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Oryx - The International Journal of Conservation, is now published quarterly by Cambridge University Press on behalf of Fauna & Flora International. It is a leading scientific journal of biodiversity conservation, conservation policy and sustainable use, with a particular interest in material that has the potential to improve conservation management and practice.

The website, <http://www.oryxthejournal.org/>, plays a vital role in the journal's capacity-building work. Amongst the site's many attributes is a compendium of sources of free software for researchers and details of how to access Oryx at reduced rates or for free in developing countries. The website also includes extracts from Oryx issues 10, 25 and 50 years ago, and a gallery of research photographs that provide a fascinating insight into the places, species and people described in the journal.

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KENYA COLONY.

GAME DEPARTMENT.

ANNUAL REPORT FOR 1932, 1933, AND 1934.

HONORARY GAME WARDENS.

The roll of Honorary Game Wardens at the close of 1934 numbered seventy-four.

NATIVE SCOUTS

The number of scouts employed varied from time to time in accordance with the dictates of Estimates.

At the close of 1934 there were seventy-three in all on the Departmental strength for Game and Fish Protection and Vermin Control.

IVORY AND CONFISCATED TROPHIES.

The total weight of Government ivory sold in 1932 was 22,582 lb. and 578 lb. of rhino horn; in 1933, 31,156 lb. of ivory and 546 lb. of rhino horn; and in 1934, 28,931 lb., and 2,418 lb. of rhino horn. The value of ivory was low during 1933. Indeed it reached a record low point about May that year when large (100 lb.) tusks of soft ivory fetched only some Sh. 4/50 per lb.—a striking contrast to the prices obtaining in 1925, when such ivory fetched round about Sh. 20 a lb. Rhino horn also was low at Sh. 12/55 per lb. In 1929 we had seen it at Sh. 42 per lb. and more.

REVENUE AND EXPENDITURE SUMMARY.

Revenue		1932	1933	1934
Revenue from Licences . . .		£ 7,163	£ 8,647	£ 6,703
Revenue from Ivory, etc. . .		8,818	7,261	9,709
Revenue from Trout Fry . . .		—	—	103
Total Revenue . . .		£15,981	£15,908	£16,515
Expenditure				
Expenditure exclusive of Ivory Vote . . .		7,640	7,262	7,715
Expenditure on Ivory Vote . . .		1,637	1,971	1,265
Total expenditure . . .		£9,277	£9,233	£8,980

Balance of Revenue over Expenditure in 1932, £6,704; 1933, £6,675; 1934, £7,535.

I would remark that in 1925 our expenditure estimates allowed £19,145 to run the Department, £10,376 more than in 1934. Our needs are now no less than they were nine years ago. They are indeed greater to-day than they have ever been, as I shall show later in this report.

CONVICTIONS.

Convictions under the Game, Game Bird, and Trout Ordinances for the period under review are as follows :—

1932	:	:	:	:	:	492
1933	:	:	:	:	:	504
1934	:	:	:	:	:	751

The astonishing rise in the 1934 figures is attributable solely to drought and famine conditions, and their repercussions. The year was particularly remarkable for the number of large captures made, both by the Department and by the Police, of illegally possessed rhino horn, and the consequent convictions of the persons involved.

GENERAL DEPARTMENTAL ACTIVITIES IN THE FIELD.

Before commencing any detailed narrative, however, I must say something as to general conditions in Kenya in so far as they affected our work, and I can say it quite shortly. Never since I took over the Department, now eleven years ago, have things in general been worse for game, or more difficult for us to compete with. Locusts first and then drought had the following direct results.

Crops failed far and wide ; and the distressed native husbandman too often turned forthwith to hunting as the solution of his trouble.

For the animals, shortage of water concentrated them on the permanent rivers and water-holes ; and poor feeding rendered them lethargic and less wary ; and the poacher's lot was thereby rendered the more easy and fruitful.

We can readily sympathize with the opportunism that took advantage of these hunting conditions ; we ourselves should doubtless, *mutatis mutandis*, do likewise. We must at the same time do all we can to check it, not only on account

of our game, but—and I say it without my tongue in my cheek—also for the natives' own sake ; for the hunting life once adopted is hardly relinquished, and it spells retrogression.

A second and direct result of the drought was the damage done by game in greater or lesser degree in almost every inhabited part of the Colony. Hunger drove animals to depredations ; and depredations are obviously more bitterly resented when times are bad.

GAME PRESERVATION.

Such field-work falls roughly under three main heads : routine patrol, necessary from revenue and other aspects, serving to remind all and sundry that there is a Game Ordinance ; preventive and punitive work in areas where native poaching is general and widespread ; and retributive measures in cases of sporadic and localized raids. It was impossible to deal with all three, and we concentrated mainly on areas where poaching was most insistent, deep-seated, and destructive.

