

explanation is that it is so that other animals will be in no doubt as to what animal has been there, as many animals are thought to mark out their territory with urine and faeces. Yet again, perhaps it has no significance whatsoever and we are trying to attribute too much reasoning to the habits of animals. It is easy to fall into traps when trying to work out causes for their actions. The hippopotamus, for example, also spreads its droppings by a rapid movement of its tail as it defaecates, yet on land this is probably a reiteration of what it does in the water, where it washes them away from itself in this manner, and there can be no suggesting that it is "marking its territory".

One often reads of the black rhino's liking for thorns, but the writer has only seen them selecting the choice, soft ones, from the tips of the branches of thorn bushes, the feeding being selective. Possibly they could eat the tough, two inch thorns of some acacia species, if they were very hungry, but it does not seem to be the general rule. The black rhinoceros frequently feeds from the ground also, and when it does so it does not seem to exercise much selection, even garden flowers finding their way into its mouth.

An interesting point is the occurrence of what appear to be suppurating wounds behind the shoulder of the black rhinoceros. Their frequency of occurrence in the same position leads to the assumption that they might be some sort of gland, and the writer favours this idea, although the popular theory is that they are caused by tick birds pecking into the skin. However, they are not coincident with the positions that one would normally expect to find ticks on a thick-skinned animal; these are usually behind the ears and in the inguinal regions. The writer has seen sores on the stomachs of some rhinos and these might be caused by tick birds, although their beaks are specially adapted for cutting the ticks off with a scissor-like motion. It has been suggested that tick birds are assuming a carnivorous diet, having obtained a liking for flesh and blood by eating ticks gorged with the latter. This might well be so. If a rhino has been rolling in the mud or dust the marks behind the shoulder become obliterated, and thus they are not always apparent, but it seems incredible that a proper examination does not yet appear to have been made of these areas.

Christmas Cards 1960

FOR the advance information of members, it is notified that this year's Christmas cards will comprise a coloured reproduction of a Lilac-breasted Roller by Dick Findlay from Allan Bird's folio of 12 South African Birds, and a pastel of the head of a Sable by C. T. Astley Maberly. Both are in full colour. Reproductions of the designs in black and white will be published in the September issue of the magazine.

Destruction and Protection of the Fauna of French Equatorial and of French West Africa

By LUCIEN BLANCOU

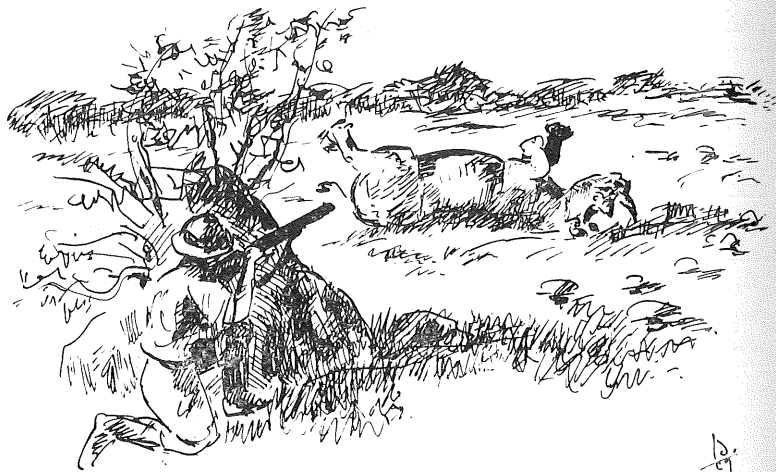
PART II

The Larger Animals

WE will now pass in review to the development of the position in more detail, if not for each kind of animal, at least for the more important ones which are also those whose existence is threatened most. We will begin by discussing how matters stand with the larger animals.

