

# Oryx

The International Journal of Conservation

The original paper was published in the *Journal of the Society for the Preservation of the Wild Fauna of the Empire* (1903-1925 and 1926-1950) or in *Oryx*, the journal of Fauna and Flora International (from 1951).

The website of the journal is (from 2008):

<http://www.oryxthejournal.org/>

The PDF is reproduced with permission from the CD version of The Centenary Archive 1903-2003, a fully searchable database of 100 years of the publications of Fauna and Flora International.

More information on: <http://www.fauna-flora.org/>

The Society was founded in 1903 as the Society for the Preservation of the Wild Fauna of the Empire, and subsequently named the Fauna and Flora Preservation Society. Fauna & Flora International is conserving the planet's threatened species and ecosystems – with the people and communities who depend on them.

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.

The [Rhino Resource Center](#) posted this PDF in June 2009. We are grateful for the permission.



FIG. 3—UGANDA KOB  
(typical).



FIG. 4—WATERBUCK  
(*Kobus ellipsiprymnus*).

department would be a hardship? It may be claimed that it will not pay—the country cannot afford it. Surely, properly organized, and with suitable game laws, their enforcement, the collection of fines for their infraction, encouragement of legitimate sport, the wild life will come to be recognized as a definite asset.

*Mr. Collier's Conclusion.*—In these notes of his I read a genuine wish on the author's part for faunal preservation. But the question arises—for whose benefit? I also “hold that a keen delight in killing game for sport is not incompatible with a love for watching animals—and leaving them undisturbed—in their natural surroundings”. I come into line with Mr. Collier when he writes that action cannot be effective without the co-operation of the native population (also would add, “the co-operation of the people concerned in Nigeria's welfare”).

Finally, may I risk a repetition? It is easier to criticize than construct. And Mr. Collier has constructed the basis for a scheme, with infinite pains. Perhaps someone else, or even Mr. Collier himself, may discern in this critique some facts and suggestions which, together with his own, could provide, without delay, a foundation on which the Government could build legislation for the immediate protection and preservation of Nigeria's Wild Life.

---

## UGANDA PROTECTORATE.

### THE GAME DEPARTMENT.

ANNUAL REPORT FOR 1934.

(Extracts from.)

#### EXPENDITURE AND REVENUE.

Figures for 1934 are as follows :—

	£	shs.	cts.
Expenditure . . . . .	5,111	17	51
Revenue . . . . .	11,676	0	30
Balance of revenue over expenditure . . . . .	6,564	2	79

The revenue was derived as follows :—

	£	shs.	cts.
(a) Sale of ivory, rhinoceros horns, and hippopotamus teeth . . . . .	9,557	12	00
(b) Sale of buffalo hides and other trophies . . . . .	4	4	30
(c) Game licences . . . . .	2,114	4	00

Receipts from (a) show a decrease of £837 approximately over 1933 figures ; and from (c) an increase of £135.

At the May auction the all-round price of ivory showed a welcome advance of 1s. 30cts. per lb. This improvement was unfortunately not maintained and in November a new low level of 5s. 11cts. per lb. was reached, principally due to the continued decline in the price of cow ivory.

At the Government ivory auctions held at Mombasa in May and November the average price per lb. was respectively 6s. 43cts. and 5s. 11cts. At the close of the year the local price for soft (bull) ivory was approximately 5s. 75cts. per lb.

The revenue from the sale of game licences shows a slight though welcome increase (£135), and there are indications that this increase is likely to be improved upon next year. It is noteworthy that nearly 50 per cent of the game and special licences taken out and over 70 per cent of the bird licences have been issued to Africans and Asiatics.

Uganda Government ivory was sent to Mombasa for sale, and during the year two auctions were held at which the total weights sold and average net prices realized were as follows :—

	Weight.	Gross Price Realized.			Approximate average net price per lb.
	lbs.	£	shs.	cts.	shs. cts.
<b>MAY :—</b>					
Ivory . . . . .	16,338	5,254	0	30	6 43
Rhinoceros horn . . . . .	57 $\frac{3}{4}$	33	12	07	11 59
Hippopotamus teeth . . . . .	82 $\frac{3}{4}$	4	13	74	1 12
<b>NOVEMBER :—</b>					
Ivory . . . . .	24,326 $\frac{3}{4}$	6,218	3	08	5 11
Rhinoceros horn . . . . .	57	29	13	51	10 40
Hippopotamus teeth . . . . .	286	8	9	03	0 59

Balance of ivory at Mombasa on 31st December, 1934 . . . 18,290 lb.