Mr. Clarke carried out, in conjunction with the veterinary authorities, an intensive poisoning campaign on the Masai-Kisii-Lumbwa border. He subsequently visited the Lambwe Valley in connection with elephant operations. Later in the year he undertook a three months' *safari* on the Upper Tana and the Kinna River-Garba Tula area, where heavy poaching by Wakamba and Boran had been reported. He covered much ground and wrote a most valuable report on the game situation, which he found good, in spite of the depredations of the marauding bands that had for years harried the area. That corner of Kenya is a difficult one to deal with. It is large, mostly densely bushed, and, with good water supplies, forms an ideal hunting ground for Boran, Italian Somalis, Wakamba, and others. I have on previous occasion referred to the difficulty of dealing with such folk. In the first place, it is not easy for a patrol to surprise a real bushman ; in the second, it is almost impossible to lay hands on him, for he can probably run as fast as any of your men, and if he cannot, he will resort

to his poisoned arrows or rifle to keep pursuers at arm's length.

Of his own particular area, the western half of the Masai Reserve, Mr. Clarke wrote at the end of 1933 :—

“ I am making no attempt to report specially on the various species of game animals that exist in my district. My reason for this is because the whole country is now a desert, and what game there is has hidden itself safely away in the most inaccessible spots. In previous reports I have been in the happy position of being able to truthfully state that (with the exception of a few specimens) more game existed than when I took over this area in 1920. I cannot make this statement to-day. If I were told to describe the situation of game in my district in one word I would have to use the word ‘ grim ’. No rain at all, country a desert, starving Dorobo all over the place, and everything horrible. However, it will rain some day, the grass will grow again, and the game will reappear.”

Captain Whittet was in his own area, Meru and the Northern Frontier Province, for most of the period under review.

Towards the end of 1932, the trapping of leopards throughout the north had assumed such alarming proportions that Captain Whittet came to Nairobi to discuss the matter with the Acting Game Warden. As a result of these representations, leopard were put on the Third Schedule of the Game Ordinance as from 1st January, 1933, and the setting of all traps capable of catching a game animal was prohibited on Crown land, without the written consent of the Game Warden.

It had been clear for some time that the trapping of leopards in parts of the Coast Province, Northern Frontier Province, and elsewhere would have to be prohibited, or at least carefully regulated, for the virtual extermination of leopards in various areas had allowed those pests of native cultivation, the baboon and bush-pig, to multiply to such extent that no crop could be gathered by human hands.

I was anxious that the necessary protection should be afforded by orders issued, when and where necessary, under the Native Authority Ordinance. This should have been

equally effective, and would have saved us from making leopard a game animal throughout the Colony ; in purely pastoral areas he has little claim to such rank. There were, however, certain difficulties in the way of such procedure, and our hand was forced in the matter.

It will, I fear, be some years before the full benefit of this protection of leopards is evident in Tanaland and some of the coastal strip.

I quote here certain passages from the report of Mr. Glenday (O.C., Northern Frontier District) :—

“ *Isiolo*.—There was little doubt that during 1933 the game suffered severely through drought and the early drying up of the River Uaso Nyiro. Natives reported elephant dying of thirst, and even if such reports might possibly have been exaggerated it was certain that, owing to the hard conditions and lack of water, the game became emaciated and consequently an easier prey to the poacher and other illicit hunters. It was said at one period in the Boran country that the elephants waited behind the cattle, and when water-holes had been dug by the herdsmen the elephant pushed ahead and drank first. It was also stated that they drank from native water gourds, which had been filled preparatory to being placed on camels to be taken to the native villages. When at last the river flowed again large herds of elephants were to be seen at the Lorian Swamp revelling in the improved conditions.

“ *Marsabit*.—The drought affected game as everything else. One of the most serious results was the rhinoceros, having fallen into wells in their effort to get water, were too weak to extricate themselves again. During the last week of the drought six rhino died at Laisamis in this fashion, and one was dragged out by the natives and ran off. The same thing happened to other wells, but, at Laisamis, there was a well with a narrow entrance between two rocks, and of these six rhinoceros three had got stuck between the rocks.

“ Towards the end of the drought, elephant in Marsabit Forest were looking in very poor condition. As is usual also, on the advent of the rains, a number of small ones died.

This was before the green grass appeared and before the elephant had gone down to the plains, so the explanation appears to be that they succumbed to the sudden severe change of temperature. Several buffalo were also found dead in the small crater lake near Marsabit. They had evidently got bogged and had not sufficient strength to get out. It was reported also that buffalo were dying of starvation on Kulal.

“*Garissa*.—A certain number of elephant appeared to have died from anthrax during the year. A few deaths were reported from elephant which had come down to the river before the rain, and the usual complaints were received of the destruction of *shambas*. Undoubtedly the worst offender is the baboon, which exist in great numbers along the river, but usually a more favoured animal is blamed.”

NATIVE SCOUTS.

There is little of unusual interest to report of the work of the native scouts during the period under review. They, in common with the rest of the Department, had a hard time, for native poachers tended to work in larger gangs than formerly, and were accordingly more prone to violence.

As in former years, the achievements of Diwan bin Ahmed, the head scout on the Coast, were outstanding, and contributed largely to the success of Mr. MacArthur in the bush hinterland.

