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short space of time an attraction to visitors both in the Union and from Oversea who at a reasonable cost will be able to spend an enjoyable and instructive holiday in an area favoured by Nature to a degree probably unsurpassed in any other portion of the Empire."

UGANDA PROTECTORATE.

GAME DEPARTMENT.

EXTRACTS FROM THE ANNUAL REPORT, 1935.

STAFF LIST.

Game Warden	.	.	.	.	Capt. C. R. S. Pitman, D.S.O., M.C.
Game Rangers	.	.	.	.	Capt. R. J. D. Salmon, M.C. F. G. Banks.

EXPENDITURE AND REVENUE.

Figures for 1935 are as follows :—

	£	shs.	cts.
Expenditure	5,285	13	47
Revenue	16,313	16	18
Balance of revenue over expenditure	11,028	2	71

The revenue was derived as follows :—

†(a) Sale of ivory, rhinoceros horns, and hippopotamus teeth	£	shs.	cts.
	13,549	16	18
(b) Sale of buffalo hides and other trophies	—	—	—
(c) Game licences and Governor's permits	2,764	0	00

Receipts from †(a) show an increase of £3,992 4s. 18cts. approximately over 1934 figures ; and from (c) an increase of £649 16s.

The results of the two ivory auctions held respectively in May and November were quite satisfactory, and the average price per lb. realized was approximately 6s. at the former and 6s. 55cts. at the latter.

The year closed with local prices for bull tusks not only firm at 7*s.* per lb. but with a decided tendency to rise, and a good demand for bull ivory of 30 to 40 lb. weight. Larger tusks were in less demand, and the prices lower.

Rhino horn realized from 12*s.* to 15*s.* per lb. and Hippo 1*s.* 38*cts.* per lb.

In order to make elephant hunting more attractive and also to assist in the sale of Full Licences, by virtue of which application can be made for Special Licences, two elephants may now be killed for a £10 licence when formerly the fee for one was £10. The fee for the third elephant is the same, £10, as that for the second elephant under the previous arrangement. Similarly the Native Special Licence for two elephants is £5 (the fee for one previously), and for a third, £10.

The total of 48,856 lb., or nearly 22 tons, of ivory sold in 1935 is a few tons in excess of the quantity disposed of in 1934. These figures are unlikely to appeal to the bigoted protectionist, but anyone who takes the trouble to study carefully the elephant control section of this Report will realize that our organized methods at present barely control the situation, and if we are to afford the inhabitants of this fertile land the measure of protection which is their due, an annual slaughter of elephants on a large scale is not only necessary but imperative. It is undoubtedly an unpalatable pill for many, though it has to be swallowed. There is more on this subject in other parts of this Report.

Critics who delight to shut their eyes to the seriousness of the local situation and deliberately ignore that there are such important factors as man and his crops, are, from the recesses of their comfortable armchairs, accustomed to level the accusation that our methods are directly influenced by revenue-making considerations.

Such an idea is entirely erroneous and the general policy of organized elephant control in Uganda has never deviated from the original intention that its first and main consideration is the protection of the interests, i.e. the lives and property, of the inhabitants.

It so happens that the situation still warrants what might

at first appear to be excessive killing, and so long as this is considered necessary the annual toll exacted is bound to be heavy, but as soon as changing conditions permit there will be a definite reduction in the rate of killing, though, from the evil which at present is of daily occurrence, it is difficult to visualize when a slacking off in control effort will be possible.

Hostile critics should try and realize the ever-increasing difficulties of control—it is not a matter of just strolling out and shooting dozens or hundreds of elephants in nice open country. Present-day protective and reductive operations entail extraordinarily exacting work under incredibly unfavourable conditions, and practically every elephant destroyed is the result of hard work without rival, which has to be experienced to be appreciated. For reasons which should be obvious no one would be happier than those engaged in control if it were practicable to call a halt and stop this intensive elephant destruction. One of the Game Rangers, with over forty years' experience of extensive elephant shooting, has recorded at the end of 1935: "The first consideration now is for native cultivation and reduction of elephant numbers."

ILLEGAL KILLING OF GAME AND BREACHES OF GAME LAWS.

Serious breaches of the Game Laws are no longer numerous, and the majority of convictions are for petty offences.

Illicit dealings in ostrich eggs are frequent, and there has been a distinct revival of the trade in blue monkey skins.

A close watch is being kept in certain localities from which there is a possibility of ivory being smuggled, and in this connection developments are expected which are likely to discourage future illicit trade in this commodity.

At the end of the year, although no rhinoceros horns had passed through the Merama Hill Customs Post in Ankole in transit, it was discovered that considerable quantities of this valuable commodity, purporting to originate in the Congo, were leaving Uganda supported by documents no less than

two years old and of doubtful authenticity. The matter was still under investigation when the year closed, but the necessary steps are being taken to prevent fraud of this nature in the future. The export of rhinoceros horn from Ruanda-Urundi was completely prohibited by decree as far back as June, 1933, so that the existing situation in connection with the consignments of horn which have been leaving Uganda is, to say the least of it, curious.

GAME RESERVES.

Bunyoro and Gulu.—The wild ungulates in this reserve are definitely on the increase, and it remains to be seen whether rinderpest, which appeared in West Madi on the Sudan border at the end of the year, crosses the Albert Nile as has been customary in previous epizootics and infects the susceptible species in the game reserve and in the vast restricted sleeping sickness area to the north.

