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THE AFRICAN ELEPHANT AND ITS HUNTERS

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BY

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"Hunting Trips in Northern Rhodesia," "Wild Life in Central Africa," "Memories of an African Hunter," etc.

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To the Memory of my Father

JAMES CARMICHAEL LYELL

(Born 1843 Died 1922)

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FOREWORD

THIS volume is not an attempt to deal with the elephant throughout its range in Africa, as the author's experiences of hunting these animals only apply to the territories of Nyasaland, North-Eastern Rhodesia, and Portuguese East Africa.

Probably there never lived a man who has hunted the elephant in all its habitats in Africa; and having read practically all the literature on the subject in the English language I have not discovered such an individual. Selous hunted in Mashonaland and Matabeleland, now known as Southern Rhodesia; Neumann in British East Africa, now called Kenya Colony; and Stigand in Nyasaland and the Congo.

Perhaps Sir Alfred Sharpe has had a more varied experience of elephant hunting than any living person, and it is a pity he does not write more on the subject.

Before the days of licences, when a hunter could not find a large tusker he took a small one, and if there were no bulls worth a shot he would fire at cows.

Pound for pound cow ivory is of much greater value than that of the bulls, but the tusks seldom grow heavier than 15 lbs.

Of course, it was imperative that restrictions should be made, for the improvement in sporting weapons and the development of communications would soon have brought the animals to the point of extinction.

Therefore, though the modern hunter is apt to chafe at the limitations imposed, he has gained in usually having more time for nature study.

The elephants, owing to increased molestation, now seek thicker country and do not as formerly spend much time in open exposed places.

I believe that elephant hunting to-day, notwithstanding the great improvement in weapons, is more dangerous than it was in the past, for constant persecution naturally makes the animals

more apt to resent interference and to act offensively.

However, there is a tendency on the part of cinema photographers, who cannot be expected to know very much about the true habits of game, to describe " charges " when the animals are only frightened and trying to escape.

Scent being the strongest sense in most mammals, when one or more animals are disturbed they try to go upwind, so that they can smell danger from their front.

In doing so they may often seem to come directly for the disturber of their peace and may rush almost over the hunter or photographer in their efforts to come round towards the wind.

Should a herd of elephants or buffaloes do this and be suddenly startled by the appearance of a human being they almost invariably split up and pass to either side.

Moreover, a real charge is one made with intent to do harm, and herds of game seldom act in combination in this way. This is a good thing

for hunters and photographers, for if such were the case there would be few left to relate their experiences or show their fine pictures to the audiences of picture-houses.

Therefore when a person is anxious to know true facts regarding the habits of game he is more likely to get his information from those with a long experience of hunting than from the man who takes long range pictures of the animals during short trips into the game country.

Few animals act on the offensive unless they are wounded, and the first instinct of all wild creatures is to bolt, for the scent and sight of man (especially the white man) are abhorrent to them.

Animals become very tame after several generations have grown accustomed to the proximity of man. On the other hand they get very wary and nervy when their inherited instincts of fear teach them that humans are a menace to their further existence.

There is another matter I would like to com-

ment on, and it is the subject of the critics of books.

I know that a person's views of life largely depend on his digestion, but all the same it is very unfair because a reviewer happens to suffer from a sluggish liver, or spasms in a wisdom tooth, that he should vent his wrath on the writer of a book whose accounts are founded on a long practical experience of his subject.

If I were asked to review a work on astronomy or metallurgy I am sure I would have the sense to refrain. Yet, many books are reviewed by people who cannot be expected to know anything about the subjects written of. The only good point about a malicious notice is that it often helps to sell the book because people say "I wonder what it is all about?" so they buy it to find out. People of acumen will notice that nasty reviewers seldom have the courage to sign their names and they nearly always deal in anonymity which is I think the worst point of the matter. A law should be made that such articles should

be signed. I am sure publishers, as well as authors, will agree with this.

I must acknowledge here the kindness of Messrs. Lewis & Peat Ltd., the well-known ivory merchants of 6 Mincing Lane, for allowing me to quote freely from their interesting pamphlet on ivory.

If I have criticised the part dealing with so-called " elephant-cemeteries " I have done so because I wished to enlighten the public on a matter which has no foundation in facts; and the man who has walked for thousands of miles through elephant haunts is likely to know more about such a matter than those who have not had similar opportunities to gain a practical knowledge of such a subject. I have shown how the vultures by day and the hyenas at night would soon find the dead elephant and attract the human inhabitants to the scene, when the ivory would be removed. To the same firm I am indebted for the excellent photograph of a symmetrical pair of Congo tusks.

The other photographs are my own work, and I wish to thank the Field Press Ltd. for their courtesy in allowing me to use some which have already appeared in my former books published by them.

DENIS D. LYELL

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THE AFRICAN ELEPHANT AND ITS HUNTERS

CHAPTER I

THE AFRICAN ELEPHANT AND ITS WAYS

THE "Guide to the Great Game Animals" (Ungulata), published by the authorities of the British Museum, mentions five races of the African elephant as follows:

1. The South African elephant (*Elephas africanus capensis*).
2. The West African elephant (*Elephas africanus cyclotis*).
3. The Sudan elephant (*Elephas africanus oxyotis*).
4. The East African elephant (*Elephas africanus knockenhaueri*).

5. The Congo dwarf elephant (*Elephas africanus pumilio*).

Amongst these five I doubt whether there are really more than two distinct races, these being the South African elephant (1) and the Congo Dwarf elephant (5). The first four races given may differ slightly as to height, shape of ears, size of feet, shade of skin, and so on; but any difference there may be between the one and the other is probably simply due to family variety and the conditions in which they live. Rowland Ward in his excellent book, "Records of Big Game," does not attempt to differentiate the tusks of these four races, though he separates the tusks of the Congo race of Dwarf elephant from the other races in his list of weights and measurements.

Although the Dwarf elephant is justifiably separated on account of its diminutive size, I believe its dimensions are simply due to its favoured habitat.

It is known that trees which grow in great shade become small and stunted, and I believe the Dwarf elephant has been similarly affected by

living in thick and shady cover, and that its original progenitors belonged to the same species which produced the common elephant of Africa, that is the race known as *Elephas africanus capensis*.

With regard to the small size of the Congo Dwarf elephant it is interesting to remember that the Pigmy hippopotamus of Liberia has also become stunted in size, due to its love of frequenting shady pools of water in dense forests.

The height of the large bull elephant in the Natural History Museum at South Kensington is given as 11 feet 4 inches. It was shot near Fort Manning in Nyasaland by Mr. T. A. Barns; and anyone who has seen many large African elephants will notice from the contour and build of this animal that it belongs to a particularly tall and lanky type, so I believe it measured in life what has been made to appear in death.

I put the matter this way because when such a huge skin as an elephant's has been removed from the carcass with the intention of having it set up later, the skin is not pegged-out; but is left to dry naturally.

As it dries it shrinks and crumples greatly and I have seen skins, such as eland and zebra, contract to half the size they were when taken off the animals. The taxidermist who sets up the specimen has to soak the hide for a long time to soften it and make it pliable enough to work; so there would be little difficulty in making an elephant which was 10½ feet at the shoulder when alive, about 11 feet in height as a zoological specimen in a museum.

I do not mention these facts with the intention of throwing the slightest doubt on the specimen of the large elephant in our national collection; but simply to inform the public, who may be ignorant of such matters, that the skins of animals can be stretched out on stuffed exhibits. The whole matter rests with the individual who takes the measurements just after the death of the animal.

Near where this large bull elephant was shot I killed a very tall bull a year or two before Mr. Barns got his fine specimen, but the animal unfortunately fell against a good-sized tree and it was impossible to measure his height.

When Mr. Barns got his big elephant he had a

native tracker with him named Kamwendo who belonged to the Achikunda race.

Kamwendo was also with me when I shot my large tusker, which I was unable to measure properly, and at the time he told me that this beast was the tallest elephant he had ever seen. This man was a splendid tracker of elephants as he seemed to know instinctively the way they would go; and he had accompanied nearly all the officers of the 1st King's African Rifles who were stationed at Fort Manning, besides other hunters, such as Barns and myself; so he had seen many hundreds of elephants in his time, and some of the largest of them shot by the white men he accompanied as tracker.

A few years after I got this tall animal I shot another good bull not far from the same place, which measured 10 feet 7 inches at the shoulder, so I naturally asked Kamwendo, who was a native with great powers of observation (especially regarding elephants), how much larger my previous elephant was, and he made a mark which would have made the very tall bull 11 feet 9 inches. Of course this could not be treated as an authentic measurement, though I firmly

believe that Kamwendo was correct as I have never seen such a tall beast again.

The natives in this district called the animal I shot "Wanculu" (the big one) for he had often been seen by them around their villages. In fact, he was a bad raiding elephant who not only came to their grain-fields, but also broke into their bins and huts to get food.

Kamwendo also told me that my tusker was a taller beast than Mr. Barns' elephant, and I believe that it was; for Captain Stigand asked Kamwendo who had shot the tallest elephant he had ever seen got the reply that mine was much the highest. This is not intended to be "puff," but simply the narration of a fact.

Sir Samuel Baker who had great experience in Africa and Ceylon mentions in his book "Wild Beasts and Their Ways" that he believes African bulls may sometimes exceed 12 feet at the shoulder. If they do, this must be the limit of their growth; and I never heard or read of a really authentic measurement of 12 feet.

"Jumbo" was kept in confinement from the size of a calf, measuring $4\frac{1}{2}$ feet. He was

measured and weighed before he was sent to America, and his height was then exactly 11 feet, and weight 6½ tons.

If an animal which had been kept in captivity for most of its life was able to reach these dimensions I think that a bull elephant living a natural life in Africa should certainly be able to exceed them.

Although the elephants in Central Angoniland are very tall and lanky they do not grow particularly large ivory. A tusk weighing over 60 lbs. is a good one in that district, and the ivory is of the best quality (unless diseased of course), and is called " soft " by the ivory merchants in London.

I think it was a pity to put an imitation of the longest tusks known in the British Museum specimen, for these are so exceptional that they make the animal look abnormal. The animal would also have looked more natural if it had been placed on the floor and not on a platform.

When the public gaze at this fine specimen of an African bull elephant I doubt if they ever give a thought to the difficulties of the collector who procured it. I have always thought that

Mr. T. A. Barns performed one of the best feats in natural history collecting when he managed to preserve such a huge skin sufficiently well to get it home in good order.

First of all he had to find an elephant of the required size (over 11 feet at the shoulder); then he had to shoot it, which was the easiest part of the business to him as he has killed many. Then he had to skin it which was not so hard to do on the top side, but was a puzzle on the ground side with all the mass of flesh, bone, and muscle pressing downwards. After the skin was off the carcass it had to be cleaned and dried; and to do this he had to make a large and deep pit so that the air could get at the under side to dry it. This proved successful, but the skin had to be carefully watched to see that beetles and other pests did not get at it and do irreparable damage. Lastly it took quite forty natives to carry it south to the river-steamer in which it went to Chinde on the east coast, where it was put aboard the ocean vessel and brought home.

The well-known taxidermists, Rowland Ward Ltd., of Piccadilly, have certainly made a very good job of setting it up, and it makes a very

noticeable specimen in our National Museum of Natural History.

The man who took all the trouble of hunting, shooting, and preserving it is seldom mentioned, so I have thought it fair to do so here.

The difference between the African and Indian elephant is that the former is taller, heavier, has larger ears, and grows bigger tusks. There are other points of distinction, such as the formation of the tips of the trunks in both species, slope of skulls, and dental formation.

Perhaps the most vital difference to the hunter is that the African elephant has a much worse temper than the Indian, and is more likely to charge when interfered with. His sloping forehead makes the brain an unsatisfactory target when he is in a facing position, whereas the Indian variety can often be killed with a frontal shot.

I doubt whether the inhabitants of Africa ever succeeded in training elephants in the past, or whether they will do so in the future, as I cannot see how it would be possible to get such muscular beasts under control. Strong and highly trained Indian bulls might manage the

African cows; but it would take a large number of them to make much impression on a bull, for he is extremely powerful and very pugnacious.

Indian elephants are comparatively docile, with the exception, of course, of a bull which has developed into a "rogue" and run off to the jungle. I heard of such an elephant in Assam which killed several natives before a party of Europeans followed him up and shot him.

If a herd of African elephants were driven into a "keddah," or stockade, I am pretty certain they would not stay there long, for they would break through anything which could be made out of the ordinary African timber found in the haunts of elephants.

If they were taken as calves they might be kept for some time, but when they reached maturity they would be dangerous.

Moreover, they do not strike the observer as being so intelligent as the Indian species. The clever things the Indian elephants do have been taught them by their mahouts, or drivers, or have been learnt by copying the action of their more highly trained companions. I rate the brain

power of elephants much lower than that of a dog, for the latter will fly to the help of his master, or mistress, if attacked, while an elephant would probably take no notice in such a case.

African elephants go about in herds varying in numbers from a few to several hundred. The usual herd consists of from ten to thirty animals, and when several hundreds are seen together such a collection consists of many small herds which have combined, probably preparatory to trekking off to some locality at a distance. In a herd of thirty beasts many of the cows will be accompanied by a calf. Occasionally the bulls consort and I have heard of over a hundred being seen together, but this is rare.

Old tuskers often go about by themselves, and it is not an uncommon sight to see a large elephant with one or two males which are much younger than himself. One seldom sees a male and female going about together, like a honeymoon couple.

When a bull elephant becomes very old he prefers a solitary existence, for like a grumpy old bachelor he does not seem to become bored with his own society! He is usually a staid

slow-moving animal, and probably finds his heavy tusks rather a bother to him if he joins a herd and enters into competition with the younger males with more manageable ivory and lither bodies.

No one, as far as I know, has given authentic information as to the period of gestation in the African female elephant, although I believe it is somewhere about twenty-two months. This shows that the elephant does not increase very rapidly.

An elephant with exceptionally heavy tusks (or "teeth" as the hunters always call the ivory) must often find them a great burden when they are a hundred or more pounds in weight. Natives have told me that they have seen such animals leaning on their tusks when they were long enough to nearly reach the ground.

A good many tusks have been recorded of from 8 to 9 feet, so animals with these long tusks might use them as props at times. In a later chapter I will give some measurements and weights of tusks, besides other matters relating to ivory.

About thirty years ago, elephants inhabited

much more open country than they do to-day, as they were less hunted then and had not to contend against the deadly high velocity rifles of the present time. In the days of the muzzle loader it was impossible for the hunter to fire quickly as the weapon took some time to load. The ordinary smooth bores used with round bullets of different calibres had poor penetration, unless they were used by the hardier type like Selous who thought nothing of putting a handful of coarse powder into the guns called "Roers" by the Dutch hunters in South Africa.

What these old guns lacked most was a refined accuracy, for no one can shoot very straight with a hard-kicking weapon; and Selous has written that he wished he had never had anything to do with them.

The power of the African elephant is immense, and I have seen many patches of country wrecked by them in trying to get fruit which grows out of reach of their trunks.

A favourite tree is the Masuko which grows a fruit about the size of a small plum, and these trees are fairly abundant all over Nyasaland and Northern Rhodesia.

Another almost similar fruit tree is the Mauni, which is scarcer in most parts of the country than the Masuko. When the fruit is ripe it falls to the ground and the elephants and other animals come to eat it. The natives assert that lions and leopards will also eat it, but whether this is so I cannot vouch.

After the elephants have disposed of the fruit on the ground they break the trees to get what is out of reach of their long trunks; and I have seen acres of country smashed up by them with the trees either broken off about 4 feet from the ground, or wrenched out by the roots. This height of 4 feet is interesting, for I think it shows that this is a convenient position for the elephants to exert the full strength of their trunk muscles. Possibly, too, it is the most suitable height for using their tusks and foreheads when they ram the trees. This must take much more force than the pulling down of large branches often as thick as a man's leg. A branch ripped down where it is forked will give more readily; and its weight helps it to fall.

The average size of these trees is 8 inches in diameter and about 25 inches in circumference,

and I have taped quite a number to take these dimensions. The largest tree I ever saw broken by a bull elephant was a "N'kuyu" tree in Nyasaland which measured just below the fracture 52½ inches. The wood of this tree is soft and stringy. The Masuko trees are harder, and a photograph will show how the wood is splintered and rent where they are broken.

In the rainy season, like all the game, elephants do not travel so far, as water and green food are more plentiful. The bush is also thicker, so they get better cover. They seem to know that they are less molested at that time, as the dry months are the hunting season.

The native crops of maize, millet, ground-nuts, and pumpkins are planted in the rains and soon grow; so the elephants, if at all numerous, come and raid the gardens at night, and the natives sit up in platforms or trees and beat drums to keep them away. Should one live near the villages and fields the beat of the drums will be constantly heard at night. It is a melancholy sound in the darkness.

The crops are ripe at the beginning of the dry season (about July in Nyasaland and Northern

Rhodesia); and after the natives have gathered them they leave the stalks of maize and millet lying about. They stop their night watches with their drums, so the game animals come in numbers to eat the stalks which they seem to relish immensely.

Sometimes elephants which prefer the grain to the stalks will come to the villages and break the bins (n'cokwe) to get at the maize cobs. When the villagers find that the bins are being broken they will put what is left into their huts, and the animals scent it and occasionally tear the thatch off to get what they want.

Once when camped at M'ponda's village in Central Angoniland, the animals arrived and broke into a hut and the natives came and asked me to go and fire at them. I knew if I fired a shot the elephants might leave the locality, and I did not want this to happen as I was to try to get a good bull the next day.

However, I had to help so I told my men to get some grass and tie it up quickly with some native string so as to make flares. These we lighted, and went towards the elephants which we could hear smashing the hut not far away. When we

got to within forty yards I saw a group of elephants busy round the hut, so we got lumps of earth and sticks (there were no stones lying about) and bombarded them for some minutes. They seemed loath to go, but eventually left without it being necessary to fire at them.

Next day I was rewarded for not firing as I got a good bull, which I believe was the ringleader in the night attack on the village.

The depredations of elephants in the native crops almost cause starvation in localities where the animals are at all numerous, for in a single night they may devastate acres of the gardens, trampling down six times as much as they eat. The natives therefore cannot be blamed for trying to take one or two in pitfalls or spear traps.

These garden-raiding elephants are inclined to be more dangerous probably because they are seldom hunted in these places. They also become accustomed to seeing and smelling human beings who invariably run away when they are about.

It is difficult to see elephants in maize which grows to a height of twelve feet in good soil, so it is dangerous work tackling them where there is

not a tree available should the animals be inclined to be nasty.

However, it is not worse than in the thick reed beds and tall grass where they are often found. The worst point about any stalky cover is that it is quite impossible to move the rifle as quickly as one can do in timber land.

By far the worst country to follow elephants in is patches of thick thorny bush where the spikes catch in one's clothes and skin. I have seen some very nasty places of this kind west of the Luangwa River in Northern Rhodesia.

After a number of elephants have been moving about in heavy reeds or grass they break and bend the stuff at all kinds of angles, so that one is impeded at every step. It is useless to try to force a way through this cover, so one must move it aside or step over when it is low enough, which it seldom is.

A good plan in such stuff is to get a man with a long spear to walk just behind and lift the stalks high enough to walk under. If it does not lift easily then a smart man will press it down and enable one to step over it. Should an elephant charge in this kind of country it is

better to stand and shoot than to bolt, for it is quite impossible to run quickly in trampled reeds or matted grass.

As a rule elephants do not charge unless they are wounded; and a real charge is one with intent to do harm.

Often elephants and buffaloes seem to be charging when they are only trying to get away, and this rush is described by the inexperienced as a deadly charge, which is pure nonsense. Moreover, a herd never charges with intent in a body.

The stampede of a large herd of elephants in timber country is a fine sight, for they raise clouds of dust in dry weather, and send fair sized trees crashing to the ground. Should such a rush take place on a wooded hillside it is like an avalanche sweeping downwards.

I once saw a tuskless bull dash between two trees and fell them both with the shock of his impact, and he did not seem to be any the worse of the bumps in his ribs.

When animals are not excited by fear they are able to judge the space between trees, but when frightened they make mistakes. I once saw a well horned kudu bull dash between two small

saplings and get badly jammed, for he struggled for some seconds before he was able to twist his horns into a convenient position to get free.

On another occasion I saw a bushbuck get hopelessly involved in the thick and tangled branches of a big bush when running away from me. He tumbled about for some time before he got away.

When elephants tear trees out by the roots it will usually be found that such timber is growing in loose sandy soil, at least if the trees are large ones.

Tuskless bull elephants are not very plentiful. I only remember seeing three, and they were all big animals. The natives assert that they are very dangerous, and it is possible that this is so, for the tuskers will keep them away from the females, which may sour their tempers and make them irascible at certain seasons.

There is an idea that twice the circumference of an elephant's forefoot will give the exact height of the animal. It may do so occasionally, but not always as many thick-set elephants have moderate-sized feet. I think this applies more to the Indian elephant which has larger feet in propor-

tion to its height and weight than has the African species. A large tusker usually has good-sized feet, and I have found that the tallest animals generally have the greatest foot circumference.

The heaviest elephant I ever shot, and he was a particularly bulky specimen, had forefeet measuring 52½ inches in circumference; while the tallest I ever saw had a measurement of 58½ inches. Like horns the feet shrink slightly in time, and the 58½ inch foot is now 56½ as it was never filled with anything to keep it from decreasing in size.

The colour of elephants is a dark grey and they are extremely difficult to see in thick cover where there is much light and shade. It depends a good deal on the position of the sun in relation to the game and the hunter. It is wonderful when they are moving about how one will spot a beast which seems suddenly to vanish, not because it has got out of sight, but for the reason that the shadows have blended better with its coloration.

When the animals are feeding in moderate-sized timber one will see the branches waving and sometimes falling, and a sinuous and snaky trunk may be suspended in the air for a second or two as

it reaches out above the topmost level of the trees. One will hear the rending and splintering of large branches being torn off, and sometimes a crash when something heavy has been brought to earth.

