



C. A. SPINAGE

ANIMALS OF EAST AFRICA

*With a foreword by
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Rhinos

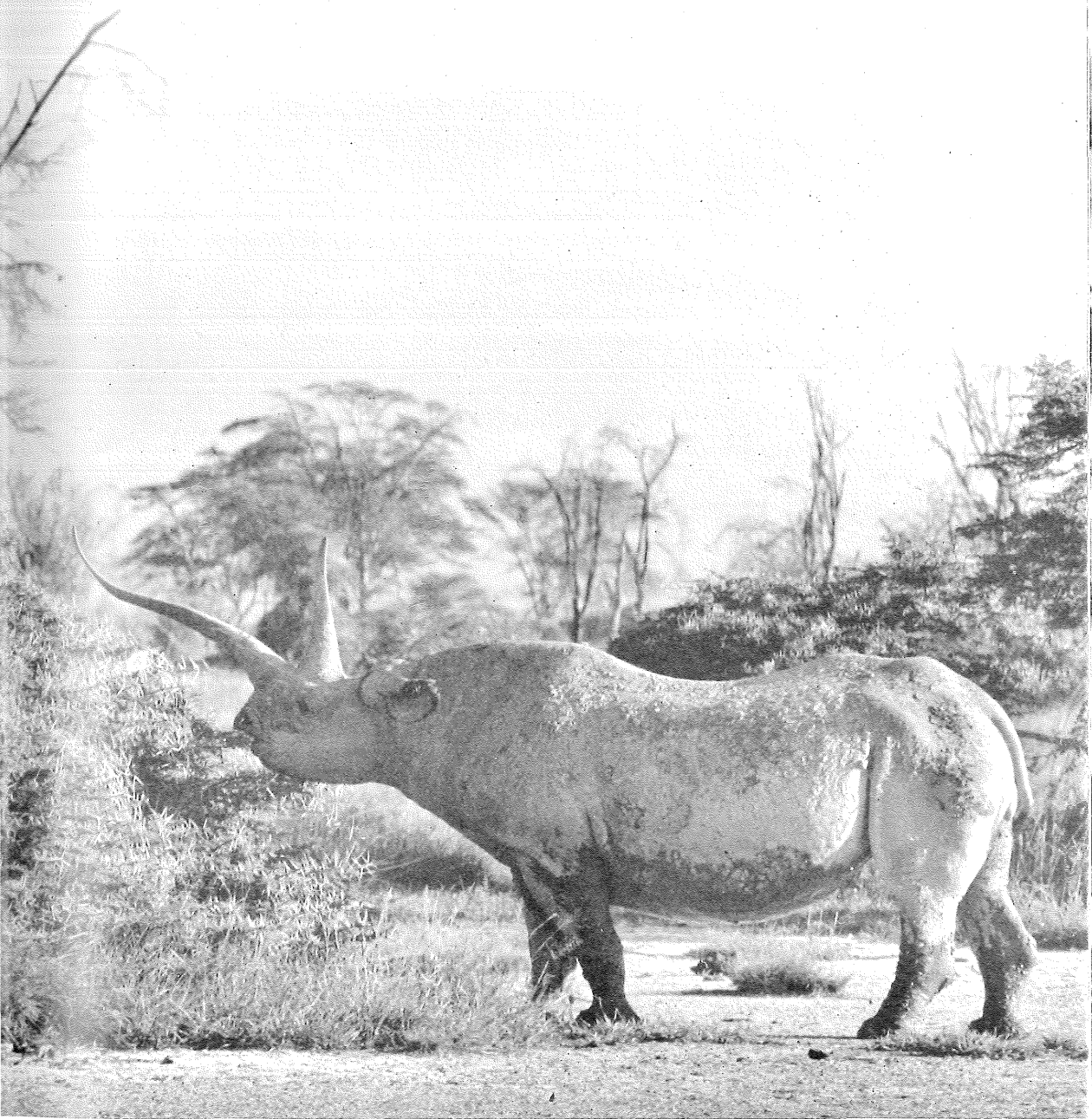


PLATE I: *The ice-clad summit of Mount Kilimanjaro with Gertie, a Black Rhinoceros, feeding in the foreground*

RHINOCEROS

infected with Anthrax, the tusks undoubtedly having been collected from an animal that had died of it.

Nothing could look less like a Zebra, and yet the RHINOCEROS (Pl. 45-49) is undoubtedly more closely related to the horses and zebras than to any other animal. Few writers speak of it without referring to it as "primitive-looking"; and if the truth be known it is but little changed from its Miocene ancestors, although it is not as primitive as its foreign relative the Tapir. Its build is like that of many of the larger extinct animals in which the backbone is like a girder resting upon four pillars which are provided by the thick legs, each retaining three digits in the Rhinoceros to provide a splayed base. The same type of structure is also seen in the Elephant and Hippopotamus. Speed is not essential in animals of such large size which are able to look after themselves by sheer strength; but by reason of their length of body they can reach a speed of nearly thirty miles an hour if needs be, and this almost from a standing start.