The last *safari* he made before he died was perhaps the most successful of his exploits. Mr. MacArthur was on leave, and Diwan made a trek on his own into the Malindi hinterland. He was away some six weeks, and returned to Malindi with 1,523 lb. of ivory and twelve rhino horns; and also twenty-one prisoners, all of whom were convicted for illegal killing or illegal possession.

ELEPHANTS.

Elephants must always constitute a problem in any area where their natural habitat abuts on cultivated land. Climatic conditions and their concomitants, during the period under

review, complicated and enlarged the problem to an unprecedented degree.

The theory of elephant control is simplicity itself: decide in what areas the existence of elephants is justifiable, and then keep them in those areas. In this matter we are not only far behind both Uganda and Tanganyika, but we are also less fortunate. Both of them have an adequately constituted and equipped miniature army with which to wage war; they also have certain areas with clearly constituted boundaries along which their forces operate to repulse attempts at egression. We have neither. The very great majority of our elephant are scattered over the vast bush zone that covers more than half the Colony; and to this huge area there is naturally a huge periphery, along which—within it as well, of course—are a thousand and one danger spots where a marauding band may unexpectedly strike, destroy, and be away. It is clearly impossible to deal adequately with such a situation.

There are, however, certain areas in Kenya, inhabited by elephants, to which reasonable frontiers, frequently crossed, exist; and it is on these frontiers that our attempts at control, by one expedient or another, have been mainly concentrated.

“*Lambwe Valley*.—On starting the campaign on 7th June, 1931, there were some 800 elephants in the valley, and serious damage was being done to potato and muhogo *shambas*; maize and mtama *shambas* had already been eaten by locusts. The whole herd was driven out by the end of July, but on trying to clear the Kuja River area some 300 or 400 broke back. These were cleared out in November, with the exception of a small herd of twenty-two. They had done no damage to *shambas*, and have been allowed to remain at the request of the Medical Department for experimental purposes.

“*The Kuja River District*.—A great deal of damage was done to *shambas*, but chiefly at the time of the elephants' movements to and fro, between the Masai Reserve and the Lambwe Valley. There were some 1,000 elephants in the district after the Lambwe herd joined up with them. On

account of the smallness of the bush area which they inhabited, however, it was an easy matter to clear this area. From December, 1931, to June, 1932, there have been no elephant in this area.

“*Sakwa, Kaniamkago, and Suna Locations.*—I concentrated on this area from December, 1931, to June, 1932, and have come into contact with large herds of elephant which have done considerable damage to *shambas*. The animals come out of the Masai Reserve, where there is a big stretch of bush called the Segegi bush, which runs up from the M’gori northward to where it meets the Uyani River. They wander over the Masai-South Kavirondo border at night from these places and raid the *shambas*. This is also the main route out of the Kuja and Lambwe Valley areas.

“As a preventive measure, a road has been constructed running parallel to the Masai Reserve border for 20 miles from a point from the Kisii-Suna road, 30 miles from Kisii to Kihancha on the M’gori River. It is hoped that, as this road is an exceedingly useful one, the increasing traffic will discourage elephant from crossing it into South Kavirondo. As a further preventive measure, a trench, 5 miles long, 6 feet wide, and 6 feet deep, is nearing completion. This trench runs parallel to the road from the Suna River to the Uyani River. A considerable portion of the trench is through murram, so that there is little likelihood of it falling in. It traverses the Lambwe districts, and is the most important of all the preventive measures taken. It is anticipated that raiding will be renewed in the future, particularly in the Bukiria and the Suna districts. The success of the 6 ft. trench remains to be proved. If it is as successful as is anticipated, which will be seen within the next four months, it is strongly recommended that the work be extended to Nyabassi from the Masai Reserve to the Lambwe Valley.

“*Disposal of Carcasses.*—The campaign has been conducted during a period of semi-, and often acute, famine, due to locust invasions, and it is estimated that close on 250 tons of meat have been distributed to natives.

“*Conclusion.*—The success of the campaign lies in the

effect of the preventive measures taken, which still remains to be proved. It is certain, however, that without these measures any amount of control would have been abortive, as the animals would have returned in two or three months to resume their damage to crops."

Subsequent events in Kisii during the period under review were as follows :—

The elephants drifted back into the various areas, except Suna, cleared by Mr. Dawson. A drive to clear the Lambwe was attempted in June, 1933 ; it proved abortive. In February, 1934, the District Commissioner, Kisii, organized a huge drive, to commence at the north-west of the Lambwe Valley, and to sweep in a south, south-easterly, and finally easterly direction, pushing all herds from the district out into the Masai Reserve.

The first part of the operation was less completely successful, and there were only a few odd elephant left west of the Kisii-Karungu road after the close of the second day.

The remainder of the operation was less completely successful, for although a number of herds passed right out of the district it appears that many animals remained in the Kuja bush.

The problem of this Kisii herd is a difficult one, and I think the only solution, or partial solution, will be an improved ditch with a number of armed sentries at such places as the terrain renders inevitably vulnerable.

