valley of Tsavo West. All those lodges were of the do-yourself style.

The people touring the parks and reserves at that time were mainly Europeans living in East Africa. Of the overseas' tourists, still few in numbers, a considerable percentage came for hunting big game, thus continuing a tradition going back to the first decade of the present century. Shooting trips were organised and outfitted by local safari firms and led by professional hunters, and you had to be in the big money league to indulge in this kind of sport. It has to be admitted though, that in the 50s and 60s the East African economy derived considerably more benefits from the trophy hunters than from the scattering of visitors who came to photograph animals within the conservation areas.

Hunting for sport was of course subject to very strict rules and regulations, and a professional hunter caught breaking any of them would have been very severely dealt with. As far as East Africa is concerned, the kind of mass-slaughter the uninformed public commonly associates with shooting safaris had, as has already been pointed out, come to an end at the turn of the century with the establishment of game laws and game departments. Ever since, the amount of game animals a sportsman could shoot had been strictly limited, the schedule being reviewed from time to time and changed in accordance with the numerical decline or increase of certain species.

After buffalo had been practically wiped out by rinderpest during the nineties, they were given complete protection and made such a miraculous recovery that after a short time it became possible to allow one, later two and even more specimens on a sportsman's licence. Until the recent



advent of four-wheel drive vehicles, light airplanes and helicopters, it was of course almost impossible to assess East African animal populations with even a remote approach to accuracy, and it cannot be denied that in their efforts to arrive at tolerable cropping figures, the game departments had to rely on a considerable amount of guesswork.

The introduction of game laws created the poacher. Humans being what they are, this was an inevitable development, and the game departments had to be given the necessary powers to keep illegal hunting in check. So long as it was mainly a matter of people in the bush occasionally getting some free meat for their families, the problem was not serious. But after World War II, game animals came under increasing pressure through large-scale poaching, which rapidly became big business and developed into a major threat for wildlife, a threat that the administrative authorities seemed unwilling to counter in a really effective manner. They were quite obviously losing interest in conservation and began to act in complete denial of the principles which a few years previously had found official acceptance and acclaim.

It would perhaps be unfair not to admit that the pressures the administrators were coming under could not have been foreseen even a short time before. With population figures rising dramatically, there was a clamour for more and more land to be made available for agricultural development. Conservationists saw a new danger taking shape, perhaps even more devastating than the illegal slaughter that was going on practically unchecked in all parts of East Africa, and they frankly stated their fears. But, in one instance, the Kenya Government answered by commissioning a professional hunter to exterminate all black rhinos in the Makueni area in order to obtain 50,000 acres of land for African settlement. The hunter massacred no less than 1,088 of the species, which now is so close to extinction within conservation areas in Kenya.

The Tanganyika government did not hesitate to move in the same direction, providing full proof — if such were needed — that national parks were by no means the inviolate sanctuaries one had hoped they would be.

A governor, well-known for his antagonism to wildlife conservation, decided against expert advice to excise the eastern Serengeti, Ngorongoro and the whole of the Carter Highlands from the Serengeti National Park. But the world-wide uproar that followed this autocratic action prevented him from opening the region to general slaughter, and he compromised by turning it into what he was pleased to call a "Conservation Unit". The animals were still theoretically protected, but the wonderland of Ngorongoro was opened to human exploitation with all the dangers this entailed for wildlife.

Considering the way those early administrators — men with independent, inquiring minds — had fully acknowledged their responsibility for the unique fauna, of which an accident of history had made them the trustees, this change of policy, this total loss of interest which could easily destroy the devoted work of half a century, was difficult to understand. It must be remembered, however that to some extent administrative posts in the colonial service became political appointments, stepping stones in a political career. Whether he likes it or not, to be a political careerist is to be something of an opportunist, able to adapt his views in accordance with whatever "wind of change" that may be blowing across the political scene.

In East Africa, agitation for independence was now in full swing, and there could be absolutely no doubt about the impending end of colonial rule. The administrators found themselves in a very delicate position. They had to remain in the "good books" of their political masters in Europe, on whom their futures depended. Their superiors, on the other hand, were determined to remain on good terms with the future rulers of the colonial dominions. Thus in order not to make themselves and their masters unpopular, the local administrators gave in to demands for agricultural land, even if situated within a well-established national park, and refused to act against poachers. Moreover, none of them would have been so foolish as to blot their copybooks by advocating more national parks and game reserves.

There is reason to assume that they honestly believed they were acting in the best possible way, for their economic and financial advisors had fully convinced them that game parks would never attract a sufficient number of tourists to add even the most modest contribution to national revenue. As far as the experts were concerned, conservation was an unmitigated nuisance, and they regarded the conservationists as a bunch of poor fools, whose pipe dreams would be swept into oblivion when the independent governments assumed power. The theory was that the new Africans would abolish the parks and



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reserves, making the only pssible economic use of their animal inhabitants by having them slaughtered for their meat, their skins and whatever else could be turned into money.

But experts can be wrong of course and looking at the state of the world today, one cannot help wondering whether economic experts might not be wrong more often than not! They certainly were wrong in their prediction that there was not the remotest chance of East Africa's conservation areas ever becoming a paying proposition.

At just the right moment, reasonably priced charter flights turned East Africa into an important target of world tourism, and the trickle of non-hunting visitors to Kenya, Tanganyika and Uganda, grew into such a stream that their impact soon surpassed — and by far — that of the comparatively few hunting parties. In direct contradiction to expert opinion, the conservation areas had almost overnight turned into national assets of very considerable value.

Enormous efforts were immediately made to open up the parks and reserves to this lucrative invasion from Europe and America The road system had to be improved and extended, and there was of course an urgent need for suitable accommodation. The Uganda parks already had lodges run as hotels, and there was the famous Kilaguni Lodge of Tsavo West, which had been established in 1961, mainly to give up-country Europeans on their way to coastal holiday resorts an opportunity to spend a day or two in the national park. Similar lodges began to spring up all over Kenya and northern Tanganyika.