The sounds elephants make are interesting, although at times they can be very quiet. When getting close a common sound is a strange rumbling from their insides just like water gurgling in a cistern, which suggests that their digestive organs are working at high pressure.

The cows are noisier than the bulls, and make squeaks and squeals, and strange gurglings of what sounds like pleasure. Then there are the trumpetings in various tones, and the shrill scream of fury which is given by both sexes if they are infuriated.

The late Major (then Captain) C. H. Stigand told me of a strange experience he had which is worth recording as I have not seen or heard any mention of a similar occurrence.

He had promised to take W., an official from Zomba who had come to Fort Manning, after an elephant. Having found a good track they were spooring the animal when W. got seedy

with the heat, and had to wait behind with two natives.

The elephant seems to have come to a stand not far from where W. and the two natives were waiting, and Stigand hit the elephant but did not kill it. He said it looked furious but he did not hear it scream before he finally killed it.

On rejoining W. and the two natives they told him that the elephant had been screaming loudly; and W. remarked that he was glad to see Stigand back all right as he thought an accident had happened.

Stigand then asked his gunbearer, who had gone up to the elephant with him, whether he had heard the elephant screaming and he said he had not heard anything of the kind.

On talking it over we decided that there must be such a shrill note, or timbre, in this piercing scream that it is inaudible close at hand, but can be heard at a little distance. I remember asking Stigand how far he was from W. when he fired at the elephant, and he thought it would be from four to five hundred yards.

I once heard a wounded elephant crying like a child that had hurt itself. There was a pitiable

note in the cries which at once prompted a feeling of pity. The natives also said it was just like a child crying; and round the camp-fire that evening the funny man of the party gave an exact imitation of the incident. Natives have a wonderfully correct ear for sounds, and occasionally one sees a man who can mimic the gestures and voices of his friends, or of a white man, to perfection.

An elephant often screams when he comes for a hunter, but not always, for I have seen one come on without making a sound except with his feet as they rustled through the grass. This incident is mentioned in my " Memories of an African Hunter " (T. Fisher Unwin) so I need not repeat it here.

As a rule a charging elephant is fairly easy to turn when close; and it is far better to keep shooting at an animal that has seen one, than to bolt straight away from it, as nothing incites an animal more than seeing its enemy retreating in front of it.

Although shooting at a charging elephant may make it swerve it is difficult to kill it when facing; and the animal which I dropped quite close only

went down at the third running shot. He had previously received two bullets, one in the head which dropped him in a dazed condition, and another when he was struggling to regain his feet, which instead of quieting him only increased his rage and made him come on in the most implacable manner.

The brain of an African elephant is extremely difficult to hit with a frontal shot because the forehead slopes more than that of the Indian species. It is therefore a mistake to take such a shot unless it is necessary to stop a charging beast.

When an elephant is dead broadside on about 4 inches forward of the earhole in a line with the eye is the right spot to shoot at, always remembering that when on flat ground the hunter is on a lower plane than the elephant. It is all a question of angle and a knowledge of anatomy.

My favourite head shot was into the orifice of the ear when standing slightly behind the animal. When hit here the elephant simply collapses into a kneeling position, or he may fall sideways, usually towards the hunter. Later on I shall deal with the question of vital shots when I discuss the best rifles for hunting in Africa.

Elephants seem to dread deep swamps more than any other type of country, though they often live in the thick reeds and grass which grow in sticky mud. Anything, however, in the nature of a quicksand or quagmire they usually avoid, for if once they get really bogged they are done for, as their immense weight and powerful struggles to get free soon sink them deeper and deeper into the mire.

Natives used to drive herds into such ground and kill the anchored animals at their leisure with spear stabs in the soft abdominal region. This was probably a much more effective way of killing them than in circles of grass and bush fires. I have never believed that they got many of the animals by the latter method because I have seen a herd go clean through a big grass fire without seeming to do themselves the slightest harm. It was interesting to watch them moving about within the circle until they had found the safest place through which to pass to safety.

Elephants are very fond of dusting themselves, and when the soil is of that reddish and ochre colour one often sees in Africa it is not an uncommon sight to see elephants of a red or

yellow colour. Animals that take mud baths, such as elephants, buffaloes, and warthogs may sometimes appear to be albinos when the earth is a light grey colour.

Once when following a good bull elephant in high and thick grass I climbed a tree to see over the grass, and saw the animal about two hundred yards away standing among several large ant-hills of a reddish colour. The elephant had been dusting himself with the dry dust found on these places and he had become a similar shade. On coming down we took the spoor and when we had got about the right place I saw what I thought was an ant-heap near so went towards it so as to climb up and look about. Just as I got to within a few paces Kamwendo touched my arm and said, " Njovu, bwana " (Elephant, master); so we retreated pretty sharply and soon found the real ant-hill I had spotted from the tree.

On another occasion I watched a fine bull standing in an open glade, puffing clouds of fine dust over himself. He seemed to be moving his fore feet backwards and forwards apparently making little heaps to suck up with his trunk. It was a very interesting sight.

When drinking elephants spout quantities of water over their bodies, and I have related elsewhere how I watched for some time several herds of elephants drinking and bathing in daylight, a very unusual sight in these times because they always drink at night unless they live in country where they are very seldom molested. On this occasion the heat had been exceptional and the beasts were very thirsty and hot, which accounts for their fearlessness.

Elephants sometimes burn themselves by rubbing on a stump or tree which has been on fire, and which has still hot embers left in it.

The annual grass fires started by the natives to get various animal life which has been roasted to death, occasionally sets a dead tree alight which may burn and smoulder for some weeks or even months; and the elephants either lean against it or start rubbing just like a bullock against a post. Although not common it is not very exceptional to shoot an elephant with a sore caused in this way.

In the old days when the natives hit a good many elephants with their old muzzle loaders, shooting small charges of inferior powder and

iron bullets, a good many animals escaped wounded. I have picked about two dozen iron bullets out of various elephants I have shot, and kept some with many of my own recovered from game of all kinds.

These iron bullets are lighter than lead ones, and mostly show the signs of hammering when hot. Some are round, but more often square-ended plugs of iron which were referred to as " potlegs " in South Africa, because the natives sometimes used a section of the cast-iron legs of the cooking pots supplied them by traders.

All the iron bullets I saw were wrought iron and not the cast variety of metal, for north of the Zambezi River the natives seldom use these three-legged cooking pots; unless an occasional one may have been brought home by some Kaffir who has been to the Mashonaland or Johannesburg gold-mines.

For cooking the Central African natives always used earthenware utensils.

When on the subject of native projectiles I may say they will use almost anything. When the Transcontinental telegraph line was made, I believe that when elephants brought down the wire

in places, the natives would take the opportunity of pilfering some which they cut into short lengths to use as bullets.

They usually under-charged their guns with powder, but might, when it was more plentiful than usual, put in too much, and blow their old trade muskets to pieces, and sometimes themselves as well. Some of these cheap guns, for which the old traders used to obtain three tusks, cost only a few shillings in Birmingham, and they had barrels which did not seem to be much superior to a gas-pipe, so there was little wonder that they burst frequently. A better type of native gun was the old " Brown Bess " of the British Army which was used for trade purposes in Africa when it was discarded for a more improved weapon. These guns had been " proved " by use, and I have seen quite a number in Africa; usually bound with a bit of elephant ear or hide round the grip to strengthen them.

Elephants are wonderfully adept in picking the easiest gradient over hilly or mountainous country, for instead of going straight at a steep slope they will wind about in a remarkable manner when making an ascent. It must require considerable

muscular exercise to bring their huge bodies to the top of some of the ranges, where they go probably for coolness and to escape the irritation caused by flies of many varieties.

Some of the Central African ranges, and even single mountains such as Chiperoni in Portuguese East Africa, have a plateau on the top where the animals can move about easily. Doubtless in such places the food may form a change of diet as the botanical features are different from the lower country.

In parts of the country their paths have been trodden for ages until in many places they have been worn many inches below the level of the surrounding ground. I give a photograph of one of these tracks taken not far from Chinunda's village in North-Eastern Rhodesia. In that locality the elephant paths were most interesting as the animals had used them for many years. When they trek away from their nightly drinking-pools they usually keep a fairly direct course for their favourite standing places far in the bush, where they intend to spend the hours of daylight.

Chinunda's village is situated on the Rukusi stream and there are other scattered villages along

its banks. The stream dries up during the hottest months of the dry season, and the water is found only in rocky holes, or in parts which are sandy where the natives have to dig for it. Although the trees in the surrounding bush have mostly dried to a grey parched-looking colour, the Rukusi, like many other streams I know, has green leaved trees growing along most parts of its course. Often when suffering from thirst it was pleasant from a rise in the country to see these winding green lines showing that water was fairly near. When the trees are in leaf water will usually be found by digging in the sandy bed of the stream. When I came to a pool I seldom allowed my men to take water from it, because in the dry weather this water is often foul from the villagers bathing, or the droppings of animals and birds which came to the water. The thing to do is to make a hole in the earth or sand a few feet away, and let the water rise to its own level, for it is then filtered and is fairly clean.

I have often seen holes scraped by elephants and other game in the sandy bed of rivers and streams, showing that they smell the moisture underneath.

A few miles up the Rukusi the natives took me to a pretty pool which they called " Nyanie " (the native name for baboon). Here was a deep pool, of most lovely green tint, formed by the constant wear of water from a precipice overhanging the place. A little distance off was deep sand, covered with the droppings of many elephants. There was a pleasant aromatic smell from this natural farmyard, for the stuff had dried (at least the older deposits had) and this pleasant scent is as fascinating to a hunter as is that of a stable to those fond of horses.

While mentioning scent it is, of course, known to everyone who takes an interest in animal life that smell is the strongest sense in many wild animals, and they depend more on it for safety than on any other sense they possess. The chief exception in the case of four-legged game, is that of animals which frequent plains; in which case their sight is probably what they depend on most as a protection against their enemies, particularly in the daytime. The theory of protective coloration, in my opinion, only holds good for insect life as long as it is quiescent. All the carnivora, which are nocturnal in their

habits, hunt by scent, and the game they hunt have also to depend on their sense of smell for safety. A so-called protective coloration is useless in darkness, although all carnivorous and herbivorous animals probably see better in the dark than do human beings.

In the daytime, movement catches the vision before colour; and as the Creator has provided animals with tails to keep off flies and to cool themselves with, these posterior appendages act as a signal to the hunter, be he human or animal. This is a point the study-naturalist knows nothing about, unless he has himself hunted game and noted the fact by practical experience in the field. I shall not discuss birds though I intend to say something about the vulture later on.

Apart from their tail movements, game cannot keep still for long even when they are sleeping, for one will notice a certain amount of movement. A sable antelope that I watched lying sleeping within thirty yards, kept moving his ears; and elephants, which usually sleep standing, oscillate gently backwards and forwards; something like the slow movement of a rocking-

chair. It has almost made me sleepy to watch them doing this when tired with the hard walking and intense heat, for there is something hypnotic in this dreamy kind of motion. Sometimes these animals lie down to sleep, and when they do so the sloping side of an ant-hill seems a favourite spot.

On several occasions I have seen the marks of an elephant's side on an ant-heap; and Mr. T. A. Barns once found a bull he was after fast asleep in one of these places. He aimed at it, but his cartridge missfired, and the animal awoke, but he quickly pumped another cartridge into the chamber of his 7·9 mm. Mauser, and killed it, as this shot went off all right.

I have noticed that the crack of a stick or dried reed will awaken a sleeping elephant if close; and the fact that such a beast heard a rifle striker give a click shows that it is usually pretty wide-awake.

Elephants have red bleary eyes, and their sight is not so acute as their smell and hearing, although one cannot take advantage of them in this way unless there are plenty of trees and cover about. Movements when in possible

sight of elephants should be slow and not hasty.

The animals are careful on hilly ground when going downhill, for they seem to appreciate the fact that the cropper will be heavy if they get one.

Once I saw three animals run down a rocky slope where there were a lot of loose shaly slabs of stone lying about. I noticed one of the animals trip and almost go head over heels. For a moment he almost seemed to stand on his head, and I am sure for a second or two his hind feet were off the ground. He recovered and followed the others which were some way ahead. On going to look at the place I found blood, and a little more when I spoored him for a short distance. I think a sharp slab of stone had turned over with his weight and cut one of his feet or legs. It was useless to follow them far, as they would probably not stop for twenty miles or so.

On another occasion I saw a herd go over the steep bank of the Luangwa River; and before they tried the place they hammered away with their feet to give themselves a propitious start.

Only one or two did this, and the whole herd followed these animals down the slide sitting on their buttocks with their forelegs stretched out in front of them. As the weather was hot and dry they raised a great cloud of fine dust which hung in the air for some minutes afterwards. After taking this precipitous bank the herd swam the river. Though I did not notice the bulls or cows helping the small calves to get across, they all managed to do so.

I have mentioned two cases in my last book of elephants helping one another, and I might again give the particulars here as this book is intended to deal generally with the habits of the animals that have come under my notice.

The first instance was when I hit a bull in the head from about seventy yards distance. He fell straight down and his tusks went into the earth up to the gums for the ground was fairly soft with recent rain. This elephant had been standing between two other bulls with slightly smaller ivory.

When he fell these bulls instead of rushing off, as one would have thought likely, began to stroke the stricken animal with their trunks and

prod him in the body with their tusks. My ·303 solid bullet had evidently failed to reach the brain, but it had sent him to sleep for about two minutes.

At last he woke up and after several severe struggles managed to get on his legs, when he swayed about just like a drunken man. He was still so dazed with the nasty knock on his skull that he almost tottered over several times, and would probably have fallen had not the others been in the way. They not only prevented him from falling, but I distinctly noticed that on several occasions they seemed to give him a heave to steady him. This was so fascinating to watch that I forgot all about killing him, for I wished to see the outcome. From past experience I knew he was not likely to die from the wound, as he was able to stand up; for an elephant hit in the head almost invariably survives the experience unless the brain is pierced.

The unwounded animals showed that they were nervous and apparently anxious to get away, but they did not forsake him. They rather seemed to be urging him to come on for they

jostled him about. At last he started to move, but was still evidently *non compos mentis*, for he staggered about considerably. He gradually regained his vitality and began to step out in a firmer manner, still between the others. Then they got amongst the trees and bushes; but as long as they were within sight they did not run. After a short rest, for it was very hot, I followed with my men for some distance and then found that they had broken into a run and it was probable that they would not stop for some considerable distance.

I have described this occurrence just as it happened; and there is not the slightest doubt that on occasions elephants will help one another.

Again, on another day, I saw a large old cow elephant come back to help a young wounded bull which had been either wounded in one of its back legs, or had injured itself in some way. He was slightly dragging a limb, but it was not broken. The cow, which was probably the animal's mother, shoved him behind several times to get him to keep up with the small herd. The natives and myself had a good clear view of the

incident, as the elephants were crossing an open space in the bush at the time.

Having seen well over two thousand African elephants I may say I never again noticed a case of one trying to help another; but I have little doubt that the habit is commoner than some might suppose. Hunters who have seen a large number of these fine animals have stated that they never observed such incidents, and also that they do not believe that they will aid one another. I only know that I saw these incidents, and though I admit they were unusual I cannot doubt the evidence of my own eyes.

A man I knew in Nyasaland later went to hunt in what was then German East Africa. He floored a good elephant on one occasion, and wrote me a long account of how he could not get to it for two days because the herd kept near the dead animal. He said that they constantly prodded it and stroked it to try and get it to rise, and were in a state of fury when the hunter and his men tried to get near.

They were so nasty that he left them in possession on the first day. Next day he returned to find them still close to the corpse so

he left them again and came back the following day and found they had at last gone off for good.

A native told me of a case of a baby elephant falling into a game pit and the mother pulling it out; and I must admit that I rather doubted the yarn at the time, but after I had observed the cases just mentioned I have come to think it was not so improbable after all.

The difficulty (as with abnormal measurements) is the veracity of the relater and his capabilities as an observer. Had Selous or Stigand told me of these incidents I would have believed them at once, for they were both excellent observers and thoroughly trustworthy. The same applies to Neumann who was the greatest elephant hunter who ever lived, as well as a very capable naturalist regarding the habits of the greater game. But there are some others who sometimes give one more than can be swallowed at a single gulp.

When an elephant falls to a head shot it is not an uncommon incident for the hunter to leave it and go after the others. On his return to the place he finds an apparently dead animal has gone away. Selous, Stigand, and others have

related such an occurrence. If there is any doubt about the animal being defunct the only thing to do is to put in another shot. The best spot for this is where the neck joins the head when the animal is on its side. If it is in a kneeling position, into the ear orifice when standing slightly behind is the correct place.

To return again for a moment to incidents of animal affection I remember seeing a puppy thrown into a stream to see if it could swim. Another dog, no relation of the puppy's, seeing it apparently drowning, immediately jumped in and brought it ashore.

Yet another case. When a passenger on a steamer in Kilindini harbour close to Mombasa, another vessel, a British India liner, was lying quite close. Another man and myself noticed that there was a menagerie of animals on board this vessel, standing about, and caged on a lower deck where they were quite visible to us. In a large cage were two well grown lions, a large dog like a Great Dane, and a fox-terrier; certainly a weird collection to inhabit one compartment. I suppose the dogs and lions had been brought up together since the latter were cubs. A keeper

came along with a basket of flesh, some of it raw for the lions, and the other half cooked meat and bones for the dogs. He threw the meat in each corner for the lions and gave the dogs their food close to the bars of the cage. The lions soon gorged their share and one came up to the fox-terrier and made an attempt to remove his bone. Like a flash the Great Dane was at his throat, and not only prevented him from taking the bone, but drove him back to his corner.

We saw this quite clearly and I remarked that if we had been told of such an incident we would probably have disbelieved it. We shall possibly be doubted now that I relate the story to others, but it happened just as I have written.

The lions when cubs had undoubtedly been cowed by the large dog and had retained their fear of him. It must have been so, or the owners would not have caged such a queer collection together.

Several times I have seen the companion of a shot animal refuse to run away, and once an oribi came and licked its mate as it lay dead. I need not remark that I regretted that shot for some time afterwards. Many such cases have

been proved, so that I do not see the least reason why elephants should not betray affection occasionally.

Elephants are careful when on doubtful ground, and I used to see them in Assam sometimes refuse to cross a bridge. When they came to it they would put their trunks down and seemingly sniff at it. The driver never attempted to force them across but would give them a touch with his knee to go to the bed of the gully or stream. The mahout (driver) prompts all their actions with the pressure of his knees and the driving spike that he uses. When an animal misbehaves this can be a cruel weapon when jabbed into his head and neck, and elephants fear it greatly as they are extremely sensitive animals.

The African elephant when drinking in streams, or when eating ant-hill mud for the salt contained in it, sometimes swallows stones, and I have on several occasions found stones in their stomachs.

The magistrate at Dedza, Central Angoniland, in 1903 showed me a number of rough stones his natives had found in the stomach of an elephant he had shot. After that I always got my men to

examine the stomach of any elephant I killed; and nearly all of them were found to contain stones, usually a dozen or so, but once as many as would have filled a small bucket. These pieces of jagged rock were about the size of walnuts though once I got one as large as a big orange.

When staying with Mr. F. C. Selous on one occasion I told him of this and he replied he had never heard of this habit in elephants, and he was very much interested to find out something he did not know about them. Like the grit birds eat these stones are probably swallowed to aid digestion.

In the dry season, when water is fairly scarce and when elephants are hunted most, they travel long distances between their drinking places. Sometimes they will not visit the same pool two nights in succession, as they have found it is dangerous to do so.

When drinking at night they can be very noisy and one will hear them trumpeting loudly and making all kinds of rumblings and gurgles. Sometimes by the time they reach the water they are extremely thirsty and these sounds probably

express their joy. They drink a great amount of water, and seem to be able to store it in a secondary stomach, for when hot and tired they will draw it out and splash it on their bodies. They usually drink nightly in hot weather, and unless it has been fairly cool I doubt if they often pass a night without water.

When elephants are exhausted and suffering from the effects of great heat (and the sun's rays can be terrific at times) a good runner can sometimes get up to them after they have bolted. Selous mentions having done this when he was young and lithe; but it must have been gruelling work when carrying a heavy gun and its ammunition. Ryan told me he had once chased elephants when they had started off after his first shot and got up to them again. Like Selous he was an excellent runner and a very tough hunter. When one looks back to these happy days in the African bush, and the association with friends of similar tastes, one forgets the hardships and fevers and can only be thankful that fortune enabled one to see Africa and its natural life before the blight termed " civilization " broke the spell of enchantment.

CHAPTER II

TRACKING AND SHOOTING THE ELEPHANT

In November, 1906, I was camped at Katema's village on the Rukusi Stream in North-Eastern Rhodesia. This small village was in a quiet part of what was then a very good country for elephants and other game. The natives got their water from scattered rock pools, and by digging holes in the sandy bed of the stream, and elephants came in numbers to pools within a few miles of the village to drink at nights.

One morning I was awakened by the cocks crowing, and distant sounds of the same kind showed there were other human habitations bordering the Rukusi. I have read that the cock-crows at morn go right across Africa from East to West, but do not believe it because there are vast spaces of uninhabited country in places over which the calls could not possibly carry.

Just after I had awakened, my " boy " came to the tent with the morning cup of tea, saying, as he put his grinning face inside the tent-flap, " Macucha, bwana " (It is dawn, master).

It does not take one long to dress in camp and get into one's khaki shirt and shorts followed by a swill in the basin on a grub box just outside the tent. A shave is left for later, for there is little time to waste; and it is very chilly as the nights are cold and damp. Every leaf and blade of grass glitters with dewdrops which when the sun touches them shine like polished bayonets. If one has not an ulster, or tweed jacket, a warm blanket from the bed is a comfort when swallowing more tea and some eggs and scones.

Most people think Central Africa is always hot, but it can feel bitterly cold to anyone who has had much fever, for it brings on the " shakes " (ague).