An undertaking of some importance was organized on Mount Elgon, during June, July, and August, 1932. The situation, which necessitated drastic action, had been foreseen for some years, and I have alluded to it in its incipient stages in previous reports. It was briefly as follows : The Elgon herd had been accustomed, doubtless through the ages, at certain seasons to work down in the wet weather to the lower fringes of the forest on the eastern side, and while feeding there, to make a short trip every few days down to a salt-lick and swamp lying out on the plain at the foot of the mountain. When white settlement commenced along their route, they did some small amount of damage.

As settlement increased, it became more difficult for them to find an unbarred passage, and they began to show resentment, which was formed doubtless by the active efforts of anxious landowners to drive them away. The inevitable result was that, from being a placid friendly herd, they became sullen and were guilty of a series of unprovoked attacks. A number of cattle were killed and at least one native. It was found necessary to shoot thirteen.

In October, 1933, the herd returned, and made itself most objectionable. Mr. Hoey shot eleven.

It is probable that some years must elapse before these periodic visits cease ; and it will only be then, after many a beast has paid the penalty for exhibiting the typical die-hard conservatism that is unequalled in the animal kingdom.

On the coast, elephants were persistently troublesome in various areas. North of Lamu, and near the mouth of the Tana, they were disciplined to some extent by Arab hunters working on a reward basis ; more efficiently in the latter area, where Mr. Petley at Belazoni organized and directed the activities of several patrols, working on the lower Tana and the delta triangle.

Kilifi and Malindi also reported sporadic raids, which were dealt with also by invoking local assistance ; an unsatisfactory arrangement, but the best that could be devised in view of the circumstances and the lack of funds.

As stated in the report for 1931, the system of cheap Governor's permits to shoot in certain zones in the Meru Reserve appeared by the end of that year to have served its purpose, and was discontinued. In 1933, however, complaints that damage was recommencing began to come in, and in August, on the representations of the District Commissioner, a new campaign was opened.

The conditions on which Governor's permits were issued were somewhat different from those obtaining in previous years, and were in brief as follows :—

Every applicant for a Governor's permit was required to deposit £10 with the District Commissioner. Such deposit was returnable if an elephant was killed, but was forfeited if an elephant was wounded and lost.

The permit-holder paid Government Sh. 1/50 per lb. on bull elephant ivory obtained, and Sh. 2 per lb. on cow ivory. These fees were subsequently modified in that all ivory under 10 lb. irrespective of sex only paid Cents 50 per lb., and over 10 and under 15 lb., Sh. 1.

The reason for this alteration was, of course, to offer an inducement to kill smaller animals if they were found in the vicinity of cultivations.

The District Commissioner was given complete and arbitrary powers—as is necessary in any scheme of this nature—to issue or refuse permits, and to set such conditions as to areas, etc., as were necessary for the proper prosecution of the campaign. Sixty elephants had been killed up to the end of 1933, and during 1934, 108 bulls and 71 cows.

ELEPHANTS KILLED ON LICENCES AND UNDER CONTROL SCHEME.

From elephants killed on licence in 1932 sixty-two tusks were exported, with a gross weight of 4,535 lb., giving an average per tusk of 73 lb. Twelve tusks weighed over 100 lb. each. During the same period 934 tusks were handed in as "found", or were confiscated, of a total weight of 22,428 lb., giving an average weight of 24 lb. per tusk; and 189 tusks of a gross weight of 3,309 lb., giving an average of 17 lb. per tusk, were obtained under various control schemes.

In 1933, 100 tusks were exported from elephants killed on licence, with a gross weight of 6,855 lb., giving an average per tusk of $68\frac{1}{2}$ lb. Seventeen tusks weighed over 100 lb. each. During the same period 1,273 tusks were handed in as "found" or were confiscated, of a total weight of 25,147 lb., giving an average weight of $19\frac{3}{4}$ lb. per tusk; and 277 tusks, of a gross weight of 7,104 lb., giving an average of $25\frac{1}{2}$ lb. per tusk, were obtained under various control schemes.

In 1934 fifty-eight tusks were exported from elephants killed on licence with a gross weight of 4,532 lb., giving an average per tusk of 78 lb. Fifteen tusks weighed 100 lb. or over. 637 tusks of a gross weight of 10,051 lb., giving an

average of $15\frac{1}{2}$ lb. per tusk, were obtained under various control schemes, including Meru ; 951 tusks came into the hands of Government, either as "found" or confiscated, weighing 20,510 lb., giving an average of $21\frac{1}{2}$ lb. per tusk.

It may be permitted to emphasize the fact that forty-four tusks of 100 lb. or over were obtained by licence-holders during the three years.

The heaviest tusk that appeared during the three years was one of 152 lb., handed in at Garissa.

During 1933, at the request of the Society for the Preservation of the Fauna of the Empire, I made an attempt to estimate the total number of elephant in Kenya. In the nature of things, it is clearly impossible to arrive at any exact figure, but, correlating information from every available source, it is, I think, possible to arrive at a fair approximation. I put the figure, as a conservative estimate, at 13,000.

DAMAGE BY GAME OTHER THAN ELEPHANT.

Widespread trouble on a large scale became increasingly acute during the period under review ; it now constitutes a problem as difficult as any with which I have had to deal. I will describe briefly the position and its genesis. There are at present vast herds of game roaming certain of the settled areas, eating crops, and, as seriously, the grazing, and drinking the water of harassed farmers.