At the end of 1934 the Department concluded the first decade of its existence, and the following revenue and expenditure totals for this period are of interest :—

<i>Period.</i>	<i>Revenue from sale of licences.</i>	<i>Revenue from sale if ivory, etc.</i>	<i>Total Revenue.</i>	<i>Expen- diture.</i>
1925-1934	£40,069	£137,938	£178,007	£59,973

#### ILLEGAL KILLING OF GAME AND BREACHES OF GAME LAWS.

Few breaches of the game laws have come to notice, and with one exception they rank amongst the normal, petty offences.

At the end of 1933 there was little doubt that a serious leakage of "found" ivory was taking place in the Masaka district. In fact during 1933 not a single tusk of "found" ivory was brought into district headquarters. This indicated wholesale organized effort, and it was suspected that the revival in dhow traffic on the lake might have influenced the situation.

Thanks to the efforts of the Criminal Investigation Department the illicit trade was quickly suppressed, but unfortunately it was quite impossible to obtain the necessary evidence against the principals who are known, but every endeavour continues to be made to make them answerable for their misdeeds. It is a poor consolation having to take action against their unfortunate dupes.

The simplicity of this ivory-running scheme is hard to believe, for advantage had been taken of the opening of the new road to the west down which the illegally-acquired tusks were taken, to return shortly as duly authorized ivory "in transit".

#### GAME RESERVES.

On the whole the reserves are well stocked, and in some the progressive increase of the ungulates is remarkable. In the near future it is hoped to be able to investigate fully the conditions in those where the situation is not exactly clear.

#### GAME TROPHIES.

Return of elephants shot by licence-holders: 199 tusks representing 100 elephants:—

There appears to have been no abnormal mortality amongst the white rhinoceros, and only two pairs of horns were found, from their size presumably originating from examples not fully grown.

Export permits show that 268 leopard skins, 13 lion skins, and 1,393 lb. of hippopotamus teeth were sent out of the country.

Thirteen pairs of black rhinoceros horns aggregating 93 $\frac{3}{4}$  lb. indicate that certain licence-holders continue to regard rhino horns from a cash basis. It remains to be seen how the situation is affected when the black rhinoceros can only be hunted under special licence and on the payment of a suitable fee.

Since the opening of the Customs Post at Gisoro, in Kigezi, on the main roads to Rutchuru and Ruhengere in the Belgian Congo, considerable quantities of ivory "in transit" have entered the Protectorate, viz. 19,250 $\frac{3}{4}$  lb. (£4,859 4s.).

#### ELEPHANT CONTROL.

*A Decade of Control.*—The end of 1934 concluded the first decade of organized control in Uganda. The results are illuminating, if not startling, and are certain to provoke the adverse criticism of those unacquainted with the situation :—

Year.	"Control" Elephants.	Males.	Females.	Elephants found dead in "control" areas.	Elephants found dead outside "con- trol" areas.	Elephants obtained by licence- holders.
1925	587	307	280	77	194	32
1926	650	379	271	60	84	175
1927	604	384	220	77	91	169
1928	657	408	249	102	119	227
1929	1,033	613	420	102	83	221
1930	892	539	353	129	13	97
1931	1,211	735	476	123	8	105
1932	1,210	670	540	160	16	143
1933	1,380	703	677	169	27	75
1934	1,603	1,012	591	270	23	100
Total	9,827	5,750	4,077	1,269	658	1,344

This gives an aggregate wastage of 13,096 elephants, which is the minimum for the period, and with the addition of tuskless juveniles which are not shown on the returns, and a percentage of elephants which perish in swamps and are

never found, the grand total can be taken to be approximately 14,000, truly a stupendous figure.

Revenue totals from the sales of ivory from 1920–1934 are also interesting :—

## REVENUE FROM SALES OF IVORY.

	£	shs.	cts.
1920—January to March	12,714	19	00
April to December	14,677	9	42
1921		2	3 75
1922	44,065	16	00
1923	9,988	0	83
1924	16,602	4	06
1925	20,386	17	92
1926 <sup>1</sup>	6,801	8	70
1927	21,445	12	43
1928	11,314	12	80
1929	16,159	0	00
1930	11,628	4	14
1931	15,266	12	58
1932	12,672	7	90
1933	10,394	17	58
1934	11,548	11	72
	£235,668	18	00

In 1921 there were no ivory sales, *vide* figures for 1922.