Let us deal with the rhinoceros first, because it is in the greatest danger of extinction. Burchell's rhino, or the white rhino (*Diceros simus*) used to be spread from the Anglo-Egyptian Sudan westwards right up to Lake Tchad in all the regions suitable to its existence: vast grassy plains but lightly bushed, but always slightly humid, mostly situated between 13° and 9° North, but extending beyond these latitudes in places. However, since 1900 it does not seem to have been met with anywhere else than in the SE of the Tchad district and in the NE of Oubangui-Chari, mostly along the Aouk River. In the course of time it was annihilated even here and since 1931 it has not been possible to find a single specimen or even traces of one. However there are indications which allow one to hope that it is present (perhaps as a reintroduction from the Sudan) in the Upper-Kotto and the Upper-Chinko, i.e. in the basin of the Upper Ubangui, between latitudes 9° and 6° N. But this has not yet been confirmed, and unfortunately at the moment these zones are not controlled or closed to hunting.

The black rhino (*Diceros bicornis*) was still present in the north of the Ivory Coast and in the Niger Province until just after the arrival of the European. In Northern Nigeria it is now very scarce; in the North of the Cameroons there is a good nucleus of about 400 head and about 500 head in Southern Tchad and the adjoining northern part of Oubangui-Chari. This is certainly an achievement to be proud of for as recently as 1933 there were probably not more than 100 in French Equatorial Africa (A.E.F.) with perhaps the same number in the Cameroons. The rehabilitation and the increase in numbers of the black rhino, the most persecuted of all animals on account of its large bulk and of the commercial value of its horn, has been entirely due to the strict and permanent control to which it was subjected. At present its numbers are increasing, and in suitable terrain, gradually, and little by little, signs of survivors are beginning to be seen and it is reappearing in localities where it has not been seen since 30 years ago. The greatest numbers, nevertheless, are located in the Reserves of North-Central Oubangui-Chari (i.e. Yassa, Miamere, Bamingui, Koukourou, Gribingui) where they are protected fairly effectively. There are still great possibilities of further increases, for there are still a number of unoccupied



Shooting rhino for its meat and horn.

suitable localities which are seldom visited by man. In about 10 years' time (if one admits that the average and normal life-span of a rhino is about 40 years) it will be possible to authorise the hunting of a few old solitaries outside the Reserves; several have already been reported as having died a natural death. To the best of my knowledge, and despite what might be said to the contrary, I do not believe that since 1934, the first year that absolute protection was accorded this species, more than 25 of these pachyderms have been killed illegally in A.E.F., of which at least half were killed in the Reserves themselves during the war.

The present position of the elephant (*Loxodonta africana* and *Loxodonta pumilis*), taken as a whole, is good. In French West Africa, since the colonisation, it has undoubtedly disappeared from many areas within its trekking range. But this was inevitable in quite a few areas, areas heavily populated and cultivated. The choice had to be made between agriculture and the proboscidian. The decision was never in doubt. Nevertheless a large reservoir exists in the Ivory Coast, estimated at 8,000 head; outside this republic there are a number of smaller herds, often well protected, scattered from Upper-Senegal to Upper-Volta; completely protected in French Niger, in Senegal and in Mauritania, in which latter province there exist a few groups, somewhat stunted in size due to the hard desert conditions—all told about 1,200 head.

In French East Africa, I think I can safely say that it is on the increase, and that since the end of commercial ivory-hunting, i.e. since about 1933. Since then the elephant has come out best, despite the numerous poachings by natives mainly in the Rain Forest, despite some killings by whites, some done clandestinely, but mostly camouflaged by varying pretexts, despite hazardous shooting (inaccurate guns, calibre too small, distance too great) with the

resultant high percentage of maimed animals which either died or became dangerous. It reappeared in considerable numbers in zones in which it had been killed off (e.g. Grimari, Ippy in Central Oubangui-Chari).