When rains are good and pasturage plentiful the resultant damage is obviously less felt than when drought or locusts render vegetation sparse and insufficient for domestic flocks and herds.

During 1934 things were very bad indeed. Zebra are outstandingly the most numerous element in the throng, though there are areas in which oryx and Thomson's gazelle run them close ; and even eland, wildebeeste, waterbuck, and impala in places add materially to the congeries.

When a district first became settled, heavy shooting of game of all kinds took place. New settlers had, many of them, in addition to the inclination, time and money to spend on shooting. Game herds became reduced and driven off,

while predatory animals, such as lions, leopards, and hyenas, were almost exterminated. In the course of time, and under stress of circumstances, shooting diminished, and in many districts virtually ceased. Herds began to regenerate, and infiltration from less favoured areas hastened the process. Game became again firmly established. The carnivora, however, did not share in the process of reinstatement, for their attempts, where made, were met with rifle, poison, and trap. The balance of nature thus tipped left a clear field for the grazers and the browsers.

It may be imagined that the solution is simple: let each farmer deal with the game on his farm. If game were stationary, this would be the answer. Game is not stationary, however, and marauding beasts may often come from unoccupied farms or adjacent Crown lands to worry a conscientious farmer. The situation is now such as cannot be dealt with by individual effort; co-operation is essential or things will become steadily worse.

There are two main lines of action indicated. The first, and obviously logical one if practicable, is to allow the problem to solve itself. This it would do without difficulty if the killing of game could in some way be put on an economic basis; if, in other words, the killing of zebra and the rest could be made to pay.

The second line of action is for Government to give all possible assistance to those who are trying to help themselves.

I have worked on both lines so far as I could. I have explored the possibility of markets for zebra and other hides, and for dried meat. Zebra hides, a few years ago, had a reasonable export market, being shipped mainly to Asia Minor, where they were used, I understand, for the cheaper quality sandal soles. The fall in price of cattle hides crowded zebra hides off the market; though there is, I think, a reasonable hope that they may again in the near future be saleable. Similarly, the low value of cattle meat makes it appear impossible to do anything with zebra and other game meat on any useful scale. I am, however, still pursuing possible avenues of inquiry.

We have to thank the Kenya Defence Force for such direct assistance as Government has been able to give, since, through its good offices, we were able in 1934 to distribute 20,000 rounds of condemned .303 ammunition to hard-pressed settlers. It is true that this ammunition leaves much to be desired, but it has, nevertheless, been eagerly and repeatedly sought.

Giraffe on Trans Nzoia continued to cause trouble in several areas. The herd that lives chiefly on the Suam Estates wandered at intervals on to neighbouring farms, and some were shot. Everyone is averse to shooting these animals, even when caught red-handed, the more so that shooting a few does not seem to teach any salutary lesson to the rest, who merely stand and blink gentle æsthetic-looking eyes at the fallen.

In order to somewhat reduce the numbers of the herd, Governor's permits were issued in 1932 for the capture of thirteen. Mr. H. R. Stanton undertook the work. He was successful in the initial stages, but later was dogged by misfortune, lions killing several tamed animals, and others being lost through accidents. In 1933 the herd that has its headquarters on the Cherangani property of the Estates and Investments Co., Ltd., gave rise to agitation in the neighbourhood. They, like their Suam cousins, wandered off the ground that gave them sanctuary and on to neighbouring farms, smashing coffee and other crops. The very tameness of giraffe in these settled areas makes them the more difficult to discipline, since shouts and even sticks and stones have little effect in turning them away. They believe themselves welcome universally, and it seems impossible to destroy that impression. Twenty-eight Governor's permits were issued for captures from this herd up to the end of 1933, and with them Mr. Stanton, enjoying better fortune and profiting by the fruits of experience, was most successful. Subsequently, during 1934, he exported eleven more.

In 1933 we prevailed on Mr. J. A. Hunter to thin out the rhino in the Muringato Forest, where these animals were far too numerous. One estimate I received put them down as 200 in an area of some 6 square miles. Actually there

were probably a score ; and some of them took to waiting about the Nyeri-Nanyuki and the Nyeri-Rumuruti roads, chasing motor cars or pedestrians.

Mr. Hunter shot eleven, and the remainder moved off ; I heard subsequently that several had returned, but complaints as to their behaviour were not serious.

We have reason to be most grateful to Mr. Hunter for the work he did. It was essential that it should be done by the most expert hunter available, since the forest there, especially in the rhino thickets, is incredibly dense ; and a wounded animal at large in so populous an area would have been a terrible menace.

Rhino gave unprecedented trouble, especially during 1934, in the Southern Game Reserve, and the District Commissioner, Kajiado, had a difficult and trying time on their account. The reasons for their unusual truculence were probably in the main as follows :—

Drought conditions dried up a number of water-holes, and concentrated game and humanity at the remaining drinking places. In consequence, these morose creatures were forced into a proximity with man which they normally avoid, an bitterly resent. They thus became very bellicose and ready to contest every encounter—a sad change from the normal behaviour of Masailand rhino. Add to this perpetual irritability the fact that the lack of grazing in open country drove the Masai to herd their beasts further and further into the dense thickets that are the rhinos' chosen retreat, and the explanation of the frequency of attacks and casualties is plain.