The Game Ranger made protracted tours in both the Gulu and Bunyoro portions of this Reserve. Entering from Amar, in Gulu, he found "a grand lot of game, very placid and unalarmed", and records: "It is obvious that the Native Administration supports the game laws very adequately. I can't say the same for Bunyoro as, going in from Pakanyi game is very scarce and very shy until quite near the Nile and Lake Albert, where it is reasonably placid and trusting. Buffalo are pleasantly plentiful in the Wairingo and Zolia rivers area and this will soon begin to show along the Nile, to the increased pleasure of those going by steamer to the Falls.

"While I was watching a group of waterbuck a few miles below the Falls they became very agitated and I expected to see a lion, but it was all over a pure white baboon which stalked in among them. I had a good look at this old male and, with the exception of a few dark hairs round his lips, he was a complete albino."

Semliki.—In April the District Commissioner, Toro, toured part of the Semliki Game Reserve and in certain places found

it to teem with kob. Buffalo and hartebeest were observed in fair quantities, but all antelopes were a trifle shy.

Lake George.—There is plenty of game in considerable variety, including numerous elephants and buffaloes, in the Lake George Game Reserve. Unfortunately wild animals are not always conspicuously in evidence at the roadside, and as the average car travels along the road boundary of the Reserve at a speed of 40–50 miles an hour it is little wonder that so many visitors complain that they have seen no game. The Game Warden has travelled up and down this road on numerous occasions during the past thirty months and has never failed to see elephants and buffalo, even at midday; but, it has usually been necessary to stop and use glasses between miles 90 and 96. The Game Ranger almost invariably sees plenty of game whenever he passes; while from Mohokya camp near mile 96, on the opposite side of the road to the Reserve, it is often possible in the early morning to see big herds of buffaloes and elephants immediately below the camp, not to mention waterbuck, kob, and wart-hog.

Lake Edward.—The Game Ranger, Toro, paid a brief visit to this Reserve during March and found game fairly plentiful, especially topi.

GAME TROPHIES.

The approximate number of elephants obtained by licence-holders during the year can be estimated from the permits issued for the export of tusks.

Uganda continues to provide plenty of reasonably good bulls as the appended return shows, and although many residents and some visitors are quite satisfied to fill their licences with moderately endowed tuskers, especially now that it is possible to obtain three elephants for the fee previously paid for two, there has been, in the course of the year, a grievance ventilated in the Press to the effect that outside the reserves and closed areas there are no longer any big tuskers left in Uganda.

That such an idea is entirely erroneous will be obvious to anyone who delves further into this Report. Disgruntled

elephant hunters frequently result from inexperience coupled with an unwillingness to accept and act upon expert advice offered. To this may be added unfamiliarity with local conditions, a reluctance to pay for the necessary assistance, and a disinclination to allot adequate time for the search for a big tusker.

Export permits show that 258 leopard skins (ten less than last year), 14 lion skins, and just over a ton (2,278½ lb.) of hippopotamus teeth were sent out of the country.

Nine rhinoceros horns, aggregating 33 lb., were exported, which constitutes a remarkable decrease on the figures for previous years.

ELEPHANT CONTROL.

Reduction of elephants, in addition to crop protection and organized control, is, with the exception of the Eastern Province, still necessary in nearly every district throughout the country. It is estimated, from every possible source of loss, that the aggregate elephant wastage in Uganda during 1935 was approximately 2,100, practically the same as in 1934.

These are startling figures, but when one realizes that, despite a wastage during the last three years of approximately 6,000, this small Protectorate is still literally over-run with elephants—big, dangerous, destructive beasts—the necessity for this appalling slaughter must be acknowledged.

There is every indication that the additional (third) elephant now permitted the licence-holder will materially assist control by inducing elephant hunters to destroy increased numbers of bulls of a type which are normally the worst cultivation raiders.

RETURN OF ELEPHANTS DESTROYED.

The number of elephants killed by the Game Department staff is as under :—

<i>No. of Elephants.</i>	<i>No. of Males.</i>	<i>No. of Females.</i>	<i>No. of Tusks.</i>	<i>Single- Tuskers.</i>	<i>Total Weight lb.</i>
1,546	946	600	3,035	57	39,146½

The average weight per control tusk shows an appreciable decline and is approximately 13 lb., as against 14·3 lb. in 1934 and 14 lb. for several years previously. There is no doubt that in 1933 and 1934 the average had been maintained on account of special intensive operations respectively in West Nile and Bulemezi-Buruli, uncontrolled areas in which the quota of shootable bulls destroyed was bound to be high. About 50 per cent more bulls were killed than cows.

Found Ivory.—Found ivory from uncontrolled areas is represented by :—

<i>No. of Tusks.</i>	<i>Total Weight lb.</i>
21	317

Found Ivory from Control Areas.—

<i>No. of Tusks.</i>	<i>Total Weight lb.</i>
266	4,468

Mengo.—Reports of damage by elephants, though not so extensive as in 1934, have been fairly frequent throughout the year. The achievements of the intensive operations of 1934, and the results of a few brief spells of control during 1935 have encouraged an understandable tendency to exaggerate on the part of the local populace who thereby hope that the dispatch of assistance will be accelerated.