*Buruli—Bulemezi.*—The outstanding feature of elephant control during the year has been the remarkable reduction of elephant numbers in North Mengo effected under the direction of Captain Salmon. Herds which were known to be large had been permitted to breed unchecked for ten years, and although damage to cultivation in the settled south had not assumed extensive proportions, it was nevertheless serious and no longer tolerable.

Captain Salmon between 13th and 18th July carried out a preliminary reconnaissance of conditions in the Buruli–North Bulemezi area in the course of which, as previously mentioned, on three consecutive days he destroyed single-handed a total of seventy elephants just north of a line from Wabusana to Wakyo, i.e. within 40 miles of Kampala.

The Officer-in-Charge of the Mengo District, while welcoming the proposed action, was distinctly apprehensive of the immediate outcome, and with reason, fearing that intensive

<sup>1</sup> Owing to the poor price much ivory was unsold at the end of the year, when 10½ tons were in store.

measures would result in the possible inroad of the herds into Bulemezi proper at a time of the year when after a severe drought and shortage of food the new crops were nearing fruition and cotton cultivation was in full progress.

During the August–September “drive” Captain Salmon found the local natives very willing to help in every way possible, and members of his native staff operating on their own received unstinted assistance. This is in gratifying contrast to the Ranger’s reception at the commencement of his July visit, when he met with nothing but obstruction and difficulty. But once he had shown the populace the type of elephant killing contemplated the whole atmosphere changed, and he was frequently embarrassed by the abundance of food showered on his party.

The carefully planned operation, which lasted about four weeks, was executed so skilfully and speedily that the elephants had scarcely begun to realize what was happening before the drastic punishment ceased, and in the absence of undue harassing of the herds no abnormal damage to cultivation resulted.

Damage to crops for the time being at any rate has been very materially reduced, and it depends on how the situation develops what action, if any, will be necessary next year. That this region is still very much over-stocked is unquestionable.

Captain Salmon came to the conclusion that Mengo district has a vastly increased elephant population greatly augmented from Bunyoro and by local breeding. As Singo (Mubende) seems to have as many elephants as ever, the thousands of extra head in Buganda are probably chiefly from the Budongo forest, which no longer appears to harbour the immense herds of the past.

#### 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, lbs.</i>
1,603	1,012	591	3,152	54	45,099



The aggregate shows an appreciable increase on last year's figures, i.e. 223, which though a melancholy fact from the point of view of the elephant is nevertheless most welcome to the Department and indicates that at long last we really do appear to be getting control of the situation. One has only to turn to the comments in the district reports which will be found on later pages to realize the necessity for exacting so severe a toll.

The increased mortality is mainly due to the intensive reduction campaign in Buruli-Bulemezi, the effect of organized control in West Nile, the resumption of Departmental activities in Toro, increased efficiency in Ankole, and minor operations in Bugishu.

The total wastage for the year is estimated to be approximately 2,100 elephants, a startling total, but as above explained, unfortunately very necessary. So long as the annual wastage can be maintained at approximately 2,000 the situation can be claimed to be fairly under control, but if the total falls appreciably short of this figure it is the elephants which will be taking charge.

The average weight per tusk obtained under "control" remains constant, and for 1934 is 14.3 lb.

The excess of bulls over cows destroyed is generally high, and in aggregate nearly twice as many bulls were killed as cows. The excess (bulls) in the Mengo operations is nearly three hundred, in spite of the shooting there being intensive and not selective.

Curiously in West Nile thirty-one more cows than bulls were shot, operations evidently being concentrated against some large breeding herds directly threatening cultivation and settlement.

*Found Ivory.*—Found ivory from uncontrolled areas is represented by: 45 tusks, total weight 669 lb.

*Found Ivory from Control Areas:* 518 tusks, total weight 6,441 lb.

*Mubende.*—Three permanent guards were employed on elephant control for most of the year, and succeeded in destroying a total of 288 elephants.

*Masaka.*—In spite of the efforts of the Game Guard elephants have caused considerable damage throughout the year in the Saza of Mawogola, in parts of Koki, and near the Tero forest. One hundred and eighteen elephants were destroyed in the course of control operations, but the size of the herds in the north indicates that even a greater toll can be taken without effecting a noticeable decrease.

*Gulu (including Madi).*—It has been necessary to shoot a considerable number of destructive elephants, especially in Madi. Unfortunately many of the larger tusked bulls are the most persistent raiders, with the result that a high percentage of heavy tusks figures in the returns.