Although many people are not hungry at such an early hour, it is a good plan to try and eat something before starting out for a long tramp through the bush.

Three or four small eggs bought from the villagers for a teaspoonful of salt each will help

to sustain one; and I always drank plenty of tea with lots of sugar in it for I believed in the strengthening properties of sugar.

When the hunter is busy the men who will accompany him are getting the gourds filled with water, with some leaves on the top to keep it cool. Banana, or plantain, fronds are the best for this; and it is also a good plan to put a piece in the crown of one's old double Terai hat, for the sun in September, October and November can be terrific.

Then the hunter sees that he has plenty of cartridges in his bag, which he hands to his gun-bearer with the camera, water bottle; and glasses, if he needs them, for they are not often required when after elephant.

The native tracker Mafumba carries nothing but a spear or axe, for he will do most of the spooring, so should travel light. Besides the two men who carry the water gourds, another will have a native basket containing a small kettle, enamel cup, and some tea, sugar, and biscuits or scones. A few bananas, or plantains, will be useful; and also a few strips of biltong, or dried meat, for it may be necessary to sleep on the spoor if

caught by night in the bush. Just as the sun peeps over the eastern horizon the party leave camp and first go along a native path which leads to the stream, where they will probably find another path, or some game tracks, running up or down the water-way.

Now is the time to begin testing the wind, for its direction is the most important feature in the day's proceedings. To do this I have found a small calico bag filled with fine flour the best thing. I have also used downy feathers, but when put in a pocket they pack, and the flour is best.

The natives when testing the wind often pick up a handful of fine sand and drop it, but it is not susceptible to anything but a fair breeze. Another means to find the drift is to crush some dry grass small and let it dribble out of the hand. A smoker has his pipe which is the best test of all.

During the months mentioned, the wind is usually very changeable and gusty, for the great heat of the ground, especially in rocky country, seems to produce small whirlwinds which come sweeping along picking up leaves, grass, dust, and even small branches. They form into a

rushing spiral and go up into the air to a great height. " Dust-devils " they are called.

It is most annoying after a long parched trek after an elephant to be getting close and then feel a puff of wind on the back of one's neck, and to see the animal put up its tail and bolt.

After walking some distance down the Rukusi we came to a pool in rocks overhung by trees, and as the banks were soft and sandy we had all approached without making much noise. As I was looking round the sand to see if there was any elephant spoor I caught a glimpse of a movement under a bush which I thought was a python.

Suddenly like a flash a leopard sprang up the bank and made off in the thick grass and disappeared. They are difficult animals to get a shot at, though had I had a chance I would have fired at it. There are only two animals which would make me do this when after elephant, and they are lion and leopard, for they are very hard to get a shot at.

We had seen when coming along, several lots of game such as kudu, waterbuck, roan antelope, and zebra; but I never thought of firing at any of them.

I suppose we had been tramping for two hours before we found what we wanted—a good bull elephant track—but at last in the sand we found a place where one had drunk in the night. Close to the same pool were the marks of a rhino, and I wondered if they had met here in the darkness and what they said to one another!

The five men quenched their thirst, and as this water appeared cleaner than the stuff I had brought from the village I had the gourds emptied and refilled.

Now came the business of the day, and it was going to be hot work for the sun was pouring down from a brazen-looking sky. The trees away in the bush were parched to a sombre grey, and above the baked sandy soil the air seemed to shimmer and dance with the intense heat. The rifle barrel was so hot that it burnt my hands to touch it, and the leather soles of my boots were uncomfortably warm.

All the men were bare-footed, except my gun-bearer who had a pair of sandals made out of a bull kudu skin; but the others did not seem to be at all uncomfortable. A native's foot is covered by a good quarter of an inch of solid epidermis;

and in hot weather I have seen the soles of their feet all cracked, not unlike the lower part of an elephant's hoof, but of course on a very small scale. When careless or tired they often hit their toes on stumps, or stones, and knock a nail clean off, and then proceed to wrap the sore up with a piece of dirty rag from their cloth. Why they do not die oftener of blood-poisoning has often surprised me; but it is remarkable how impervious they are to septic infection.

Mafumba spoored well, but the windings of the elephant at first had been through sandy country where the tracks showed distinctly. Occasionally he had stopped to pick some tempting morsel off a tree he passed, which was a good sign, for it showed he was not frightened or suspicious in any way.

It is often possible to judge by the spoor how an animal is feeling, for when he gets on an old elephant track and steps out fast he is probably bound for a long distance. The usual gait of an elephant will be about six miles an hour, but he is probably able to go ten in the same time without breaking into a run, for he has an immense stride when he likes.

We found a young puff-adder this elephant had trodden on, squashed flat as it had been lying in a torpid condition on the path. This is an uncommon incident as they do not often kill small animal life in their colossal movements. In my previous chapter I have mentioned the wonderful paths the elephants had made in this district and how long they had been used. Continuous friction for ages had even marked the flat rock they sometimes traversed in their wanderings. In wet weather their feet become gritty which probably causes this wear, which can be noticed in certain places that I remember.

By one o'clock we did not seem to be getting much nearer, so I decided to give the men and myself a rest for the heat was excessive. Getting behind the trunk of a large tree I sat down in the shade, until the men had got a bundle or two of dry grass which they placed against one side of a big bush so as to give me some better shade. A fire was soon made and the small kettle put on and I gave the men a cupful of water each, for like me they were very thirsty.

It is a great strain to the eyes following elephant spoor as the constant glare becomes

blinding at times. Some natives tire quickly and are apt to say that it is useless going farther, but Mafumba, though not the best tracker I have seen, was a dogged type of individual who never suggested giving in when the work became wearisome. That is the best temperament for a tracker.

After resting about half an hour we went on, and I told the men with the water and basket to keep well behind for they are apt to chatter. A native when he makes a remark to a man walking within a few feet of himself will often shout loud enough to be heard half a mile away. One has sometimes to stop and administer a reprimand in which the word " Kalaile " (Ka-lay-lee—be quiet) is necessary.

I noticed there were a lot of crisp leaves lying about which when trodden on go off like a pistol shot. For the moment the name of the tree they fall from has escaped my memory. When they fall they curl in drying, and get stiff and hard. They are a great nuisance when stalking antelopes, and an elephant will also hear them crack if fairly close. The leaf is like the half section of the pod of a broad bean only not quite

so long. Sticks and reed stalks also crack when dry, so one has to be careful when getting close to any kind of game not to tread on such things or the game will take fright and bolt away.

Elephants often pick leaves when passing alongside, or under, trees, and some of these they drop after chewing them. Such remnants are a good guide to the time which has elapsed since they were left, but it has to be noted where they are lying so as to gauge the time approximately. If they fall in the shade they keep moist much longer than when in the sun, so these facts have to be taken into account. The same points apply to the age of the droppings, and these natural deposits are the best guide of all. A good native tracker carefully examines these lumps, which, incidentally, I may mention measure 7 by $5\frac{1}{2}$ inches if dropped by a bull elephant. The cow droppings are much smaller.

When I was collecting notes for the "spoor" book I taped many of these "remainders," and found that the above was a fair average size.

Since our rest, and the tea which always freshened me up wonderfully, we got along

better and appeared to be over-hauling the elephant gradually, as the droppings he left were quite warm inside when the tracker broke them with his feet. The ground had been sloping upwards for some miles and we were approaching the highest rise. When we got there we saw a long valley underneath us, and a few green trees which denoted that there was water somewhere about. As soon as they saw the green vegetation the men said, " He will be there "; and I thought they were probably right. I suppose we had covered a good sixteen miles of rough country since we left camp; and judging by the position of the sun we would very likely have to sleep out, which was not a great hardship in the dry season as long as we had the means to make a fire. I never left camp without a box of matches in my pocket, and usually had a magnifying glass in a pouch on my belt.

As the going was now slightly downhill it got easier, and we were all more optimistic about seeing the elephant although there was nothing in sight yet. We then got into a large patch of high grass which had missed the fires that had cleared most of the thick stuff away, and I hoped

he would pass through this cover, as timber country is preferable in every way.

Mafumba was going ahead along a well trodden elephant path and I was a few paces behind, with my ·256 Gibbs' rifle, when I saw him bob down and hold his arm behind, all the time snapping his fingers.

He had, of course, seen the elephant, and just after he stopped we heard a low rumbling which sounded like a note of alarm. The grass was 10 to 12 feet high and I could see nothing when I walked up to Mafumba, and it appears that the animal had moved away for the tracker pointed round to the left. Fortunately we were near the edge of the grass so we followed very carefully and I began to test the wind with my flour bag. It seemed steady so I think the elephant had heard and not scented us. Hearing anything seldom sends them off like winding humans, for they are accustomed to hearing other game.

It was frightfully hot and we were all dripping with perspiration, and having gone through burnt country most of the day I was as black as a sweep.

When we emerged from the grass we saw the

elephant standing under a tree almost facing us, and in a very bad position for the head shot; so I exchanged the ·256 for my single ·400 Jeffery which my gunbearer Mashila had been carrying all morning.

I fired into the elephant's chest, slightly to one side, as he was standing at an angle, and he almost collapsed on his hindquarters with the shock of the 400 grains solid bullet. He recovered, however, and began to move to the right, so I bombarded his head with the Mannlicher which I had seized after firing the first shot. One of these tiny bullets got his brain for he fell dead in his tracks, and the business was over.

His tusks when weighed afterwards were 44 and 46 lbs. and measured a little over $5\frac{1}{2}$ feet.

After resting near the carcass for a time we went off to try and find water, as there was only a little left in one of the gourds. None of the men appeared to know this part of the country very well; though Mafumba said he had been here a long time ago. I think he must have had some glimmering of the fact in his subconscious mind, for he made for some bamboo cover about three-

quarters of a mile away, and sure enough found a small stream which was hardly more than a trickle, but it was sufficient. The men scooped out a hole and dammed it up, and we then filled the gourds and kettle, and went off to the trees.

I never like a camp near bamboos for should a breeze come up they squeak all night, which is caused by the poles rubbing against each other.

The men now set about getting grass to make a lean-to shelter, and also gathered enough firewood to last the night, which was easy as there were plenty of dead branches lying about. In the districts I have hunted in there was never much difficulty about finding wood as many dead branches and trees can be found in such well-timbered country.

I gave the men permission to cut off a big piece of the elephant's trunk, and they spent the evening and far into the night chewing enormous quantities of tough meat. I never weighed what a native could demolish at a sitting, but am not far wrong when I say that a healthy specimen can gorge 12 lbs. of flesh and be none the worse. However, if this is repeated often they can get almost drunk with meat-eating, so a few

of the pills (not called after Dr. Livingstone) are useful things to carry in the medicine chest, which in my case was an old cigar-box.

Next day we tramped home in the cool of morning, having spent quite a comfortable night, except for the dolorous howls of several hyenas which had scented the meat. They had torn a lot off the trunk where it had been cut, but had not injured the tusks, or managed to get their strong teeth through any other part of the elephant's anatomy.

When near the village we met some men with axes and knives on their way out as they seemed to know there was dead meat about. How they found out I cannot say, unless after we had left the carcass they had seen vultures wheeling in the sky. None of my party had left before me so they had certainly received no message. Was it bush telepathy?

Reaching the tent about eleven o'clock, I sent out most of my carriers to bring in the meat, and Mafumba went back with them to see that the tusks were properly removed.

In about a week tusks will usually draw out, due to the putrefaction of the soft tissues, but I

always preferred to get them cut out to prevent damage, and trouble over theft.

I will now change the scene to another part of the country, and shall not attempt to keep strictly to sequence, simply mentioning experiences as I remember them. In such a small volume it would be impossible to give many detailed accounts of hunting, and there is much in my diaries which does not apply solely to elephants.

About the end of the dry season (often called the cold weather) in 1905 I was camped at Kazembi's village, not far from the Luangwa River. This village (like others) lies in the broad valley between that river and the Muchinga range of mountains, which run parallel to the river for a great distance. I copy what I wrote at the time as this is more interesting, I think, than rewriting my experiences.

8th October, 1905.—Got to Kazembi's village, but found him away as some relative had died at another village. The heat is terrific, but can only be expected as this is the hottest time of the year in these parts. Saw some elephant spoor crossing the path; probably two days old.

My last tin of condensed milk met with a

sudden end, and I had only opened it this morning. My bright and verdant cook instead of jamming it in a corner of a box, put it loose in a basket, and it turned over. The nearest spot where one can buy tinned milk is over a hundred and fifty miles off, so I will need to get a " nanny " goat.

Tsetse flies innumerable, and hope for my men's, as well as my own sake, that they are not loaded up with the germ of " S.S." (sleeping sickness). Coming along the path we had all to use branches to keep the devils off, so wish I had brought a zebra's tail. The men kept slapping their backs so I walked behind, instead of in front, to watch the flies. One man seemed to be a particular favourite so I went into the line behind him, and told him why. I counted up to twenty-eight flies on his back, at one time, and had some on my own, too. They settle quietly and the person does not feel them until they insert their probe, then he does; but this man evidently thought I was interested and desisted slapping until I told him to do so. I thought this nice of him. These fly were the common tsetse (*Glossina morsitans*) and not *G. palpalis;*

which is believed to be the only carrier; though I believe *morsitans* is likely to do the trick also.

I may say Kazembi is probably the word here for tsetse, though the natives usually put in an "m" and say "Kamzembi." So Kazembi the headman is very well named indeed.

As my supply of tea is getting short I have to economize by drying the leaves and using them twice. It may come to thrice before I can get more.

Out in the evening to try and get meat, as the "boys" have "scoffed" (eaten) all the puku meat I brought from the Luangwa. Saw waterbuck, puku, and impala; and slew one of the former for the natives, and an impala for myself, as waterbuck needs too much chewing.

As well as these abominable tsetse there are myriads of mosquitos, so this is a "tickly" place.

Any stream one sees here is full of that vile reed called by the natives "mataiti." Each blade of this obnoxious stuff has a point like a needle, and it is painful for bare legs and arms; and dangerous for the eyes.

9th October.—Last night after my evening meal I sat and talked to Chikamagombe, an

excellent elephant tracker who lives here. I have engaged him on good terms to himself to spoor for me. He says some fine bulls are coming at night to the Nyamazi stream; and he advises me to go on a few miles to N'dombo's village, so I shall start about four o'clock when the sun gets cooler.

N'dombo's village. Evening.—Left Kazembi's at three-thirty p.m. and got here a little after six. It is supposed to be about ten miles, so the men did well. Beastly hot, but the path fairly flat, and slightly fewer tsetse flies about.

10th October.—Up before the sun, and soon after starting to look for spoor the men I had sent to Nawalia came running up with my mail, which included several home letters and two *Fields*. These are welcome as I am reading Selous' "Wanderings" for probably the fiftieth time. I always carry it on trek for it is my "vade-mecum" in the bush. When he wrote it I doubt if he ever thought of the pleasure it would bring to later hunters.

After crossing the Nyamazi stream we picked up a good spoor, but the elephant went through some frightful stuff—that beastly mataiti reed.

This part of the country has not been well burnt, as many patches of grass and reeds have missed the fire, and are all tangled and heavy underfoot.

For a time the elephant got into slightly better country, the usual small timber, and I hoped he would stand here, but he again went into the heavy grass.

About ten o'clock the men and myself were rather fagged, and very dry, so we sat down for a quarter of an hour, and had some tepid water all round. I spent the time reading my home letters and I wished the writers could have seen where they were opened, and the dirty, sweaty, ash-covered specimen who was reading them. My retinue, too, would have excited some interest, what with their unclothed bodies and tribal marked visages: as the Scotch matron of a girls' school might remark, " There's a bonnie lot! "

Feeling rested Chikamagombe took the spoor, and we went on slowly, for the tracks were difficult at times when they got into the matted grass which had been so much trampled by elephants in places that it was difficult to get

our's away. The worst of this matted grass is that the hoofs leave little sign on the earth below.

We saw a good deal of small stuff, such as waterbuck, puku, and impala; and an excited warthog went off grunting like a lion. One of the men thought it was a lion, for he shouted "M'kango," which raised a laugh from the others.

Soon after this incident, as Chikamagombe had his head down looking for spoor, I saw a grey mass just over his head which I knew was the elephant. I hissed to the men coming behind and turning again to look at Chikamagombe saw him still going forward. The elephant had moved slightly just after I spotted him, and Chikamagombe may have been slightly deaf and had not heard anything. I slipped up close and touched him on the back and we stopped. We now saw the tops of the grass waving slightly as the elephant passed through it, so we waited to see what he would do.

I had been carrying my single ·303, and one of my carriers was coming behind with a heavy black powder double 10 Purdey, a fine rifle of its kind;

but I always preferred a small bore which I was accustomed to use on smaller game.

The smoke of black powder is a nuisance in thick vegetation as it often hangs badly if there is no wind to drive it away.

We now went forward again and through an open space in the grass I saw the elephant passing slowly. His head was such an uncertain shot that I fired into his shoulder and he gave a deep grunt, and there was something in the tone of this grunt that made me certain he had got a severe wound.

As we started to follow him I wondered whether I would be safer with the big 10-bore, but decided to stick to the small rifle, for I am a great believer in accuracy and penetration. In my opinion, a six foot puncture from a solid ·303 is likely to be more effective than half that distance with a larger bullet, so I stuck to the rifle I knew best.

Seeing that I had plenty of cartridges in my pockets I put three between the fingers of my left hand for quick use, and went ahead; Chikamagombe carrying the 10-bore Purdey with four cartridges in his paw.

The cover was as bad as I have seen for such a job, so we moved forward very carefully and slowly.

I suppose we had gone about half a mile when I saw the elephant standing under a tree looking very sick, for he had now left the thick grass and got into sparsely wooded country, which was much to be preferred to the beastly grass.

He was about fifty yards off and was turned slightly away so I wasted little time in firing for his brain, aiming just forward of his earhole. He crashed immediately and then rolled over on his side. This bullet, when it hit his hard skull cracked loudly, just as if it had hit a rock.

Then we went to a shady tree and I told the men to get some dry sticks to boil a kettle for tea. They were all grinning like a troupe of Christy Minstrels, and chattering like monkeys; for they never see a dead elephant without speculating on the glorious gorge ahead. The usual question of fat arose, but this cannot be decided until the interior is seen, as an elephant which looks fat may be fatless, and a thin one may possess lots of their beloved " m'futa " (fat).

After I had disposed of three cups of tea and

the natives had polished off a large gourd of water we came back to camp. Chikamagombe with the tail, and some of the others with the usual lump of trunk carried on a pole by two of the men.

. . . . . .

This part of North-Eastern Rhodesia was one of the best for elephants, and those who went there usually met with success, for at the time of which I write there were many good tuskers about. However, things may be different now, for elephants are quick to leave places where they are hunted much, and go to others where they are free from molestation.

I will now give an account of another day in the same district, describing the death of the heaviest-bodied elephant I ever shot; but he was not an extremely tall beast. His feet were a moderate size, too, but his bulk was enormous, as the reader will appreciate when he looks at the photograph of his head.

16*th October*, 1905.—I did not feel very fit this morning as I had a touch of fever last night followed by the usual "shakes." However, I went out, and was rewarded for doing so, as I shot the heaviest elephant bull I have yet seen.

The sun was up before I got off, which was later than usual. We headed towards the west with the lovely Muchinga range right in front of us.

After going for one and a half hours or so, keeping our eyes open for spoor, one of the men who was ahead suddenly stopped and pointed to a blackish-grey mass amongst the thin trees. I may say the grass had been burnt round here, so except for the scattered small trees the country was very bare.

There were outcrops of rock about, and it was difficult at first to make sure whether the dark-coloured object was an elephant or a rock. However, we got a glimpse of a fine tusk which soon placed the matter beyond doubt.

I got as close as I could and saw that he was a monster. He seemed suspicious, and the wind was not very steady as it kept coming along in puffs. Thinking I had better shoot quickly, I took a rest against a sapling with my single ·303 and aimed for his earhole. The bullet struck, for I heard the crack, and he stumbled forward, but did not fall. This was bad so I loaded up quickly and could not fire again for a bit as the elephant was rocking

about and grunting hard all the time. For a few moments he looked rather nasty, but turned away and I fired at his shoulder pretty low down. He then rushed off as hard as he could go and had not covered more than fifty yards when he came down on his knees with a great thump. I knew he was mine and that I had hit him in the heart with the last shot. He made frantic efforts to rise, all the time grunting loudly, so I put two bullets into his earhole and he died.

His trunk when he fell had got under his chest and still stayed in that position notwithstanding his violent attempts to regain his feet.

We then came back to the village, the men singing on the way. When we got in I went to bed as I was shaky with fever, but I got up in the evening to scribble this account of an exciting day.

. . . . . .

On the day following the shooting of this fine elephant I went out to see the cutting up and the tusks removed, for the fever had left me after a big dose of phenacetin followed by quinine. As a cutting up scene is very amusing I will try to give an account of one.

When an elephant has been killed anywhere near a village the natives flock to the feast like a cloud of vultures. The cry of "Nyama" (meat) goes resounding to the fields, and those working throw down their hoes and rush for their meat knives. These knives are often made out of the soft steel (or iron) banding which is used for binding bundles of trade goods. They get a piece from 15 to 18 inches long and wrap some hide or native "maluzi" (bark string) round one end to form the grip, and rub an edge on a stone until they get it sharp. Such an implement makes a first rate knife for cutting meat, but being soft it has to be sharpened frequently.

Then the men make for the bush, and the women follow with their baskets and dusky offspring bobbing and yelling on their backs. How I used to pity these wretched infants, for these meat holidays were no picnic for them! Still it takes a lot to kill a negro piccaninny. The unwonted exercise not only produces squalls of discomfort (for the creature is tied up in a cloth, or goatskin, so tightly that one imagines it would be squashed as flat as a pancake); but it seems to stimulate a wish for nutriment, so the mother will

loosen the cloth and switch it to the front where it can reach its natural nourishment; although, I have seen a mother with a long pendulous breast pass it under her armpit to her baby behind; which seemed an improved arrangement.