On the other hand, quoting from the words of a District Officer after inspecting the scene of a raid : “ In some cases shambas have been so completely destroyed that the owners have been compelled to emigrate from the vicinity.” Such devastation was common enough twelve years ago through the greater part of Buganda, the Western Province, and Bunyoro, but nowadays is abnormal.

Although huge numbers of Buruli and Bulemezi elephants have crossed the Kafu and returned to Bunyoro during the year, about 280 have been killed in the course of control operations. The situation in this portion of the Mengo district is very much easier than it was a year ago and is likely to remain so.

Entebbe.—The year 1935 is noteworthy as it has seen in the Entebbe district a remarkable decrease in elephant

numbers and also a very welcome decline in damage to cultivation. For the last six months there appears to have been scarcely an elephant in the district, and the Game Guard's bag for the whole year is no more than twenty-three elephants.

It is possible that the Bulemezi-Buruli operations of 1934-5, and particularly the extermination of the elephants based on the region south of Kiramula and Semuto, has directly and beneficially influenced the situation in the Entebbe district.

Mubende.—Three permanent guards were employed in elephant control during the year and destroyed a total of 291 elephants, almost identical with last year's achievements (288).

The District Commissioner is of the opinion that: "The large number of elephants in the district does not seem to diminish and almost daily complaints are sent in of depredations from almost every gombolola."

Masaka.—The number of elephants destroyed by the single Game Guard has decreased appreciably, from 118 in 1934 to 71 in the present year, yet complaints of damage are more numerous than before.

Endeavours were made in the middle of the year to post an additional expert guard temporarily to the district, but this was found impossible owing to the paucity of staff and more urgent needs elsewhere.

Bunyoro.—Bunyoro is another district in which the inadequacy of the existing staff is increasingly apparent. With the five guards available it is hopeless to expect satisfactory results, but it is confidently anticipated that the additional staff approved for 1936 will afford material relief.

The Bunyoro elephant situation is particularly interesting as certain events of this year, coupled with control activities of the present and last twelve months, and the happenings of years long past, all seem to indicate that for some time there has been a close association between Buruli-Bulemezi in Buganda and Buruli-Kibanda in Bunyoro, and that large numbers of elephants, which for a considerable period have

been residing south of the Kafu, have now returned north of that river to their old homes based on the Nile and the Game Reserve.

In view of the carefully considered opinions of those best qualified to judge that with few exceptions elephants are generally increasing throughout the Protectorate, it is necessary to review the situation, particularly in the case of Bunyoro, if a definite increase is an accepted fact.

A glance through the Annual Reports of the last ten years reveals that the Game Department in its elephant control methods has never claimed more than keeping pace with the normal annual increase. But, in the course of the same ten years, the local population has not remained stationary, and the steady increase in the numbers of human inhabitants has naturally been followed by an ever-growing tendency for settlement, and the necessary cultivation, to extend farther and farther afield.

In Bunyoro expansion can only take place mainly into areas in which for generations the elephants have been accustomed to live or roam seasonally. This would be bad enough if the case was restricted to no decrease in elephant numbers and a progressive increase in the local population : but in addition there have undoubtedly returned to Bunyoro within recent months large numbers of elephants which have evidently been absent for years.

In consequence, the Bunyoro portion of the Game Reserve (south of the Victoria Nile) is almost certainly overstocked with elephants, which results in an ever-increasing tendency for them to emerge in all directions and create havoc in the settled areas. The Game Ranger reports that it is many years since he has seen so much *wanton* destruction, and that in some instances the devastation has been so complete that the populace has been forced to move elsewhere.

The numerous cases of extraordinary boldness and indifference to punishment which have been the subject of special comment by the Game Ranger are not so much a result of the elephants having forgotten the severe lessons of the past, but due to a large proportion of new elephants

being implicated, raiders which for years have dwelt peacefully south of the Kafu, where their depredations have only recently been followed by organized control measures on a large scale. They have returned to Bunyoro mainly ignorant of the punishment which is meted out to the habitual raider.

Until elephant numbers are not merely checked, but very appreciably reduced, increasing conflict between man and beast is unavoidable in view of the rapidity of present-day expansion.

Capt. Salmon has a definite plan of action for the period in 1936 when the main elephant herds are accustomed to leave the reserve, via Kibanda and Kihukya, for the move on to the Kafu. Its success is dependent on his being able to concentrate sufficient guards not only in the areas threatened directly, but also in those into which numerous elephants may be driven as a result of sustained, intensive pressure in another quarter.

It is interesting to summarize how elephant control has had to alter its methods to deal effectively with the ever-changing situation, in order to prevent the elephants taking charge in Uganda.

The first ultra-humane effort was to shoot *one* elephant only out of a marauding herd, and if the herd moved away to let it alone. It was only permissible to shoot a second elephant if the herd was extraordinarily persistent and refused to depart.

It was at once evident that this method was futile and was no deterrent to raiding, so orders were issued to punish drastically all elephants with which contact could be made after a raid.

Too much attention being paid to strictly *raiding* elephants, it was soon obvious that in many localities where damage was prevalent elephants were increasing with astonishing rapidity and a campaign for reduction had to be coupled with normal cultivation protection.