By the end of June there had been no general exodus from the Gulu reserve, although a few bulls had reached Lango. Raiding bulls were active during June, July, and August. Shamba-raiders were reported as being more in evidence than usual during the first part of the year, owing probably to increased planting in the cultivated areas.

In Madi complaints of damage have come in regularly throughout the year and shooting has been directed entirely against shamba-raiders. In the earlier months raiding from the Gulu elephant sanctuary into Pakelli and Zaipi counties was frequent, the vast areas of grain cultivated behind Zaipi and Pakelli and close to the boundary of the sanctuary evidently proving a great source of temptation. On no occasion was the Game Guard permitted to follow up raiders across the boundary, although in many places the cultivation is distant only half a mile. Many raiders therefore escaped without punishment.

*Lango.*—Elephants did a considerable amount of damage to crops in Atura county. Two were shot by a Game Guard from Masindi, unfortunately without appreciable effect on the activities of the shamba-raiders.

In spite of heavy elephant shooting and some consequent reduction during the last twelve years or more, elephants are still too plentiful in Toro where they have good protection in the numerous swamps and dense jungles. The Game Guards find that in most cases the elephants are now more difficult to approach than they were a few years ago.

*Fatalities.*—A carrier accompanying Captain Salmon who was dealing with the ill-tempered Waki herd (Bunyoro) was caught and killed by an elephant which put a tusk through him as he lay on the ground after having fallen while running towards one of the native staff for protection.

The deceased was apparently a notorious evildoer and had recently been acquitted on some charge of breaking the law. A local chief when he heard of the fatality remarked “The Court may have acquitted him but God didn’t!”

A woman was killed by an elephant within a few miles of Katera (near Sango Bay) in the Masaka district. This same elephant also chased a European in a motor car, and another European on a motor cycle, although the latter luckily was not aware of it at the time, being informed later by natives who witnessed the incident. The Game Guard was sent to deal with the culprit; he killed a few elephants but could not be certain that they included the man-killer. As, however, the attacks thenceforward ceased, it is assumed that the proclaimed beast met the fate it deserved.

*Gallantry.*—Each year provides its quota of deeds of conspicuous gallantry, when in defence of person or property puny man armed with primitive weapons confidently tackles so redoubtable an antagonist as the elephant. In the Mubende district a plot owner incensed at the unwarranted intrusion and depredations of a raiding elephant seized a spear, and with one shrewd blow slew the mighty marauder. He received a suitable cash reward.

But the palm goes to an Acholi, Edwardo Omara, who well-deservedly was awarded “for gallantry” the medal of the Civil Division of the Order of the British Empire. At the end of 1932, in the capacity of unofficial helper to the local Game Guard, Edwardo Omara made a desperate effort to rescue the Guard who had been caught by a vicious, wounded elephant. Attacking the elephant repeatedly with a spear he at last succeeded in driving it away, rescued the victim and his rifle, and then carried the injured man some miles to get his wounds attended to, but his efforts to save

his life were in vain. An adequate cash reward was paid him for his very brave effort.

Early in 1934 a bull elephant which had been severely burnt in a grass fire took possession of a waterhole near a village and kept the inhabitants away from their only supply of water.

It was Edwardo Omara who once again came to the rescue and attacked the murderous beast with a spear, inflicting a mortal wound from which it almost immediately succumbed. A substantial cash payment was given as a reward, but it was considered his outstanding performance was deserving of something more tangible, and it is gratifying that he has been awarded the medal as previously mentioned.

*Maroons.*—Further representations have been received from overseas advocating the use of maroons in elephant control. “A suggestion that greater use could be made of the mental faculties of the elephant if they could be frightened away from shambas by the use of explosive maroons which would not wound the beasts.”

It is a very delightful idea for the elephants, but it is impossible to favour a policy costing a good deal of money merely to *drive away* these destructive creatures so that they can come back another day.

The assertion that the Department is not particularly interested in the idea is correct; throwing maroons will not stop the elephants breeding, and as we are unable to prevent breeding there is no alternative but to destroy. The protectionist has to face the unpalatable fact that overstocking as is the case in many parts of Uganda can be successfully countered only by definite wastage and not by creating temporary periods of fear. The point—a vital one—which appears to be consistently missed by overseas critics is this fact that the country is still seriously overstocked, and a great deal more loss than at present inflicted is necessary.