Various other of our fauna, from buffalo to Kavirondo crane, came in for abuse, in many cases doubtless well earned, in some quarter or other of the Colony.

It says much for the spirit of Kenya with regard to game that, in spite of drought and other troubles, when the matter of the removal of hartebeeste and topi from the Royal Game List came up for discussion in August before the Uasin Gishu District Association it was turned down by a unanimous vote.

ANIMALS AND THE RAILWAY.

September, 1933, was an unusually bad month for giraffe along the railway, five being killed by trains ; the total bag for the year was eighteen.

BUFFALO.

There was great mortality among these animals from rinderpest during 1933 and 1934, notably in the Tsavo, Sabaki, Kasigau area. A curious feature of the disease in the area around Kibwezi, Athi, Chulu Hills, was the fact that animals appeared to be dying from it over a period of some two years. I say "appeared", for although I myself have no doubt of the facts, the statement is so odd that I felt it needed qualification.

KUDU.

I fear that both Greater and Lesser Kudu have suffered severely from rinderpest during the last two years. A Greater Kudu, probably a sick animal, was seen in 1934 by a competent observer on the southern slopes of the Ngong Hills ; it had probably come up from the Narosura country.

In 1932 I saw on Kulal a Greater Kudu which carried a head that I place at 60 inches at least, and believe probably ran to 63 or 64 inches ; it was one of five adult bulls lying together in a small clearing. A head of $58\frac{1}{2}$ inches was recently obtained in the southern part of the Northern Frontier District.

Lesser Kudu I believe to be much less numerous in several areas than they were ten years ago, notably in Tanaland and in the Voi-Taveta country. The killing-off of leopards should have led to an increase, and I can only attribute the diminution to a combination of drought and rinderpest, the former rendering the latter more fatal.

BONGO.

I am happy to be able to state with confidence that Bongo have increased in number considerably during the past five

years, and more noticeably during the past three. In this connection I should like to say that we have to be grateful to the Forest Department for a much fuller measure of assistance and co-operation recently than we were formerly accorded, and we may hope accordingly that the Bongo herds will continue to thrive and increase.

HUNTER'S ANTELOPE.

This interesting and attractive animal appears to have slightly increased its numbers in recent years, though any exact census is difficult if not impossible.

KENYA ORIBI.

I find that the distributional range of this delightful antelope is wider than was at one time believed, and there does not appear to be any danger of its extinction.

HARTEBEESTE, COKE'S, ETC.

These animals are usually the first to succumb to the effects of drought and partial starvation, their lowered condition making them susceptible to a lung infestation to which they appear to be immune under favourable circumstances. Many died during the last two years.

WATERBUCK.

Within three or four miles of Nairobi Aerodrome the distributional ranges of *C. ellipsiprymus* and *C. defassa* meet. From there across on to the slopes of the Ngong Hills herds of waterbuck may be seen in which individuals show every degree of gradation between the types of the two species, and there is no doubt that cross-breeding is general.

LYNX.

I have always believed this animal to be of very sparse occurrence in Kenya. The intensive leopard trapping in the Northern Frontier Province in 1932 disclosed the fact that

they were numerous in the Wajir area, several hundred skins being brought in there.

FAMINE RELIEF.

Permission was granted in various areas for certain common game animals to be killed without licence in order to alleviate famine conditions. The most important districts where this occurred were Kilifi, Rumuruti, Embu, Kitui, Machakos, and Baringo.

It is an astonishing fact that the more rigorous the drought and the poorer the condition of other game animals and man, the sleeker and fatter do zebra become. Thus, needless to say, they provided by far the largest contribution to famine relief.

GAME BIRDS.

I have for years now had a melancholy story to tell of game birds in the settled areas and the native reserves ; and here I can give no more cheerful account.

It may be of interest to review briefly the situation : East Africa is full of "vermin", using the word in the gamekeeper's sense. The game birds had established themselves alongside hosts of predatory enemies—raptorial birds innumerable, jackals, mongooses, civets, genets, servals, snakes, and what all. It is indeed evident in the nature of things that, where man is absent or transitory, the more vermin there are the more game birds we expect to, and do in fact, find.

Nature strikes a balance. Man comes, white man the worst, and the balance is, only too often, tipped. It is not, for the most part, that he kills the birds ; he makes their environment impossible by the introduction of fresh factors. He clears the bush, cleans off the undergrowth, his beasts crop the grass. He employs others who bring *totos* and dogs, these too often left to fend for themselves. He, if only by virtue of example, teaches natives who are not naturally bird-eaters the value of such diet. And the birds disappear.

So much for what has happened in most of the settled areas to the non-migratory birds. In some of the native reserves the story is very similar. Land development and changing tribal habits have been responsible for upsetting the balance irretrievably. I can see no means of arresting the dire progress.

Side by side with this decrease, in the accessible parts of the Colony, of our more important game birds, we have also a less easily explicable but equally deplorable decrease in the number of our migrants.

