

River area and to drive the "fly" back to the escarpment in the Doma, Sipolilo, and Darwin Districts. This has been practically achieved both at Darwin and Sipolilo.

The policy of game elimination will not be extended over the whole of the area occupied by "fly". It is considered that the present operations have stopped all spread of the "fly" except in portions of the Urungwe and Sebungwe Districts where operations are difficult to carry out or where as in the latter district no operations are in progress. More pure Entomological Research into the biology and ecology of the "fly" will be instituted.

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## TANGANYIKA TERRITORY.

### GAME DEPARTMENT REPORT, 1935, EXTRACTS FROM.

#### INTRODUCTORY.

To preserve a *balance* in the wild life of this Territory is a concern of this department.

The game position of the entire territory cannot be measured at a glance. A matter of 360,000 square miles, the greater part of it pure bush, is a combined care, as far as game preservation and elephant control goes, of a Game Warden, 6 Rangers, and 173 Game Scouts.

A ranger's duties comprise investigation in person of information respecting movements of game and depredations of marauding game; much correspondence from all over his area, requests for help against raiding animals, and the dispatch of scouts and rifles; personal presence in major difficulties, compiling of information for necessary returns, maintenance of native staff and stores. All this does not leave the ranger much available time for research in the general game position.

Even when an area has once been visited and reported upon that is no criterion that the situation will always remain

the same. Migration takes place depending on variations in the seasonal rains and the consequent change in the conditions of grazing and watering. It can be seen, then, that what may appear to be unnecessarily frequent changes in the boundaries and placing of reserved areas, and in the species of animals to be protected, are unavoidable and subject to varying circumstances.

#### PROTECTION OF LION, LEOPARD, AND CHEETAH.

The following regulation was introduced during the year :—

“Notwithstanding anything contained in any regulation, no person shall, unless he holds one of the licences mentioned hereunder, hunt lion, leopard, cheetah, or buffalo in the Central, Iringa, Lake, Northern, and Tanga provinces, or kill therein any number of such animals exceeding that specified hereunder :—

	<i>Lion.</i>	<i>Leopard.</i>	<i>Cheetah.</i>	<i>Buffalo.</i>
Visitor's Full Licence . . .	6	4	2	Unlimited
Visitor's Temporary Licence . . .	2	2	1	„
Resident's Full Licence . . .	6	4	2	„
Resident's Minor Licence . . .	2	2	1	„

“Provided, however, that in the Serengeti Closed Reserve not more than one lion or one cheetah may be killed by the holder of a Visitor's Full Licence or a Resident's Full Licence and that no lion or cheetah may be killed in the said reserve by the holder of a Visitor's Temporary Licence or a Resident's Minor Licence.

“Provided further that any person may at any time in defence of any person or for the protection of property kill in the said provinces any of the animals mentioned in this regulation without holding one of the prescribed licences.”

#### NOTES ON FOUR OF THE MOST VALUABLE COMPLETE RESERVES.

Of our complete game reserves, of which there are twelve, the *Lake Natron* adjoining the Masai Reserve in Kenya is the most valuable. It is approximately 3,000 square miles in extent and harbours a great variety of game, such as

elephant, rhinoceros, buffalo, giraffe, oryx, lesser kudu, and gerenuk, besides most of the common species, such as wildebeest and zebra. Sable, roan, and topi are not met with here.

A volcanic mountain known to the Masai as Oldonyo Lengai and to the Swahili-speaking native as Kilima cha Mungu is situated in the reserve. This mountain has been active at intervals during the past twelve to fifteen years.

The *Selous Reserve* is famed chiefly for its number of elephant and buffalo, and a few rhinoceroses are also located here. Greater kudu are not plentiful, but two herds have been observed, one containing approximately thirty-five animals, another twenty, and scattered about are several smaller herds. Sable antelopes are rare but a few small herds are known, one consisting of about twenty animals. Wildebeest, zebra, palla, hartebeest (Lichtenstein's) are numerous, and waterbuck are well distributed along the big rivers and round about the soda lakes.