When they reach the carcass of the pachyderm they crowd round, but seldom take part in the cutting-up, as it seems to be a recognized custom that this is the male's work. Then the men when they cut off chunks of juicy flesh fling it to their wives (they have usually more than one), or daughters; and this is where the fun begins, for several old hags will dash for the lump, and then there is a regular cat-fight! Anyone who has heard cats serenading in numbers will have heard nothing worse than these women round a defunct elephant, for there is nothing like it for "caterwauling" in the world. To me it used to be infinitely more amusing than the greatest farce to be seen in a home theatre.

Although they yell like demented fish-wives they hardly ever come to blows; but I once saw two old hags fighting for a long piece of the intestines like furies. The "rubber tubing" broke, and they both fell backwards, one des-

cribing a perfect somersault. This one was so incensed at the yells of joy from the men, that she picked up a knobkerry, and went for her opponent, who ran into the bush like a scared rabbit when chased by a Scotch terrier.

The men seldom fight, either, though they jostle and bustle one another to get at the favourite morsels. They hack and cut like madmen, and occasionally their own, or someone else's finger comes in the way, but this does not stop the injured party for long. If it is a really bad cut he may tear off a bit of his dirty loin-cloth and wrap the finger up, often putting some of the elephant's dung on it to stop the bleeding.

Once in a thick scrum a man holding a knife in close proximity to another man's rear was pushed hard. This knife was not one of the soft steel banding variety, which usually have a square point; but was a sharp pointed native-made implement. The knife was driven in a good two inches, and the sufferer was brought up to the shady bush I was sitting under for inspection. I immediately took hold of the haft and wrenched it out. The man simply gave a satisfied grunt,

and rushed back to the elephant so as not to miss anything that was going on.

If an elephant has been lying for some hours in a hot sun, for the cutting up scene usually takes place the day after it is killed, the body swells considerably as the gases generate in the stomach and intestines.

When the bowels are punctured there is first a hiss, then a screech not unlike the whistle of a locomotive. A shower of filthy fluid is ejected which usually gets someone on the face and body; but this is only treated as a joke and a cause for merriment.

When the first elephant of a hunt is killed, the natives, after disembowelling the animal, will get into the cavity and throw blood all over themselves until they emerge like the "evil one." This blood-bath is supposed to make them brave, and—like the elephant-tail bangle worn by the damsel of Regent Street—to bring luck. It certainly brings a powerful aroma into the atmosphere surrounding the initiated savage, for the rite is ineffectual unless the blood is allowed to dry on the body. In the course of a few days it has mostly flaked off, to be replaced by the usual

taint of *homo africanus*; which I have heard a lady remark is "like nothing on earth."

By the time the natives get the meat to their huts it is often rotten, and I have sometimes seen them eating it when it was seething with maggots and green with putrefaction.

For some reason it seldom does them much harm; but should it make them squeamish it is not its putrid condition which they think is to blame, but because it is meat "taboo" to their family. Most families have some animal which is forbidden, and some will not eat elephant; while to others zebra is barred, and so on. I suppose the idea originated in the past by some member of the family dying just after having partaken of the flesh of a particular animal; and such meat is ever afterwards considered to be dangerous to other members of the same family.

Possibly some people may feel disgusted at what I have written about high meat, but I thought it would be interesting to describe the last phase in the life of an elephant, and to do this I had to touch on matters primitive and elemental.

CHAPTER III

THE OLD ELEPHANT HUNTERS

MANY of the old books on shooting and travel in Africa are becoming scarce, and as time progresses they will naturally become more difficult to find.

Comparatively few of the old pioneer hunters wrote anything about their experiences, for as a class they were not addicted to putting much on paper. They could tell a good yarn, but if asked to write it down they would probably have said that they were better with a rifle than with a pen. Doubtless they were, for some of them were rough and ready fellows, who like the old hunters and trappers of the "far West," had little education, but plenty of pluck and common sense.

Among them were fortunately a few who were men of good education, and this mental training made them capable observers and matter-of-fact

writers. If fine writing was attempted then it often became exaggerated and flowery; and there has only been a small minority who could write on African game as White of Selborne, St. John, and Hudson could on bird life.

Vast changes have taken place in Africa during the last seventy years, and it seems extraordinary that only within the space of a man's lifetime the course of civilization has brought such a transformation scene in many parts of the Continent. The shrieking locomotive, odoriferous motor-car and humming aeroplane have invaded many parts of the wilderness which thirty years ago was teeming with game.

To add up the odds against the wild fauna we have the modern high velocity rifle with its rapidity of fire, which spells extinction if the game does not move on to pastures new.

I am not quite sure that the improvement in fire-arms has such an effect on the reduction of animals as the constant noise and disturbance in their haunts, but, of course, the increase of hunters is mainly responsible for its diminution.

When game disappears in certain areas it does not follow it has all been killed, but that when the

majority have been shot the remaining animals become so unsettled that they trek elsewhere for safety from molestation. Probably the amount of wounding has something to do with it also, for the presence of bleeding animals in a herd is sure to unsettle wild creatures.

The high velocity small-bore in the hands of an experienced hunter can kill anything that walks, while in the hands of a novice it can be a scourge against wild life.

In the old days men used muzzle-loaders which took some time to recharge after one or more shots had been fired. Even with the ordinary single or double breech-loader the rapidity of fire was very much less than it is with a magazine rifle.

When I went from Nyasaland to British East Africa in 1911 for a short trip, I saw the veld between Kijabe and Deepdale Drift full of fired cartridge cases, showing that a great number of parties had been blazing ammunition at game. This is not real hunting; so I have a very poor opinion of shooting on the plains, in comparison with the woodcraft necessary to obtain success in thick bush or timber country. As the flat trajectory of projectiles increased, the game on

the plains seemed to gain an equivalent knowledge of ballistics, and kept farther and farther away from the man on foot or on horseback.

Of course one cannot expect the "tripper" sportsman to know or learn much of true hunting in the few months he has at his disposal; and it is notorious that when three to four hundred parties used to visit British East Africa (now Kenya) annually, that most of their good trophies were procured for them by their white hunters, who were usually men of great experience. I have heard some queer stories about some of these parties; and what was particularly annoying was the way they raised prices for the man who wished to hunt at a reasonable cost.

After this long digression I must come to the purpose of this chapter, which is to say something about the old hunters of Africa.

I will begin with Sir Samuel Baker, not because he was one of the earliest hunters; but because he had had experience in Ceylon and the East before he went to Africa, and was one of the first good observers of animal life. In his interesting book "The Nile Tributaries of Abyssinia," published by Macmillan & Co., in 1867, he tells

us about the way the Hamran Arabs hunt the elephant on horseback. These fine men tackle the elephant with no other weapon than the sword, and Baker calls them " Arab centaurs."'

After finding an elephant, not a difficult business at that time as the animals were numerous, three men chased it on horseback at great speed so as to wind it and make it slow up. As the country seems to have been very open they were soon alongside. Then one man manœuvred in front so as to attract the animal's attention and the other two dismounted just behind and quickly tried to cut the " tendon achilles" with their sharp swords. When they were successful the elephant was anchored and at their mercy. Baker's opinion of their courage is as follows: " In the way of sport I never saw anything so magnificent, or so absurdly dangerous. No gladiatorial exhibition in the Roman arena could have surpassed this fight."

On occasions all three men dismounted, which of course made the risks much more formidable, and sometimes a man was caught and torn to pieces by the elephant.

Sir Samuel Baker shot many elephants in

Ceylon and also in Africa. In the former country, few of the elephants seem to bear tusks, so killing them seemed useless except that they doubtless got so numerous in places that they raided plantations. There must have been risks, for a good many men seem to have liked the sport of hunting them.

There was a Major Rogers who is believed to have killed over 1500, and Captains Gallwey, Skinner and Layard are credited with having shot about 1000 each.

The weapons they mainly used were ordinary double 14 and 16-bore muzzle-loading shot-guns with the barrels cut down to about 24 inches, so as to make them handy in thick cover. Bullets were hardened for penetration and these were of course spherical in shape.

Sir Samuel Baker was one of the first to use large charges of powder in rifles; and he owned and used an enormous weapon made by Gibbs of Bristol which weighed 21 lbs., with a barrel 36 inches long. The charge of this colossal weapon was 16 drams of powder, while the spherical ball weighed 3 ozs., and the conical an ounce more.

In one book he advises a pair of double 8-bore rifles weighing 15 lbs. each to shoot from 12 to 14 drams of powder.

Perhaps his favourite rifle was a double ·577 express by Holland & Holland regulated for 6 drams powder and a 648 grains bullet. This weapon weighed 12 lbs., so it took some carrying; but Baker seems to have been a very muscular specimen of humanity, and of course in his day people believed more in big bullets than they do to-day, for there was less attention paid to refined accuracy and study of the anatomy of the game. The ·303 rifle had been introduced before his death; but having been accustomed to shooting with big bores he probably never studied the pleasant shooting and killing power of high velocity nitro rifles. As a matter of fact the qualities of the small-bore nitro rifle are seen at their best when used for killing game such as elephant, rhino, and hippo; and I would rather tackle them with a ·256, ·275, or ·318 than with any of the rifles that Baker used. It is the first shot that counts, and a small bullet in the right place is infinitely more efficient than a big one in the wrong. If both the small and large bullet hit a

vital spot it makes no difference to the elephant whether they measure a quarter or half an inch in diameter.

Other works by Sir Samuel Baker are "Wild Beasts and Their Ways," two volumes, Macmillan, 1890; "Ismailia"; and "The Albert Nyanza—Great Basin of the Nile." Then he wrote two excellent books on sport in Ceylon called "The Rifle and Hound in Ceylon," 1854, and "Eight Years in Ceylon," 1855. He wrote in a most interesting way, and was an excellent observer of animal life, and his books will always be standard works on sport in his time.

A splendid hunter about the middle of the nineteenth century was William Cotton Oswell who only wrote a short account of his hunting experiences in Africa in the "Big Game" volumes of the "Badminton Library Series."

His eldest son Mr. W. Edward Oswell brought out an interesting work on his father's adventures which is called "William Cotton Oswell—Hunter and Explorer," in two volumes published by William Heinemann, London, in 1900.

Oswell began his colonial career as a magistrate in India, but he seemed to have suffered greatly

from malarial fever there, so he went to South Africa in 1844.

He was immediately fascinated with the veld life, and the abundance of game which then existed in that country, so he took to a hunting life and killed many elephants, rhinos, buffaloes, and other game. He was a splendid rider, wiry and hard, and he used to ride the game to close quarters so as to get a near shot, for his favourite weapon was a double 10 smooth-bore gun by Purdey—specially built heavy for ball.

In the book mentioned, there is an illustration of this fine gun which must have done an enormous amount of execution in Oswell's hands.

Sir Samuel Baker, to whom he lent the gun when he went on his expedition to the sources of the Nile, wrote:

"In exterior it looked like an ordinary double-barrelled rifle weighing exactly 10 lbs.; in reality it was a smooth-bore of great solidity and carried a spherical ball of the calibre No. 10.

"The hard walnut stock was completely eaten away for an inch of surface; the loss of wood

suggested that rats had gnawed it, as there were minute traces of apparent teeth. This appearance might perhaps have been produced by an exceedingly course rasp. The fore portion of the stock into which the ramrod was inserted was so completely worn through by the same destructive action, that the brass end of the rod was exposed to view. The whole of this wear and tear was the result of friction with the wait-a-bit thorns! Oswell invariably carried his gun across the pommel of his saddle when following an animal at speed. In this manner at a gallop he was obliged to face the low scrubby wait-a-bits, and dash through these unsparing thorns regardless of punishment and consequences, if he were to keep his game in view; which was absolutely essential if the animal was to be ridden down by superior pace and endurance. The walnut stock thus brought into hasty contact with the sharp thorns became a gauge, through the continual friction, which afforded a most interesting proof of the untiring perseverance of the owner, and of the immense distances that he must have traversed at the highest speed during the five years' unremitting

pursuit of game upon the virgin hunting-grounds of Southern Africa."

The above is a very lengthy and detailed description of a gun, but the old writers believed in being exact when they started to describe anything. Although it would be possible to describe Oswell's Purdey gun in half the space the above account covers, it would be difficult to do so more clearly.

Here are a few lines written by Baker showing what kind of man Oswell was:

" Oswell was not merely a shooter, but he had been attracted towards Africa by his natural love of exploration, and the investigation of untrodden ground. He was absolutely the first white man who had appeared upon the scene in many portions of South Africa which are now well known. . . .

" I have always regarded him as the perfection of a Nimrod. Six feet in height, sinewy and muscular, but nevertheless light in weight, he was not only powerful but enduring. A handsome face with an eagle glance, but full of kindliness

and fearlessness, bespoke the natural manliness of character which attracted him to the wild adventures of his early life. He was a first-rate horseman, and all his shooting was from the saddle, or by dismounting for the shot after he had run his game to bay."

I do not wish to fill my space with such lengthy quotations from other books, but Oswell had such a fine reputation as a man and a hunter that I could not resist giving Sir Samuel Baker's life-like description of his friend. The portrait as frontispiece in Volume II shows him to have been one of the finest men of his time, for truth and manliness are depicted on his features.

He had several narrow escapes from big game, the narrowest being from two white rhinoceroses. He had fired both barrels of his Purdey into one of these animals and then approached close, and before he could turn his horse the rhino drove its horn under the flank, throwing the horse and rider into the air with the force of the blow. He got his head badly cut with the stirrup-iron in falling, and the rhino who had a grand opportunity of avenging its wounds passed him and went off

His native after-rider came up, so he got on his horse and rode after the rhino and killed it. Then he returned to his own horse and had to shoot it.

On the other occasion he came on two of these animals when on foot and had to run, but the female chased him. Firing both barrels almost together he found himself hoisted in the air, having been hit in the thigh by the rhino's horn which made a gash 8 inches long and right to the bone in all its length. He was laid up for a month after this episode.

William Cotton Oswell will probably be best remembered through his association with Dr. David Livingstone, for in the years 1848-49, on his third expedition, when travelling with Dr. Livingstone and Mr. Murray, he went through the Kalahari Desert and discovered Lake Ngami. I have read that the discovery of this lake was made by Livingstone, which is a mistake, as it was Oswell's and Murray's expedition. Dr. Livingstone was simply their guest, and I believe never himself claimed the discovery of the lake, though others gave him the credit of having done so. One of the finest traits of Oswell's

character was his extreme modesty and his dislike of notoriety.

Mr. Murray accompanied Oswell on his first trip, and on his second expedition he had as his companion a very fine man named Captain Frank Vardon.

When Livingstone discovered the puku antelope he called it "*Cobus Vardoni*" after Vardon. I have a little book entitled "Life in the Wilderness, or Wanderings in South Africa" which belonged to Vardon, as it was a presentation copy to him from the author—Henry H. Methuen. It was published by Richard Bentley in 1846, and there was a second edition in 1848.

In these accounts of the old hunters I do not attempt to mention them in chronological order, but simply as they occur to me.

Possibly the old hunting book which aroused most controversy and comment was "A Hunter's Life in South Africa" by Roualeyn Gordon Cumming, two volumes, published by John Murray in 1850.

The work is well illustrated, one of the most thrilling pictures being that of the hunter's

" boy," Hendrick, being dragged from the camp fire at night by a hungry lion.

When people first read this book they were so astonished at the number of elephants, lions, rhinoceroses, and other game claimed to have been shot by the author, that they immediately came to the conclusion that he was " a stranger to the truth." The illustrations were partly to blame for this, because in some cases they look exaggerated. For instance there is one of Gordon Cumming standing pulling at his frightened horse between two enraged elephants, one in front and the other at the back of him. Certainly if the incident happened as depicted, both the man and horse would have been killed. The affair probably happened, but the artist has made too much of it by putting all the figures too close.

Another picture I have seen criticized is one of the hunter and a native pulling a python from a hole under a rock by the tail. There is nothing wonderful in this for it is quite a possible feat. Once after hitting a 14 feet python on the head I tried to pull it out straight with three natives before it was quite dead. Several times we got it

fairly straight, but a violent convulsion would almost throw us off our legs, and I had to smash its head to a jelly before I could measure it.

In the days when very little was known of the interior of Africa it was natural that the home people should be critical and unbelieving; but now that so many people have travelled and shot in Africa nothing that Gordon Cumming wrote is considered to be either improbable or impossible.

The rifles he used were mainly four double barrels by Dickson, Purdey, Moore, and Westley Richards. He used small charges of powder with the consequence that he sometimes filled his elephants with lead before he killed them. On several occasions he put forty and more balls into an elephant before it expired; and it seemed usual for them to take about twenty bullets before succumbing. This was, of course, due to inferior penetration in the charges he used in his weapons. His favourite was the 10-bore 2 groove Dickson of Edinburgh—a rifle he seemed to love as much as a wife. At last it burst and his lament was thus:

"Alas! it was for the last time. The barrel

burst with a terrific explosion, sending the locks and half the stock flying right and left, and very nearly sending me to 'the land of the leal.'"

Although the loss of such a trusty weapon must have been a serious matter for the hunter so far from civilization and gun shops, one cannot help being amused at the language describing the incident. To-day, if a hunter's rifle exploded at an equal distance from communications he would probably state the fact in more moderate writing. This floweriness of description, however, was typical of the time; but when reading these old books one should not condemn them for their display of sentiment. I forgot to mention that he escaped with a slight burn on his left arm and was partly stunned, but not gravely hurt.

In one part of his book Gordon Cumming mentions the wonderful protective colouring of insect life; and I wonder if he was one of the first to notice this. I may say that though insects display this protective coloration it does not apply to the mammalia, because the colour of an animal is no protection against the carnivora

which usually do their hunting at night when they mainly hunt by scent and not sight. Moreover, a zebra which is usually mentioned as a good exemplification of protective coloration cannot keep its long and noticeable tail still for long, as it is constantly switching it about to keep off flies. Movement is generally the first thing to catch the eye, so (except for insects) I do not agree with those who think that colour is a safeguard to any creature.

Personally, I believe that the pigments which cause colour in any living creature are affected by the environment due to the form of the sun-rays to which they are exposed.

Antelope which inhabit open plains are exposed to continual sunlight and get bleached to a neutral shade. Animals which live in light and shadow such as the zebra and leopard in Africa, and the tiger and panther in India are often striped and spotted. Animals which inhabit dense bush are not invariably protectively coloured, but they are often striped; and I may mention the varieties of bushbuck, and the bongo, for instance. The rich reddish coat of the latter is a most vivid object in green bush.

One of Gordon Cumming's favourite amusements was sitting in a hole by a water pool at night and shooting animals which came to drink. He seems to have liked the loneliness of these nocturnal vigils; and some of the pictures in his book show him firing at game by night.

Nowadays, such sport would not appeal to sportsmen; but ideas change with the times.

Like Harris, Oswell, Vardon, and the old Dutch hunters, Gordon Cumming seems to have slain many rhinos of the white and black varieties, for these large and rather stupid animals teemed in South Africa long ago.

He describes a trek-bokken of springbuck, which must have been a marvellous sight, though game in such numbers can still be seen in the wilder parts of Eastern Africa at the present day. As this volume is about elephants I do not wish to treat of the other animal life on the African Continent.

Gordon Cumming paid a visit to Mr. Moffat at his mission station at Kuruman. That fine old missionary was the father of Agnes Moffat who married Dr. Livingstone; and I have stood by

her grave at Shupanga on the great Zambezi. Cumming also stayed with the Livingstones once, and they seem to have been known by most of the old hunters.

As hunting is hard and enervating work these old hunters frequently arrived at a mission station played out and sick with fever; and they often mention the kindnesses received from the missionaries and their wives. I may say that missionary enterprise in the old days was a vastly different thing from what it is to-day; for the missionaries really roughed it then. To-day the mission societies are much better off so they give their evangelists better houses and modern comforts, and I never noticed that they had much to complain of. They never roughed it like the hunters!

Roualeyn Gordon Cumming was the second son of Sir William G. Gordon Cumming, Bart., of Altyre, and was born on 15th March, 1820. He died at Fort Augustus, Scotland, on the 24th March, 1866, at the age of 46 years. He took a bad chill by swimming to an island in Loch Tarff on a bitterly cold day in spring, and developed a cough, which affected his lungs.

After his death his great collection of trophies was bought by Barnum—the showman—and was burnt in his great fire.

My late father, James C. Lyell, who had a remarkable bent for collecting interesting things, found in an old bookshop a pamphlet called "Catalogue of Hunting Trophies, Native Arms and Costume from the Far Interior of South Africa, etc., etc., etc.,—the Property of and Collected by Roualeyn Gordon Cumming, Esq., 1850, Price 6d." I copy the inscription on the cover. This catalogue was printed by G. Norman, Printer, Maiden Lane, Covent Garden; and it gives a short description of 172 specimens, including a complete South African wagon and gear.

My father also found another interesting catalogue brought out in 1835 detailing many specimens obtained by Andrew Steedman and shown in that year at what is termed "The African Glen," Colosseum, Regent's Park, price 1s.

Now it is evident that the idea of showing his trophies and making a list of them for exhibition was suggested to Gordon Cumming

by his having seen Steedman's show and catalogue.

Andrew Steedman claims to have discovered the common waterbuck (*Cobus ellipsyprymnus*) and my father bought the record head of this antelope at Steven's Auction Rooms in London and presented it to me. It measures 36½ inches on the curve and is given as the record in Rowland Ward's " Records of Big Game," eighth edition.

One of the earliest writers to attract the wandering and adventurous type of man to the South African hunting-grounds was Major (afterwards Sir) W. Cornwallis Harris. He wrote several books on Africa such as " Portraits of the Game and Wild Animals of Southern Africa " (1840). It had hand-coloured plates and is very scarce, a clean copy being worth about £20.

Then he published the " Wild Sports of Southern Africa," which, I believe, was published in 1840. I possess the fifth edition, given me by my father, and it is dated 1852.