The influx of snipe during the rains, the quail migration through the highlands, the New Year's flights to our waters of duck and teal, all have dwindled of recent years. Even the hosts of pigeon which come to feed on the ripening wild figs in our highland forests appear to have gone, or at least to have sadly diminished.

A sorry recital ; the more so that one can see little chance of improvement, unless perhaps as a result of several wet, really wet, seasons. But when shall we get them ?

The bird-shooting in the forest and semi-desert parts of the Colony has undergone no change ; and the Northern Frontier and elsewhere can show the same profusion as ever of sandgrouse, francolin, and guinea-fowl, to the enthusiast who has leisure to journey to the wild places. But in Kenya to-day the average man finds it hard enough to get a good day with his gun.

PROFESSIONAL HUNTERS' ASSOCIATION.

East Africa has been fortunate to boast, for the last thirty-odd years, a considerable number of men of outstanding skill in hunting and field craft who spend all or most of their time looking after the safety and comfort of visiting sportsmen. The record of this glamorous band is an enviable one, and its history, if ever it comes to be written, will make proud and enthralling reading.

It is a great pity that, until early 1934, there was, save their common profession, no sort of bond or unit within which to include the interests of our "white hunters". The inauguration of the Professional Hunters' Association at

long last remedied this. The Association serves a dual purpose. Membership is an honour, and guarantees to the world the capacity and integrity of each one who enjoys it. And, secondly, the Association is pledged to high aims, and, being articulate, can do much to counteract the calumnies to which we are too often subjected.

It is stated in the constitution of the Association that among its objects are the following :—

To institute and secure the general adoption of a high and sportsmanlike conception of wild life and of the hunting of game.

Consistently with the practice of the profession of hunting to promote and assist in the preservation of the fauna and flora of Eastern Africa and to keep the sport of big game shooting clean and wholesome.

To collaborate with the officers of the Game Departments and Administrative Services in Eastern Africa ; to assist them in execution of their duties in regard to the preservation of fauna and flora ; and generally

To prevent the illegal and/or unsportsmanlike disturbance, destruction, and/or molestation of fauna and flora by members of the Association and/or their clients and servants.

To prevent and punish illegal and unsportsmanlike practices in the hunting and photography of fauna, and to encourage, promote, and insist upon honourable and sportsmanlike conduct generally in the practice of the profession and sport of hunting.

I value the new Association, not only for the use it will be to visitors and to myself, but also for its value to the Colony generally.

Kenya takes her game and its preservation very seriously. In common, however, with her other assets and their associated activities and enterprises, game is, in much of the world press, subjected to the supercharging process that is so obvious a characteristic of modern journalism. It is not long ago that a well-known journal had headlines,

“500 Man-eating Lions Invade Nairobi.” The story appeared in modified form in print the world over ; it had a long run, and even appears sporadically in still recognizable form up to the present. It is comparatively harmless, and will die a natural death, or, more accurately perhaps, suffer an old soldier’s end.

Very different was the case of the story which flashed through the world press in 1933. Not one person in a thousand who read the account ever read the subsequent withdrawal and apology ; and it would have made little impression on them if they had. Millions of people will continue to believe, in so far as they trouble to believe anything, that lions were caught on fish-hooks and tortured, brave show for a sadist picnic. It is a story that casts discredit on big-game hunters, on Game Departments, on the East African territories, and even on humanity generally : on big-game hunters, for “what one will do, so will another” ; on Game Departments, for “not attempting to stop that sort of thing” ; on the East African territories, for “having such a rotten public opinion that that sort of thing goes on” ; and on humanity generally, for the fact that a beastly story has such first-class news value.

The story is, of course, utterly without foundation. Let us run the gaunt of the criminal calendar, if it pleases the news-makers ; but leave us our reputation as to the fair treatment we insist on in all matters connected with our game.

One of the preoccupations of the Association is propaganda. The truth about game, reasonably recounted, should have enough flavour without the addition of the sauce of imagination which renders the mess so distasteful to us in Kenya. In this matter, no less than in its other aims and aspirations, the Association will be of service to the community. We may all wish it well.

LEGISLATION.

In December, 1922, the setting of traps capable of catching game animal was made illegal on Crown land except with the consent of the Game Warden.

Leopards were placed on Schedule III. (They are thus now game animals, and their skins may not be sold or exported without a permit from this office.)

The Serving Officer's Licence was made available for members of the Indian Civil Service on leave in Kenya.

The distinction between visitors and residents for Trout Licences was abolished.

The Lake Victoria Fishing Rules were passed. While we are not directly concerned with fishing either in the lake or at the coast, we have been compelled to take a semi-sponsorial interest in both, and accordingly I mention the Rules here.

In December, 1933, a Game Amendment Ordinance was passed, having the following main provisions :—

Legislation regulating the export and import of trophies was simplified and consolidated.

The fees payable for the following licences were reduced :—

Visitor's Full, Resident's Full, Resident's 14-day.

The following new licences were introduced :—

Visitor's 14-day, Serving Officer's 14-day, Serving Officer's Private Land, Assistant's Licence.