The *Northern Railway Reserve*, situated in the Pare District, Tanga Province, is small, but it is the only reserve in that province. Besides rhinoceros, buffalo, and the commoner species, it contains rarer species, such as oryx, lesser kudu, and gerenuk, and is occasionally visited by elephant.

The *Serengeti Complete Reserve*, although small, is a most valuable piece of country as it is bounded by two rivers and extends right down to Lake Victoria. It is the main breeding ground for lions on account of its cover and permanent waters. In the dry season it harbours a lot of game.

#### CLOSED RESERVES.

Entry to a closed reserve, of which there are two only, is by permit. The fact that the permit must be obtained in person and for a specified period has enabled an efficient check to be kept. Certain restrictions may be enforced, such as in the Serengeti Closed Reserve where one lion and one cheetah only may be killed by the holder of a Full Licence and none on a Temporary or Minor Licence.

*Serengeti Closed Reserve.*—This reserve is becoming more and more popular with visitors as it is probably the only

place in the world where one can almost guarantee that numbers of lions will be seen which can be photographed from as near as 5 yards. Provided one is accompanied by an expert who from constant experience knows when to approach or when to leave them alone, one can drive up to them in comparative safety ; but a lion is a lion, therefore unnecessary risks should not be taken. I regret to say that cases have been brought to my knowledge where visitors have been so venturesome as to step out of their cars in order to take something new in the way of photographs. It will be through such foolhardy behaviour that the first accident occurs.

*Lake Rukwa Closed Reserve.*—In 1928, when I first visited Lake Rukwa, game was plentiful and tame, but when I visited it again in 1932 I was unpleasantly surprised at its scarcity and wildness. Inquiries showed that it had become popular amongst meat hunters who were killing game to feed their native labour. This information was easily verified from the number of car tracks and from the remains of camps with racks for drying meat still standing.

Early in 1933 an area with defined boundaries bordering on the lake on three sides was declared a closed reserve. This closed reserve is chiefly noted for its numbers of puku, which are only found elsewhere in the vicinity of the Kilombero River, although I understand that a few of this species have been seen near to Mwaya on the shores of Lake Nyasa in the Rungwe District.

An honorary game ranger who has known Lake Rukwa for a number of years has written to tell me that game is increasing, which is gratifying.

#### POACHING.

*By Europeans.*—The situation remains the same as in the previous two years. Where game is killed solely with the intention of feeding native employees there is bound to be overshooting of certain species. This practice, though illegal, is comparatively harmless and capable of control. Flagrant cases can be dealt with summarily.

*By Natives.*—This is far more difficult to suppress. A native is allowed to kill sufficient game meat for himself and his family's needs. Although in practice this concession is not easy to control there has been a larger number of convictions during the year.

In some cases native offenders against the game laws are tried by local native authorities.

#### DISEASES AMONGST GAME.

During the year rinderpest has been responsible for many deaths in western Serengeti. Near the Ngorongoro Crater this disease is almost an annual occurrence, though in recent years it does not appear to do much harm.

Towards the end of 1933 an outbreak was reported in the Pare District, Tanga Province. It is believed that illicit movement of cattle amongst the Wakamba and tribes bordering on Lake Jipe and eastwards was the cause of the outbreak. In January, 1934, rinderpest was rife amongst game on the Jipe Steppe and along the western slopes of North Pare. Buffalo, eland, and lesser kudu were the main sufferers. Major Bradstock, Honorary Game Ranger, reports finding the carcasses of nine lesser kudu within a radius of half a mile. The carcasses of several more were seen in the Pare District. By the end of January the disease was spreading through the gap in the Pare Range and towards the west, and later it moved in a south-easterly direction towards the coastal line.

If it appears necessary, steps will be taken to procure complete protection for lesser kudu until such time as normal conditions are reached.

#### ELEPHANT CONTROL AND CULTIVATION PROTECTION.

##### *Elephant.*

As in the previous year, cultivation protection has taken up the major time of four game rangers and 126 game scouts. A temporary ranger was also engaged for a short period towards the end of the year to deal with raiding elephant in the Moshi District. Owing to the drought, which was

almost universal throughout the Territory, and the resultant shortage of water and food, elephant herds approached cultivated areas in their search for food and water.