When the three countries attained independence — with Tanganyika changing its name to Tanzania — tourism had already reached a momentum that no economist planning for the future could overlook. The respective governments were fully aware that they owed this bonanza first and foremost to East Africa's wildlife and, far from abolishing the parks, they set up new ones at Kidepo in north-eastern Uganda; at Ruaha, Mikumi and Tarangire in Tanzania; and at Lake Nakuru, Meru, Mount Elgon and Malindi in Kenya, to mention only a few. A sector of the Amboseli Reserve was given national park status, and a considerable part of the Mara Reserve, though not nominally a park, at least became administered as one and has thus been closed to all human exploitation apart from tourism.

In 1966, Kenya was visited by 103,355 tourists. This figure rose to 275,970 in 1969, and to over 300,000 in 1970. In 1977, tourist earnings amounted to K£8.3 million.

Shooting safaris were still being organised, but with game becoming scarce outside the conservation areas, due both to poaching and to intensified agricultural development, professional hunters found it increasingly difficult to provide their clients with really first-class trophies. In Tanzania, hunting for sport was banned for a while and then permitted again; in Kenya it came to an end in 1977 — permanently, it is said.

Poaching, unfortunately, remained a major threat to wildlife. In Kenya, great harm was done through a politically motivated change. The excellent and highly respected national parks service was dismantled and conservation made the sole responsibility of the Game Department. A somewhat chaotic situation prevailed for some time, and the poachers made full use of this. They become highly organized and acquired modern weapons and motor transport and after practically wiping out the game in many unprotected areas, they invaded the parks and reserves. The most dramatic casualty of all this was the black rhinoceros.

In 1960, Kenya rhino were thought to number about 2,500. I quoted this figure for what it was worth in my book "SOS Rhino" *(East African Publishing House and Andre Deutsch, 1966)* and wrote: "Even though Kenya and Tanganyika are the African countries with the greatest number of black rhinos, there is no room for complacency. If the rhinos are not given the most effective protection possible, they could be wiped out in a very short time."

In fact the 1960 figure should have been much higher, but my prediction has nevertheless come true in a most distressing manner. During the last six years, Kenya alone may have lost as many as 10,000 black rhinos. Tsavo National Park is though to have been stripped off 95 per cent of its rhino population; Amboseli, once such an excellent place for observing the animals, of 85 per cent. For Ngorongoro, Tarangire and Manyara, the respective figures are given as 70, 80 and 80 to 85 per cent.

In 1977, the Kenya Rangeland Ecological Monitoring Unit (KREMU) came up with the figure 1,818 for the black rhino population in the whole of Kenya with the exception of forest areas. Taking into account certain standard errors implied in the method employed and adding an estimated number of forest rhinos, the figure may, in actual fact, have been around 5,000. But in the following year, 400 were killed in Meru National Park alone.

Most people take pride in seeing their predictions come true — I can only deplore that mine has proved so shockingly accurate!

Rhino are still fairly numerous in the Aberdare National Park and regularly visit the salt licks at the two game-viewing lodges, "Treetops" and "The Ark". As to the extent of poaching with in the Aberdare forests, I have information of such contradictory nature that I would not dare to pronounce a personal opinion. Strangely enough, black rhino are now quite regularly seen in Nairobi National Park which 30 years ago harboured not more than two or three. In the course of time a few were transferred to the park from areas taken over for agricultural development, and they have become amazingly well established. I have recently heard of a plan to bring as many rhinos as possible into a special well-guarded reserve, where efforts would be made to maintain and increase their numbers by breeding, until the battle against poaching has been won. It can be stated fortunately, that the gangs of criminals out to rob East Africa of its most precious heritage do not have things all their own way any longer, for well armed and thoroughly trained anti-poaching units have now gone into action. Good luck to them.

It must be admitted that there has also been some perfectly legal over-exploitation of certain wildlife resources. When my wife and I paid our first visit to Lake Baringo in the early fifties, we found crocodiles amazingly numerous. Their scaly backs could be seen crossing and recrossing the surface of the lake, and Kamasia tribesmen stood up to their armpits in the water, fishing for tilapia, without paying the slightest attention to the reptiles.

"Aren't you afraid of the crocodiles?" I asked one of the fishermen as he came wading out of the lake with his catch. He laughed and said: "Why should I be afraid of them? They're not dangerous at all. If you happen to step on one, it rushes off very quickly."

Another Kamasia added: "The crocodiles of Baringo are not like those of Kisumu. There they will eat people — but not here."

A few years later a professional crocodile hunter established himself on the lake and made what can well be called a clean sweep of the big reptiles. Today, you are very lucky indeed if, in course of a trip to Lake Baringo, you catch sight of even a single crocodile.

With crocodile hand bags having become a status symbol among the fashionable ladies of Europe and America, the same kind of slaughter went on all over East Africa. In the Lake Rukwa region of Tanzania, one licensed hunter and his gang of helpers accounted for 45,000 crocodiles. This, of course, is the kind of pressure no species can endure for any length of time, but human exploiters out for quick profits seem to be quite unable to grasp this simple fact. The incredibly short-sighted way in which the crocodile hunters acted is well exemplified in the answer Hugh Cott, one of the world's foremost authorities on crocodile ecology, received when he remonstrated with one of the shooters. "When we finish them here," the man said, "we go on to another place."

Crocodiles, therefore, became very scarce in many areas where they used to be numerous up to the end of World War II. For a time, Kabalega. (Murchison Falls) National Park was about the only place where tourists had a really good chance of getting acquainted with these prehistoric monsters. They have lately shown signs of a very satisfactory recovery in the Galana River of Tsavo East and in the Uaso Nyiro where it flows through the Samburu-Buffalo Springs Reserve. Attempts are now being made to restock Lake Baringo.