The family tree of the Rhino is a rather complicated one consisting of many small branches all ending suddenly without a dominant trend, and at the moment the oldest true Rhinoceroses seem to be North American in origin. Like the Elephant the immediate ancestry of the East African ones is unknown; they do not seem to have derived from the Miocene fossil forms.

To-day there are two species in East Africa, the more common Black Rhinoceros, *Diceros bicornis* (Colour Pl. 3), and the rare White Rhinoceros, *Ceratotherium simum*, confined to a small area in Uganda, the Congo and the Sudan. Throughout the Lower and Middle Pleistocene the White Rhinoceros appears to have been common throughout the whole of Africa, whereas the Black Rhino was rare. This position was not reversed until the Upper



PLATE 45: A Black Rhinoceros with its attendant Tick Birds



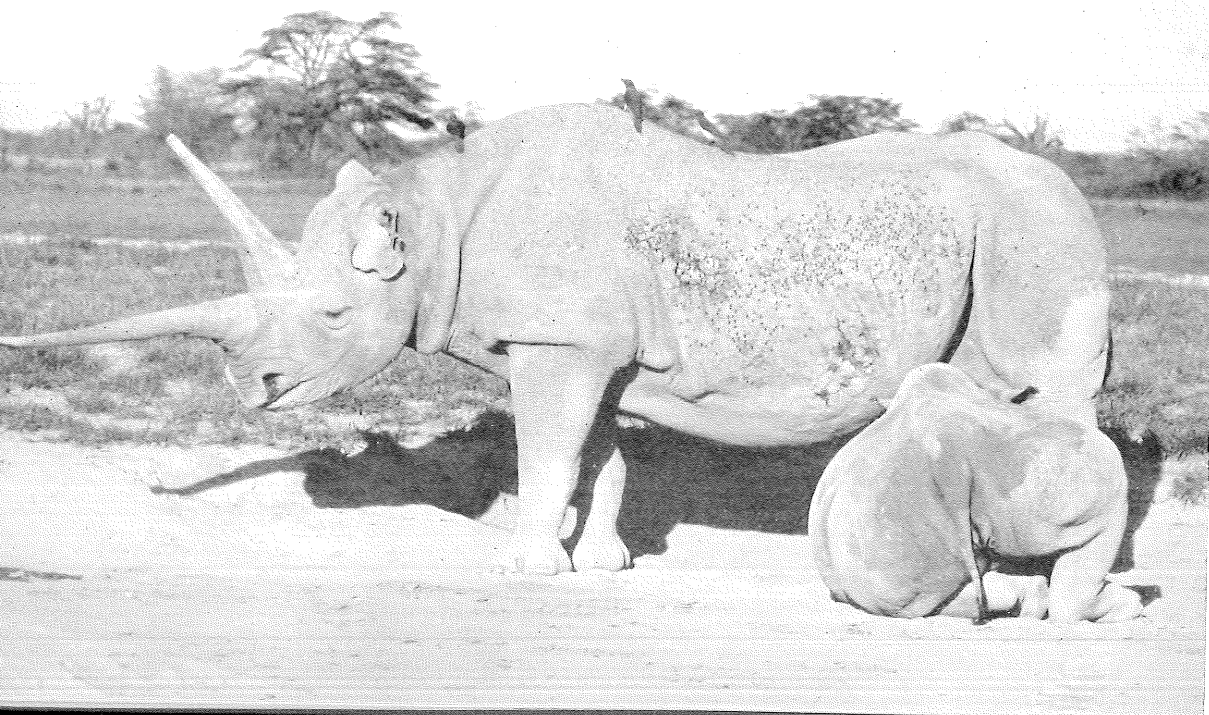
PLATE 46-47: *Not really playing. Due
always rolls over in this comical*

*to the disposition of its weight the Rhino
flops down suddenly*



PLATE 48: *A close-up of Gertie and her remarkable horn. Note the prehensile lip and the fact that her nose is running!*

Gladys with her broken horns and torn left ear. The black dots on her flanks are Bot flies. The calf is far too big to obtain any milk, although it is trying to do so



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Pleistocene and has remained reversed until to-day. The White Rhino is, next to the Elephant, the largest of terrestrial mammals, being nearly a foot higher at the shoulder than the Black. Despite its size it is a much more docile beast and rarely attacks. There is little difference in colour between the two but the White is easily distinguished by its square lips, unlike the pointed prehensile ones of the Black, for it is strictly a grazer.