The thinning-out campaign, inaugurated in 1933, was continued in the Southern and Eastern provinces. As far as possible old cows past the breeding stage and tuskless animals were killed, but a large proportion had necessarily to be younger animals. 2,716 elephants were killed during 1934.

The percentage of sexes killed was as follows:—

	<i>Bulls.</i>	<i>Cows.</i>
Kilosa, Kiberege, and Mahenge districts . . . . .	66%	34%
Rufiji District . . . . .	60%	40%
Southern Province . . . . .	50%	50%

Eastern Province.—In the Rufiji District the situation in regard to elephant control is so improved that shooting has been eased off since the end of the year. The Ranger reports that raiding has practically ceased, and, but for the ripening mangoes in December, which are such an attraction, there would be few elephants near settled areas, though where native gardens are cultivated on the edge of dense thickets they are still raided. 468 elephants were killed in this district during the year: weight of ivory, 8,191½ lb.; found ivory, 38 tusks, weighing 227 lb.

In the Morogoro, Kilosa, and Mahenge districts the Ranger reports that elephant are becoming wary of raiding near large settlements but that small isolated settlements are suffering. The remedy is obvious. 940 elephants were killed in these districts.

In the Dar es Salaam District the scheme begun in the previous October was continued under European control until March, when it was considered that sufficient elephant had been killed or driven away from the vicinity of cultivation to enable native scouts to deal with any further trouble, their duties being to keep guard and to intercept any herds that may return. Seventy-two elephants were killed during the year.

Southern Province.—In the Kilwa District special operations were carried out in an attempt to drive out or kill all

elephant in the coastal area. These operations have proved successful and that area is now practically free from raiding.

In the Liwale District a control scheme is being carried on with the object of driving all elephant towards the western boundary.

In the Mikindani District two or three small herds of approximately thirty elephants crossed over from Portuguese East Africa on account of the shooting there ; most of them have been driven back. In the Newala District the same thing occurred but the number of elephants that crossed the Rovuma was much smaller.

In the Masasi District raiding is almost a thing of the past, but scouts are maintained there to keep watch.

In the Tunduru and Songea districts, in addition to ordinary cultivation protection, a certain amount of thinning out has had to take place. 1,165 elephants were killed during the year in this province.

Two native scouts were stationed in the Iringa District to deal with raiders. They accounted for 58 elephants. A further two scouts were posted to the Sumbawanga District for the same purpose and shot thirteen elephants.

### *Rhinoceros.*

On account of the drought these animals were attracted to the vicinity of cultivated areas in their search for food and water. Unfortunately, in some instances their meanderings took them amongst young coffee trees, and complaints soon began to come in from planters near Mbulu and Oldeani. Parts of the Tanga Province, particularly in the Pare District, were also affected. Records show that seventy-two rhinoceroses have had to be destroyed as a result of this practice.

### *Hippopotamus.*

In the Southern Province a thinning-out campaign of these animals was continued in localities where crops were suffering from their depredations. These areas were chiefly the Rovuma River, the Kilwa coastal area, and the Maliwe-Njenjo area of Kilwa. Three hundred and fifty hippopotami were killed, yielding teeth weighing approximately 2,000 lb.

In the Rufiji District the campaign begun in 1933 was continued, and records show that 1,142 hippopotami were killed during the year, of which number 243 were killed by hunters who were not employed by Government. The teeth obtained from these animals weighed 4,328 lb.

The situation is much easier, especially in the Rufiji River, where the reduction in numbers is most noticeable. As an example of the number of hippo in that river I would mention that the Ranger shot and recovered in one day the carcasses of sixty-seven hippopotami in a stretch of not more than a quarter of a mile. Although a campaign has been in force for two years, and it is estimated that approximately 2,600 have been exterminated, this drastic killing does not appear to have unduly disturbed them. Calves are seen with practically all the cows. The drop in the weight of teeth is an indication that most of the older animals have been destroyed. The average weight for a set of teeth is now between 4 and 5 lb., as against 7 lb. a couple of years ago.