Human activities — protective and destructive — are by no means the only factors to have influenced the East African wildlife situation over the past 30 years. You have to live in this part of the world for a considerable length of time to realise fully the degree to which fluctuations of climate can transform the habitat and how much they affect almost all forms of life

The fifties were very dry and Lake Nakuru gradually dried up, turning into a vast salt pan with just a few small lagoons where rivers entered the lake bed. Huge clouds of salt dust were blown into Nakuru township and plans for getting rid of this nuisance by having the white plain covered with salt-loving vegetation were under discussion.

If you wanted to see flamingoes in large numbers, you had to go to Lakes Elmentaita or Hannington which, although low, did not become completely dry because both receive a considerable part of their water from springs situated within the lake bed. Lake Manyara in northern Tanganyika went through a similar process of dessication.

The level of the deeper, fresh water Lake Naivasha fell so much that the whole rim of the small crater known as Crescent Island emerged from the water, forming a long, circular peninsula instead of a crescentic island A large part of the lake became transformed into a vast papyrus swamp which, towards the end of the fifties, began to dry up and was then devastated by vast fires. Drought conditions attained a catastrophic climax during the first half of 1961, causing tremendous losses among domestic stock and wildlife. In Nairobi National Park, the entire annual crop of wildebeest calves was wiped out.

The November-December rains — the "shortrains" — of 1969 brought precipitation far above average, and they went on through January and February, merging into the very heavy "long rains" of 1962. The floods resulting from this excess of rain



THE CLOWNS: Among them, the giraffe. Picture: by FABBY: one of a series of eight postcards (appx. same sixe) available from World Wildlife Fund — Kenya.

were said to have caused quite as much damage as the preceding drought had done. Lake Nakuru filled up and the flamingoes, which had been absent for so many years, returned in force. The same happened at Manyara. The basin of Lake Natron in northern Tanganyika was flooded to such an extent that the flamingoes which Leslie Brown had found nesting there a few years previously moved to Lake Magadi where, in 1962, they formed a breeding colony of about a million couples. Unfortunately they have never returned to this very accessible place. Lake Naivasha also rose, and Crescent Island resumed its normal size and insular status. Around Lake Victoria, port installations were flooded and goods sheds could be seen standing far out in the water.

During the sixties, rainfall was, as a whole, considerably better than it had been in course of the fifties. Lakes Naivasha and Nakuru remained fairly stable and the Nakuru flamingoes became one of East Nakuru also acquired a large population of white pelicans.

The beginning of the seventies, however, brough a return to drought conditions, and the levels of Lakes Naivasha and Nakuru began to fall fairly rapidly. As the waters of Lake Nakuru receded, their alcalinity increased and the pelicans took to washing the salt out of their pumage by bathing at the mouths of the various rivers entering the lake. To do this they usually congregated in great numbers, and for a time it was possible to obtain spectacular photographs from a hide that had been erected in shallow water and now stood high and dry on a river bank.

With the lake level falling steadily, the pelicans had to perform their ablutions farther and farther out and finally went to other places which suited them better, but were less accessible to the photographer.

The northern parts of Kenya, dry at the best of times, were hard hit by the new drought and Grevy zebra, already over hunted and over-poached, went into a rapid decline. Visitors from Europe and America wrote luridly dramatic accounts of Tsavo National Park turned into a red desert dotted over with elephant carcases. They confidently predicted that the vegetation of Tsavo was beyond recovery and the whole area thus doomed as a conservation area.

But then the last quarter of 1976 brought excellent rainfall,' and precipitation has been far above average ever since. Lakes Naivasha and Nakuru have attained levels higher than in 1962. This may have brought about changes in the composition of the planeton, or it may simply have been the depth of the water over their usual feeding grounds. But whatever the reason, the flamingoes left Nakuru and the tourists were naturally disappointed, even though they could see thousands of pelicans and great numbers of wood ibis, spoonbills, herons, stilts, avocets, sacred ibis, glossy ibis, cormorants and duck. Having heard so much of the lake surrounded by a pink fringe of a couple of million flamingoes, most of them could not get up any enthusiasm over the other species of birds. Small flocks of flamingoes visited the lake from time to time, and at the moment it looks as if these visits might gradually develop into a proper return movement.

For several years now, Tsavo National Park has had a constant covering of high grass. With water available everywhere, game — including elephant — has been able to disperse over a vast area and visitors again have something to complain about.

Nairobi National Park, too, has lately come in for a lot of disparaging comment from disappointed tourists — and locals — and for the time being, I, for one, am very hesitant to take a newcomer into this reserve. It has been amazingly green for years, the grass never turning really yellow as it otherwise does during the dry season, and there is very little game to be seen.

Under normal conditions, the game population of Nairobi Park has always been subject to very marked seasonal fluctuations. Some species, especially zebra, wildebeest, Grant's and Thomson's gazelles — and to a lesser degree, hartebeest — have a strong tendency to wander out to the plains south of the park just as soon as the rains begin. The dry season brings a movement back to the park.

These migrations were very noticeable during the fifties, especially from 1958 to mid-1961. During the catastrophic drought of that year, the total number of animals within the park rose to over 13,000 head. Impala, waterbuck, bush buck and reedbuck displayed a remarkably sedentary behaviour even then.

A lot of interesting information was obtained from monthly game counts, instigated in 1960 and continued into the first half of the seventies. When these counts were started, the wildebeest was by ▶



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far the most common of the plains' animals, up to 2,000 being recorded on various occasions. As has already been mentioned, they were badly hit by the 1961 drought, but produced an unusual number of calves in 1963 and 1964. In Nairobi National Park, wildebeest calves are normally dropped at the end of February and in March, but the first "1963" calves appeared just before Christmas 1962, and in 1964 calving began in January. It looked almost as if the wildebeest were out to make good the disastrous losses of 1961 as quickly as they possibly could.

In 1964, most of them left the park at the beginning of the long rains, as they had always done, but this time very few herds returned during the dry season. The majority obviously found enough grazing and water in the reserve south of the park, thanks to the continuation of the predominantly humid phase that had started during the second half of 1961. They were, however, brought back by the drought that set in at the beginning of the seventies, when, on one occasion, over 20,000 head of game were counted within the park area.