This book has old tinted plates, and the vignette on the title page is a beautiful little

picture of a giraffe stretching up to pick the leaves of an acacia tree; with two rhinos and antelopes, and an ostrich, in the background.

Harris was more of an explorer than a hunter, and he also wrote the " Highlands of Ethiopia " in three volumes, 1844, published by Longman, Brown, Green & Longman, London. This work is dedicated to the late Queen Victoria, and the inscription is surrounded by quaint figures in colour of humans and animals. Vignettes on title pages were not uncommon long ago, but I never saw the dedication page of a book decorated like this.

A quaintly illustrated book is Captain Alfred W. Drayson's " Sporting Scenes Amongst the Kaffirs of South Africa," published by G. Routledge & Co. in 1858.

The colouring of the illustrations seems to have had some oily matter in it as all the illustrations have stained the backs of the pages by soaking through the paper.

Although the pictures are apparently roughly done, some of them are remarkably true to life. The artist was Harrison Weir, who drew from designs by the author. The picture facing page

193, called " Elephants in the Open," is very good indeed.

Henry Faulkner (a lieutenant in the 17th Lancers) joined an expedition to look for Dr. Livingstone, and after returning he wrote in 1868 a very interesting book entitled " Elephant Haunts." Faulkner seems to have got very keen on elephant hunting, and shot a fair number of the animals.

There is a neat vignette on the title page of Matiti Hill close to the Murchison Cataract in Nyasaland where I shot my first hippopotamus, and a stirring frontispiece showing the author describing a somersault in the midst of various dead and dying elephants. These old writers made a great mistake in allowing the artists they employed to draw such theatrical sketches of their exploits.

An ordinary page sketch is incapable, unless in the best hands, of getting the perspective right, especially when it is depicting narrow escapes!

A book which drew Selous and others to the gipsy life of Southern Africa is " African Hunting—From Natal to the Zambesi," etc., by William Charles Baldwin, published in 1863

by Richard Bentley, New Burlington Street, London. It has excellent illustrations by Joseph Wolf and J. B. Zwecker. Wolf is thought by some people to be the greatest animal painter who ever lived. These old artists usually studied animals in captivity, as very few of them ever travelled in the wilder game-haunts of foreign countries. In this book, Joseph Wolf is called James Wolf, which is a mistake.

One of the best illustrations by Wolf in this book is one called "Chasing Haris Bucks," which are sable antelopes. The word "Haris" should, of course, be "Harris," for the sable antelope was discovered by Sir W. Cornwallis Harris.

Baldwin during his hunting career killed an immense amount of game including elephant, rhinoceros, and buffalo. When hunting on the open plains of South Africa the success or otherwise of the hunter was almost wholly due to the speed and temperament of his horse.

In these old hunting books, Dutch names for the game are often given, and the leopard was sometimes called a "tiger," which of course was a misnomer. The hyena was frequently termed

a " wolf," and so on. To readers who were not acquainted with the subject this was puzzling, and I have heard people insist that the true tiger and wolf inhabit Africa.

Baldwin, of course, used muzzle-loaders, and had to fire a good many shots into his game before he killed it.

It must have been hard work carrying a heavy rifle and guiding a restless horse at the same time, and the question of reloading the weapon was a problem which could not be solved without dismounting, for a dirty barrel and a too close-fitting ball sometimes made the operation impossible when on horseback. One of their chief worries was to keep the caps on the nipples, for the jerking movement of the horse and of the rider would often dislodge the copper caps, with the natural result that there would be a missfire.

The ant-bear holes often found on the veld were a trap, and horses trained on the plains were quite at sea in forest country.

Baldwin gives a good description of the Victoria Falls of the Zambesi (or " Zambezi " it should be, for the native word is pronounced " Zambayzi "), and mentions how he cut his

initials on a tree on an island above the Falls, just below those of Dr. Livingstone.

In the "Life of F. C. Selous," by that accomplished artist and writer J. G. Millais, he mentions Thomas Baines (who wrote "The Gold Region of South-East Africa" in 1877, and "Explorations in South-West Africa") having visited the Falls before Livingstone. It is possible that some white man who has never been heard of actually did so before any of them.

Mr. Millais also mentions an exhibition of pictures by Baines at the Crystal Palace some years ago, for he seems to have painted many pictures and drawn many maps of South Africa.

The most dramatic picture in Baldwin's book is called a "Narrow Escape," showing a lion fastened on the back of his steed as he is retreating at speed. Another, equally thrilling, is a plate, called "Night Shooting," of a lion many feet in the air after it was hit by the hunter from a hole near a pool of water at night. A dead rhino is in the water and the form of a defunct buffalo is seen in the misty distance. All these pictures I mention are by J. Wolf. Mr. J. G.

Millais has written that Joseph Wolf was "the greatest painter of birds and mammals who ever lived."

Certainly his work is wonderfully true to life considering that he never had the opportunity of seeing the large mammalia in their natural haunts.

Now I come to the hunter whose book made me resolve to get to Africa if possible. That volume was "A Hunter's Wanderings in Africa," by Frederick Courteney Selous, published in 1881 by Richard Bentley & Son, London.

I knew when I had read it that here was a hunter who was also a fine observer and field-naturalist, for he wrote on the game as few had done before; and, I may remark, as few have done since.

His vivid descriptions of a trekking and hunting life quite fascinated me, so in 1898, after having spent over four years tea-planting in Eastern India, I wrote to Selous asking advice as to the best rifles and where to go in Africa to get some good shooting; especially elephants. He answered immediately, and asked me to write him again if I ever went to Africa. I did so, and

we exchanged many letters between 1898 and 1914, and I have kept most of them.

After the Boer War, in which I served for a few months until an attack of enteric fever knocked me out, I found my way to Nyasaland, and in Zomba met the late Major (then Captain) C. H. Stigand with whom I collaborated in a book on spoor (tracks), published by Horace Cox of *The Field* office, London.

I shall mention Stigand in due course as one of the best known and most experienced African hunters.

Being home in 1906, mainly in connection with the book mentioned, I asked Selous to write us an introduction, which he kindly did after reading the MS. of the book.

He invited me to Worplesdon to see his fine museum, and it was most interesting to go over it with him. I handled the old elephant gun with which he shot many elephants; and what surprised me about it was its lightness considering the large charges he used. These old 4-bore guns were much used by the Dutch and British hunters in South Africa, and the former called them "Roers." They were loaded from a pouch of

powder hung on the belt, and a small handful seems to have been the ordinary charge, which made them kick furiously. Once Selous had a missfire and passed the gun to a native, and he loaded it again on the top of the old charge.

Here is what Selous wrote about the accident:

"This time the gun went off—it was a 4-bore elephant gun, loaded twice over, and the powder thrown in each time with his hands—and I went off too! I was lifted clean off the ground, and turning round in the air, fell with my face in the sand, whilst the gun was carried yards away over my shoulder. At first I was almost stunned with the shock, and I soon found that I could not lift my right arm. Besides this, I was covered with blood, which spurted from a deep wound under the right cheek-bone, caused by the shock of the gun as it flew upwards from the violence of the recoil.

"The stock itself—though it had been bound round, as are all elephant guns, with the inside skin of an elephant's ear put on green, which when dry holds as firmly as iron—was shattered

to pieces, and the only wonder was that the barrel did not burst."

These old guns were cheaply made trade weapons, costing in Africa about £6 each, so it is extraordinary that they were able to withstand such an experience. They must have been stronger than they looked. Later, Selous used a single 10-bore, and mentions double rifles of this gauge. It was not until he got a ·461 Metford by Gibbs of Bristol that he did his best shooting.

When I went to see him he had a ·256 Mannlicher, and a single falling block ·375 by Holland & Holland; but he never had a chance of shooting elephants with nitro rifles, I believe.

He gave me a signed copy of the catalogue of specimens in his private museum; and the trophies have now gone to the national collection at South Kensington.

Possibly the most thrilling adventure Selous experienced was when his camp was raided in 1888 by the Mashukulumbwi—a savage race of people—one dark night.

Selous and his men (twelve were killed and six wounded out of twenty-five) had to take to

the bush, the former with only a rifle and four cartridges; and on his belt a knife, a box of matches, and a watch. Taking the Southern Cross as his guide he turned his back on his raided camp, and made for the south in the darkness of one of the worst nights he must ever have experienced. After some days' hard walking, and having shot a wildebeest for food on the way, he got to a village, tired and sleepy, and there had his rifle stolen. Seizing some meat he had to bolt, and at last met the remnant of his following, who had also made south in their efforts to escape the murderous Mashukulumbwi. He had lost most of his outfit, including four breach-loading rifles and their ammunition. The most interesting point about Selous' books is how he mentions the names of the old hunters who were often his companions on hunting trips.

An old hunter was William Finaughty about whom a book has been written by an American, Mr. G. L. Harrison, who, when on a shooting trip to the Kafue River had one of Finaughty's sons with him. He then went to see the old man —who had made his name as a famous elephant hunter before Selous started to hunt

in Africa—at his farm about twelve miles from Bulawayo.

He was then an old man, and as he had never kept diaries his information may not be absolutely correct. He told Mr. Harrison that on one trip he had killed a hundred and thirty-three elephants, and the most he ever shot in a day was ten animals. I have tried to get Mr. Harrison's book in this country, but have failed; so I suppose it was privately printed.

Selous met many famous Dutch hunters such as Petrus Jacobs, who was just recovering from a bad mauling by a lion when Selous met him. Jan Viljoen was another celebrated hunter, and Cornelis Van Rooyen, a great friend of Selous', was very well known in the eighties of last century.

A hunter often mentioned in "A Hunter's Wanderings in Africa" was an Englishman named George Wood, who for a time was in partnership with Selous on various trips after elephants.

Many of the old hunters gave up following elephants when they began to inhabit more densely wooded country where tsetse flies

abounded, for it was impossible to take horses there and expect them to live long. It was infinitely harder work following elephants on foot than on horseback, and much more dangerous, for a good horse in fairly open country was usually able to take its rider to safety when an elephant charged. If not well trained, however, it added to the risks.

Selous once shot six elephants in a day, and has mentioned that he could have doubled that bag had his horse not misbehaved himself, for it suddenly took a stubborn fit and nearly brought Selous into difficulties on several occasions.

He used his ·461 Gibbs with long, heavy, solid bullets. Once an elephant sent the horse flying, and Selous found himself right under the elephant, but managed to get away. He had another narrow escape from a bull buffalo which unhorsed him, but for some reason ran off instead of killing the hunter.

Selous shot many buffaloes on foot and did not think they were nearly so dangerous to tackle as lion and elephant. He ought to have known, as he shot large numbers of all these animals. The same species varies, however, in different

localities, and what is correct in one district may not hold in another.

Once when discussing rifles with him he was showing me a ·256 Mannlicher he had, and remarked that had he had such a small bore as the ·256 during his early days he could have bagged three times as much game as he did, and there is no doubt that he would have done so.

His best known works on African hunting besides the one I have before mentioned are: "Travel and Adventure in South-East Africa," published in 1893 by Rowland Ward & Co. Ltd., and "African Nature Notes and Reminiscences," published by Macmillan & Co. Ltd., in 1908. This book is one of the best works extant on African game, though there is little about elephants in it as it mostly treats of other animals.

Of all the big game hunters of our time Selous is probably the one most missed by those who take an interest in the subject, for he often used to write most interesting letters to *The Field* on game and natural history.

Various white hunters have been credited with

shooting more African elephants than anyone else, but there is little doubt that Arthur Henry Neumann was the greatest elephant hunter who ever lived. He was a friend of Selous, and a great friend of J. G. Millais, who gives a most interesting chapter on the main incidents of Neumann's hunting life in his fine book "Wanderings and Memories," published in 1919. Mr. Millais relates that Neumann was born in 1850, in Bedfordshire, and later went to Natal, and afterwards to Swaziland. He seems to have been a man who simply had to get to the untrodden wastes of Africa, for we soon find him in British East Africa at the time when the country was full of elephants.

He began his elephant shooting with a double 10-bore by Holland, and a ·577 Express by Gibbs, and was a most excellent game shot.

When the ·303 came out he got one and was very successful in killing elephants and rhinos easily with it; though it once jammed, owing to the faulty action, and brought him into trouble with a cow elephant which damaged him severely.

In his book "Elephant Hunting in East

Equatorial Africa" (Rowland Ward Ltd., 1898), a splendid volume of hunting, and the only one he ever wrote, he describes his various adventures in very clear language, absolutely free from the taint of exaggeration. He was a practical and greatly experienced man, and like Selous was a most able observer of the habits of the animals which came under his notice.

He was the pioneer in many districts which are now well known, and he always left a reputation behind him with the native inhabitants of straight-dealing and manliness. His favourites among the savage inhabitants of the forest and bush country he hunted were the Ndorobo, who killed the elephants with poisoned spears.

There is an excellent picture in his book by the artist, Mr. Caldwell, of an Ndorobo launching a spear at the belly of an elephant. The elephant is beautifully drawn with its ears showing the flaps turning inwards. Some people say that the turn-over of the ear is to the outside, but I never saw an elephant with its ears shaped so, for they are usually bent towards the body.

Many artists draw elephants with their tusks

sticking outwards, which, though it may occasionally happen, is most unusual, for the curve of both tusks is inwards, towards one another. This is an advantage as they go through thick vegetation in their wanderings.

Neumann once bagged fourteen elephants in a day, on another day eleven, and he seems to have been a very cool shot.

A good game shot is not necessarily a good target shot, and vice versa. It is one thing shooting at an iron target when there is plenty of time and when there is no danger; but it is quite a different matter for the tired hunter, who may have tramped twenty miles after elephant under a blazing sun, to hold his rifle straight knowing that if he only wounds the beast he may be charged and crushed into a pulp.

Neumann, judging from his accounts, seems to have preferred the heart shot at an elephant to the one at the brain, though he sometimes killed elephants with the latter shot.

After his mauling he could not use his heavy black-powder weapons so he killed some of the largest bulls he ever secured with the ·303.

Later in his hunting career he got a double

·450 Rigby nitro rifle, and was very pleased with its killing power.

The elephants in British East Africa grew large tusks, so he was able to get a good many with tusks weighing over 100 lbs. each.

After game preservation was started in East Africa he found it was difficult to get his ivory out of the country, though most of it was shot beyond the sphere of British influence.

Although the Government objected to his hunting, they seem to have allowed Arabs, and other natives, to get out their ivory, although they must have known that much of it was newly shot and not obtained from the stores collected in the past by the old chiefs.

Neumann felt that he was being badly treated in being prevented from hunting in the lands where he had been a pioneer; and he must have felt like the old tusker who has to forsake the wilderness where he has roamed at will, and to seek pastures new.

He died in London in May, 1907, and I have always regretted that he did not give the public another book on his later adventures with elephants.

In Nyasaland, Sir Alfred Sharpe was the greatest hunter of elephants I have heard of; but although he has written a book on African travel he has never published a work dealing solely with elephants, which is a pity, for he has had great experience in various parts of Africa.

About the time Neumann was doing most of his hunting Count Teleki went on an exploring expedition and discovered Lakes Rudolf and Stephanie. Neumann had thought he was the discoverer of Rudolf as he came on it before he heard it had been discovered.

Count Teleki shot a good many elephants and used to find them in the open; a thing hardly known in that country now as the elephants have been driven to the bush and forest for cover.

The only book I know dealing extensively with the elephants in West Africa is "The Congo Free State and its Big Game Shooting," by Henry Bailey ("Bula N'zau"). He used a ·577 Express with solid bullets, as far as I remember, and seems to have bagged a good many elephants. There was no mention in his book of the Dwarf elephant of the Congo, so I suppose he did not come across it. It is

probably an extremely localized species and difficult to find.

A few standard works have been written by various authors collaborating in a single book. There is a large and expensive volume entitled " The Big Game of Africa and Europe," which was written by Selous, Millais, and Chapman.

Then there is a slightly older book " The Great and Small Game of Africa " with coloured plates, which is also expensive.

Many old books dealing with the continent of Africa, mainly to the south of the Zambezi, have been written, and most of them have very long titles. There was J. Barrow's " Travels into the Interior of Southern Africa," two volumes; and Burchell's with almost exactly the same name, also in two volumes. This work is scarce and costly.

In my remarks about the old elephant hunters I have given the names of their books when they wrote any, and there were many others who mention elephants without having gone in for shooting them much. Early African explorers were bound to see their tracks, or the beasts themselves, sometimes.

Besides those already given there are the writings of Alexander, Andersson, Barth, Bruce, Burkhardt, Burton, Campbell, Chapman, Clapperton, Daniell, Denham, Du Chaillu, Galton, Junker, Kerr, Le Vaillant, Lichtenstein, Monteiro, Myers, Petherick, Pringle, Schweinfurth, Speke, etc.

Then, not nearly so old, we have Swayne's "Seventeen Trips through Somaliland," Kirby's "In Haunts of Wild Game" and "Sport in East Central Africa," several notable books by Sir H. H. Johnston such as "British Central Africa," and "The Uganda Protectorate," two volumes; Lugard's "The Rise of our East African Empire," two volumes; Pease's "Travel and Sport in Africa," three volumes; Gibbons' "Africa from South to North through Marotseland," two volumes; and last but by no means least, Millais' "A Breath from the Veld," a beautifully illustrated and named volume, for the title seems to conjure up visions of long treks through the game-haunted spaces of South Africa when it was a country worth living in.

CHAPTER IV

RECENT ELEPHANT HUNTERS

It is difficult to fix a period to separate the old from the recent hunters of elephants, but most people who take an interest in big game would agree that Selous and Neumann might be called the last of the old hunters of Africa.

The introduction of the high-velocity rifle might form the dividing line, except that Neumann shot a number of his later elephants with ·303 and ·450 cordite rifles. Many of the old hunters were explorers who broke into new country, and although they often took grave risks they had the old prestige of the white man which carried them some way.

The natives have found that the white man is but mortal like themselves, and is not a kind of invulnerable demi-god who has dropped from the clouds to visit them for a time.

Again, the marvellous improvement in the accuracy and killing-power of the modern rifle is perhaps not such an advantage as many people suppose.

Constant persecution has made animals wilder, and the more dangerous game inhabits denser country where the flatter trajectory of the high-velocity rifle does not make so much difference, except that its superior accuracy and rapidity of fire is a great advantage to the cool shot.

There are many more wounded animals about, and this also increases the risks. Licences limit the number of game allowed, so a man may hesitate to put a bullet into a beast which is nasty, because if he kills it it counts as one on the restricted licence.

None of the old hunters I know of experienced greater risks, or were oftener hurt, than the late Major C. H. Stigand. When he was a captain I met him in Zomba, Nyasaland, in 1903; and we decided to collaborate in a book which eventually saw the light as "Central African Game and its Spoor," published by Horace Cox of *The Field* office, in 1906. When Stigand was busy with the native names I spent some

time in various trips getting the drawings of the tracks of the various game, as all the species do not inhabit one district.

Then I left for Mzazas on the Luangwa River in North-Eastern Rhodesia, and soon afterwards heard that Stigand had been badly injured by a rhinoceros which made an unprovoked attack on him in thick grass without being wounded. He showed me in 1906, when we met in London, the healed wound, which was like a saucer-shaped hollow in his chest close to the heart. Another half inch deeper would probably have meant his death.

Soon after that, three weeks to be exact, he walked for two hundred and forty miles with his regiment, the 1st King's African Rifles, when it went south under orders for British East Africa. On getting to British East Africa, and when going along the Uganda railway, on his way to Nairobi, he heard that lions had been coming to drink under a water-tank at Simba station, so got leave to stop and sit up.

The lions came and he hit three. One was wounded and he followed it in the dark, and it sprang at him and knocked him down. Stigand

was a very muscular man so when it had a grip of his left wrist he began to punch its head, and it changed its hold farther up the same arm. At last it left him and he managed to get to the little station where he got a train to Nairobi and had to go to hospital.

Next day the passengers on another train saw the wounded lion lying near and bombarded it from the carriages. Strange to think of a single man following it in the dark in contrast to the "sportsmen" who stayed in the train!

I saw the skulls and skins of these three lions in London, and noticed that the one which had mauled Stigand had the lower jaw broken by a bullet, which was doubtless the reason that it did not kill him. The skin was full of holes from the train-shooters!

Only a year or two after this incident Stigand hit a lion in East Africa which ran into a cave, and he actually crawled in after it, but fortunately found it defunct.

After he had gone to the Sudan he went, without a rifle, to drive a garden-raiding elephant out of some native crops it was invading; and the elephant immediately attacked him, knocked

him down, and drove one of its tusks through his leg.

He had to come home for treatment, and must have suffered extremely from pain afterwards in all his wounds from wild beasts, especially in damp cold weather which stirs up the torment in old injuries of this kind.

Stigand was an exceptionally brave man, for he had an idea which he carried into practice, that one should never let the natives think that a white man can be afraid of anything. Crawling into a dark cave after a wounded lion was a case in point; and his doing so was quite contrary to a decision we came to one day when arguing what was the best thing to do under certain circumstances. We decided that unless a man had a good object in being reckless it was foolish to be so, because a big game hunter does not go out with the intention of committing suicide.

Up to the end, however, he practised a contempt of risks, for he was killed in December, 1919, when leading a punitive expedition against the Aliab, a section of the Dinka tribe in the Soudan. He was in command and walked ahead of the troops with Major White, and got into an

ambush where both officers were killed. I heard that Stigand shot quite six of the enemy before he fell; but the pity is that such a fine man should have died because he scorned a danger which he must have known might be present Often I have heard him say how easy it would be to fall into an ambush when on a punitive expedition against savages. And so it happened.

He wrote a number of good books including "The Game of British East Africa," published by Horace Cox, *The Field* office, in 1909. This work is technical for he does not mention many of his adventures in it. His best book is undoubtedly "Hunting the Elephant in Africa," published by the Macmillan Company in 1913. In it will be found detailed accounts of most of his narrow escapes; except the one from the elephant in the Sudan which occurred later.