There are many who lose no opportunity of decrying elephant control on account of the wholesale killing it entails, and who are prepared to bring every possible influence to

bear in order to interfere with the efforts of those who are most conversant with the actual situation.

The necessity for control is deliberately ignored and much capital made by constant reference to the term "slaughter". Admittedly there has to be resort to slaughter time and again, but to insinuate that such methods are indulged in callously, foster competitive killing, and are productive of boasting is as incorrect as it is unjust. Intensive killing is utterly repugnant to the European control staff but is often unavoidable. When sustained wholesale destruction, as was necessary in North Mengo, takes place it becomes indescribably nauseating.

*Height.*—The highest elephant Captain Salmon measured during the year was 11 ft. 9 in. at the shoulder, between spears and done carefully. This was an outstanding bull and inches bigger than the next best.

#### NOTES ON THE FAUNA.

*Baboon*—*The Green Baboon*—*Papio anubis anubis* Cuvier.—One would like to be able to chronicle an abatement of the baboon nuisance, but unfortunately this is not the case and many districts continue to submit bitter complaints. In the absence of organized effort, which is unduly costly, an effective remedy is almost impossible. Districts which have suffered most include Kigezi, Ankole, Masaka, Bugishu, and Teso.

*Colobus.*—Implementing the provisions of the International Convention of 1933, all colobus are being transferred to the First Schedule of the Game Ordinance, i.e. henceforward will be included in the completely protected list.

*Lion.*—The lion appears to be steadily increasing if the frequency of reports of encounters, damage to stock, and attacks on human beings can be accepted as an indication of its abundance.

Records of lions destroyed by the agency of local effort are not always brought to official notice and doubtless many courageous acts in consequence go unrewarded. As the local populace should be given every encouragement to foster a spirit of self-help, instead of sitting down and shouting

loudly for assistance, it is hoped in future that no worthy episode will be allowed to pass unrecognized. A substantial reward was paid to a native hunter who in the Entebbe district destroyed two cattle-raiding lions, his armament consisting of a small-bore rifle and ammunition of doubtful quality.

In June lions were reported to be particularly troublesome in North-West Masaka in the vicinity of the Ankole border. In due course, the Game Guard dealt successfully with the situation.

Until a few years ago, at a certain time each year, a lion (or lions) used regularly to visit the area in the vicinity of Lakes Nabugabo and Kayanja in the Masaka district. One night in the course of the periodical visitation there was an uproar in a cattle kraal near Lake Kayanja, and while the men ran out to look after the cattle a Muhima woman who had armed herself with a spear, entered the kraal and found a crouching lion which she courageously speared to death. Since the incident there has been no recurrence of marauding lions.

Considerable damage to stock is reported from the Butengeza area of Buruli, in the Mengo district.

From Ankole have come the usual widespread reports of the presence or depredations of these large carnivores, but they are meagre in comparison with the actual situation. Reported losses amongst native-owned stock total 171. On one occasion, attempts were made to attack Mbarara township cattle and those of the local butcher near the market. At least four lions have been accounted for by Mbarara residents who have turned out from time to time to hunt marauders. There have been some amazing episodes connected with these hunts. Only one human fatality was reported from Ankole.

*Leopard.*—In most districts, in spite of considerable wastage, the leopard is a constant source of complaint, and there is no indication that its numbers are in any way decreasing. In the drier regions of the north and east, where the lesser ungulates, settlement, and stock all concentrate in the vicinity of water, man and leopard are in frequent conflict.

*Buffalo.*—As the incidence of rinderpest has been very strictly limited, buffalo mortality attributable to its ravages has been almost negligible.

In consequence, there has been little amelioration of the situation, although the combined activities of licence-holders, special permit-holders, temporary native hunters, the Game Guards, and the Veterinary Department have accounted for a few hundreds. The reduction, though small, is none the less welcome.

There are a few licence-holders, recipients of permits, and temporary hunters who are performing yeoman service locally in keeping buffalo numbers within reasonable bounds. Buffalo wastage from all causes during the year probably exceeds a total of four hundred.

One can always rely on the buffalo to provide entertaining episodes for record. Perhaps the strangest is the case of two buffaloes in Sebei (Bugishu) which entered the rest house at Kaburoron without first seeking the necessary permission, and displayed further their contempt of authority by battering down a part of one wall, before departing through the door.