On account of mysterious aphrodisiac properties attributed to the horn by certain Asiatic peoples, the Rhino has been sorely persecuted, so much so that it seems to be threatened with extinction. The horn is peculiar amongst mammals and has long excited the interest of naturalists. It is generally referred to as a mass of hair "cemented together," but I would prefer to describe it as a keratinous or horny material of a fibrous nature which (although more pedantic) would be nearer to the truth. Chemically it is essentially of the same constitution as the horns of other animals; but it lacks a bony central core and thus there is no fusion with the skull, just as the keratinous outer covering of an Antelope's horn does not fuse with it. There are normally two horns in the African Rhino, medially situated on the nasal bones, although in earlier literature records of three horns, the third being little more than a bump, were not uncommon. The persistent shooting of this animal by trophy hunters seems to have resulted in their rarity to-day.

Reference could not be made to Rhino horns without mentioning the remarkable specimens exhibited by "Gladys"¹ and "Gertie," two almost world-famous Black Rhinos that live in the Amboseli National Reserve. Both of these animals, apart from other remarkable attributes which will be described later, have possessed horns of outstanding length, probably living world

¹ Since this was written Gladys has been killed by poachers.

records. Normally the Rhino keeps its horns ground down to a fairly sharp point by goring the ground, and by rubbing it on termite mounds and trees. This habit is particularly noticeable in zoos where they rub them on brick walls and also between the bars, which causes them to become laterally flattened. The horn is fairly soft and, as it grows throughout the animal's life, rubbing it down is necessary to stop it from growing to uncontrollable lengths, when it would be useless for its primary object of fighting. "Gladys" and "Gertie," being exceptionally docile females, have not worried about this, it seems; hence the great lengths which their horns have reached.

At one time "Gladys" (Pl. 48) possessed the longest anterior horn by several inches, but broke off about eighteen inches of it in 1955. Unfortunately the piece was never found, so we shall never know exactly how long this great horn was. Until 1959 "Gertie" (Pl. 48) then reigned supreme until her horn too was lost in fighting. First of all the tip was broken off, snapping where it had worn thin on the underside from touching the ground; and then, probably in repulsing the attentions of a bull Rhino, the whole of the remainder of the anterior horn was torn off at the base, leaving it bleeding profusely. When I last saw it in early 1960 the wound had healed and it was already growing again. The regeneration of Rhino horns is of normal occurrence and has been observed in a zoo specimen; but it is doubtful whether this particular specimen will ever grow very large again as "Gertie" must be a pretty old animal by Rhino standards. One can't help thinking that the loss of it must have been quite a weight off her mind as she always used to carry her head very low when walking along, with the tip often scraping on the ground.

From a study of photographs taken in 1952 "Gertie's" horn

must have then been about forty inches long. The major portion which was recently broken off was recovered and found to be thirty-nine and a half inches in length; this was matched against photographic enlargements of the intact horn in life and its total length was thus estimated at fifty-four and a quarter inches. So it would appear to have grown about eighteen inches in six to seven years.

During the last century some horns "of great length and slenderness, coupled with small size at the base" were obtained from traders at Zanzibar. They were thought by some to be those of a new species which was termed "Holmwood's Rhinoceros," although others quite rightly thought that they might be the abnormal horns of an ordinary female. There seems little doubt that they were similar to those found at Amboseli. The uselessness of such exaggerated horns as a weapon of offence was clearly shown by the breaking of those of "Gertie" and "Gladys." They would also be quite useless for another purpose to which the Rhino frequently puts it, and that is digging out salt. I have seen a complete cave in the Aberdare Mountains dug out by Rhinos; at the same spot was an archway with Bamboos growing on it made by these animals. A particularly large cave also exists on Marsabit Mountain. They are easily recognised as being the work of Rhinos because the roof is scored with indentations, like thousands of pickaxe marks, where the Rhinos have dug their horns into it.

From the earliest days of African hunting the hunters have always written about the ferocity and vindictiveness of their quarry—it would not do for a hunter to write about its gentleness! Thus it behoves the naturalist of to-day to vindicate the true nature of such animals. Sensational writers have always described the Rhino in the worst of terms as a bad-tempered and dangerous

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beast. I would not contradict the latter, for its unpredictable nature makes it a dangerous opponent indeed. But if it thinks itself to be in danger it is just as likely to run off with its tail in the air as it is to attack.

Records of the domestic relationships of the Rhino have been clouded by such assertions of bad temper. Because of its "bad temper" it is quite often stated to be a solitary animal, a point which I regard as highly doubtful. In the Amboseli Reserve for instance, which must be one of the finest places in Africa for observing them at close quarters, I have seen groups of five; and up to seven have been reported associating together during the daytime. These are invariably females with young ones at foot, and young animals that have been driven off by their parent, who may still be in the same group. Most of the large males seem to keep to the undergrowth during the day, but this is not always the rule.