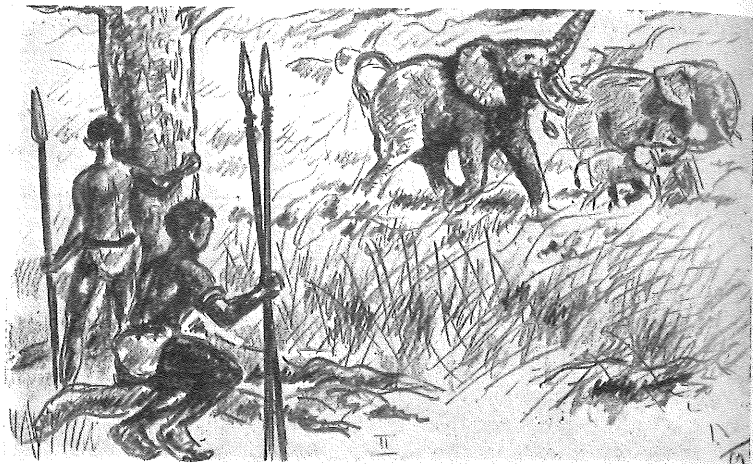
Though the "big-tuskers" are fairly scarce, except between Ouham and Gribingui and in the Upper-Mbomou, the herds of young males and the attendant females wander about all over during the rains. Of course, as everywhere else, this poses a problem and creates difficulties, due to the inevitable damage to cultivated fields. The sum total of elephants in A.E.F. may be gauged at 25,000 head today, of which 10,000 are in the forest. It is not possible to say how many of this number are "Dwarf Elephants" (in principle completely protected). The percentage is undoubtedly fairly considerable, at least ten per cent, but these are only to be found in the forests.

Undoubtedly this stock could still go on increasing. But it has become absolutely necessary and urgent, as in East Africa, to control its growth rationally and systematically in a humane manner by continually driving the elephant back into "no man's land." Hunting permits allow for 2 to 4 elephants in French Equatorial and for 1 to 3 in French West Africa.

For those who have read the novel *Les racines du Ciel* (The Roots of Heaven) I need hardly mention here that, despite its real interest, this work is not based on well-founded facts, at least in so far as the parts about Lake Tchad and the Oubangui-Chari districts are concerned; the geography of these two districts, to say the least, has been strangely distorted. This is literature to stir the imagination of "the great reading public," not for those who have lived with the animals in the wilds.



An elephant herd photographed in French Equatorial Africa by Marcel Bonnotte.



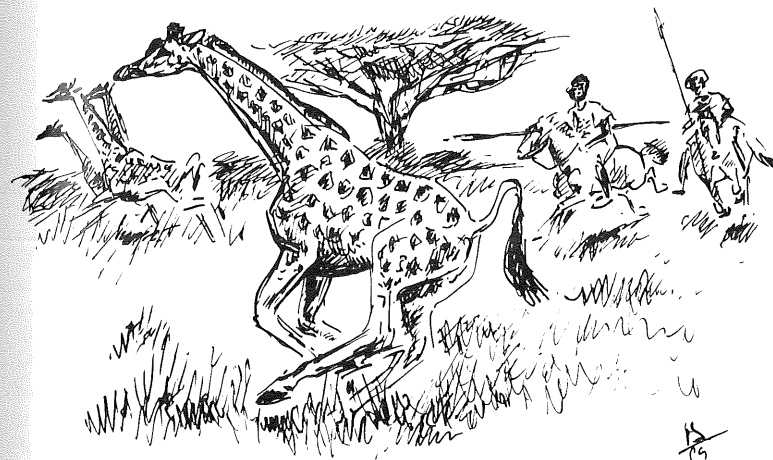
Natives hunting elephants by fire.