The opinion of the Administrative Officer in charge of the Masaka district is quoted fully for it conveys an accurate impression of the buffalo as a nuisance in most of the localities in which it is common: "Speaking generally, buffaloes have done a great deal of economic damage to crops throughout the district. They carry 'fly' with them, and are a general pest on the community." This could be qualified considerably, though on the whole it is correct, and it is no exaggeration to claim that the buffalo continues to be a serious threat to economic development.

In various parts of the Mengo district, buffaloes have continued to be responsible for a good deal of damage, especially in the coastal region of Kyagwe. A herd which frequents the forest adjoining Salama Estate has at times been exceptionally troublesome. One evening after dark, Mr. Chambers, accompanied by his wife and daughter, had the unpleasant experience of being charged by a big bull

within half a mile of his house. Considerable damage was done to the car which was knocked into the ditch.

In the Toro district, sixty buffaloes were accounted for by pitting under Veterinary Department arrangements.

Buffaloes can often be seen, especially early and late, in the Lake George game reserve in the vicinity of the Mbarara—Fort Portal road, mile 96 being a particularly favourable locality.

In December, a herd of about twenty was observed grazing on a hillside just above Saza headquarters at Bugoya in the Mubuku valley. An immense solitary bull had become an habitual crop raider at a Gombolola two miles away from Bugoya, but was much too cunning to get into danger either by day or night. The damage done by this type of semi-domesticated solitary raider is extensive.

On several occasions after dark, buffaloes have been encountered by motor traffic along certain portions of the last fifty miles of the main road to Fort Portal from Kampala ; and there have been instances of lorries hitting buffaloes, fortunately with no worse result than minor damages to the car.

The Ankole buffaloes are generally plentiful and undoubtedly increasing. The species is reported to have been particularly troublesome in Kashari. Mortality from rinderpest has been severe in an extremely limited portion of Southern Ruampara.

*Roan Antelope.*—The few reports received from Ankole indicate a steady increase, accompanied by an extension of range towards the east and north-east. It is singularly fortunate that this species is immune to rinderpest which raged for a few months amongst the game in its Southern Ruampara habitat and caused severe mortality amongst certain susceptible species.

*Eland.*—In the Kabuga area of Southern Toro on the Ankole border is reported a marked decrease in the numbers of the eland, which cannot be attributed entirely to recent rinderpest epizootics. It is an outlying area difficult to control effectively but now that the Ranger has returned from leave it is hoped to be able to protect this inoffensive species from the activities of poachers.



In Southern Ruampara in Ankole, the fine eland herd which has been increasing steadily during the last ten years suffered heavy mortality during an outbreak of rinderpest which lasted a few months. Known losses total thirty-two. In the Gayaza region of the same district another herd which has been very carefully conserved for many years was harried unmercifully at the end of the year by a native poacher, and it is reported that more than twenty eland were killed.

In spite of these two set-backs in adjacent areas, the eland situation generally is satisfactory and in most of the localities it inhabits it continues more than to hold its own.

*Waterbuck.*—In the course of a flight over the coastal zone between Jinja and Mjanji, the abundance of waterbuck in the Busoga sleeping sickness area was a striking feature.

In localities in which there are no native-owned guns and where the inhabitants only have primitive weapons this relatively large species appears to be well able to look after itself and is increasing.

The male waterbuck is no mean antagonist when cornered or driven into a net and can use its long horns with deadly effect. The females also under similar circumstances are most skilful with their feet and can inflict wicked injuries with their sharp hoofs.

In consequence, the waterbuck in many parts enjoys immunity from molestation which is the lot of few other antelopes. This is particularly the case in the densely-populated counties of Kasilo and Serere where the waterbuck herds have attained amazing proportions and where they are a positive nuisance. Once this antelope has acquired a taste for crop-raiding, and has realized that little harm to itself will result, it becomes extraordinarily bold and persistent. Drives organized during the dry seasons in the counties of Teso, previously mentioned, brought little relief as the participants in the hunts were mainly too frightened to tackle these animals. Reliable witnesses have reported herds up to 150 having been seen there and an aggregate

for one uninhabited area adjacent to settlement of 700 waterbuck.

*Bush-Pig*.—There is no abatement of the bush-pig nuisance, and this creature, although included in the vermin list, is the most complained of wild animal in many districts.

The use of poison against these persistent marauders is frequently advocated, but effective action is very costly in personnel, as poisoning has to be carefully supervised and carried out under adequate safeguards.

Details of new methods of pig-poisoning are always worth recording, and the following is said to be highly successful :—

When growing sweet potatoes in localities frequented by bush-pig it is a good plan to have a plot more accessible than the others so that the marauders can easily enter. The plot is quickly discovered by the pigs and as soon as the potatoes begin to develop nicely a preliminary raid takes place before the main droves come along.