Reduction measures had then to be extended to certain areas in which for years it had been possible to leave the elephants unmolested, and, in two such localities, it was

necessary to inflict a total loss of more than 1,000 elephants, without incidentally showing much of a reduction in numbers.

This intensive hammer business is almost certain to have unpleasant repercussions elsewhere, either immediately or ultimately, but, executed expertly and quickly, it is the only method left by which elephants can be ejected from regions required for other purposes and can be taught an unforgettable lesson and, most important, an appreciable reduction in numbers which is *now imperative* can be effected.

The Game Ranger believes that the Bunyoro elephant situation is probably worse now than ever it was, but this is not due to lack of effort on the part of the meagre native staff—much reduced from the strength of former years—who in 1935 destroyed more than 350 elephants, an excess of 100 over the 1934 figure, and 125 more than the average in the last ten years.

All herds were out of the reserve (Kibanda-Kihukya region) by 7th July, though when shot at they were quite willing to return, and the situation remained fairly quiet till 20th July, when large numbers emerged and showed every indication of staying out. Damage to the *wimbi* crops, which were almost ripe, became serious. Great numbers of elephants remained in the big patch of long-grass country—much of which is uninhabited—between the Masindi Port-Masindi-Arua road system.

At the end of July the raiding of *wimbi* was almost incessant in many parts of this area, and the elephants were not responding satisfactorily to punishment. For instance, on 29th July a party of elephants was followed and ten were killed after a raid near Matunda: the following night the *same* garden was again raided and ruined completely, the marauders making straight for the reserve and neither stopping nor deviating in the ten miles for which they were followed.

Toro.—Affairs in Toro, always the most complex and difficult of all the elephant areas, have reached a state verging on the breakdown of organized control, but it is hoped that the additional staff approved for 1936 will enable measures

for protection and reduction once again to be prosecuted vigorously and effectively.

This unsatisfactory state of affairs is mainly due to the drastic reduction of Toro native staff in recent years—to a total of two: the reduction was necessary in the interests of economy but it has proved false economy. From 1924 to 1932 there was a very definite policy, attended with considerable success, which included the patrolling of district and Game Reserve boundaries and the reduction of elephants in the areas of control.

During 1932-3 organized control efforts were relaxed for the duration of the Toro scheme, when certain Europeans under special permit destroyed more than 400 elephants. The Game Ranger is convinced that: "There are more elephants in Toro to-day than in 1932, more than in 1924 when elephant control began, and more bulls and ivory as good or better."

Although there are fairly extensive uninhabited areas in Kibale and South Kyaka into which elephants might be suitably driven and there left alone, the Game Ranger, with very good reason, is opposed to leaving marauding and other elephants undisturbed in the centre of the cultivated highlands of Toro. He emphasizes that drastic methods for reduction, and even extermination, of the numerous small herds scattered throughout the highlands area is the only remedy, and he would like to see, as far as possible, the Toro elephants confined to the two Game Reserves, and those in the north driven into the uninhabited western portion of Buyaga in the Mubende district.

After many years of being shot at the elephants are definitely more cunning and after punishment do not stop running for many miles. Also, visiting elephants nowadays, when chastised, are not so ready to return whence they came, and at times try to work round and penetrate farther inland. Unfortunately the reserves are mostly open country, while outside there are innumerable areas of dense vegetation in the heart of settled Toro. The elephants are becoming more and more prone to withdraw in the daytime to the very thickest cover from which they do not emerge until after dark.

Complaints from natives in 1935 have been far more numerous than in any previous year up to 1933. Most complaints have come from exposed cultivation near elephant forest and dense jungle, but they are also widespread. Also, as elsewhere, natives often cultivate at a considerable distance from their huts, and in most localities their crops are unfenced.

There are not sufficient guards to send one to protect every exposed garden, and in addition there are numerous appeals for assistance against buffaloes, hippopotamuses, and lions.

It would appear that, as in Bunyoro, Bulemezi-Buruli, and Lango, the time has come in Toro for the introduction, periodically on fixed fronts, of intensive operations against the elephants with the object of driving them towards the almost uncultivated lowlands around the three lakes.

In 1935 a total of 221 elephants, which produced a gross weight of ivory well in excess of 7,000 lb., were destroyed by the Game Ranger, his two guards, and the recruits.

Near Mohokya, in September, the Ranger saw a devastated garden in which two bull elephants had wantonly broken down 100 banana trees and not chewed a single stem.

Elephants were particularly destructive in Mitoma, Kashari, and Nshara sazas, and to a lesser extent in Igara and Bunyaruguru.

Fatalities.—A native elephant hunter in the Kigezi district wounded a cow elephant, which he followed. She came out of long grass and caught him, inflicting serious injuries, from the results of which he died in hospital at Kabale some six weeks later.

In June an old woman was killed on the Bulemezi-Buruli border by a cow elephant which had unusual looking tusks. It was an aggressive creature and on the following day, immediately Capt. Salmon began dealing with the herd, rushed at him from about 200 yards away, across a bare open grass area, and was killed.

Early in May a solitary traveller to Katera was caught by an elephant on a track leading through the Toro forest from the Buddu coast and killed. The unfortunate victim

must have been taken unawares and though, from the tracks of the encounter, he endeavoured to escape into the bush he was almost immediately caught, flung to the ground and his life trampled out of him.