When he took a trip to Lake Bangweolo in 1904 he was knocked down by an elephant which nearly got hold of him. In passing through Fort Jameson after this trip he showed me the "shorts" he was wearing at the time, which were soaked with blood which dripped from the elephant's trunk as it stood over him when he

was lying amongst the branches of a fallen tree into which he had fallen.

He shot a few elephants in Nyasaland and North-Eastern Rhodesia, but it was in the Congo and Lado that he made his best bags, once getting eight in a day.

He shot a lot in the country of the Alurs, Madi, and Lugware; and in his book on the elephant he says: "It was the first time I had been in the middle of a big herd with an unrestricted licence, and I am afraid I rather let myself go. Fresh herds came surging up out of the grass, and I had an exciting five minutes.

"When they went off I ran after them, till the last one I fired at disappeared, and racing after him I heard him gurgling on the ground in front of me. I was exhausted after my long day and running, and threw myself down at a muddy pool of water to drink, thinking that he was done for. When I got up he had gone, and I never caught up with him again."

It is not an uncommon incident for an elephant to fall apparently dead, and such a result is probably due to a bullet passing near the brain

which produces concussion and insensibility for a short time.

Stigand used a ·256 Mannlicher as a rule, but mentions a ·318 in a letter to me. He also tried a ·450 cordite, but did not like it, I believe.

He was certainly a "small-bore" man, for the same reason that I am. It is essential that the hunter should carry his own rifle so as not to miss chances and to be ready for any emergency. I defy any man to carry a double ·470 rifle, weighing over 11 lbs., for a thirty mile tramp through rough African bush, under a terrific sun, and do good shooting. It is natural that a man will do his best work at elephants with the rifle he uses for shooting small stuff such as antelopes, as he will know its accuracy to a nicety.

I have been accused of being "dictatorial" for advising the use of small-bores by a critic who has no practical experience of African shooting. This is absurd, for of course everyone can use any rifle he prefers, but the beginner, if he wants advice, is more likely to get satisfactory information from the man who has tried different rifles in the field. Striking energy, as expressed in foot-pounds, is of little value in practice.

What one must be careful about is to use the proper type of bullet for the different game, and only two kinds are necessary—solid and expanding. The solid should have the ordinary blunt nose, as sharp-pointed bullets are liable to turn over on rounded bones and lose direction.

I have tried the following weapons as I had a craze for buying rifles. These were 4, 8, 10, ·577, ·500, ·461, and ·450, black powder rifles; and high velocity weapons of ·450, ·404, ·400, ·375, ·360, ·355, ·350, ·333, ·318, ·311, ·303, ·275, and ·256. I do not think a larger bore than ·350 is needed for any beast in Africa, or anywhere else, for it is known that African game is more tenacious of life than animals in any other part of the world.

In countries where the jungles are very thick it is possible that some people would prefer a large bore, but I contend that if a man cannot see his game sufficiently well to place a vital shot he should not fire at all.

I believe a magazine rifle is a more reliable tool than a single falling block, or a double rifle, for the following reasons: falling block rifles are liable to jam and the strikers break oftener than

those of magazine rifles which very seldom go wrong. The double having hinged barrels may get a bit of twig, leaf, or grass on the face of the action which prevents the rifle closing unless the old-fashioned pull to the side lever is used. Although slower than a top, side, or bottom snap lever, I would prefer the side pull-out type for its greater power in closing the action.

With a double one has two quick shots and then a wait to get reloaded just at the time when another cartridge may be vital. Sir Alfred Sharpe, who has had great experience, prefers magazine rifles to doubles, and I thoroughly agree with him.

My friend the late Captain Martin Ryan was a very good elephant hunter, and he tried various rifles. I think he killed most of his animals with a 7·9 mm. (·311 bore) Mauser, but he also used a ·416 magazine Rigby rifle and a ·375 Mannlicher. He said the ·416 was very deadly, but heavy to carry on a long day as it weighed 10 lbs. The best weight is something between 7 and 8 lbs.

After I left Africa he wrote me a number of letters on vital shots at game, a subject we both

took a great interest in. He was a very good observer, and took the trouble to open the top of an elephant's skull so as to locate the exact position of the brain cavity. Once, in Africa, Ryan gave me a sketch of the brain cavity of this elephant's skull, which I showed in my book "Nyasaland for the Hunter and Settler," published by Horace Cox of *The Field* office. I have done another sketch for this small book which may be of interest.

I remember seeing at Lilongwe, in Nyasaland, a small skull of a cow elephant which Mr. Gordon, the magistrate, had had sawn in half. The hollow could therefore only be viewed from the side, and the length was about a foot, and the shape something like a large sausage with considerable contraction about the middle.

It clearly showed that even the larger brain of a bull was an extremely difficult mark to hit when one considers that the hunter is usually on a much lower plane, and that the animal may be moving its head; besides the other drawbacks of intervening vegetation, other elephants being in the way, and often indifferent light for clear shooting. From the front the size diminishes greatly,

so to hit a charging elephant in the brain might be called something of a " fluke."

Except for an occasional article in *The Field* Ryan wrote nothing about his shooting experiences apart from very interesting letters to his friends.

Unfortunately, he was killed in action in German East Africa in October, 1917, much to my regret, for I miss his interesting letters about the game and wild life we liked so well.

One of the recent hunters who has killed many elephants is James Sutherland, who wrote " The Adventures of an Elephant Hunter," published in 1912 by Macmillan & Co.

His favourite rifle was a double ·577 nitro rifle by Westley Richards fitted with a single trigger. This is one of the most powerful rifles made, as it shot a bullet weighing 750 grains. He also mentions using a ·318 by the same maker, but seems to have been a believer in the larger bore. For body shots it perhaps kills a little more quickly, but for head shots I do not consider it so good as the more accurate ·318 rifle.

I lately read a most interesting volume on elephant shooting entitled, " The Wanderings of an Elephant Hunter," by W. D. M. Bell; and it

particularly appeals to me because the author believes thoroughly in the use of the ·256 and ·275 for killing elephants. He usually went for the brain shot which shows that he is an expert in the use of the small-bore, and also a cool hunter; for a man has to keep his wits about him when he specializes on hitting the brain.

If I was asked what were the chief attributes of a good hunter I would say that he must first of all be patient and persevering, and not readily upset with failure, and next he must be able to shoot as steadily at game as he would at a target. Good range shots are seldom of much use at game, and vice versa. It is one thing lying flat to shoot at a measured distance at a target which will not run away, or charge if it is hit wrongly; and quite another to keep a cool head when one is tired out, parched with a terrific sun, and possibly shaky with fever. Some really good hunters are very indifferent shots, but they manage to remain quite collected when close to dangerous game, and what is the most important essential, to wait until the angle is suitable for putting in a shot that is likely to be vital and decisive.

Successful shooting is purely a matter of angle

with an equivalent knowledge of the anatomy of the animals. Mr. Bell's book is certainly one of the best I know regarding the diagrams he gives for the killing shots, though personally as regards the full side brain shot I prefer to aim a little nearer the ear orifice than he advises.

It must be remembered that in sketches it is difficult to show exact angles; and another point I might mention is that a man is at a much lower elevation than the elephant's brain, so due allowance has to be made for this.

When aiming to hit a hidden object such as the brain of an elephant it means that the bullet must be placed lower than the mark so that it will hit it. That is when the man is on the ground and thus below the level of the elephant's head.

All the drawings in this book are excellent, and one called "The Angry Bull" is exceptionally good.

The largest tusker ever killed by a white man was one shot by Major P. H. G. Powell Cotton which had ivory weighing 372 lbs., the pair. The largest tusk was 9 feet long, 25 inches in circumference, and 198 lbs. in weight—a wonderful trophy indeed.

I believe this elephant was killed with a ·400 cordite rifle by W. J. Jeffery and Co.

Major Powell Cotton has written several good books on African sport, such as, " A Sporting Trip Through Abyssinia," and " In Unknown Africa "; both very interesting volumes.

I think one of the best books on African game, as a whole, is " Animal Life in Africa " by Major J. Stevenson-Hamilton. It deals extensively with the habits of most of the South African fauna, besides other subjects.

There is a slight error, however, in the diagrams showing best shots for elephant and lion, where the author shows in red marks the position of the heart in these species. In both cases, particularly in that of the elephant, the position of the heart is shown much too high, and if anyone were to aim as advised, the heart would certainly be missed, though the bullet might get the lungs, which is " another story."

Mr. T. A. Barns, who has shot many elephants, generally used a 7·9 mm. (·311) Mauser, and he seems to have preferred the heart shot. I think he found it best, as he believed in emptying his magazine into the animal after the first shot; so if

the first bullet happened to miss the heart some of the others would probably get it or the lungs.

Within the last few years he has written some good books on his later travels, the best being: "The Wonderland of the Eastern Congo."

His wife has accompanied him in many of his travels and has probably been the first white woman to visit parts of Africa formerly unknown to Europeans.

There are many men, R. J. Cuninghame, Leslie Tarlton, Judd, and others, in East Africa who have shot a good many elephants and written little of their experiences.

One of the best hunters in Nyasaland is George Garden, of Mlanje, who has shot many elephants in that country and in Portuguese East Africa.

He mainly used a double ·450 No. 2 cordite rifle, and being an excellent game shot, few elephants he hit escaped. Once he was knocked down by an elephant in Portuguese Territory and had a bad time as he was far from medical aid.

His knowledge of the game and natives is probably greater than that of anyone living in Nyasaland at the present time.

In Northern Rhodesia several of the old magistrates shot a number of elephants; and the names of Coryndon, Wallace, Croad, Leyer and Melland occur to me. The latter shot the largest tusker I have heard of being killed in Northern Rhodesia, and its ivory weighed 229 lbs. The best tusk of the pair measured 7 feet 9 inches, with a circumference of 22 inches, and weighed 119 lbs. This elephant was shot in 1904. Mr. Melland when he fired at this elephant had no idea its ivory was so good. A lucky shot!

I once met an Italian on a steamer going home who told me he had shot about fifty elephants in Central Africa, using nothing but a ·275 Rigby Mauser, which is the kind of rifle Mr. Bell was so successful with.

A man is sure to be experienced when he uses nothing but a small-bore, because generally the beginner thinks that nothing but a large bore is of any good!

At the present day when only two to four elephants can be killed on the licence, there is really no necessity for a man to burden himself with a big rifle, and in my opinion, it is a better plan to take two small-bore rifles of the same

calibre, the extra one not only to act as a second gun when necessary, but to replace one which may have met with an accident, or gone wrong in some way.

Not an uncommon incident in Africa when travelling on a river or lake is the swamping of a dugout, possibly by the attack of a hippo; so it is better when going on a lengthy water journey to have two boats and put half the essentials into each in case of a mishap. This prevents one being completely stranded.

If I was going back to hunt in Africa I would buy a couple of ·318 Mauser-action magazine rifles, for I believe this is a perfect size as an all round rifle; and notwithstanding the critics, who have not always had practical experience as a backing to their opinions, I am no believer in a heavy rifle which is usually somewhere in the rear when most wanted.

I think it will be a long time before the elephant is exterminated in Africa for there are still vast tracks of virgin country left. After all, the explorer who goes into the untrodden wilds only sees a small amount of country on either hand, and there are always immense spaces which he

does not visit. It is when a country becomes settled, and railways and roads made, that the game goes elsewhere; for it is constant noise and incessant interference which cause it to scatter and forsake its old haunts.

To conclude this chapter I give a list of native names for the elephant in different parts of Africa which may be useful to prospective hunters.

Chinyanja	Njobvu.
Chiyao	Ndembo.
Zulu (Ngoni)	Nkhlovu.
Chikunda	Mzou.
Swahili	Tembo. Ndovu.
Chisenga	Njovu.
Chibisa	Nzovu.
Chiwemba	Zofu.
Dinka	Aku.
Galla	Arib.
Turkana	Etum.
Sudani	Feil.
Haussa	Gewa.
Somali	Marodi.
Waganda	Njovu.
Kalahari (Bushman?)	Thloo.
Abyssinian	Zahun.

In addition to the above, the natives of Nyasaland, North-Western, and North-Eastern

RECENT ELEPHANT HUNTERS

Rhodesia, as well as the bordering country of Portuguese East Africa, have names for a tuskless male elephant as follows:

Chinyanja	Nyungwa.
Chikunda	Mowi.
Chiwemba	Tondo.
Zulu (Ngoni)	Kamgwara.
Chiyao	Nachuula.
Chibisa	Nachuula.

The Chikunda tribe have the following names to differentiate various elephants.

Golongwa—Males with tusks of about 20 lbs. which run with a herd of females.

Batwa—Bulls whose tusks form a single man's load (30 to 60 lbs. each).

Pinga—Bulls with tusks, one of which makes a load for two men.

Hurukazi—Collection of cow elephants, or their ivory.

CHAPTER V

THE IVORY OF THE ELEPHANT

WHEN nature planned the elephant it was an unfortunate circumstance for the animal that its ivory should incite the cupidity of man. Man himself has suffered because of this, for who has not read the grim story of the ivory caravans, mainly composed of low-caste Arabs, who seized or bought slaves to carry the tusks to the coast, whence they never returned. In Southern Africa the early traders were usually of British blood, though there was a sprinkling of Dutch, Germans, and Jews. These men usually brought their ivory to the coast or nearest rail-head in ox wagons so that there was not the horrible cruelty attached to the business that there was in the more tropical parts, where, on account of the tsetse fly, animal transport was impossible. Most of the old pioneer hunters traded in ivory, and on their inward journey the wagons would be loaded up with

trade goods such as cheap guns, powder, lead, beads, cloth, and copper and brass wire; all in demand by the aborigines of South Africa.

Roualeyn Gordon Cumming mentions in his well-known book, "A Hunter's Life in South Africa," how he used to trade with Sicomy the paramount chief of the Bechuanas at his kraal of Bamangwato. At first, Sicomy would give him three large tusks for a single musket, which Gordon Cumming says cost £16 for a case containing twenty of these inferior weapons. A gas-pipe type of gun worth 16s. was certainly not much to pay for say 120 lbs. of good ivory, as a good tusk in those days meant one of about 40 lbs. weight. The ivory was of the best quality, too, as it was probably the "soft" variety.

He remarks in his book that he felt annoyed when the price came down to two tusks for a gun; though he also mentions that he was making 3,000 per cent. on his trading, which he considered a fair profit!

It is interesting to read that ivory at that time (1850) fetched from £28 to £32 per cwt. in the London market. To-day a similar quality ivory would easily fetch £125 per cwt.

Many elephants were shot by the natives sent into elephant country by the Arabs and others, but the large native hoards were collected from animals killed in pitfalls, spear traps, by poisoned spears and arrows, and those found dead after being wounded or from old age. Elephants have to die some day, though I believe that an elephant will easily live to the age of 150 years. Doubtless when they feel that their days on earth are numbered they go to the most secluded spot they can find.

I have never believed in these so-called " elephant-cemeteries," for several reasons, which I shall attempt to explain.

The first reason is that when an elephant (or any beast) dies, the carcass is soon seen by the vultures which collect in numbers to feed on the meat. At first one bird will sight the corpse and will begin its long spiral descent which quickly attracts the other birds. The natives know this and are constantly searching the sky to notice these scavengers of the air, so that they are quickly directed to the scene to get the meat; and naturally, if the animal is an elephant, the tusks also. These belonged to the paramount chief of

the territory, before Europeans took charge of the most of Africa. If the elephant dies in thick cover the vultures are unlikely to spot it as they work almost wholly by eyesight; but other scavengers such as the lion, leopard, hyena and jackal scent it, and their grunts or howls are heard by the human inhabitants who are wonderfully adept in locating where sounds come from; so they find the meat soon afterwards and take it away. If the animal is an elephant the tusks are of course taken away.

That makes two sound reasons against elephants' tusks being found in any number; but there is a third.

Once in Northern Rhodesia I knew a man who had shot several elephants in Portuguese Territory, which was against the law of Portugal I suppose; although it was not against the natural sporting instinct of an elephant hunter.

My friend, not being able to dispose of the ivory, buried it in a hollow near a stream. He told me about it, so I asked him how long it had been underground and he said "several months." I replied that it was probably rotten, so we went out one evening with a hoe and a rifle, so as to

make his " boys " think we were going to look for a buck for the larder.

The tusks were underground, about three feet, and when we got the eight out there was not a sound one amongst the lot. Some had gone quite spongy and could be squeezed like a bit of india-rubber. They had lost all their value and were useless for anything, which was a disappointment to the " poacher " after his adventures in shooting the animals. So much for buried ivory!

But, notwithstanding this incident, there seems little doubt that tusks will occasionally remain in sound condition after being buried for many years. Possibly certain soils contain some chemical that preserves ivory; though it certainly was not present in the case I saw in Africa.

The old chiefs often kept ivory on the mud floors of their huts, but these buildings were dry. They may have buried it under the floor where it was dry from the constant fires kept going day and night.

No native with common sense would bury such a valuable substance as ivory in the open bush, for it would inevitably be stolen. I know of a headman who buried some tusks inside a cattle

kraal under a grass roof, and the soil was black and sodden with the droppings and urine of oxen. One of these tusks was blackish in colour just as if it had been dipped in wet soot. It looked rotten and valueless.

I have seen tusks which have come out of the thatch of a hut coloured a beautiful mahogany-red colour. In my big hut in a permanent hunting camp I made near the Bua River, Nyasaland, I covered the ceiling with some yellowish reeds. In a few weeks the acrid smoke of the wood fire had coloured the reeds the mahogany tone I have mentioned.

The reddish coloured tusks that reach the home market have probably been stored in this way. A heavy tusk, however, would be too weighty for storage in this manner as the light poles and thatch would break away and let it fall down.

Ivory is found to be gnawed by rats; and such tusks have likely been stored in the grass roofs of huts which often teem with the rodents, which live there, only descending to the floor at night or when there is quiet in the huts.

What disintegrates ivory most is a damp heat; and an Angoni near the Bua River told me that the

deceased Mpseni, the paramount chief of the Angoni tribe in that quarter, once tried to sell some buried tusks to Carl Weise (an old trader), but the latter would not trade because they had gone bad with damp. After that Mpseni (pronounced Impa-saini) used to keep his ivory, or most of it, on the floor of his large hut covered over with the skins of lions, leopards, and game. On this primitive seat he used to dispense justice to the members of his unruly race; for the Angoni were the terror of the surrounding tribes of South Central Africa.

I knew many of Mpseni's sons and grandchildren, and his chief wife lived near my camp, and whenever I shot game used to come and ask for meat, and always got it. She was a withered old hag, who in the past was probably instrumental in causing the death of many people.

Among Mpseni's sons I knew well Mameza, Makumbi, and Shauri. The latter used often to accompany me after game, and he told me much about life in the old days before the whites invaded the country, and brought in all sorts of irksome laws and restrictions. The natives were happier in these times when they were free to

settle their quarrels in the good old way with spears or knobkerries. However, if the Angoni are given to regretting the gory past, our presence has saved many of the smaller tribes from extinction; for the Angoni (known of old as the " Mazite "), like their cousins the Matabele, were a murdering gang of ruffians.

One of the men (an Angoni) who used to carry my cartridge bag and camera, told me that when his people were raiding the Achewa, and other small communities, they used to kill children and goats, and put the body of a child at the bottom of a big pot filled on the top with goat-flesh.

After they had left, the people who had bolted into the bush would return famished to eat the goat meat seasoned by the gravy of their offspring underneath. This was considered a great joke by the narrator, who looked quite an inoffensive and kindly specimen of humanity; which proves that looks are not always an exact index to character.

I often asked natives if they had ever found a large collection of tusks together in the bush, and they always replied that they had never done so.

Occasionally a single man who was the first to find a dead elephant might secrete the ivory by

burying it if he did not fancy giving it up to his chief; but not often, for he would have had an unhappy existence after such a circumstance was discovered. There are still many men walking about Africa without hands, ears, nose, and so on; these members having being cut off for theft or other native crimes

Women, too, will be seen horribly disfigured by mutilations. When the death sentence for bad crimes was pronounced by Mpseni it usually took the form of strangulation by binding the male or female to a tree with maluzi (native bark string). If death did not ensue before night, hyenas or a man-eating lion would finish the victim.

It would be unnecessary to try to describe all the uses to which ivory is put, but to mention a few, we have billiard balls, bangles, backs of brushes, napkin rings, knife handles, and so on. Even to-day, an immense amount of ivory is exported from Africa, and much of it reaches the London Docks.

There are a number of ivory merchants, and I have been fortunate in getting much information from the firm of Messrs. Lewis & Peat Ltd., of 6 Mincing Lane, London, E.C.3; about the trade

terms, qualities, prices, etc., of ivory. This is naturally specialized knowledge, and few people (including the African hunter of elephants) are likely to find such information in any work known to me. It may also be interesting to future generations to know the value of ivory in these times, for pamphlets and records get lost, and such information is more likely to survive in the form of a book.

I shall therefore quote, with Messrs. Lewis & Peat's permission, what they write in their pamphlet as follows:

"IVORY"

GENERAL INFORMATION

(*Revised to April*, 1923)

"For the benefit of merchants, traders, and shippers, we have the pleasure to set forth a few particulars and general information regarding ivory from a commercial point of view.

"It is always understood when referring to ivory that the tusk of the elephant is meant, as there are many inferior kinds of ivory such as

the walrus, hippopotamus or sea horse, wild boar, and the narwhal or species of whale, which inhabits the Arctic Regions, and produces a long straight horn, but grown spirally. The teeth of some whales are also ivory, though of small value.

"Africa is now practically the only country from which supplies are obtained. Very little comes from India. Large quantities are produced from Central and Northern Africa and the Soudan, of both 'hard' and 'soft' variety.

"From Abyssinia only small quantities are shipped each year—it is 'soft' ivory and of good quality.