#### *Vermin.*

The scheme inaugurated in 1933 in the Rufiji District against pigs, wart-hogs, baboons, and monkeys has proved itself a success where the poisoned baits have been carefully prepared. Reports from native headmen show that many carcasses have been seen in addition to the tushes and tails collected.

#### *Brought in.*

Sets of tushes or tails of pigs and wart-hogs	. 679
Monkey tails	. . . . . 132
Baboon tails	. . . . . 97

Strychnine was used against man-eating crocodiles at Mohoro in October. Baits were put down overnight and next morning fifteen dead crocodiles were seen floating on the river.

*Risks.*—Game Scout Heberi bin Mwasofu in the Tukuyu District was gored by a buffalo towards the latter end of the year, and has subsequently died as the result of his injuries.

Scout Saidi bin Mawanga was charged by a cow elephant



and received stomach and leg wounds. Head Scout Marekebu, who fortunately was with him at the time, killed the cow and then shot five more elephants which were attracted by Saidi's groaning. If Marekebu had not been there there is no doubt that the herd would have finished off Saidi.

Scout Saidi bin Abdullah at Kisaki was picked up and carried for some distance by a wounded elephant which eventually tossed him away. Saidi recovered, crawled to his rifle, and killed the animal. During the late war this scout was very badly wounded. In 1925 he was mauled by a man-eating lion near Kilosa which died on top of him with his hand in its mouth. In 1930 he was gored by a rhinoceros in the Kisaki District, and now by an elephant. I think it will be agreed that he has led a life which has been somewhat more exciting than the average one.

In the Mbugwe area, Northern Province, a herd of elephant raided native gardens at the back of some hills known locally as the Pyramids. In the morning when the natives arrived at their shambas (they leave them unprotected during the night and sleep at their villages some two miles away) they found the elephants still there so proceeded to chase them, throwing spears. Eventually the herd became annoyed and charged, killing three natives. Two game scouts then arrived on the scene and killed five elephants before they could drive the herd back to the bush. In 1933 a similar incident occurred where one native was killed. Where native gardens are left completely unprotected at night in country which is known to contain elephant such accidents are almost inevitable.

*Ivory.*—Average weight of ivory shot and found :—

By licence-holders . . . . .	52·82 lb. per tusk
By Game staff . . . . .	14·35 lb. „ „
Found ivory . . . . .	17·53 lb. „ „

Heaviest tusks obtained during the year :—

By licence-holders . . . . .	106 lb., 99 lb., 91 lb., 88 lb.
By Game staff . . . . .	91 lb., 86 lb.
Found ivory . . . . .	90 lb., 82 lb.

*Rogues.*—Three rogue elephants were killed during the year, one at Kidodi in the Kilosa District, and two at Mkalimoto in the Kiberege area. All three of these elephants had killed natives.

#### CAPTURE OF WILD ANIMALS FOR EXPORT.

The following species of wild animals were captured and exported during 1934: 3 giraffes, 1 elephant, 1 rhinoceros, 1 eland, 2 oryx, 6 wildebeest, 7 zebra, 1 bush-buck, 1 Thomson's gazelle, 2 cheetahs, 2 jackals, 25 baboons, 15 monkeys, 1 eagle, 1 vulture, 2 crested cranes, 1 marabout stork, 1 bustard, and 7 hyrax.

#### RANGERS' OBSERVATIONS.

*Captain Moore, V.C. (Serengeti Range).*

Two Thomson's gazelle and an eland were found drowned when the river rose at Banagi. Probably they were caught in the first rush of water whilst feeding in the river bed.

During the drought a herd of wildebeest numbering several hundreds passed on the reserve side of the Makungu River. As they came within smelling distance of water they stampeded and it was afterwards found that four of them had been pushed over the edge into the river bed—a drop of 30 feet. As lions found them during the night one can but hope that the fall killed them outright.

Lions are becoming more tame than ever they were. Maned lions and lionesses with cubs are often to be seen in the open, and those living near the Seronera River have become so tame that a notice-board was erected asking visitors not to shoot in the event of them approaching very close to a car. It was whilst this notice-board was being put up that a well-known pride came right up to us and were eventually photographed sitting around it.