In Bwamba, the owner of a garden was killed while assisting two other natives to spear a big bull which was raiding his crops.

Elephant Speared.—In Ankole a native, single-handed, speared and killed an elephant which was raiding his potato garden. The elephant was heard at night in the shamba just outside the man's house. He went out immediately with his spear, thrust it into the elephant and took refuge in his house till next morning. After following the tracks for a short distance after daylight the great beast was found lying dead. He was suitably rewarded for his stout-hearted effort.

Sex Ratio.—Mr. F. G. Banks is of the opinion that in the case of elephants there is probably an excess of male over female births. In the old poaching days in the Lado it was only the bulls which were shot, the licence elephants for the last thirty years or more have been bulls, and control annually has exacted a heavier toll from the bulls than from the cows, yet there is still no lack of bulls. In the course of control measures, aiming at destruction, Mr. Banks has taken careful note of the sex of all juveniles destroyed, and has invariably found an excess of young males over females.

NOTES ON THE FAUNA.

Gorilla.—There is nothing to add to the comprehensive notes recorded in previous Reports.

Chimpanzee.—According to various prospectors this ape is plentiful in many parts of the Kalinzu forest in western Ankole. In the Budongo forest its local movements are influenced by the ripening of certain species of wild fruits on which it feeds, the fruit of the *muzizi* tree evidently being a favourite.

Baboon.—In Bunyoro baboons have been particularly troublesome, and in July and early August five native children

were attacked and badly bitten within a few days of each other: two of them died. A large hunt was organized and the aggressive troop concerned exterminated. This encouraged the Chiefs to organize further hunts and several hundreds were killed during the next few months. The Native Government has now commenced methodical and organized communal hunts in order to deal with this pest. The abatement of the nuisance rests mainly with the natives themselves, and if they will only co-operate and continue the organized effort they have started and found so successful, their cultivation will soon be free from damage.

In Bunyoro native effort accounted for 830, and the local planters 256, a vast improvement on the 1934 figures which were respectively 467 and 57.

Teso is the only other district in which the depredations of baboons—in the Kagwara peninsula of Kasilo county—have been sufficiently serious to invite comment: control measures in the worst-afflicted parts of Ankole continue but are not highly successful as there is little local co-operation.

Blue Monkey.—An unusual complaint from the Seboi region of Bugishu accuses the blue monkey—a forest species—of causing extensive damage to banana and maize crops. As far as is known this species has not previously played the role of shamba-raider.

Cercopithecus lhoesti lhoesti Sclater.—The unidentified species of monkey of the Kayonsa forest of Western Kigezi turns out to be the above.

It belongs, according to Schwarz, to: “a natural group characterized by a number of characters in the condition of the fur, markings, and skull. They are long and soft-haired animals, with hairy noses and long conspicuous hairs below the root of the tail, extending considerably down the tail itself. There are pale infra-orbital marks on the face, the underside is blackish, the tail silvery grey”; and, in the nominate race, the throat-patch shows a tendency to extend in the direction of the sternum.

Potto.—Several specimens of this quaint little slow lemur

have been caught alive during the year both in the Budongo forest and the Kyagwe forests. It is reported, however, that few of them survived many days in captivity. These little creatures are apt to bite savagely when handled, and as their skulls are very fragile it is quite likely that they get injured inadvertently by the captors, for normally it is a species which thrives in captivity.

Lion.—The lion can always be expected to provide a number of entertaining episodes worth recording, though 1935 has been more free of incident than most years. In Ankole a man-eating lion was killed by the Game Guard at Nyakavoza, about five miles from Mbarara. There were also the usual attacks on stock in Kazhara, Kashari, and Ruampara sazas. In the Masaka district, as in recent years, the lion has occasionally been troublesome. In January, in the Musale of Buddu, three natives armed with spears killed three lions which had been raiding goats and dogs, and wounded a fourth. In February, in the Sabawali of Mawogola, a youth of 17 speared and killed a lion which he saw carrying off a dog. In July, in the Sabadu of Buddu, two men speared and killed a lion, but unfortunately were badly mauled in the course of the conflict.

Lions, in Gulu, have caused a certain amount of damage amongst stock, but there have been fewer complaints than in recent years. In the well-stocked game localities in the neighbourhood of Amar and the Aiyuge river lions are evidently plentiful.

In Karamoja, the Karasuk of the Chemorongi Hills have reported several casualties due to attacks by lions.

Complaints were investigated of cattle-killing by lions in the inhabited area of the Semliki valley in the Toro district, where it was claimed that about forty head of cattle are killed annually.

Leopard.—If the lion has not quite come up to expectations during the past twelve months the leopard has made full amends for its royal cousin, and has been very much in the limelight with a tally of three Europeans seriously injured and another caught but providentially emerging from

the fracas unscathed. In March a leopard which had killed nine sheep in the course of several days at the Busingiro hotel in Bunyoro was speared by a native herdsman. As usual many have been trapped or speared in the Bugishu district: an unusually large example measuring 9 ft. 2 in. was killed in Sebei. In Karamoja the Karasuk of the Chemorongi hills have reported several casualties due to the attacks of leopards.

Mr. G. W. Foster, an Honorary Game Ranger, was badly mauled in April by an infuriated leopard which escaped from a trap and attacked him. Under the circumstances Mr. Foster is most fortunate in having got off relatively lightly, and it is a matter for congratulation that he is not permanently disabled.