The third of the large animals to be considered is the hippopotamus. The position of the hippo in contrast with the elephant is really bad. Just as was the case with the two preceding species, the hippo has been shot at from all sides ever since the beginning of colonisation. It has suffered even more, for it is relatively harmless, except under very exceptional circumstances. Also, all owners of guns chased it implacably; natives hungry for its meat, purveyors, "week-end sportsmen," tourist hunters of large game—all led it a hard life, and some made a packet of money at its expense. Undoubtedly it found refuge in the water, but just as frequently during periods of drought the water delivered it to its pursuers. How many mothers, or families or even whole herds were destroyed until the last individual . . . ? And this at times without firearms, but simply with the most primitive and barbaric methods; assegais, harpoons, game-pits, etc. Thus only a small number remain, fairly widely distributed in French West Africa, and not many more in French Equatorial (here, perhaps, 12,000 at the most). However, one must mention here the National Park *Saint-Floris* in the north east of Oubangui-Chari, a park set aside for the hippo (but giving shelter to many other animals as well) and where during the dry season up to 500 head may congregate, having escaped from the slaughter along the Chari and the Aouk Rivers. The protection afforded it in the park is most satisfactory. The other Reserves in the north also offer shelter, but only to a small number. Some are still to be found in the forests and to the south of the equator, but here they are too easily harassed and riddled with bullets by poachers and by irresponsible people. It must be acknowledged, however, that at times—but not very often—they know how to take their revenge by ransacking or plundering gardens and plots and by escaping into marshy or swampy areas where they cannot be reached, this even in the near neighbourhood of Brazzaville!

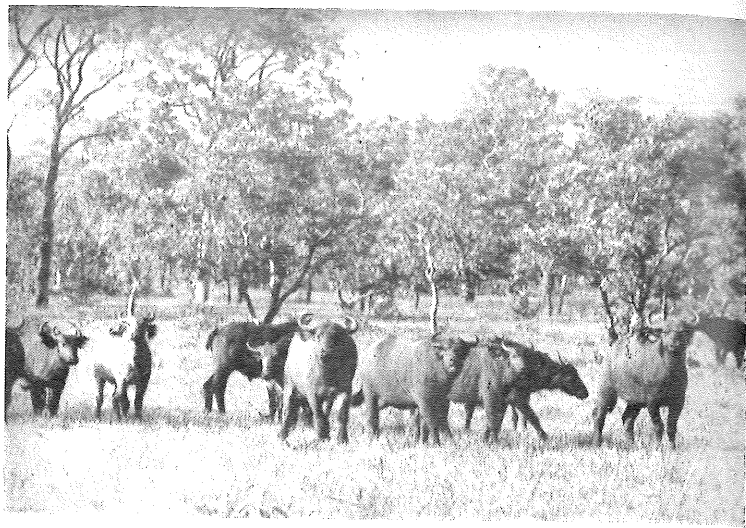
A hunting permit allows for one hippo in French Equatorial and for 1 to 2 in French West Africa.

The dwarf hippo (*Chaeropsis liberiensis*) does not exist in French Equatorial, but appears to be fairly widespread from the extreme south east of (ex) French Guinea to the west of the Ivory Coast, where it is at its most abundant (also present in Liberia and Sierra Leone). Heavily and totally protected, it is nevertheless diminishing alarmingly.

The giraffe is approaching extinction in French West Africa, but is now accorded total protection. It is largely a victim of the military, who, unfortunately for it, are quartered throughout its distribution zone and who too often show themselves quite forgetful or disrespectful of the hunting regulations. It must, however, be added that when a high military authority interests himself in these matters he is obeyed immediately, more so than are some Civil Governors. Military discipline has good qualities, having at its disposal quick and effective methods of obtaining obedience. In French Equatorial Africa the giraffe seems to have regained some of its territory during the last 25 years, despite some abuse by the military, but above all, despite the hunting of the Arab horsemen. These have often been checked and placed so that they were rendered harmless, but still not enough, for they are certainly still the worst destroyers. The Europeans, on the other hand, be they visitors or residents, for the most part prefer to admire or to photograph these majestic remnants of the Miocene rather than to shoot them, even though a hunting licence allows them one head in the Tchad Province but only in the Salamat region. The species has responded to this restraint. In the north of Oubangui-Chari where it occurs in lesser numbers than in Tchad, since the region is too heavily wooded for it, it is not allowed to be hunted at present. It is well so. Giraffes,



Arab horsemen hunting giraffe.