The months when very young animals are to be seen are :—

Topi : From August to December.

Hartebeest : From August to December.

Wildebeest : February seems to be the favourite month

for the main herds when out on the plains, but odd calves have been seen in October and November.

Giraffe : May and June.

Thomson's gazelle : Noticed at all times but mostly to be seen when out on the plains in January and February.

Grant's gazelle : January and February.

Impalla : About October.

Buffalo : March and April.

Wart-hog : December and January, and odd ones at other times.

Roan antelope : November.

Bush-buck : September and October.

Eland : September.

Dik-dik : July and August.

Elephant : November (Meatu area, Lake Province).

Hunting dog : August.

Lion do not appear to have any fixed time.

The wildebeest this season commenced to calve from 28th January onwards, and were to be seen in vast numbers. It was interesting to note what bad mothers the cows seem to be. Time and again, whilst driving about in the vicinity of the herds, freshly born calves were found completely lost. Often they would gallop behind the car under the impression that it was their mother. On these occasions the car would be stopped and the little fellows would come right up to anyone getting out. It would have been an easy matter to have caught hundreds. Several were caught, but then they seemed to realize their danger and would gallop off in search of their mothers. Sometimes the mother would come from a distance and collect her calf, but more often than not there were no full-grown animals in sight. Many calves lost in this manner become a prey to the numerous lions and hyenas, so that the wastage must be tremendous.

On one occasion a young calf followed in this manner until we crossed a river bed when a lion dashed out, struck the calf a terrific blow and sent it hurtling 20 yards away into the river bed. To my astonishment a few minutes

later a boy at the back said the calf was still following, We stopped the car and collected the calf, but he had such a nasty gash in his side that he had to be destroyed. We were amazed that a calf a few hours old should have survived a blow from a full-grown lion, but except for the gash he appeared to be none the worse and not in the least frightened. He came running up to me and was easily caught. It was a sad business having to shoot him.

*Mr. Harvey (Masasi Range).*

Near Lake Lulira towards the headwaters of the Njenje stream, in Liwale District, I spent several hours watching elephants drinking, browsing, and eating salt. The salt-lick was on the side of a steep hill which was part of the river bank, and the salty clay seam apparently ran perpendicularly, with the result that the elephants have gradually excavated upwards for some 15 feet or more. To get at the salt they had to climb up out of the river bed on to a sloping rock ; then they had to stand up on their hind legs to get at the clay. They used their tusks to dig out and loosen the earth.

A reliable scout, Saburi bin Ismail, reported to me that out of a herd of over twenty elephants, which crossed over from Portuguese East Africa into the Mikindani District, more than half were *buddis* (tuskless).

A heavy feed of mtama has a remarkably soporific effect on elephant. Both Mr. Ionides and myself have repeatedly come across elephant suffering from indigestion apparently brought on by "bolting" large quantities of ripe mtama. This drowsiness brought on by overfeeding often causes elephant to lie down and go to sleep. On several occasions I have come across elephant which have lain down in as many as five different places in the same morning.

The scouts tell me that the fruit of the *mgongo* tree (*Sclerocarya caffra*) ferments inside the elephant and makes them vicious. I have often seen them eating this fruit (commonly known as the *marula*), but have not noticed any signs of drunkenness. I have often watched (through

field-glasses) rhinoceros eating ripe *upupu* or buffalo beans ; rhinoceros and eland are very fond of the *upupu* vine.

*Captain Minnery, M.C., D.C.M., M.M. (Northern Range).*

Whilst on safari in the Kibaya area, Captain Minnery met a party of Masai, one of whom had recently been mauled by a lion. The story as related by the wounded Masai is interesting :—

“ At about 3 p.m., when the Morani and stock were in front, I noticed a calf was unable to keep up with the main party ; so I decided to wait for the women who were following us with donkeys and to pack the calf on to a donkey. Sticking my spear into the ground I squatted down and waited. I was in this position for some time when suddenly I felt a terrific smack in the middle of my back which knocked me flat on the ground. As I lay face downwards and before I could turn I was seized by a lion which gripped my right thigh. I swung over and found I was looking into its face. It was difficult to draw my *sime* (short sword) as I was lying on it, so I tried an old Masai trick and forced the first and second fingers of my right hand up the lion's nostrils. It left me and crouched a short distance away but facing me. I then seized a faggot of wood which was lying nearby and as the lion came again I hit it hard on the head. It turned and slunk away. At the time I remember wondering why the lion had not attacked the calf first of all, as to get to me it had to pass it.”