"Regular shipments come from the East Coast of Africa, mostly from Zanzibar and Mombasa, which are the ports of shipment and trading centres for that portion of Africa including Uganda and British East Africa, now Kenya Colony.

"Fair supplies come from Mozambique, the quality of which is good and always 'soft.' Beira is the port of shipment and the ivory is procured from Rhodesia, and Portuguese East Africa.

"The greatest source of supply is, of course,

West and Central Africa, embracing the Belgian Congo, French Congo, Nigeria, Gaboon, and the Cameroons, and a little from farther south—Portuguese West Africa, of which Benguela is the port.

"The bulk of the West Coast and Central African ivory is of the 'hard' variety, although a certain quantity of 'soft' is always found, the quality of which is usually coarse and not so good as that from the East Coast, nor the 'soft' Egyptian and Abyssinian.

*"(1) It is perhaps not generally known that ivory for the most part is found dead in the jungle, and collected by natives and organized expeditions from the 'cemeteries,' so called because the herds of elephants which inhabit particular regions and wander round from place to place for water and food, are supposed to have chosen spots in which to die, and when these 'cemeteries' are discovered a good haul of ivory results. It is estimated that a larger percentage of ivory is now shot, than was the case some years ago, and may even amount to 50 per cent.

* Paragraphs numbered will be referred to by the author further on.

"(2) Although the elephants may have died many years before, the tusks remain quite sound and good, except perhaps where the ground is very damp or swampy, when the ivory would become stale.

"(3) There is a story of elephants having been bombed from the air. It happened during a lull in the military operations during the Great War in 'German' East Africa, where some young airmen evolved the idea of bombing the elephants and afterwards collecting the tusks. They cast lots and the deed was done, the bomb falling on the leader of a herd. The result was not highly satisfactory from a commercial standpoint, for not only were a certain number of elephants blown to fragments, but the largest piece of ivory found was no bigger than one's hand.

Mammoth Ivory.

"(4) A certain quantity of Mammoth ivory is constantly being found in Northern Siberia in a more or less perished condition and of little or no value. Occasionally, however, there are a few tusks in a fair state of preservation which may be of some commercial value, or perhaps of interest

as specimens. The skull of a Mammoth was recently discovered, and sold in the London auctions. It was in a perfect state of preservation, and excited keen interest.

"*Soft*" *and* "*Hard*" *Ivory.*

"(5) It is extremely difficult to explain the difference between 'hard' and 'soft' ivory. The colour, size, and shape do not help to determine whether a tusk is 'hard' or 'soft.' The experienced eye can tell from the general appearance, although occasionally even appearances are deceptive, and only after cutting the tusk for manufacturing purposes can the true nature be ascertained.

"The country of production is a great guide as to whether ivory is 'hard' or 'soft.' As a general rule the east coast of Africa produces 'soft' ivory, and that from the west coast is 'hard,' whilst in Central Africa, Nigeria, and Egyptian Soudan, both 'hard' and 'soft' are found.

Ivory from:

"Abyssinia and Mozambique is always 'soft.'

Gaboon and Cameroons is always ' hard.'

Central Africa, Congo, Niger mostly ' hard ' but sometimes ' soft.'

Egyptian Soudan, Mombasa, and Zanzibar mostly ' soft ' but some ' hard.'

Very small quantities of ivory come from Siam, which is of a different nature, and cannot be described as ' soft,' although it is not really ' hard ' like the African.

Male and Female.

" The tusks of the male elephant are easily distinguished by the growth and length of the ' hollow.' The male tusk may grow to very large dimensions—over 8 feet long and up to 160 lbs. weight, which is of course exceptional, whilst the female tusk seldom exceeds 5 feet in length and about 30 lbs. in weight. The ' hollow ' of the male tusk may extend to half or three-quarters of the whole length, and the tusk is much wider at the base in proportion as compared with the female tusk, which is ' close grown ' with a very short hollow, besides being practically the same diameter for the greater length of the tusk and tapering very gradually to the point.

Assortment and Sizes.

" Tusks may be classified as follows:—

Very large and exceptional	100 lbs. each and over
Large	50 to 100 lbs.
Medium	30 to 50 ,,
Bangle sizes . . .	10 to 30 ,,
Scrivelloes (close and wide)	1 to 14 ,,

Bangle Tusks

" Are so called because they are a suitable size and shape for cutting pieces of certain dimensions for the manufacture of bangles. They must be quite sound, not cracked, diseased, or in any way defective.

Scrivelloes

" Are the small tusks under 15 lbs. average.

Close Scrivelloes

Are the small female tusks under 15 lbs. average, and less than 2 inches in diameter at the end of the hollow. (Half close—the same with a longer hollow.)

Wide Scrivelloes

" Are the small tusks of the male elephant under 15 lbs. average.

Billiard Ball Scrivelloes

" Are the female tusks either ' hard ' or ' soft ' suitable for the manufacture of billiard balls. They must be over $2\frac{1}{4}$ inches in diameter at the end of the hollow, and may be up to $3\frac{1}{2}$ inches. The average weight does not matter, but the tusk must be perfectly sound.

" Bagatelle balls are made from the same description of tusk, which is 2 to $2\frac{1}{4}$ inches in diameter.

Round and Flat.

" These terms are applicable to any size tusks, but more especially to bangles and scrivelloes. A tusk is said to be ' round ' if the difference between the greater and lesser diameter does not exceed 20 per cent. at any one point of the tusk; therefore a tusk would be called ' flat ' if the greater diameter is more than 20 per cent. of the lesser diameter.

Defects and Diseases.

" There are many ways in which an ivory tusk may be defective apart from being cracked, and it is quite exceptional to find a perfectly sound tusk. The value naturally depends largely upon

the condition, and extent of the damage. Some ivory, especially Egyptian, is more liable to become cracked than other kinds such as Congo, and this may be accounted for by a sudden and great change of temperature.

" Cracks usually occur in the hollow and may extend any distance up the inside of the tusks, without showing on the outside at all, except in the case of very bad cracks, which may extend the whole length. Minor cracks or ' skin shakes ' are very deceptive as they may be more or less serious and go through the skin into the ivory.

" There are many forms of disease which depreciate the value of a tusk according to how far it has eaten into the ivory. The commonest, but the most difficult to detect, is a disease or growth in the point of the tusk known as ' Beany point,' or if bad, a ' Diseased point.' The growth usually has its root at the very end of the hollow and grows through the solid part of the tusk up to the point, where it shows itself in the shape of discoloured spots. It may grow straight up the heart or extend in all directions, and it is almost impossible to judge from outward appearance the extent of the growth and consequent depreciation.

" Diseases inside the hollow or on the outside of the tusk are more noticeable and of quite a different character, more in the nature of decay.

" Bullets are sometimes found embedded in a tusk without any outward sign or mark, but as a rule a bullet causes the ivory to crack or else decay. An ancient metal spear-head was once discovered firmly fixed in the centre of a fair sized tusk, and if proof were needed that there was no sign or mark on the outside indicating where or how the spear entered, it was amply provided for by the damage done to the saw when cutting the tusk in halves.

" (6) There are many other ways in which ivory may be defective; some tusks are gnawed by animals, such as the rat; whilst a more common sort of defect is ' staleness.' A stale tusk may only be affected on the outside skin or coat or it may be so bad as to be quite ' perished,' so that the value is estimated as to the degree of staleness.

Comparative Values.

" There has always been a steady demand for

ivory, and although prices fluctuate, the market is normally regulated by supply. Towards the end of the year 1919, and during the first few months of 1920, supplies fell off, with the result that prices were quickly forced up to abnormal heights, chiefly by what appeared to be speculative buying in addition to the general trade demand. In consequence of this it was not long before large shipments were brought forward, and ivory from unexpected and unusual sources, was soon on the spot. Prices therefore, after being forced up about 300 per cent. in less than six months, just as rapidly declined 150 per cent.

" It may be assumed that as a general rule the larger the tusk, the more valuable, i.e., taking a tusk weighing 50 lbs. at the price of say £50 per cwt., the value of a tusk weighing 100 lbs. would probably be about £65 per cwt., but this is not always the case. Likewise, the smaller the tusk, the less valuable; so that on the same basis tusks weighing 15-20 lbs. would be worth about £35-£40 per cwt., and scrivelloes lower in proportion. There are two outstanding exceptions to this way of estimating relative values, viz: bangle tusks and billiard ball scrivelloes,

which are governed by a special demand for these particular sizes.

Chart.

" The following chart shows the movement in the market for the last 16 years as compared with the stock in London at the end of each year.

" The highest price indicated for each year (and the highest and lowest during the year 1920) are for 'hard' and 'soft' tusks respectively, of an average weight between 50 and 100 lbs.

Public Sales,

" The Public Sales in London are held every three months beginning in January, and are attended regularly by buyers from America, the Continent, and Home trade.

" The ivory is landed and stored at the Ivory Floor, London Docks, and laid out for inspection before the auctions take place.

Charges, etc.

" Dock charges and sale expenses amount only to a small proportion of the total value, as will be seen in the *Pro forma* Account Sales following."

The following *Pro forma* Account Sales gives full details of charges, etc., but the prices and assortment of Tusks are only approximate.

Ref. No. 125.

6 MINCING LANE,
LONDON, *April*, 1923.

Pro forma ACCOUNT SALES of 150 *Tusks Soft Sound Ivory sold at Public Sale by Order and for Account of "whom it may concern."*

per LEWIS & PEAT, LTD., *Brokers.*

PROMPT 1 MONTH.

Mark	Lots	Tusks	Lbs.		Cwt.	Qrs.	Lbs.		Per Cwt.					
	2	average	100	=	1	3	4	@	£115	205	7	2		
	3	,,	80	=	2	0	16	@	£112	240	0	0		
	4	,,	60	=	2	0	16	@	£110	235	14	3		
	4	,,	50	=	1	2	22	@	£108	183	4	3		
	5	,,	40	=	1	3	4	@	£105	187	10	0		
	8	,,	30	=	2	0	16	@	£95	203	11	5		
	10	,,	20	=	1	2	22	@	£85	144	3	11		
	10	,,	15	=	1	1	10	@	£70	93	15	0		
	14	,, (B.B. Scrivs. 2½" a 3')	15	=	1	3	14	@	£160	300	0	0		
	20	,, (Close Scrivs.)	8	=	1	1	20	@	£55	78	11	5		
	30	,, (Wide Scrivs.)	6	=	1	2	12	@	£50	80	7	2		
	40	,, (Close & Wide)	3	=	1	0	8	@	£40	42	17	2		
					20	2	24						1,995	1 9
	150													

Discount 2½ per cent.	...	49 17 6	
Brokerage 1 per cent.	...	19 19 0	
*Dock Charges about	...	7 10 0	
Fire Insurance, 1 month	...	1 10 0	
			78 16 6
			£1,916 5 3

* Port rates, 8s. per ton, landing, 1s. 4d. per cwt. 6½% opening for Customs } according to labour performed.
stripping, sorting and lotting for sale; rent, 1d. per cwt. per week, plus 55% }
Sale expenses 4s. 6d. per lot.
Draft allowance 1 lb. per lot; if over ¼ cwt.
Freight as per Tariff.

In a report on the January sales in 1924 (Lewis & Peat Ltd.) is a list of the stock of ivory in all hands on the 22nd January in each of the following years:

1919	. .	115½ tons
1920	. .	88 ,,
1921	. .	132 ,,
1922	. .	99½ ,,
1923	. .	92¼ ,,
1924	. .	105 ,,
		632¼ ,,

. . . . . .

This shows that an enormous amount of ivory is still available; but it cannot go on for ever, and I should think that it might be an excellent speculation to buy up ivory with the almost certain prospect of a rise within the next one or two decades. As ivory is not an essential like food stuffs, this would be quite a legitimate way of making money for anyone who could afford a long wait for any return on his investment.

It will be noticed by the reader that when quoting from Messrs. Lewis & Peat's pamphlet on ivory I have marked numbers against certain

clauses or paragraphs. This I will say something about and will begin with (1) " Cemeteries." I have tried to explain before that this can only be supposition without any authentic proof whatever. As I have said, the vultures by day and nocturnal animals at night would soon attract the native's attention to the meat of a dead elephant, and the tusks would also be taken.

(2) I cannot believe that tusks will remain sound for many years in a damp and hot tropical climate. I gave an example of seeing some dug up after being a few months in damp ground and they had gone quite rotten.

Certain types of soil may contain chemicals which act as a preservative for many years. In dry countries such as Egypt and the Soudan I believe ivory might keep sound for some time, except that it would most likely crack badly.

(3) The story of the young airmen bombing elephants is a most unsporting affair; and it is pleasant to know that the elephant's tusks were blown to fragments, as that should be a deterrent to other experiments of this kind.

(4) Mammoth tusks from Siberia have probably lain at the bottom of a frozen crevasse or frost

bound swamp into which the animals have fallen or sunk and so have been preserved to a certain extent, though many crumble on discovery and are valueless.

(5) It would be interesting to know the causes which make the elephant produce "hard" and "soft" ivory. Personally, I believe it has something to do with the food eaten, which may contain chemicals which affect the ivory. Again, it may be something in the water which they drink. There is some such reason, for no one would imagine that one variety can grow "hard" and another "soft" quality ivory. The extraordinary thing is that it is possible to get "hard" tusks in the same district as "soft." Perhaps it may have something to do with the digestive organs in different elephants. It is certainly a problem!

(6) Rats gnaw tusks when they are kept above ground and in the thatch of huts. The grass on the roofs of native huts is always infested with these rodents which come down to feed at night, or when there is quietness in the huts in the daytime.

If a carcass should lie in the bush for long,

hyenas and jackals may mark the ivory to get at the nerve matter in the hollows.

In two weeks or so tusks will draw out with natural decomposition of the tissues.

. . . . . .

I now give a copy of Lewis & Peat's Ivory Sales Report for January, 1924, as it may be instructive to those who take an interest in the commercial values of ivory:

ZANZIBAR AND EAST INDIAN.

17½ tons offered and sold.

Soft.

Tusks—		At per cwt.
Average lbs.	£	s. £ s.
96 a 117	sound and nearly sound	...131	0 a 132 0
80 a 89	,, ,, ,, ,,	...117	0 a 123 0
70 a 79	,, ,, ,, ,,	...116	0 a 132 0
60 a 69	,, ,, ,, ,,	...110	0 a 130 0
50 a 59	,, ,, ,, ,,	...113	0 a 131 0
40 a 49	,, ,, ,, ,,	...110	0 a 128 0
29 a 39	,, ,, ,, ,,	... 98	0 a 114 0
80 a 99	sli. def.	...109	0 a 123 0
70 a 79	,, ...	...108	0 a 114 0
60 a 69	,, ...	...101	0 a 111 0
50 a 59	,, ...	...100	0 a 114 0
40 a 49	,, ...	...103	0 a 112 0
20 a 39	,, ...	... 87	0 a 97 0

Tusks—			At per cwt.	
Average lbs.		£	s.	£ s.
70 a 99	def.	... 95	0 a	104 0
60 a 69	,, ...	... 92	0 a	96 0
40 a 59	,, ...	... 91	0 a	96 0
31	,, ...	... 81	0	
Bangles—				
21	... ...	... 89	0	
12	... ...	... 69	0	
Billiard Ball Scrivelloes—				
	Ins. Dia.			
16 a 19	$2\frac{3}{4}$ a 3 sound ...	...161	0 a	171 0
13	$2\frac{1}{2}$,, ...	...153	0	
11 a 13	$2\frac{3}{8}$ a $2\frac{5}{8}$,, ...	...134	0 a	150 0
9 a 12	$2\frac{3}{8}$,, ...	...135	0 a	143 0
8	$2\frac{1}{4}$,, ...	...111	0	
9 a 10	2 ,, ...	... 98	0 a	99 0
Common Scrivelloes—				
6	wide sound	... 49	0	
7	close and wide sound	... 59	0	

Hard.

Tusks—				
80 and 99	Fine quality	... 95	0 a	96 0
50 a 75	sound and nearly sound	... 79	0	
40 a 49	,, ,, ,, ,,	... 77	0 a	80 0
30 a 39	,, ,, ,, ,,	... 65	0 a	72 0
80 a 103	sli. def.	... 78	0 a	84 0
43 a 60	,, ...	... 70	0 a	72 0

Soft Cut Ivory.

Billiard Ball Points—						At per cwt.	
Average lbs.	Ins. Dia.			£	s.	£	s.
17	3	sound	...	...219	0		
14	$2\frac{3}{4}$	,,	...	...229	0		
10 a 11	$2\frac{5}{8}$ a $2\frac{7}{8}$	,,	...	...214	0	a 222	0
12	$2\frac{5}{8}$	,,	...	...220	0		
11	$2\frac{1}{2}$	,,	...	...196	0	a 243	0
11	$2\frac{3}{8}$	,,	...	...224	0		
5 a 8	$2\frac{1}{4}$	,,	...	...153	0	a 178	0
8 a 11	$2\frac{3}{8}$ a 3	sli. def.	...	...178	0	a 186	0
4 a 8	$2\frac{1}{4}$	,,	...	...103	0	a 124	0
Bagatelle Points—							
	Ins. Dia.						
6 a 7	2	good ...	...	...103	0	a 120	0
3		fair ...	...	... 90	0		
With Ball Points—							
3 a 7	good ...	...	...	...120	0	a 155	0
4 a 6	fair ...	...	...	... 90	0	a 112	0
Mixed def. Points—							
3 a 8	... ...	...	...	... 54	0	a 89	0
Small Points—							
4	... ...	...	...	... 56	0		
Cut Hollows—							
9 a 12	thick ...	...	...	... 95	0	a 99	0
7 a 8	medium	...	...	... 82	0	a 92	0
6 a $6\frac{3}{4}$	,, ...	...	...	... 73	0	a 75	0
4 a 5	thin ...	...	...	... 54	0	a 70	0

ABYSSINIAN.

1¼ tons offered and sold.

Soft.

Tusks—			At per cwt.	
Average lbs.		£	s.	£ s.
89	sound or nearly sound	...115	0	
43 a 61	,, ,, ,, ,,	...111	0 a	113 0
26 a 39	,, ,, ,, ,,	... 94	0 a	105 0
62 a 64	sli. def.	...103	0 a	107 0
50	,, ...	... 95	0	
36 a 38	,, ...	... 90	0	
Bangles—				
21	sound	... 89	0	
Billiard Ball Scrivelloes—				
	Ins. Dia.			
23	3	...149	0	
13 a 15	2⅜ a 2¾	...145	0 a	150 0
13	2¼	...126	0	
16	2⅜ a 2⅞ sli. def. ...	...130	0	
Bagatelle Scrivelloes—				
10	2	...100	0	
Scrivelloes—				
5 a 6	close and wide sound ...	... 44	0	
4 a 6	,, ,, def. ...	... 36	0	

MOZAMBIQUE.

6¾ tons offered and sold.

Soft.

Tusks— Average lbs.				£	At per cwt s.		£	s.
	120	sound or nearly sound		...128	0			
60	a 82	,, ,, ,, ,,		...115	0	a	121	0
50	a 59	,, ,, ,, ,,		...109	0	a	121	0
40	a 49	,, ,, ,, ,,		...109	0	a	125	0
30	a 39	,, ,, ,, ,,		...103	0	a	119	0
20	a 29	,, ,, ,, ,,		... 90	0	a	100	0
60	a 105	sli. def.		...100	0	a	114	0
50	a 59	,, ...		...104	0	a	106	0
40	a 49	,, ...		...100	0	a	108	0
30	a 39	,, ...		... 95	0	a	105	0
20	a 29	,, ...		... 84	0	a	92	0
	75	defective		... 96	0			
30	a 49	,, ...		... 81	0	a	91	0
	21	,, ...		... 61	0			
Bangles—								
19	a 31	sound		... 88	0	a	108	0
16	a 17	,, ...		... 77	0	a	89	0
9	a 13	,, ...		... 63	0	a	74	0
14	a 18	flat		... 70	0	a	85	0
9	a 13	,, ...		... 60	0	a	62	0

Billiard Ball Scrivelloes—					At per cwt.	
Average lbs.	Ins. Dia.		£	s.	£	s.
18	$2\frac{7}{8}$	sound ...	...156	0		
11 a 14	$2\frac{1}{2}$	,, ...	...137	0 a	158	0
13 a 15	$2\frac{3}{8}$ a $2\frac{3}{4}$	,, ...	...147	0 a	151	0
12	$2\frac{3}{8}$	,, ...	...143	0		
13 a 16	$2\frac{3}{4}$ a $2\frac{7}{8}$	sli. def. ...	...120	0 a	134	0
Bagatelle Scrivelloes—						
9	2	good ...	...103	0 a	107	0
8 a 10		fair ...	... 93	0 a	99	0
Scrivelloes—						
4	wide, sli. def.	...	... 50	0		
6 a 7	close sound ...	...	... 50	0 a	53	0
7	close & wide sound ...		... 56	0		
4 a 6	,, ,, ,,	...	... 41	0 a	49	0
8	close & wide def.	...	... 44	0		
3 a 4	,, ,, ,,	...	... 35	0 a	36	0

EGYPTIAN.

$10\frac{1}{4}$ tons offered and sold.

Soft.