All full licences under the Game Ordinance were made to run for twelve months from date of commencement.

A fourteen-day licence was to be issuable after an interval of six months instead of twelve months.

The conditions under which licences are held were clarified and made definite.

Provision was made for the issue of Governor's Permits for photographic purposes.

The minimum weight (30 lb.) for ivory permissible on an elephant licence was abolished.

ACKNOWLEDGMENTS.

This is the most difficult part of my report for me to write. I and my Department are under such great obligations to individuals and to sections of the community that it seems

impossible to avoid being on the one hand invidious and on the other fulsome.

As in former years, we owe a deep debt of gratitude to the Police. Not only did they make some splendid captures, eighteen tusks at Kitale, and forty-eight rhino horns hidden in bales of tobacco at Moyale, to mention only two, but they helped us consistently throughout the Colony. To the Commissioner and the whole of his Force I offer my sincerest thanks for their unvarying assistance, ungrudgingly given, their own multifarious duties notwithstanding.

To many officers of the Administration also we owe a debt that words cannot easily express, nor, unfortunately, services repay. In many areas they supervise our scouts and look after game and fish interests generally. Often, however, I feel I have cause to be grateful for their forbearance as for their active assistance ; though it is, I hope, universally recognised that failure to respond to a call for assistance is caused by *non possumus* and not by *nolumus*.

I cannot, however, end this chapter without mentioning two invariable assistants : the Society for the Preservation of the Fauna of the Empire which, one is glad to recognize, is always at hand to help if required with propaganda or in other ways ; and the local press, which is ever ready to put before the public information on game matters of general interest and importance.

GENERAL SUMMARY.

I have already said enough—it may well be more than enough—in this report to show that the three years under review, 1933 and 1934 particularly, were times of difficulty and often of depression.

There was incomparably more work at hand than ever before, and there was less with which to do it.

We must admit, however, that we have not succeeded in perhaps the most important aspect of our work—the suppression of rhino poaching and dealings in illicit rhino horn. We are indeed not within measurable distance of such success, and it is difficult to foresee when we shall be.

I have no wish to libel an in many respects admirable people, but I believe I am within the mark in saying that a great many of the Somalis in Kenya either are, or potentially are, rhino horn traders. With the same disclaimer, I could make an almost similar statement with regard to the *duka* keepers throughout the reserves. The numbers of people involved do not constitute the crux, or even the major part, of the problem. The trouble is the rapidity with which the stuff changes hands. It has often occurred to me that our perpetual efforts to catch participants in the traffic is very like a game of "hunt the slipper".

We can, for the most part, only hear of horn moving when someone sells the information, and the news is so often just a fraction too late. Further, the information we get of dealings must in the nature of things be usually from accomplices, and that, unsupported, is useless in court. At one time there were in Kitui jail—it was some time ago—over thirty Wakamba, each one of whom admitted having sold rhino horn to a certain *duka*. He was a cautious man, and never had the horn within a mile of his shop. Could we get corroborative evidence against him? We could not—at least not for a long time; and when we did the fine was but a tithe of what he had made out of horn in the previous few months! If only magistrates would realize the universality of this cursed traffic, the huge profits to be made—for no other trade, save perhaps the drug traffic, can show a 1,000 per cent profit on a deal—and the incredible difficulties that have to be overcome before a case comes into court; if only, I say, they realized these things, they would surely impose in all convictions sentences that would serve as some deterrent at least.

I make no apology for dissenting here at such length of the rhino horn traffic. Kenya is the world's last stronghold of these great beasts. There are a few dotted about Africa; more in Tanganyika perhaps than elsewhere, but even there they are very local. In Asia they are verging on extinction.

The only other point that I wish to recall deals with game in relation to human activity. I have before shown

that game preservation must necessarily include two correlated, yet separate, functions : the care of game and the control of game. I have now but one officer for the control of game and vermin, and all too slender funds ; and am forced to every kind of expedient to deal with the indiscipline of beasts.

SOME NOTES ON GAME PRESERVATION IN ASSAM.

(With special reference to the Kaziranga Game Sanctuary.)

By J. B. ROWNTREE, I.F.S.

Assam has always been noted for its fauna and for the facilities it has to offer in the way of shikar, but it is sad to have to relate that nowadays, except for a few favoured localities, this reputation is no longer deserved. Nor is this state of affairs to be wondered at when it is realized that the population has been increased to an enormous extent in recent years by the influx of immigrants from Bengal.

It is true that there are other contributory causes, such as an increase in the number of guns possessed by villagers, and the fact that in recent years magistrates and district officers have had their hands too full with more pressing affairs to give much time to the subject of game preservation.

The chief cause for the decrease in the number of game is, however, undoubtedly due to the growth in population, and to the fact that the Unclassed State Forests, formerly the best shooting grounds in the province, are rapidly being opened up for cultivation. This process is likely to continue, and it is useless to ignore the fact that the wants of the cultivator must receive the first consideration, and that game cannot be preserved at the expense of that destructive creature *homo sapiens*.

It follows therefore that little, if anything, can be done to save the game in the Unclassed State Forests from eventual