Once the pigs have indulged in the first raid each growing potato is skilfully poisoned and left in the ground practically undisturbed. It is claimed that the consequent mortality is severe enough to wipe out the majority of the invaders and drive the survivors right out of the neighbourhood.

In Toro the persistent advocacy of fencing to keep destructive wild animals away from crops has at last met with splendid response, particularly in Busongora county ; and in the dense conditions of the Mubuku valley well-fenced gardens are nowadays the rule and not the exception.

In the vicinity of the Toro (Kibale) forest the bush-pig causes a great deal of damage to native crops, in spite of nearly all the potato fields being fenced. Fencing seems to have made the pigs more enterprising and bold, so that now they will force their way through or burrow under fences.

*Giant (Forest) Hog*.—An unfortunate fatality occurred in the Toro district. An adult forest hog fell into a deep pit, one of a line protecting a European estate from buffaloes and elephants. A crowd of excited natives were standing round looking at the captive when a girl was accidentally

pushed into the pit and immediately killed by the enraged animal.

*Hippopotamus*.—On the whole, the hippopotamus is an increasing species, and where its habitat coincides with adjacent settlement it is often a source of serious damage to cultivation. Unfortunately, it has to come ashore to feed, and if access to suitable grazing is denied by crops which incidentally may have taken the place of the normal feeding ground then there is certain to be trouble.

There is no doubt that the existing abundance of these creatures along parts of the Victoria Nyanza coasts constitutes a direct threat to the efforts being made to reclaim for settlement some of the fertile littoral. New cultivation has been so harried along the Entebbe shores that there has been a distinct set-back to development and an inclination for those participating in the reclamation schemes to abandon the project.

Along the Victoria Nyanza shore there are such vast regions of swamp in which the hippopotamus can find absolutely secure refuges that there is no fear of it becoming a vanishing species so long as the swamps remain. At the present time it is the marauders from the swamps which are complained of most, because they are so clever at hiding that it is only possible to deal with them on land after dark.

Although complaints of damage by hippopotamuses at Entebbe, and in its immediate vicinity, have always been dealt with promptly, and several of the raiders shot, this creature's numbers show no signs of decrease. Experience indicates that destruction of a raider, which normally takes place on land, gives the net result of one raider less, and does not interfere with the herd which still remains a potential source of danger from which in due course further raiders come. It is only when a herd is attacked and several of its members destroyed that it is likely to move elsewhere.

*Giraffe*.—The latest reports indicate that this inoffensive species is definitely increasing in most parts of its habitat. It is said to be plentiful locally in Karamoja, on the Teso side of Mount Kamalinga, along the Greek (or Kelim) river

both in Bugishu and Karamoja, and in East Madi near the Nile.

*Zebra*.—A special measure of protection accorded this species in the Buganda Province has now been removed. Persistent shamba raiding and considerable damage to cotton plots in the extreme southern areas of Entebbe district necessitated the employment of temporary hunters to relieve the situation.

#### BIRDS.

*Migrant Storks*.—The continued widespread distribution of locust swarms has affected materially the movements of useful insect-eating species such as the European or white stork—*Ciconia c. ciconia* and Abdim's or white-bellied stork—*sphenorynchus abdimii* to the very great advantage of Uganda, and a corresponding disadvantage to Territories further south. Although part of the normal northern passage of white storks was observed at the end of January, when many thousands were seen flying high over the Mabira forest, this species was present in Uganda in abnormal quantities till the latter part of March, and all had not left by the middle of April.

At one period in March there were vast concentrations of these birds in a large area extending from Kigezi in the south-west to the Nile region of Buruli, Buganda.

Abdim's storks arrived unusually early at Entebbe on southern passage, large flocks being seen on 25th October, which is a fortnight before the previous earliest date.

In early December multitudes of white and white-bellied storks, accompanied by quantities of migrant kestrels, were concentrated in an extensive area west of Mityana along ten miles of the main road, where these birds were feeding for days on a scattered laying, locust swarm.

#### CROCODILE.

*General*.—Owing to its abundance and unpleasing habits, this is a species which annually attracts a great deal of attention, as it is always responsible for a large number of human fatalities.