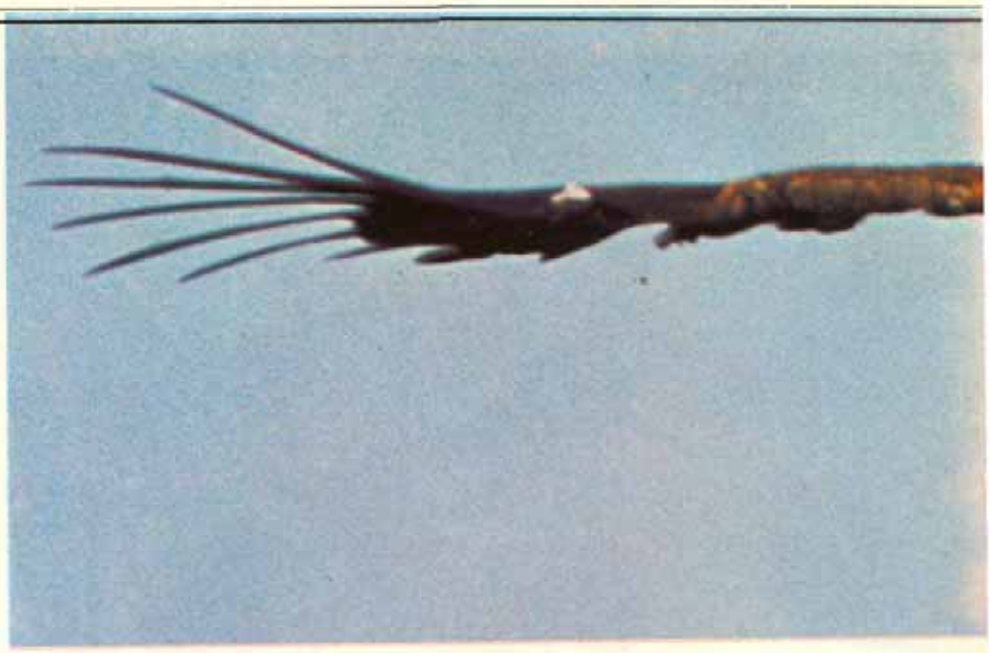
The years of abundant rainfall that followed the drought of the early seventies brought about a very general exodus. Nobody knows how long the present wet phase will last, but once dry or at least average conditions return, the animals which have not been killed off by poachers will presumably come back to Nairobi National Park.

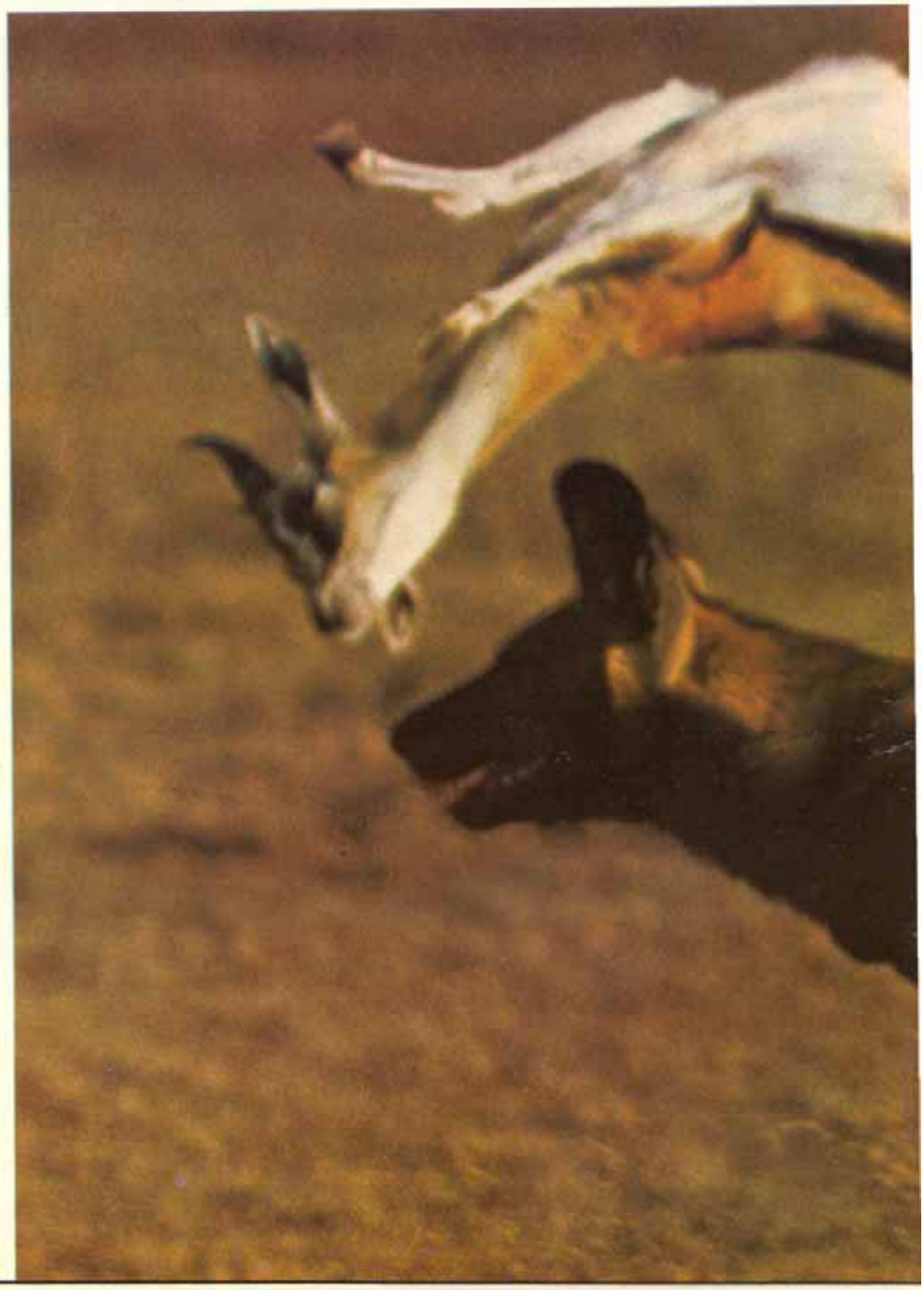
After most of the wildebeest had left the park area in 1964, hartebeest began to increase in numbers and became the dominant game species. During the fifties and early sixties, the lions, as was to be expected, killed mainly wildebeest. Zebra came second among their prey, and hartebeest were taken only very occasionally. After 1964, the lions at first went on chosing their prey mainly from the much-reduced wildebeest population, and several years went by before the now very numerous hartebeest for the first time topped the list of lion kills.