Buffalo.—The buffalo undoubtedly is the villain of the piece in the wild life pageant of Uganda. With rare exceptions it is plentiful, often overwhelmingly abundant, and increasing rapidly in all districts.

In spite of every encouragement to would-be buffalo hunters the response is so poor that it is difficult to know what special reductive measures are likely to have any lasting effect on the hordes of this awe-inspiring, and often dangerous, species.

There has been no rinderpest in the main buffalo areas so that the herds have been able to increase free from the heavy loss which this disease usually inflicts.

Complaints of genuine damage, as well as those prompted by fear, have increased enormously, and an unpleasant aspect of buffalo marauding nowadays is the frequency with which cotton plots are damaged.

More than 600 buffaloes were destroyed during 1935. This may sound a formidable total, but if the number had been 6,000 it might have made a slight impression on the vast herds which are almost everywhere, and which the first-named figure has not done.

The Bunyoro report is typical of the situation in most districts, the buffaloes being an unmitigated nuisance besides having increased enormously. During the dry season they

are a constant source of trouble owing to their habit of taking possession of waterholes and denying the local natives access to them. Assistance is given whenever possible and the local inhabitants are encouraged to deal with these pests themselves.

In Toro complaints have been abnormally numerous. The complainants pay no consideration as to whether a rifle, in the area complained about, has the least hope of success or is even likely to be of any use. The Toro buffalo lairs are mainly swamps of bamboo-like reeds, 20 feet high, or 10 feet elephant grass or forest. In them buffaloes lie up during the day and emerge to graze at night, and it is quite out of the question to utilize the services of the highly-trained elephant guards, or, in fact, any hunters, in these types of country. In many parts of the Toro highlands a rifle can be of little use, and unfenced cultivation is an easy booty to marauding animals which are mainly nocturnal grazers.

On 15th November rinderpest broke out amongst cattle at Laropi in West Madi on the Sudan border. The origin of this outbreak was traced to buffalo, two buffaloes having been found dead between Dufile Old Fort and Ilingwa Hill. A third buffalo was found dead half-way between Laropi and Dufile on 27th November, in close proximity to the kraal where the disease started amongst the cattle.

Uganda Kob.—The Uganda kob is now abundant in the Amar region of Gulu, east of the sleeping sickness restricted area, which possibly accounts for the prevalence of lions in the same locality.

On the Lake Albert flats between Tonya and Kaiso, as well as in the restricted sleeping sickness area south of the Howa river, this handsome species is particularly plentiful.

Roan Antelope.—It is most satisfactory to record that in Ankole the roan antelope is not only increasing but is steadily extending its range and returning to localities from which it had been driven many years ago, i.e. probably during the War.

This species is plentiful and evidently on the increase in parts of Gulu, Chua, Lango, and Karamoja.

There still is a herd in Sebei, North East Bugishu, but its size is not definitely known. In November a rogue bull frequented a portion of a European-owned stock farm near the Suam river and was not only a nuisance but a definite menace to human life. Several natives were chased up trees by this aggressive beast, and on one occasion a native who had just reached the safety of his hut in time was terrified to find the angry creature charging the wall again and again, vainly endeavouring to batter it down.

Bushbuck.—Marauding bushbucks are as plentiful as ever in the vicinity of the forestry station at Kityerera, in Busoga, and more than 100 have been destroyed. Otherwise there is nothing of interest to record concerning this species.

Lesser Kudu.—In early January in West Suk, a fine male was seen about midday while motoring along the military road to Turkana, about fifteen miles north of Kacheliba. That evening, just before dusk, another male with a big head was observed by the roadside within a few miles of the same place. Both these animals were extraordinarily bold and fearless and stood unconcernedly watching the car until it was within a few paces of them. In Northern Karamoja it is common. There are a few in North-Eastern Chua which seasonally have a tendency to stray westwards.

Eland.—This fine species seems to be increasing steadily in most parts of the Protectorate in which it still occurs. During the year, in one locality, a herd of 150 animals—mainly cows and juveniles—was observed.

Waterbuck.—In many localities the waterbuck is evidently an increasing species, and in some it is a confirmed crop-raider. In the Lake George Game Reserve it is plentiful, and numbers can always be seen from the adjacent motor road. It has been suggested that in a few districts it might be advisable to increase the number permitted to be killed on a Full and Fourteen-day licence, but with a few exceptions the general concensus of opinion is that an increase is neither necessary nor yet desirable.

Impala.—The few reports received about this graceful species indicates that it is undoubtedly increasing in the

various localities it frequents in the Masaka and Ankole districts.

Jackson's Hartebeest.—Very fine trophies of Jackson's race of the lelwel hartebeest can be obtained in Chua and Karamoja. Early in the year two males, shot at random from a herd in North Karamoja, were found to have heads measuring respectively $24\frac{1}{8}$ inches and nearly 26 inches.

This species is very plentiful on the Lake Albert flats in the restricted sleeping sickness area near Kaiso, south of the Howa river. It is also widely distributed and by no means uncommon in parts of Bulemezi and Buruli (Buganda), and on the flats either side of the Kafu river.