When Captain Minnery caught up the party this Masai, although badly hurt in the thigh and back, had caught up with the main body ; he had helped to pack the calf on to a donkey and was then hobbling along with the aid of a stick. Prompt treatment was given on the spot and he was then taken to Kibaya to a native dresser. Two days afterwards he was alive and appeared to be getting better.

Game Scout Nyangi, who is stationed in Ngorongoro Crater, reports that two hippopotami were killed by lions outside a swamp in the crater. As he heard a considerable noise during the night he walked over in the morning to investigate

and found the carcasses of a fully grown bull and of a calf. The bull was covered with fresh wounds around the neck and back. Great gashes were made in the thick skin as though sharp knives had been used. The calf was partly eaten. Round about the vicinity of the carcasses the ground was ploughed up and showed signs of a great struggle.

*Brigadier-General L. B. Boyd-Moss, Honorary Game Ranger.*

While hunting elephant near Kapinda, in the Mahenge District, I found the fresh tracks of two bulls and followed them for about an hour, when I saw them moving through the long grass ahead. They stopped under some big trees, but I was unable to see their tusks clearly on account of the undergrowth. On getting up closer I saw that the big bull had very good tusks. I fired at the brain and he dropped to the shot. The smaller elephant at once came up and stood over his fallen comrade. The big bull, however, was only stunned, and, after a few minutes, staggered to his feet. Seeing the younger bull standing close to him he at once attacked, thinking, no doubt, that the other was responsible for knocking him down.

Then followed a very wonderful fight between the two beasts. Their tusks were locked together as they sood head to head, each straining to force the other down. After five minutes of desperate struggling the bigger animal got the younger beast down. Kneeling upon him he drove his tusks into his side, with each thrust lunging them deeper and deeper. When he had made certain that the young elephant was dead he withdrew his tusks and, giving a triumphant trumpet, walked off through the forest. I examined the dead elephant and found a great hole in his side with a big roll of fat and some of his intestines hanging out. The natives told me that this was the only occasion in which they had known elephants fight to the death.

While hunting on the banks of the Rufiji I put up a lion in some long rushes. I found that he had just killed a crocodile about 10 feet long. He had evidently jumped on the crocodile's back and had apparently torn out its throat. The lion had

started to feed on the firm flesh under the tail. The natives said that they had often known lions to kill crocodiles, but the lion would never eat the body but only the tail.

*Mr. F. J. Anderson, Honorary Game Ranger.*

Mr. Anderson, on closely examining a freshly dead giraffe in the Monduli District, noticed a small swelling on the neck some 12 inches behind the right ear, and in the centre of the swelling was a small snake bite evidently received whilst the animal was browsing off some near-by thorn trees.

During the height of the drought, sickness visited a cattle herd. For convenience the sick animals were tethered to a row of eucalyptus trees some 40 yards from the house, in charge of two night-watchmen with lanterns. At the time a number of lions nightly came up from the plains to water from the farm dam. One morning, about 1 a.m., an old lion with very worn teeth sneaked into the line of sick oxen, grabbed the snout of the end animal, and endeavoured to smother it by holding its jaws together and presumably blocking its nostrils with pressure. The watchmen, hearing a scuffle, ran towards the struggling animals. The lion only let go his hold when hit on the head with a stout stick, and then made off into the coffee.

*Mr. C. F. M. Swynnerton, Honorary Game Ranger.*

In Old Shinyanga, on the night of 29th August, a woman who had been made to sleep outside her hut was seized by a number of hyenas. Eye-witnesses who ran out stated that the hyenas, first one then another, taking turns, hustled the woman along as in a relay race, shrieking. Examination of the ground showed that she was devoured limb by limb on the way. A number of the hyenas were afterwards destroyed by trap-guns and poison. Hyena meat was partly used in the poisoning; some was eaten but most times it was left, whereas ox meat was accepted freely.