It is pleasant to record that during the last few years even the north of Kenya has come in for a very fair share of rainfall, and at the moment the Grevy zebra seem to show some hopeful signs of recovery.

Changes of habitat quite as spectacular as those caused by man and by fluctuations of climate have, within the last thirty years, been brought about by massive increases in elephant populations. The pretty Terminalia-woodlands, through which I passed on my first safari to the newly-gazetted Murchison Falls National Park of Uganda, I saw not so many years later as vast stands of dead, ring-barked trees. I did not visit this region often enough to follow the tranformation from woodlands to grasslands in detail, but I was certainly able to observe closely the changes brought about by elephants in Tsavo National Park.

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THE AERIAL ACTS. The colour portfolio here and on the following four pages are by Baron Hugo van Lawick from his superb book on Serengeti predators "Savage Paradise." The photographs are reproduced by kind permission of Collins Publishers. U.K.







IT S STILL THE GREATEST SHOW ON EARTH

In 1951, when I visited Tsavo for the first and second time, most of the park was covered by a bushy savanna. It may not have been quite as dense as it apparently was at the turn of the century, when the Uganda Railway was being built, but there were few places where you could see farther than about a hundred metres. Elephants were fairly numerous both in March and September, though you could sometimes drive around for a whole day without encountering a single one. When you did come upon a few, you had to manoeuvre for a long time until the viewfinder of your camera showed you more than an occasional grey back or a flapping ear.

From notes written at the time I see that in September I sneaked to within 40 metres of some elephants not far from Tsavo Station without getting a single picture. I then scrambled up one of the rocky "inselbergs" so characteristic of African landscapes, but even from that elevated point I could not gain an unobstructed view of the animals.

A few days later I had a similar experience near the old Ngulia Camp. After having stalked two bulls without getting a single chance for a reasonable exposure, I hoisted myself on to a pile of rocks and was rewarded by one of the elephants coming out on to a small clearing. As it walked across the open space, I was able to snap it four or five times in quick succession before it went into cover again.

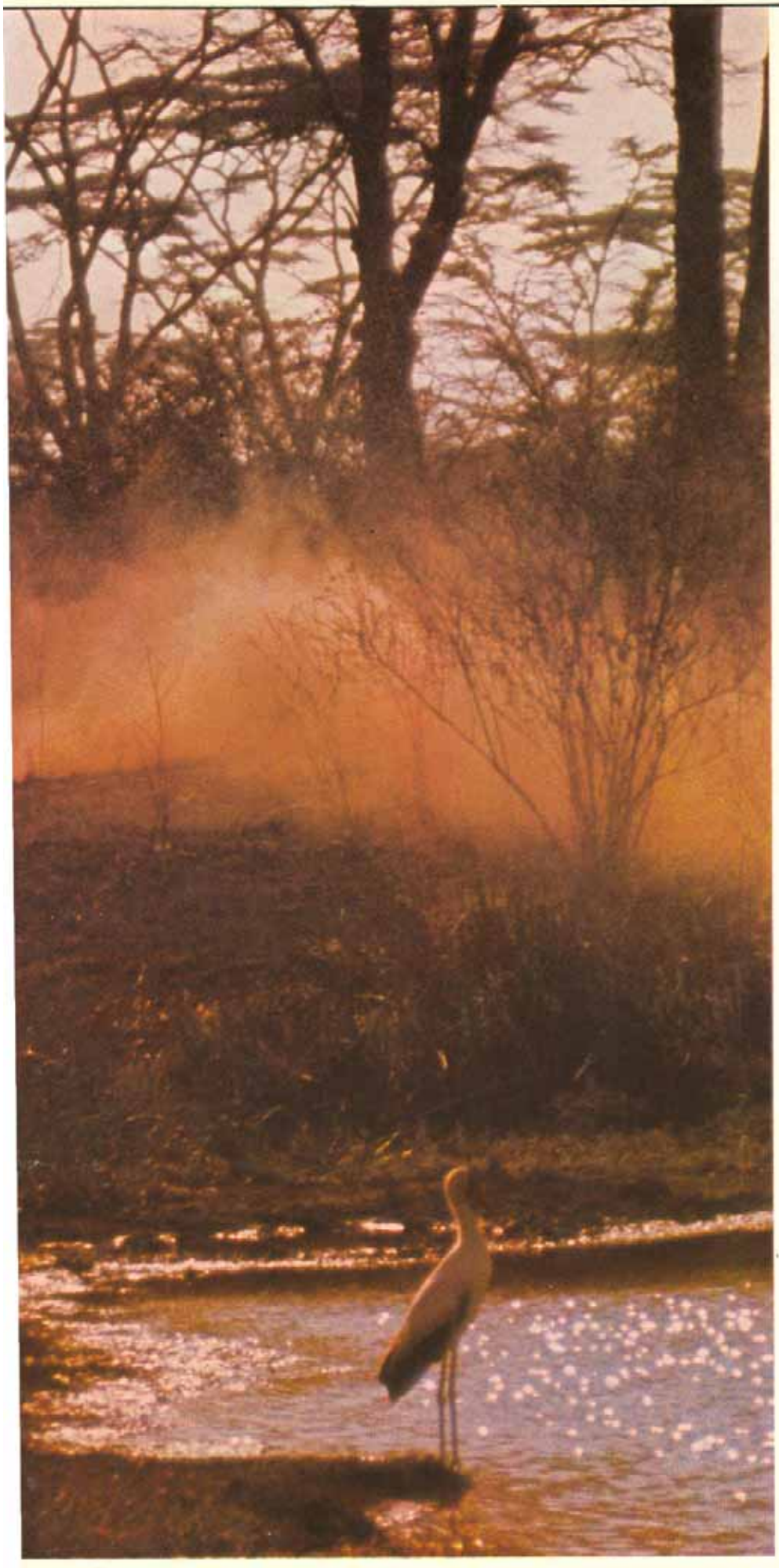
During the mid-fifties, elephants rapidly increased in numbers, and I remember passing through regions where the savanna looked as if it had been under heavy gunfire. In many places, visibility was still very limited, however, and a friend of mine got lost west of the Aruba Dam-Galana track, wandering about for several days with the trees preventing him from seeing either the Yatta Escarpment or the mountains in the vicinity of Voi.