Bush Pig.—There is unfortunately no abatement in the widespread damage to cultivation caused by this pest, which is increasing everywhere. In the dense, short-cover regions in Igara and Buhwezu, in Western Ankole, the bush pig is not only preventing the extension of settlement, but is gradually driving out the human population.

In Bunyoro the Native Government has been forced to introduce methodical and organized hunts to deal with bush pig.

Hippopotamus.—Events of the year tend to confirm that the hippopotamus is one of the species which is on the increase, and complaints of its evil doings are widespread and loud.

In early January, at the request of the Township Authority, it was unfortunately necessary to destroy four of the hippopotamuses frequenting Entebbe Bay in the vicinity of the Botanic Gardens. The rest of the herd disappeared, but in the middle of April it was noticed that two had returned: subsequently five were seen.

Extensive damage has been reported throughout the year in the Entebbe district, particularly from the sazas of Busiro and Mawokota. Eighty-seven raiders have been destroyed by the locally employed temporary hunters, and eight by the game guards: but these animals are just as plentiful as ever along the Victoria Nyanza coast, in Lake Wamala, and in the Katonga and other rivers.

In the Victoria Nyanza coastal region (mainland) natives who complain of lack of assistance have been urged to resort to their old, and often very effective, methods of trapping by digging pits.

From the Mengo district, two cases have been reported of canoes being upset by a hippopotamus, one of which resulted in the death by drowning of one of the occupants.

A native trying to drive a marauder out of his shamba was severely bitten in the arm.

On the Ruizi (right in Mbarara township) and on the Kagera rivers in Ankole several crop-raiders had to be destroyed.

In the Toro district, Lake George and certain other localities are vastly overstocked with hippopotamuses. In consequence a portion of the big surplus moves up rivers, such as the Mpanga and Wimi, to the crater lakes and swamps, even into the extensive swamps of Fort Portal township. When one raider is destroyed it is quickly replaced by others.

In the course of a report on the fishing situation in Lake Edward a correspondent, familiar with the Nile and Murchison Falls, states: "There is hardly 100 yards of (east) shore line between Katata and beyond the Kasenyi lagoon which can be said to contain less than fifty hippos. There are more hippos here than, say, in the Murchison Falls area, and they are by no means shy." He also records: "The fishing is easier in the lake and there is less danger of hippos fouling the lines or nets. Though I have not shot any hippo since I came here I can endorse the statement that they are a truculent bunch (in the Kazinga Channel) and one cannot be too careful of them. They have attacked the boats on several occasions."

It is estimated that more than 200 hippopotamuses have been destroyed in the Victoria Nyanza, another 100 in the inland waters, and 200 or more in the waters of the Albert Nile where there are no restrictions on native hunting, and yet plenty of these big mammals are left.

White Rhinoceros.—Once again there is nothing outstanding to chronicle about this remarkable species which continues

to be a source of interest, and those frequenting the neighbourhood of Rhino Camp can be easily located and seen by tourists from the steamer.

Giraffe.—The giraffe herd which frequents the right bank of the Albert Nile in the neighbourhood of the Zoka forest is reliably reported to have totalled forty-three head in 1934.

Zebra.—Zebra have become such a nuisance in the South-West portion of the Entebbe district that it has been necessary to destroy sixty-three in Gomba saza.

Squirrels.—Amongst a collection of lesser mammals obtained in the Mabira forest (Kyagwe), a small striped squirrel has been identified at the British Museum (Natural History) as *Funisciurus pyrrhopus*, a West African species hitherto not known east of the Western rift.

REPTILES.

The first two parts of *A Guide to the Snakes of Uganda*, which is being illustrated with black and white drawing of snake heads as well as with coloured plates depicting each known Uganda species, compiled by Capt. C. R. S. Pitman, appeared respectively in the July and October numbers of the *Uganda Journal*.

Water Cobra.—Exhaustive investigations have conclusively proved the existence of large water snakes in the Victoria Nyanza, but it has to be admitted equally conclusively that they are not water cobras but species of the highly aquatic genus *Grayia*. *Grayia smythii* and *Grayia tholloni* are evidently common all along the coasts of the Victoria Nyanza and its numerous islands, and many specimens of the former and a few of the latter have been examined.

CROCODILES.

Crocodile.—During June a boy of about 14 years old was taken by a crocodile at Tonya on the Lake Albert littoral. He was never seen again. An adult man was taken and killed

at Buhuka, also on the Lake Albert eastern shore, on 3rd September.

As usual from time to time one hears casually of fatalities which are never officially reported.

The annual loss to nets attributable to crocodiles probably totals many hundreds of pounds.

Control.—With the aid of a launch an intensive campaign against the breeding females was carried out, from 14th to 19th October, along the Entebbe coast-line and islands from Kinywante Bay to Mbiru Point, as well as in the vicinity of the extremity of Koja peninsula and on islets near Damba Island.

As in 1934 this year's breeding season appears to have commenced unusually early and the majority of the eggs found were either hatching out or in an advanced state of incubation. At least a dozen broods had hatched. The total bag for the six days' activities is:—

64 adult crocodiles killed, mostly on land or in shallows from which the carcasses were recovered. Presumably the great majority of these crocodiles are females.

111 juvenile crocodiles destroyed from broods which had hatched out and taken to the water.

4,144 eggs destroyed.