The Man-lions of Kazikazi.—The following incident occurred to Mr. Harrison, of the Tsetse Research Department, which is well worth recording. A native of the district, by name

Mkwavi, had been in the habit of brewing *Kangalla*—a fiery drink made from honey which he sold. Although this was illegal, Mr. Harrison did not interfere until six of his own servants were affected, who from continual drunkenness had to be discharged. To add insult to injury, these six men were kept by the brewer and employed to collect honey. The matter was then reported, and eventually five natives were arrested, including Mkwavi. The case was tried by the District Officer and the accused sentenced. A fly-boy in Mr. Harrison's employ heard Mkwavi telling his accomplices about the witch-doctor at Kidurumo, who sold *dawa* (medicine) which would bring lions to any desired spot, and said that when he returned he would visit the witch-doctor and arrange for six lions to pester Mr. Harrison and his natives.

By this time it was well known amongst the natives including the local headman that Mkwavi was going to Kidurumo to procure the *dawa*. Shortly after Mkwavi's return his work necessitated Mr. Harrison's camping at a place about 20 miles from the nearest habitation. Being the dry season all pools were dry and water was brought by lorry. The only game in this area was an occasional dik-dik and duiker. The first five days everything was very quiet. On the sixth night, about 10 p.m., Mr. Harrison was awakened by something scratching at the wall of his tent. Thinking it was a jackal or hyena he got a torch and switched on the light and to his surprise saw six full-grown lions not 6 yards away from his tent. One lion was killed outright and a second badly wounded and found the following day. The bullet which killed it had also wounded a third, as great pools of blood were found. A few nights later the surviving lions again visited the camp and their spoor showed that they had passed close to the tent. Two days after this incident Mr. Burtt, also of the Tsetse Research Department, met two lions, one of which he succeeded in killing.

Fifteen days later Mr. Harrison returned to his camp at Kazikazi and after dinner, whilst he and Mr. Burtt were sitting on the verandah of the station, they heard loud



lapping at a water-hole about 30 yards away. Picking up a torch they walked over. When the light was switched on six lions were seen. One was killed and two more badly wounded, both of which were found on the following day. The local natives firmly believe that amongst those killed were included the six which Mkwavi had brought with the help of the witch-doctor.

GAME DEPARTMENT.

BUDGET, 1934.

<i>Expenditure.</i>			<i>Revenue.</i>	
	Esti- mated. £	Actually spent. £		£
Personal Emoluments.	5,498	5,316	Revenue from Game	
Other Charges . . .	4,289	4,006	Licences . . . . .	4,865
	<u>£9,787</u>	<u>£9,322</u>	Revenue from Sale of Ivory	20,653
				<u>£25,518</u>
			Balance in favour of Government . . . . .	£16,196

*Revenue during past four years.*

	1931	1932	1933	1934
Game Licences . . . . .	5,715	5,885	5,829	4,865
Sale of Ivory . . . . .	13,387	22,444	14,842	20,653
	<u>£19,102</u>	<u>£28,329</u>	<u>£20,671</u>	<u>£25,518</u>

*Elephant Tusks, Rhino Horns, and Hippo Teeth obtained during 1934.*

ELEPHANT.		RHINOCEROS.				HIPPOPOTAMUS.			
<i>Shot.</i>	<i>Found.</i>	<i>Shot.</i>	<i>Found.</i>	<i>Shot.</i>	<i>Found.</i>	<i>Shot.</i>	<i>Found.</i>	<i>Shot.</i>	<i>Found.</i>
Tusks. *Weight.	Tusks. Weight.	Horns. Weight.	Horns. Weight.	Teeth. Weight.	Teeth. Weight.	Teeth. Weight.	Teeth. Weight.	Teeth. Weight.	Teeth. Weight.
4,906 69,646	637 11,169	170 549	315 1,069	15,024 7,563	874 714				

\* The weight is in lbs. unless otherwise stated.