The elephants eventually became so numerous that they turned most of the savanna into grassland with just a few scattered trees here and there. The "inselberg" near Tsavo Station is now surrounded by open country, and from the rock where I photographed the elephant crossing a small clearing you have an uninterrupted view down the whole of Ngulia Valley. In almost the same place, where in 1952 I approached a solitary bull and never got more on my films than part of his head among thick growth, I recently photographed a fine tusker standing perfectly free. The landmarks which my friend was unable to see can now be spotted from any part of the area where he lost his way even in reasonably strong moonlight.

These changes have brought about a considerable influx of plains game into Tsavo Park, but in many places where lesser kudu and gerenuk used to be common, I cannot find them any more. The elephants might, in actual fact, be partly responsible for the catastrophic decline of the Tsavo and Amboseli rhino, for in both places they have



THE BIG CATS. . . another plate from Hugo von Lawick's "Savage Paradise. (Collins.)



cleared away a large part of the cover in which the rhino found a certain amount of security.

Baobab trees, very common in the Tsavo area, survived the destruction of the savanna, but in recent years elephants have taken to feeding on their softish wood, and it is now rare to see one of the vegetable giants that has not been badly gnawed. Many of them have been turned into pitiful ruins.

Various control schemes have from time to time been advocated, but the authorities were understandably reluctant to order the destruction of hundreds or even thousands of elephants within a region that had been set aside primarily for their protection. Some ecologists expressed hopes that a pattern of self-regulation would eventually emerge and restore the balance. In Tsavo National Park, the mating age of elephants has, in fact, already gone up from 10 years or less to about 12 years. While calving intervals have increased in length from four to seven years.

The severe drought at the beginning of the seventies has also done something towards controlling the Tsavo elephant population by killing — according to an official report — about 3,000 out of a total of 20,000, mainly calves, elderly and very old animals. This comes closely to the cropping figures suggested by game biologists.

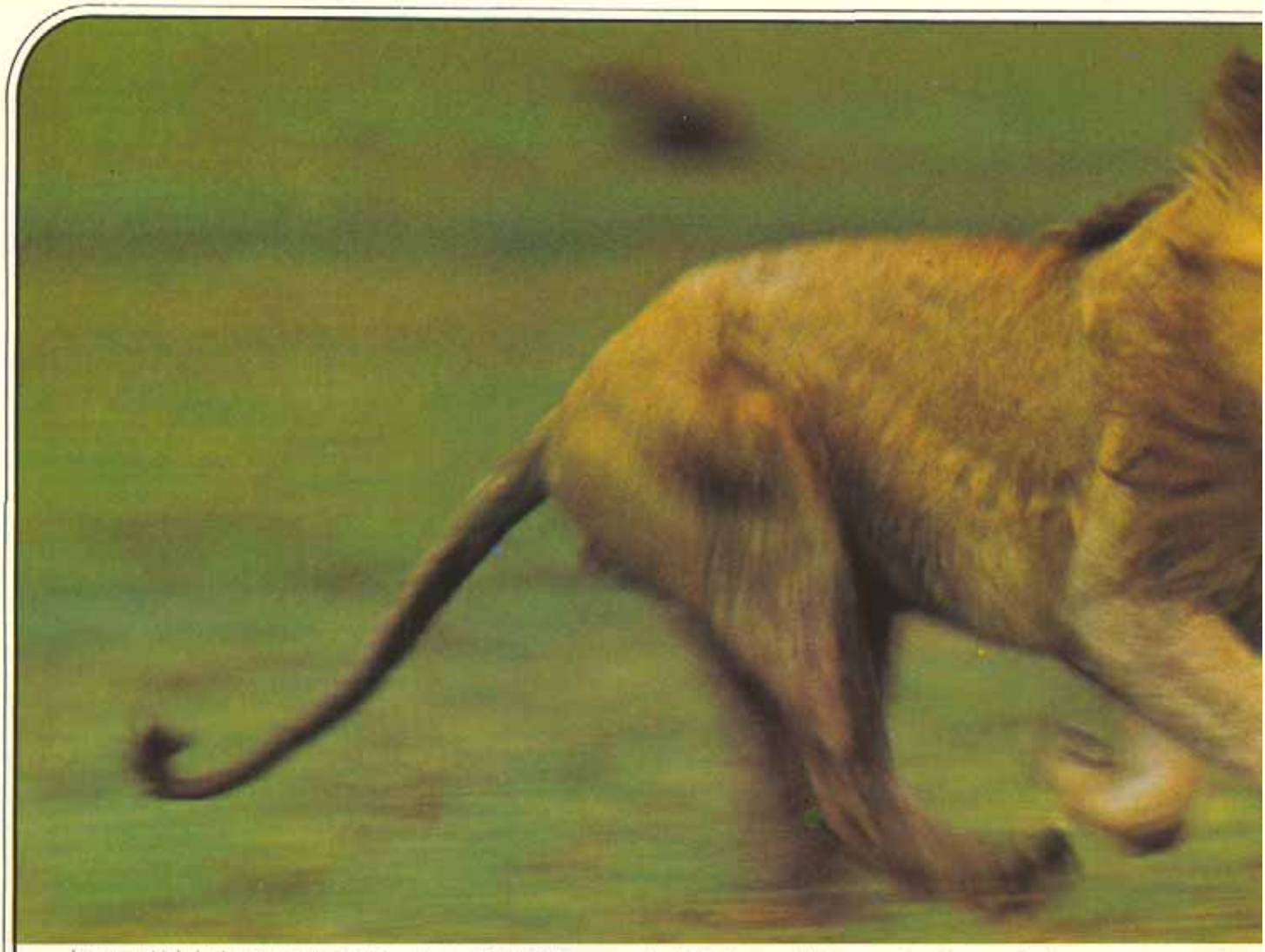
Despite the sad overall decline of East Africa's wildlife, today's tourist will, in actual fact, see considerably more game than he would have done thirty years ago. Within parks and reserves, most species have definitely increased in numbers, and he is able to view and photograph the animals under conditions which, during the fifties, I would not have imaginied in my wildest dreams. When the tourist boom set in, they quickly became used to the rapidly increasing number of motor cars and are now so indifferent to vehicles that — despite all the information available through books, movies and television — newcomers to East Africa are always utterly amazed when they find out just how close they usually can get to whatever they want to photograph. Anybody carrying fairly adequate equipment — and who is able to use it correctly — cannot fail to return from safari with excellent movie shots or a splendid collection of colour slides.