A herd of buffalo photographed by Marcel Bonnotte.

unlike elephants and hippos, have never occurred in French Equatorial Africa to the south of the Equator. It is estimated that there are approximately 6,000 head of giraffe in the Provinces of Tchad and Oubangui.

The Buffalo: Now we come to a much-hunted species which, however, continues to multiply and which remains vigorous throughout the territories of French Africa. In French West its numbers have undoubtedly diminished but yet it is still met in many areas, mostly in the Middle-Guinea, the Ivory Coast, the southern portion of Upper-Volta and in the north of Dahomey. In French Equatorial it is almost everywhere south of latitude 12° N., approximately at least 150,000 head, of which 20,000 in the Gaboon, 25,000 in the French Congo, 80,000 in Oubangui-Chari, 25,000 in Tchad. It is well-known that the forest buffaloes are the smallest, more especially those in the heart of the Rain Forest. The forest buffalo, however, dies out towards the outskirts of the forest. The best buffaloes with the longest horns, the variety *aequinoctialis*, are found from the east on the Chari River right up to the Sudanese border, those at the frontier being the largest and heaviest.

However, the increasing number of fire-arms in the hands of the natives, the ubiquity of the buffalo and the value of its meat, fresh or smoked, invite poaching on an ever increasing scale. One of the most depressing aspects is the hunting with smooth bore guns. Far too many buffalo are hunted with buckshot or lead bullets, which do not kill or which kill but slowly, but which leave them bleeding, suffering, maimed and naturally incensed against all humans. Hence a large number of accidents in which it is the innocent who is the victim, especially so in the Gaboon and in the

French Congo. It is very difficult to stop this deplorable practice. The native hunters who do this kind of shooting think themselves most courageous, which estimation of themselves, however, does not prevent them frequently from abandoning the wounded buffalo instead of trying to follow it up and give it the coup de grace. In this respect the owners of muzzle-loaders, that is with piston or with silex, are much less harmful, in that they approach very close to their prey and usually hit their target, whereas the owner of a modern gun shoots from too far away, with weapons having not enough force or penetrating power. The hunting licences allow from 6 to 8 buffalo in French Equatorial and from 3 to 8 in French West Africa.

Derby's Eland (*Taurotragus oryx derbianus*), like the buffalo, has benefited greatly by the action of the Veterinary Services in vaccinating domestic stock against Rinderpest and against other endemic diseases, to which the eland as well as the buffalo and the warthog were often victims between the years 1910 to 1930. Nowadays since these epizootic diseases have been largely suppressed the eland is multiplying and as he is a great walker, very suspicious and has an excellent sense of smell, of hearing and good eyesight he easily escapes from his pursuers, black and white, no matter how implacable they may be. Thus one meets them almost throughout the Oubangui-Chari, except in the extreme south and in the southern Tchad. The herds often number 20 head, but during the dry season they may congregate in herds of up to 100. The horns



Giant eland on the run.

average one metre, measured in a straight line, but may attain 1.21 metres (specimen collected in 1954). With a good guide most tourist hunters get their eland, sometimes even two. In brief, the eland is flourishing in French Equatorial Africa, where he is represented in all of the Reserves to the north of the Rain Forest (about 8,000 head and 2,000 in the Cameroons). In French West Africa, however, where the value of total protection was realised too late, but a few dozen are left in Upper Gambia, Middle Congo and Upper Senegal.

The Ostrich concludes this (portrait) gallery of large West African animals. In French West Africa it seems to be still fairly well represented, in the Sahelian and Sudanian vegetation zones. In French Equatorial Africa its existence is mainly threatened by having its nests robbed, and by the sale of its eggs. It is confined to the Tchad district except for some specimens which have been seen near Birao, in north eastern Oubangui, but only during the dry season. It would not appear that poaching has been eradicated, which however is not quite impossible. Nevertheless this large bird of the steppes at the moment is not in actual danger. In 1936 a traveller returning from S.E. Tchad complained to me that he had met far too many ostriches on his trek—a complaint, which I, as inspector of game, received with great joy, even though I could not have done anything about this abundance, well beyond my sphere of activity at the time. A hunting licence allows for one ostrich in Tchad and for one to two in French Equatorial Africa.