These eggs were taken from 74 nests, in 5 of which hatching had commenced, and in one of which (21) laying was not complete. These 6 nests totalled 151 eggs so that the remaining 68 nests produced a total of 3,993 eggs, or approximately 59 eggs per nest.

The size of "sitting" varied from 34 to 78 eggs, and two nests each held the maximum of 78 eggs.

"Sittings" were as follows:—

70 and over.	60 and over.	50 and over.	40 and over.	30 and over.	Total.
11	28	14	12	3	68

The juveniles, for the first few days of their existence, pack together in suitable refuges at the water's edge when they can be caught easily. They disperse quickly when frightened, but soon pack again, calling to each other loudly with a

chirruping cry. It is not long before they become extremely active in the water, when they develop the wariness of their parents and elude capture.

The female crocodile guards the eggs throughout the long ninety days which constitute the period of incubation. When ready to hatch the youngsters start chirruping in the eggs. The parent hears the noise and removes the hard rammed soil off the eggs, thereby enabling the little creatures to emerge. On this occasion one nest was found from which hatching was not complete, and it was most entertaining to listen to the sustained subterranean chirruping.

There is a possibility that crocodiles breed only once in each period of two or three years.

GENERAL.

DISEASES OF GAME.

Rinderpest.—I am indebted to the Director of Veterinary Services for the following résumé of the rinderpest situation in Uganda during 1935. In January rinderpest was present in Bugwere and Bugishu districts. During February there was a small outbreak in South-East Teso which was soon suppressed, and in March another amongst the Suk cattle on the Kenya border. No more rinderpest appeared until October, involving cattle in Loliakat quarantine, Karamoja. It was soon suppressed. During November the disease appeared amongst the cattle of West Madi, near the Sudan border, and there was also another outbreak in Teso. The West Madi outbreak was due to the introduction of meat and hides into the kraals from buffalo which had died in the bush from rinderpest. During the early part of December fifteen dead buffalo were discovered near Dufile Old Fort. Further extensions are expected. Thirty-eight buffaloes were destroyed in Toro by organized pitting.

The most disquieting feature is the West Madi outbreak, and it remains to be seen whether in 1936 history repeats itself and the disease crossing the Nile into Gulu, enters the

Gulu and Bunyoro Game Reserves, eventually to spread into the cattle areas of the south and south-west.

Other Diseases.—With the exception of rinderpest the ungulates and other wild animals which act as vectors of stock ailments seem to have kept free of disease. In November rabies was discovered in the West Nile district, necessitating a campaign against jackals—there a plentiful species—and other small carnivorous mammals. There has been one report of mysterious, unexplained mortality.

ECONOMIC INDUSTRIES.

Skins.—Leopard skins continue to be exported fairly extensively, and though the trade is scarcely of the dimensions of an economic industry nevertheless their acquisition not only increases the purchasing power of the local natives, but is of definite benefit in reducing depredations amongst the smaller types of domestic stock.

There is evidently no interest in any other wild animal products from the aspect of economic industry.

Beeswax.—The Game Department has an interest in this industry from the point of view of the damage caused by certain wild animals.

It is now definitely known that the ratel or honey badger is a widespread species in many parts of the Protectorate and it is strange that so little is known about it, and that the local natives rarely take any steps to counter its depredations.

During 1935 the Agricultural Officer directly concerned with the industry has, in the course of his investigations, obtained ratel skins from localities as far apart as Rubanda in Eastern Kigezi and Galiraya in Northern Bugerere (Mengo). In Bugerere he reports that the species is plentiful and that throughout this saza, particularly at Galiraya, Kasokwa, and Bale, the hives suffer much damage in consequence.

The Agricultural Officer is of opinion that “approximately 50 per cent of the total number of occupied hives are damaged by the ratel in Ankole and Bugerere, and consequently discourages bee-keepers in the new wax industry”.

The number of pounds of wax obtained per hive vary according to the amount of nectar and district climatical conditions, etc., but average $1\frac{1}{2}$ lb. per hive per year.

As the price of beeswax is £6 c.i.f. ex wharf London per cwt. East African block, the material loss to the owner can be appreciated, when as recently happened in Bugerere, thirty-eight out of forty hives were wrecked in a night by one (or more) ratel.

The ratel is easy to trap and in the course of its nocturnal wanderings follows for choice definite tracks and paths. Its line of approach to trees containing hives should be quickly detected, and if the trees are surrounded by a hedge or *boma* in which are left gaps protected by snares, the nuisance will soon be reduced to a negligible quantity. The most efficacious type of trap is the noose set on a stout bent stick which, when the trigger is touched, catches the creature by the neck, the stick straightening itself and jerking the victim clear of the ground.

ORDINANCE FOR THE PRESERVATION OF FLORA AND FAUNA IN CEYLON.

The Ordinance is an enabling document divided into six parts and five Schedules.

By proclamation under it the Governor may declare any specified area of Crown land to be a National Reserve and may by the same or by subsequent proclamation declare that the whole or any part of such a National Reserve shall be (a) a "Strict Natural Reserve", or (b) a "National Park", or (c) an "Intermediate Zone".

Part I.
National
Reserves
and
Sanctuari

The Governor may also proclaim any specified area of land in Ceylon (other than land declared to be a National Reserve) to be a Sanctuary.

He can further, by proclamation, vary the limits of any Reserve, Park, etc., or remove protection from them.