When, at the end of the Forties, I visited the Serengeti for the first time, I found most animals fairly shy, and in some respects the photographic results were by no means overwhelming. I had to work hard, for instance, to obtain some reasonably good exposures of topi and waterbuck, and I never got close enough to eland and buffalo. There was one notable exception, however: The lions were easy to photograph even then! We know from the pictures taken by Martin Johnson, Marcuswell Maxwell and others that just as soon as they were awarded some measure of protection, the Serengeti lions had decided that the noisy, smelly monsters that from time to time appeared on their hunting grounds were neither a new kind of prey nor an enemy to be feared and could therefore be ignored.

In 1949, after a number of years which had brought very few visitors to the Serengeti, the big cats were still as tolerant of cars as they had been during the late twenties and up to World War II. On that early safari, I performed the experiment of getting out of our car about 70 metres from two big, fully fed males resting under a tree. While they had paid absolutely no attention to the vehicle — an open-sided safari car with all of us plainly visible — the two lions now instantly jumped to their feet and ran for cover like a couple of hare.

One day we saw a leopard climb an acacia tree, carrying a Thomson's gazelle in its fang. At the foot of the tree there were two

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hyenas which had apparently tried to rob the cat of its prey and now seemed quite ready to resort to siege tactics. While I got my camera ready, my wife spotted another leopard hiding among the branches, but long before we were close enough for photography, the first leopard dropped its prey, which hit the ground lose to one of the hyenas, jumped off the tree and vanished in a thicket, followed by its companion, of which I caught only a glimpse.

This was more or less what I had expected. All books on African wildlife I had read stressed the leopard's highly elusive habits, and I knew that many people had spent twenty or more years in Africa without ever seeing one of these spotted cats. As C. G. Schillings, the pioneer animal photographer who travelled in East Africa at the turn of the century, put it: "Vastly more numerous than the lion, the leopard is literally everywhere and nowhere."

In course of the Fifties, we saw leopards practically every time we visited the Serengeti National Park, but it was always the same story: A yellow flash, as one jumped out of a tree and bounded away in the direction of the nearest cover, or a fleeting glimpse of a long-tailed shape darting across the track into the high grass and scrub fringing a river bed.

On most occasions photography was quite out of the question, and once only did I get some reasonably good shots of a running female before she vanished from sight.

At the beginning of the sixties, stories began to circulate in Nairobi of one Serengeti leopard, a big male, that had developed a complete indifference to cars. He became known as "Good as Gold", for if you managed to find him, you were absolutely sure of obtaining excellent photographs. My wife and I made his acquaintance on October 10th 1962. He lay stretched out peacefully on a thick, almost horizontal branch of a yellow-barked acacia and near him hung the skin of a baboon which he had killed the previous day. He hardly looked at us, and I spent the next few hours taking dozens of pictures, wondering whether I would ever again see a leopard with such absolutely un-leopard-like behaviour. I need not have worried, for during the next few years we saw and photographed "Good-as-Gold" on several other occasions, for the last time in 1964. He disappeared about a year later, and nobody knows what happened to him.

By that time, however, other leopards had departed from their usually so secretive ways, especially youngish animals which had got to know motor cars at a very early age. Some of them became as tame — or even tamer — than "Good-as-Gold", and the Seronera region of the Serengeti acquired a well-deserved reputation for being just about the best place in all Africa for watching and photographing the spotted cats.

I have since also obtained good leopard photographs — which not so many years ago would have been considered exceptional — in the Nairobi and Tsavo National Parks, as well as in the Mara and Samburu Reserves. But in none of these places are conditions quite as favourable for leopard spotting as they are — or at least were during the sixties and early seventies — in the vicinity of Seronera.

The cheetahs inhabiting the East African conservation areas also changed their attitude towards humans — or rather towards their vehicles — in a most remarkable manner. In a book published in 1924, Martin Johnson captioned one of his photographs: "A tame cheetah — the wild ones went too fast for the camera." On my first visits to the Serengeti National Park they also bounded away the moment they caught sight of a vehicle.

During the second half of the Fifties, however, as more and more cheetah cubs in Nairobi Park, in the Amboseli Reserve and on the Serengeti Plains grew up in increasingly frequent contact with cars, they gradually developed an indifference to them which a few years past nobody would have thought possible. In 1964, the cubs of a Nairobi Park litter not only came to the cars in order to sniff at them, but eventually made a habit of jumping onto the bonnets and roofs. There they often sat down comfortably, with their tails hanging down outside the car windows. More recently in the Amboseli Reserve, one could sometimes come across a cheetah family resting surrounded by 25 or 30 tourist buses, and none of the animals ever looked at the cars.