J. W. Mathews Floating Trophy 1960 COMPETITION

A SIXTY guinea silver trophy, known as the J. W. Mathews Trophy, in honour of the first Curator of Kirstenbosch, is awarded each year for competition. The object of the competition is to encourage the people of this country to take a greater interest in the conservation of our natural resources.

In 1960 the trophy is to be awarded to the scholar who submits the best illustrated notes on six Monocotyledons (indigenous to South Africa) that he or she has seen. The scholar must describe the plants, state where they were seen and give any other details.

Entries, which may be in English or Afrikaans, should state name, age, standard and school of the competitor and should reach Professor H. B. Rycroft, National Botanic Gardens, Kirstenbosch, Newlands, C.P., not later than 30th September, 1960.

The trophy and a miniature will be presented to the winner at the Annual Gathering of the Botanical Society of South Africa at Kirstenbosch on Saturday, 15th October, 1960. The trophy is to be kept at the school of the winner either in the class room or in the Principal's Office and will have to be returned to Kirstenbosch by 15th September, 1961.

Four consolation prizes each of half a guinea—collectively known as the J. Sauer von Pletsen Prize—will also be awarded.

A Trip to a Game Paradise

4. NASAL MAGGOTS WORRY OUR GAME

Written and Illustrated by

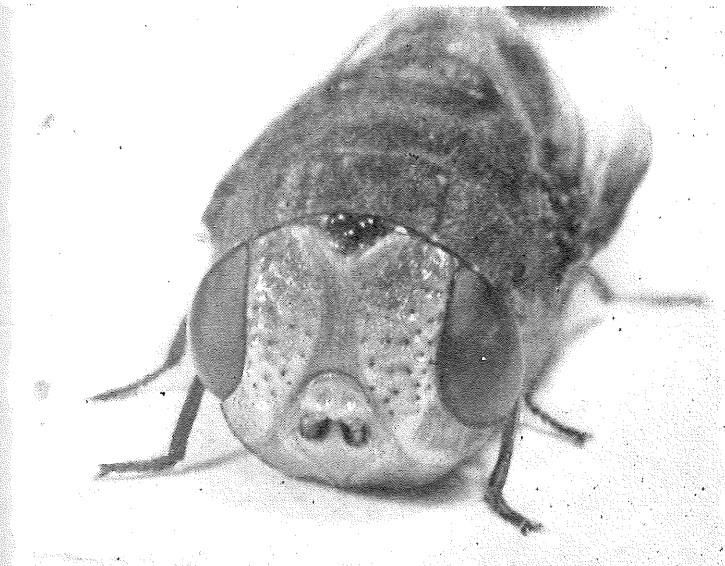
F. ZUMPT

South African Institute for Medical Research, Johannesburg

EVERY game warden knows that hartebeest, wildebeest and other related antelopes may sometimes be seen standing with their heads downwards, sneezing heavily and snorting. These animals are not fully aware of what is going on around them, and are consequently easy prey for the lion—and the hunter.

The antelopes are suffering from infestations with nasal maggots. More than 100 maggots of all sizes, up to 3 cm. in length, may be found in the nasal cavities and frontal sinuses of a single wildebeest or hartebeest. When the antelopes sneeze, the mature maggots are expelled through the nostrils. They fall to the ground and pupate immediately in crevices or other hiding places in the soil. The flies hatch after 3-6 weeks.

The adults are very peculiar. They have a body length of 1-2 cm. and blackish to brown colouring. Hairs are sparse. The most striking fact, however, is that their mouth-parts are rudimentary and they are not able to take any food. They have to live on the fat which the maggots have accumulated during their development in the head of the antelope. Nevertheless, the stored energy does not last very long, and both sexes are very short-lived. The sexes



Frontal view of the antelope bot (*Oestrus variolosus*).