*Man-eaters.*—A rifle and a supply of ammunition were sent in response to an urgent appeal to the Engineer-in-Charge of the S.W. “Lugard” at Pakwach who subsequently wrote :—

“Practically speaking, there was a reign of terror on here and four different parts of the river were fenced in for water-drawing. The climax came when a boy of about ten years of age was taken at the end of the pier just before the rifle arrived.

“No one saw him being taken away but I happened to be standing outside the house with Dr. Garde from Arua, when I saw a huge crocodile in the middle of the river with something in its mouth which I thought was the torn off leg belonging to a hippo.

“I warned all the natives that it might have been a man’s leg and commenced making inquiries if any one was missing. A ‘toto’ was missed the following day, so by comparing times and movements of the boy he must have just been caught a few minutes before I saw his torn and lacerated body being carried across the river. The time would be about 5 p.m.

“However, thanks to the rifle, the Pakwach terror is dead and his body was found a mile down stream with the side of his head blown away.”

The Officer-in-Charge of Lango records: “At Akokoro (*see* paragraph 221, 1933) a native named Misaki Obala rushed into the water and speared and killed a crocodile which was carrying off a girl. The girl was badly injured but recovered after three months in hospital. Misaki received a reward for his bravery.”

Numerous other fatalities have come to notice from time to time, though it is believed that the majority are never reported.

*Destruction of Crocodiles.*—With the aid of a Government launch the opportunity was taken during the period 20th to 26th September to prosecute vigorously the organized campaign against the female crocodiles on their breeding grounds which had been started in 1928, carried on in 1929, and

then perforce for a variety of reasons had to be discontinued until the year under review.

Although in the extremely limited time available it was not possible to visit all the known breeding haunts along the mainland and islands' coast in the Mengo and Entebbe districts between Damba and Zinga islands, the results are very satisfactory, and there are indications that the operations of previous years have effected an appreciable decrease in the numbers of females on certain breeding islets.

As in a week nine female crocodiles have been killed alongside their nests and a further eleven shot in the shallows near by, it is anticipated that next breeding season will reveal a conspicuous diminution in these creatures in the localities dealt with this year.

One particularly favoured haunt was visited three times after at least eight crocodiles had been shot and more than 700 eggs destroyed, and no crocodiles were seen either on land or in the water where previously they had been exceptionally conspicuous.

This year's breeding season appears to be abnormally early as a large percentage of eggs destroyed were in an advanced stage of incubation, many on the point of hatching out, whereas it is generally reckoned that the main hatchings take place in the latter part of November.

Forty-four nests were dug out and a total of 2,611 eggs destroyed. In one nest, most of the eggs had hatched and only 11 were left: the average number of eggs per nest in the other 43 works out at 60·5 approx. The maximum "sitting" was 84, and the minimum 41.

Nest totals are as follows:—

<i>Eggs.</i>	
84 . . . . .	1 <sup>1</sup>
70 and over . . . . .	6
60 „ . . . . .	16
50 „ . . . . .	15
40 „ . . . . .	5
	—
	43

<sup>1</sup> This is an exceptionally large "sitting".

It is believed, mainly supposition, that "sittings" of less than fifty eggs are laid by the younger crocodiles during the early years of maturity.

#### DISEASES OF GAME.

Although no fresh outbreaks of rinderpest were reported in January, the disease could not be considered as eradicated in the Western Province, and in February, following reports of deaths of buffalo, eland, and waterbuck in Southern Ankole, infection was discovered among cattle in that area and persisted until May.

Mortality amongst certain species of game was particularly severe and included thirty-nine buffalo, thirty-two eland, twenty-six pigs, five waterbuck, three bushbuck, and one topi. No sick or dead animals have been seen since the end of July.

In Belgian Ruanda, a rinderpest focus near the Kigezi district boundary was the source of considerable anxiety during February, and resulted in the disease entering Kigezi in April.

A herd of cattle, which had grazed over the Belgian Ruanda border, became infected in July, and after heavy mortality the disease died out in September.

An outbreak occurred in Begishu in April, due to illicit movement of cattle from Suk, and after one extension from it was suppressed.

*Buffalo Hides.*—As elsewhere mentioned are unsaleable, endeavours to find an overseas market have been unsuccessful. The high charges of internal and external transport, sea-freight, long haulage, excessive costs of acquisition and the irregularity of supplies coupled with a very limited commercial value render dealings in buffalo hides an unprofitable business.

---

#### IVORY TRADE, AFRICA—STATISTICS.

An attempt has been made to compile authoritative statistics of the trade in ivory over a number of years and the result is given below. It is here desired to thank the authorities