In 1925, Marius Maxwell wrote: "Photographing the East African buffalo in its marshy haunts or in bush country is not any easy task. The most one can expect under such conditions is to snatch a glimpse of a raised head of one's massive flanks. Where the animals have been in any way disturbed, they usually remain in the shelter of the swamp and make their appearance in the open at night time."

As far as Kenya and Tanganyika were concerned, there had been no change in bufallo behavious by tHe late forties and early fifties. Photographing them remained



a far from easy task, and I had to go to the long-established Katwe Reserve (later Queen Elizabeth National Park) of of western Uganda in 1950, in order to get my first really satisfactory shots of the big black bovids. To find the Katwe buffaloes, grazing in the open in broad daylight, and to be able to drive up to one group of mighty bulls after the other came as a tremendous surprise to me. I found it more difficult to get pictures of heards, for they almost invariably took fright and lumbered away before I was really close enough for the 13.5 cm lens I was using at that time.

During the second half of the fifties, the Manyara National Park became known as a good place for buffaloes. They had begun to change over to diurnal habits, remaining out of cover almost permanently, and had lost their fear of cars. Same as in the Katwe Reserve, the old bulls were the first that could be approached closely. It took quite a number of years more for the herds to develop a similar attitude of indifference.

Gradually, the buffaloes of Amboseli, Samburu and Mara, of the Serengeti National Park and Ngorongoro went through the same change of habits, and today's tourists find it easy to photograph the impressive animals.

In Amboseli, for instance, it is sometimes possible to drive right in among a heard resting on the edge of a swamp. On a recent visit, I saw this herd leave their swamp retreat about mid-morning and slowly wander past two or three cars. Some approached to within a few metres and stood staring, while a dozen cameras kept clicking away. How amazed Maxwell would have been if he could have witnessed this scene! ■

ARTICLE: by MARK and DELIA OWENS, research scientists in the Kalahari Desert

The social life of the brown hyena

A DENIZEN of darkness and inhabitant of remote desert regions of Southern Africa, the brown hyena has long been an elusive and misunderstood carnivore. It is often portrayed as a timid, solitary animal, skulking through the blackness of night and dominated by all but the smallest of predators. Six years of research in the Central Kalahari have shown that the brown hyena simply does not fit this mould.

Brown hyenas are highly skilled "active scavengers." While seldom hunting themselves, individual hyenas bully most other predators, including leopards, from their kills single handedly.

And the brown hyena is anything but solitary. Although they forage alone, individuals exist as part of a clan, the members exhibiting high degrees of altruism while rearing the young in communal dens.

The 55,000sq. km. Central Kalahari Game Reserve in Botswana, where the research is located, is one of the largest game protectorates in the world. Seven times larger than the Serengeti Plains, it is a huge, totally undeveloped tract of wilderness, so remote that it is closed to general tourism. We are the only inhabitants other than a few bands of migratory Kalahari Bushmen.

The nearest African village where supplies may be obtained is over 200 km. away and all our food, fuel, and water must be hauled great distances over sand tracks. But the logistics problems are offset by the privilege of conducting research in a pristine environment where most of the animals have never before seen modern man.

Because of the dictates of the Central Kalahari environment, where food items are scarce and widely scattered for much of the year, brown hyenas always forage alone. Due to the size of these food items and their wide distribution it simply is not profitable for browns to forage in groups. This fact is probably responsible for their reputation as solitary animals.

They do, in fact, live in clans of ten to twelve individuals including the young. The clan consists of a dominant male, a number of subordinate males, four or five adult females and their young. Each member of the hyena clan occupies a position within a social hierachy or "pecking order"

Clan members jointly defend a territory of about 170sq. km. against neighbouring clans. The territory includes a segment of the fossil river valley which becomes prime real estate during the rains (January-March). At that time large numbers of springbok, gemsbok, and other herbivores congregate on the fossil river bed to graze the nutritious seasonal grasses. At this time of year, kills by lions, leopards, cheetahs, and occasionally wild dogs yield large amounts of carrion concentrated on the dry river courses. Life is good for the brown hyena.

But the clan's territory also includes mixed bush and woodland habitat types adjacent to the river systems. These areas become more important to the brown hyena during the dry months when the large herbivores have migrated away from the fossil river valley.

The brown hyena's diet consists almost entirely of material scavenged from the kills of other predators. Radio tracking the movements of lions and hyenas by aircraft and truck has shown that lion range movements and prey selection greatly influence brown hyena ecology. The diet, range movement, and even the size and shape of the clan's territory are affected by the lion pride operating in the area. In the dry season when the lion pride expands its territory, the hyena clan nearly duplicates this expansion.

All that is left for brown hyenas when lions are finished with a kill are skin, bones, horns, and hooves. There is very little fresh meat available. Yet with its hammer-mill jaws and powerful digestive juices, the hyenas are able to injest and assimilate remains of lion kills.

Browns never feed with nor even venture closer than 100 metres to lions attending a carcass. This caution is necessary since lions occasionally kill them. Even after the cats have moved off, the brown hyena approaches the kill very carefully and then takes over the remains.

Except for lions, however, brown hyenas are the most dominant and numerous large carnivore in the research area. An individual brown hyena will chase leopards, cheetahs, jackals, and smaller predators from their kills. When present spotted hyenas and wild dogs do dominate brown hyenas, but these two predators are extremely rare in the reserve and therefore constitute little competitive threat to the brown hyena.

One night a large male leopard killed a springbok near our camp. Before it could feed, "Shadow," one of the brown hyena clan females arrived at the scene. With hackles raised she charged the leopard and chased him 150 metres into camp and up the tree next to our kitchen tent. "Shadow" and "Old Yellow", the dominant male of the clan, consumed the springbok.

A brown hyena takes a very systematic approach to its feeding on a carcass. The primary objective is the dismemberment of a portion, usually a leg, which can be carried off and cached in thick grass or under a bush. Seventy per cent of the times we have observed browns leaving a carcass they carried some portion with them.