Tusks—			At per cwt.	
Average lbs.	£	s.	£	s.
60 a 69 sound and nearly sound	...112	0 a	128	0
50 a 59 ,, ,, ,, ,,	...108	0 a	116	0
40 a 49 ,, ,, ,, ,,	...107	0 a	119	0
30 a 39 ,, ,, ,, ,,	...101	0 a	114	0
27 ,, ,, ,, ,,	... 97	0		

Tusks— Average lbs.				£	At per cwt. s.		£	s.
70 a 76	cracked clean or sli. def.			...102	0 a		108	0
60 a 69	,, ,, ,, ,,			... 98	0 a		108	0
50 a 59	,, ,, ,, ,,			...101	0 a		106	0
44	,, ,, ,, ,,			...101	0			
30 a 39	,, ,, ,, ,,			... 95	0 a		100	0
19 a 29	,, ,, ,, ,,			... 90	0 a		94	0
18 a 26	cracked and def.	...		... 57	0 a		75	0
Bangles—								
19 a 33	sound ...	...	...	... 90	0 a		104	0
14 a 15	,, ...	...	...	... 80	0 a		84	0
10 a 13	,, ...	...	...	... 64	0 a		69	0
16 a 17	flat ...	...	...	... 78	0 a		88	0
11	,, ...	...	...	... 69	0			
Ball Scrivelloes—								
	Ins. Dia.							
15 a 25	2½ a 3	sound	...	...140	0 a		155	0
13	2½	,,	...	...160	0			
11 a 12	2⅜	,,	...	...125	0 a		141	0
11	2¼	,,	...	...111	0			
Bagatelle—								
10	2	good	...	...103	0			
7 a 8		fair ...	...	... 85	0 a		87	0
Scrivelloes—								
7	wide sound ...		...	... 48	0			
10 a 14	,, def.	...	...	... 35	0 a		50	0
5	close ...	...	...	... 44	0			
6	close and wide sound			... 48	0 a		49	0
6	close and wide def.			... 39	0 a		42	

Hard.

Tusks— Average lbs.				£	At per cwt. s.		£	s.
128			sound and nearly sound	90	0			
60 a 85	,,	,,	,, ,,	73	0	a	78	0
50 a 59	,,	,,	,, ,,	73	0	a	77	0
40 a 49	,,	,,	,, ,,	70	0	a	71	0
33 a 39	,,	,,	,, ,,	68	0	a	73	0
27	,,	,,	,, ,,	65	0			
98 a 116	sli. def.		... ...	77	0	a	82	0
38 a 42	,,	...	... ...	65	0	a	68	0
20 a 29	,,	...	... ...	57	0	a	60	0
30 a 39	def.	...	... ...	49	0	a	56	0
17 a 20	,,	...	... ...	38	0	a	43	0
Bangles—								
15 a 33	sound	...	... ...	54	0	a	67	0
21 a 31	flat	...	... ...	65	0	a	69	0
10 a 13	,,	...	... ...	50	0	a	55	0
Scrivelloes—								
7	wide sound		... ...	48	0			
6	close	,,	... ...	42	0			
11 a 14	close and wide sound			50	0			
5 a 6	,,	,,	,, ,,	40	0	a	41	0
5 a 7	close and wide def.			30	0	a	34	0

THE IVORY OF THE ELEPHANT

WEST COAST AFRICAN.

Congo, Cameroon, etc.

6 tons offered and sold.

Hard.

Tusks— Average lbs.				£	At per cwt. s.		£	s.
81	sound or nearly sound		...	84	0	a	87	0
60 a 74	,,	,,	,,	... 75	0	a	82	0
50 a 59	,,	,,	,,	... 73	0	a	79	0
40 a 49	,,	,,	,,	... 75	0	a	85	0
30 a 39	,,	,,	,,	... 69	0	a	73	0
19 a 23	,,	,,	,,	... 58	0	a	63	0
90	slight defective		...	... 73	0			
50 a 69	,,	,,	...	... 69	0	a	73	0
40 a 46	,,	,,	...	... 65	0	a	66	0
30 a 36	,,	,,	...	... 60	0	a	65	0
16 a 23	def. ...	...	...	... 48	0	a	49	0
Bangles—								
16 a 40	sound	...	...	... 61	0	a	74	0
10 a 14	,,	...	...	... 54	0	a	56	0
20 a 25	flat ...	...	...	... 63	0	a	71	0
14	,, ...	...	...	... 53	0			
Billiard Scrivelloes—								
Ins. Dia.								
10 a 18	$2\frac{1}{2}$ a $2\frac{5}{8}$ sound		...	...110	0			
Common Scrivelloes—								
5 a 7	wide sound ...	...	...	... 38	0	a	39	0
4 a 6	close ,, ...	...	...	... 47	0	a	51	0
5 a 6	close and wide sound		...	... 35	0	a	39	0

Soft.

Tusks—				At per cwt.			
Average lbs.				£	s.	£	s.
60 a 89	sound ...	...	...	...116	0 a	120	0
50 a 59	,, ...	...	...	...116	0 a	119	0
40 a 49	,, ...	...	...	...104	0 a	117	0
30 a 39	,, ...	...	...	...100	0 a	105	0
87 a 92	slight defective		...	...111	0 a	116	0
60 a 69	,, ,,		...	... 99	0 a	109	0
31	,, ,,		...	... 91	0		
31 and 41	defective	...	...	... 80	0		
Bangles—							
16 a 28	...	...	...	... 89	0 a	91	0
13 a 15	...	...	...	... 71	0 a	84	0
9	flat ...	...	...	... 61	0		
Billiard Ball Scrivelloes—	Ins. Dia.						
11 a 16	$2\frac{5}{8}$ a $2\frac{3}{4}$	...	...	...125	0 a	131	0
10	$2\frac{1}{4}$	...	...	...106	0		
7 a 8	2	...	...	... 79	0 a	86	9
Common Scrivelloes—							
6	wide ...	...	...	... 50	0		

To conclude, I will give some details about the heaviest and longest tusks known. The heaviest tusk yet recorded is one in the Natural History

Museum at South Kensington, which weighs 226½ lbs., and measures 10 feet 2½ inches on the curve, and 24¼ inches in circumference. It is believed to have come from British East Africa.

The longest pair of African elephant tusks went to the American National Collection, and the longest of the two measured 11 feet 5½ inches on the curve, and 18½ inches in circumference. The pair weighed 293 lbs., and they also came from British East Africa.

Female elephants grow much smaller tusks than the males, and the best I have read of was one which belonged to the late Arthur H. Neumann. In his book "Elephant Hunting in East Equatorial Africa" he says it was 6½ feet long, 12½ inches in girth, and weighed 36 lbs.

While I am writing on elephants I may note that the heaviest Indian male's tusks are: 8 feet 9 inches on curve, 21⅞ inches circumference, 161 lbs. weight; 8 feet 6½ inches on curve, 22 inches circumference, 160 lbs. weight. They came from the Western Terai, India, and belong to H.M. the King.

These tusks are most remarkable, for the Indian species usually grows much smaller ivory than the African race. A few pairs have been recorded from 70 to 90 lbs. each, but even these are exceptional.

Besides the tusks, the tail and feet make nice trophies, and the latter can be utilized for stick stands, flower-pot holders, coal-scuttles, seats, and so on.

Probably several centuries will come and go before the African elephant is exterminated, for there are still vast tracts of country which are unlikely to be settled for a long time.

If the regulations continue to only allow the shooting of the larger bulls and go on preserving the cows, the average weight of the ivory is bound to decrease; for when nothing but immature males are left for the continuance of the animals this will affect the health of the species.

The herds of female elephants will also prove an increasing menace to the native's crops and the plantations of white settlers on the boundaries of wild countries, where the animals exist in numbers.

Probably it will be found necessary to allow the females to be shot. If so, a smaller charge should be made for them as their ivory weighs so little, though it is more valuable pound for pound, than is that of the males.

CHAPTER VI

THE DANGERS OF HUNTING ELEPHANTS, AND OTHER GAME

WHETHER the elephant, rhinoceros, buffalo or lion is the most dangerous animal to tackle, is, like everything else, largely a matter of opinion.

There is little doubt that the rhinoceros should be eliminated from the list because few men have been killed by them, though a number have been badly injured.

In Nyasaland and Northern Rhodesia the only fatal accident which was caused by a rhino which I have heard of was when Mr. D. D. Dobson, a magistrate at Ngara, in Nyasaland, was killed in 1916 by a rhino which attacked him, seemingly unprovoked by a wound, and gored him so badly that he died the following day.

Now Ngara is not very far from the place where the late Major (then Captain) C. H.

Stigand was also severely injured by one of these animals. It came for him unwounded, and as I have mentioned previously, gave him a nasty wound in the chest. I therefore think that the one that came for Stigand was probably the animal which killed Dobson. Dobson was a famous Oxford Rugby "Blue," and very popular in Nyasaland. I lived near him for a year or so when he was the collector at Fort Manning, and he was one of the best men amongst the Administration officials of his time.

These are the only cases of a rhino proving dangerous that I heard of in Nyasaland or Northern Rhodesia, but the animal is not particularly plentiful there, nor much hunted, compared with the elephant.

The lion is fairly numerous in these countries, but very difficult to find, though I heard of two deaths after a mauling from lion in North-Eastern Rhodesia. One was that of a Mr. Johnstone who was killed by a lion near Lake Tanganyika.

Another case occurred in 1915 when a young man named Norman Sinclair wounded a lioness, which attacked him. His rifle was knocked out of

his hand and he pulled out a knife and stabbed the animal several times in the neck. The lioness died from the effects of the bullet wound and stabs, and her victim succumbed to blood-poisoning on the following day. Doubtless there may have been other cases of deaths from lions in the country I write of, but if so I did not hear of them. I refer to whites not natives.

In British East Africa (now called Kenya Colony) many more deaths have been caused by lions than by elephants, for the simple reason that the former animals are much more hunted. I believe there are quite a number of graves in the cemetery at Nairobi of men who succumbed to the mauling of a lion.

The only death from a buffalo in Northern Rhodesia that I heard of was that of a cotton planter named Crosby, who hit a bull buffalo near the Mlembo river, and followed it into thick cover. I heard afterwards that his rifle was slightly out of order as it jammed frequently, so it was rather a reckless proceeding to follow an animal like a wounded buffalo with such an unreliable weapon. Crosby came on the buffalo at close-quarters when going round a large ant-

hill, and it immediately went for him before he could do anything to stop it with his rifle. The buffalo knocked him down and killed him, and when his body was recovered it was found to be horribly mutilated with hardly a whole bone in his body.

A lion or elephant may leave his enemy quickly, but when a buffalo gets him down he often spends some time in smashing his victim.

Another man who was badly hurt by a bull buffalo in Portuguese East Africa was De Fries, who was so damaged that it took him a long time to get about again. He had a terrible time until he could get to medical aid, and suffered great pain when being carried to Fort Jameson.

Selous was once knocked off his horse by a buffalo; and for a wonder the buffalo went off after giving him one prod with its horns which Selous managed to escape.

Again he was knocked off his horse by an elephant, landing under its chest, and with great difficulty contrived to drag himself clear and crawl out, for the elephant's body was pressing him down.

He had some other narrow escapes which can

be read in his books; but, as I have before mentioned, the late Major C. H. Stigand had the most wonderful adventures with wild animals of any man I ever heard of. To be badly mauled by a rhinoceros, lion, and elephant fortunately does not come within the experience of all hunters; and Stigand owed his recovery to the fact that he was a remarkably strong man with a splendid constitution.

I have mentioned already his escapes from a rhino and lion, but did not say much about the one with the elephant in the Lado Enclave, Soudan.

An elephant had come to raid some native crops, and Stigand, not wishing to shoot it, had gone without a rifle—rather a reckless proceeding.

This elephant, I believe, had probably been wounded by a white man or a native, and was in a nasty frame of mind; for as soon as it saw Stigand it charged him and knocked him down. It drove one of its tusks through the fleshy part of his thigh and then picked him up and threw him some yards through the air. One account I read said twenty yards, but I doubt if it was so far as that. Having flung him away, the animal again

came for him; but Stigand, knowing it was his last chance, kept still, and the elephant, after smelling him with its trunk ran away and left him.

As he had received a very severe wound he had to come home for treatment, but after some time recovered his health and strength. During the years he lived in Africa he seems to have gloried in risks. Whether all were justifiable is a question I need not discuss, except that it would be good advice to the beginner to say that it is best when going near dangerous animals to be prepared for any eventuality, as it is impossible to foretell what a beast will do under the circumstances.

That is why it is a mistake to be dogmatic about the habits of animals, for one will run away and another do just the opposite. Theories, even after a great experience of hunting, may therefore be upset by certain incidents which are not always agreeable.

When I was living in Nyasaland and Northern Rhodesia I heard of the deaths of eight white men and several natives caused by elephants. At the moment I can recollect the names of six, and have forgotten the names of the other two.

Those killed were Johnstone, Shaw, Goddard, Yule, Tilden, and Schmarsow, a German.

Johnstone was killed not far from the Luangwa River by a bull he had wounded with a powerful ·577 black powder Express rifle. It charged him but he failed to turn or stop it, and it knocked him down.

A few weeks afterwards I was present when the natives who had been with him gave evidence. His kit was brought in by his "boys," and the tusks of the elephant, one of which had been smashed to splinters, as the animal in killing Johnstone drove its tusks clean through his body and hit the hard ground, or a rock, underneath. The ivory was all stained with blood from the unfortunate hunter, who I believe was instantly killed by the infuriated animal. Johnstone was buried close to the Government Station of Nawalia, and I took a photograph of the grave, in 1905.

Not far from where Johnstone was killed, a postal official named McNeill had a native killed by a wounded bull which smashed him up badly.

Shaw was a young officer in the King's African Rifles, and I never heard the exact details of his

death except that he was killed by the first elephant he had seen.

Goddard, on the other hand, had killed 110 elephants when the 111th got him. I heard that he had an idea that if he did not stop shooting elephants the next would do for him, and it did.

James B. Yule had been in Northern Rhodesia for many years and had shot a number of elephants and other game. He served under Sir H. H. Johnston when he was H.M. Commissioner of Nyasaland, and was a man of great experience. In May, 1914, he wounded an elephant which at once charged him with a scream, knocked him down and perforated him with one of its tusks.

He lived until next day, and when he was dead his " boys " carried him back to his farm, where he was buried. In their testimony they affirmed that the elephant, after wounding Yule, seized his rifle and threw it into the bush; which sounds rather improbable though it is possible.

Tilden was an American who came to Northern Rhodesia to start cotton planting, but had the ambition to shoot an elephant. He wounded one and it attacked him, and he died from the injuries

received. I never had the full details except the bare fact that he had been killed by his first elephant.

Schmarsow was a German who lived, I think, at Chiromo in Nyasaland. I believe he had shot a few elephants and a good many other animals.

He had gone to Mashinjiri, a place I know well, to look for elephants as they often used to roam round that part. It seems he had got up to a herd composed only of females which became frightened and ran off. Schmarsow and his hunter followed and came on a bull, which he had not seen before, and close to it a cow with a calf.

He is said to have shot at the bull with a ·400 cordite rifle, missed it and wounded the cow on the trunk. Another shot seems to have missed and the animals made off. Schmarsow followed and climbed an ant-hill, but the cow, which had stopped, apparently saw him, for she charged at once; and Schmarsow instead of shooting ran for some thick cover about fifty yards away.

The native "boy" with him said afterwards

that the cow rapidly overtook the hunter, catching him up within thirty yards. She shot out her trunk, seized him by the waist, and dashed him to the ground. Then she drove her tusks through him, and the "boy," who was watching from some cover in which he was crouching, said that she seemed to thrash him on the head with her trunk in her rage.

After spending some minutes smashing him about, she ran off, leaving a piece of her tusk 27 inches long sticking in the victim's body, as she had broken it when she drove it through the body into the baked ground.

When the elephant had gone, the boy who had seen the catastrophe went with one or two others to their master's body, but found him dead. Schmarsow's remains were buried in Blantyre Cemetery.

There is little doubt that Schmarsow lost his life by running away directly in front of the elephant, for that alone is enough to make an irascible animal charge. The only thing to do in such a case is to shoot and keep on shooting as long as a cartridge remains in the rifle. That is a very good reason why a magazine weapon

holding five rounds is infinitely more reliable than a double or single-loader rifle.

I have a habit of keeping cuttings from *The Field* and other newspapers about incidents of this kind connected with African game, and so I have quite a number of articles dealing with accidents to big game hunters.

One of these recounts the death of a Mr. R. P. Fuller Maitland who was killed by an elephant in the Baringo District, British East Africa, after putting eight bullets into the animal.

There is a fact, which others and I have written on, that if the first bullet does not have a fatal effect, an animal (be it an elephant, or anything else) may take a number of shots without apparently seeming to feel them in the least. That is to say, if such wounds do not hit the brain, heart, or spinal column.

This is caused by a bullet in certain circumstances causing a paralysis of the nervous system, which makes subsequent wounds (if they do not hit the parts I mention) appear innocuous. Some of these injuries if they had been given in the first instance might have proved fatal. I have particularly noticed this insensibility in animals

of the Cobus species, such as the waterbuck (*Cobus ellipsyprymnus*), and the puku (*Cobus Vardoni*), but have also seen it in the elephant and buffalo.

Among the men I have heard of who were killed by an elephant, there was a Mr. F. L. James who died in West Africa, and a Mr. Ingram who was killed somewhere in Africa, Prince Ruspoli killed in Somaliland, and Colonel Armstrong and Mr. York both in Uganda.

A buffalo slew Colonel V. M. Stockley, the Hon. Guy Dawnay, Mr. Latham—the airman—and Monsieur Octave Fiere.

One of the best men killed by a lion was Mr. George Grey, a brother of Lord Grey of Falloden. He was staying with Sir Alfred Pease in East Africa, and tried to stop a charging lion with a ·280 Ross rifle. He hit it full in the face, but the light bullet driven at a great velocity broke into fragments without stopping the beast, and it mauled him so badly that he died soon afterwards.

George Grey was very well known in Central Africa at the time I was there, and previously he had done splendid service by raising a corps of

scouts—called "Grey's Scouts"—in the Matabele Rebellion in 1896. I have heard people say that he was one of the finest Englishmen who ever lived in the wilder parts of Africa.

Selous, who shot about 200 African buffaloes on foot, says he considered them less dangerous than lions and elephants. One important point when comparing the three is that the lion is much quicker in attack than the elephant and buffalo—although these are quick enough.

Again, the lion can take cover more easily; so is more likely to be approached at close-quarters before he is seen.

Moreover, his claws and teeth are always septic, so that wounds caused by him soon get poisoned and inflamed; and people who are mauled suffer greatly after the accident.

It is almost impossible for the hunter who is far from medical help to attend to his own injuries when in a prostrate and exhausted condition, so his wounds do not get the drastic attention necessary in such a case. When the doctors and nurses get him, the poison in his blood has often gone too far for even amputation to save him.

The elephant and buffalo on the other hand usually, though not always, make an end of him on the spot. If not, the wounds are not nearly so liable to be poisoned as is the case with those inflicted by the carnivora.

Some authorities such as Sir F. J. Jackson, and Judd, the well-known East African hunter, believe the buffalo to be the most dangerous animal to interfere with in Africa.

Personally, I think the hunter is in more danger from fevers (and sleeping sickness when it is prevalent), and I believe that there is as great a likelihood of meeting one's death from the bite of a poisonous snake as from wild animals; because a deadly snake may bite one in the dark, especially when sleeping on the ground.

Because a man is mauled or killed by a wild beast is no proof that he is not greatly experienced, for something may happen quite beyond the power or forethought of anyone to prevent. Any man, for instance, can get a bad cartridge which missfires at a critical moment.

A rifle which may never have jammed may do so on occasion. The cover may be so thick and tangled that it is impossible to swing the rifle

properly at an advancing beast, and when dodging one may trip and fall right in front of it. One thing, which no one should do (as I said before) is to run directly away in front of an angry animal. Keep testing or noticing the drift of the wind and always try to dodge to the side down wind so that one's scent is wafted away from and not towards the animal. Of course, most beasts charge by sight, but many such as the elephant and buffalo, start off on the wind. A lion almost invariably charges by sight.

In following a wounded animal it is advisable to go very slowly and to stop and listen at times, for one will hear the heavy breath of a stricken beast such as a buffalo before it is seen. I have heard a wounded elephant on several occasions making a deep rumbling kind of groan; and it is not an uncommon sound to hear such a beast smashing the vegetation, thumping with his feet, and flapping his ears angrily on his sides. Again, they may be absolutely silent, which is more ominous and exciting than when one knows their whereabouts.

The big game hunter, as a rule, is not given

to thinking much about the risks, though at the back of his mind he knows they are always present.

Morbid brooding would do him little good, for it would certainly affect the quality of his shooting and the celerity of his movements in dangerous places.

When one writes of quick action, it should be remembered that no sensible hunter ever wore heavy boots and clothes. I always preferred shorts to long trousers, because they felt light and free. Putties or leather leggings I could not stand as they made my legs too warm and affected my walking powers. Light elk-hide flat soled boots with a few bars to prevent slipping on dry grass I found best, with thin socks, and my calves bare. I got lots of scratches, but if deep I rubbed some permanganate of potash crystals on them. A few scratches will hurt nobody, but the vile " chitaizi " bean often made one most uncomfortable, as the fine hairs thrown off the pods of this growth have some irritant poison in them which causes a painful itch for some time.

In really bad country of this kind I occasion-

ally wore strong khaki cloth leggings of my own make which helped as a protection.

A double Terai hat is infinitely better for hunting in than a solar topee, as it sticks on one's head and does not fly off with the touch of a branch or other projection.

A khaki shirt with one pocket on the left, but none on the right which will catch the toe of the rifle stock; sleeves usually rolled up, but left long so that they can be buttoned down to act as a protection in thorny and "chitaizi" bean country.

A "Bushman Friend" knife in a sheath on the belt; and a good pocket-knife is useful for finer work.

In a pouch on my belt I always carried a burning or magnifying glass in case matches should be forgotten, an empty cartridge case with a cork to hold permanganate of potash crystals, and a small pair of tweezers which were often most useful for removing thorns in the natives and myself. These items weighed very little and were all necessary at times.

In my cartridge bag I always had a notebook and pencil, and a small screw-driver and file, as

well as a pull-through and some oily rag for cleaning the rifle should I not be able to get back to camp before nightfall.

I believe that many generations will come and go before the elephant disappears from the wilds of Africa, for there are still vast tracts of country left which are unlikely to be settled in for a long time to come.

When he goes, however, one of the grandest game animals which ever trod our earth will have perished, for amongst the fauna of the world there is nothing which can compare with him as a quarry for the hunter.

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