Such groups of animals when seen together never show any signs of hostility but, rather, as much affection as any group of animals, often greeting one another by rubbing noses. I have even seen one rub the underside of its chin on another's back, just as a cat will do. The females are particularly patient with their single offspring which accompanies them for two years or perhaps more, long after the parental milk supply has ceased. I have watched these young animals, with a sizeable horn on their nose, butting away into their mother's inguinal region in a vain attempt to obtain some milk (Pl. 48). The long-suffering parents made no attempt to drive them away, unlike many animals that seem to us to display an unnecessarily harsh attitude towards their suckling young. The calves make a mewling noise which sounds rather plaintive; it is seldom heard in the adult animals which usually only snort and grunt.

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In the morning when the sun comes up Rhinos normally seek the shelter of the bush and leave the open plains where they have spent the night sleeping and browsing. One morning I came across a female and her calf still out in the open; the calf wanted to go into the bush but the mother was quite content to stay where she was. The calf kept trotting off to about fifty yards' distance and would then stop and look back to see if mother was following. Seeing her still standing there it would then trot back again, mewing loudly, and rub its face affectionately against hers. This demonstration of calf love went on for some time but left the mother quite unimpressed. She just stood there and yawned!

From my experience it seems that a male may remain attached to a female after mating. In the Ngorongoro Crater, for example, a male and a female with a large calf were pointed out to me that had all three lived together there for some considerable time. At Amboseli once I came across a very aggressive male guarding a female, and returning to the same spot later in the day I found the female about fifty yards distant in some thick bush and the male still spoiling for a fight. To the casual onlooker this might appear to be two separate Rhinos; but I think that they were probably very much attached to one another.

In forest areas I should say that I have just as frequently put a pair to flight as I have a single individual. There is no doubt that these lone ones do occur just as they do with most other animals; but to describe the Rhino as a solitary animal is wrong.

An instinct for survival causes many animals either to flee or to attack first and to think afterwards. A good example was provided by two Rhinos which I was once watching out in the open, and which, in their turn, were watching me. So intent were they that they did not notice a third coming to join them until it was right amongst them. Suddenly aware of its presence, they

took fright and, swinging around, charged off snorting and blowing, while the new arrival slowly followed them in obvious bewilderment. On another occasion I was watching an old bull Elephant quietly browsing when another came walking up behind it. It did not hear the advent of the newcomer until it was right behind and then the old bull swung round, ears wide out and tusks at the ready for instant battle. It immediately relaxed again upon seeing that it was just another Elephant, and the newcomer extended the tip of its trunk in the typical manner of friendly greeting between Elephants. Of course had it been a potential enemy such as a motor car, the alarmed bull might have charged straight away.

"Gertie," of Amboseli, has the further distinction of having given birth to an "earless" calf; such congenital abnormalities or mutations do occasionally occur amongst animals, but the ones concerned do not usually survive for long. This one, however, born in 1953, was holding its own in 1960 when I last saw it. In this case it is only the external pinna of the ear that appears to be deficient. The pinna is thought by scientists to be mainly for discerning from which direction a sound is coming, and for reducing its intensity if too loud. A round hole on either side of the head, signifying the entrance to the auditory canal, is all that can be seen on this animal, which looks very odd compared with normal Rhinos with their large, trumpet-shaped ears (Pl. 49). This "earless" one appears very nervous when one approaches it in a motor car. I found it by itself one day in the open and although it orientated the sound correctly—it turned and looked at me—it did not seem to trust itself and ran off to join a pair of Rhinos, in whose company it did not seem to worry unduly. Such behaviour may not have had anything to do with its deformity, which is possibly not unusual amongst Rhinos—

another "earless" one was living in the Ngorongoro Crater at the same time.

Sir Samuel Baker, a famous African explorer who was also a keen naturalist, refers to the Rhino as fighting with its teeth amongst its own kind and biting off another's ears. Although such behaviour is common with an Indian Rhinoceros, and is the latter's primary method of attack, this is the only report that I have ever come across of such behaviour in the African species. It is not, however, to be lightly dismissed as "Gladys," the other Amboseli Rhino already mentioned, possesses a badly torn ear (Pl. 48). Possibly it was torn at the time that she broke her horn; in any case, it is difficult to see how it could have been torn otherwise than by fighting. The Indian Rhino never uses its horns to attack with; it has very sharp lower canine teeth which it uses, and which are rudimentary or absent altogether in the African animals. If you are thinking that perhaps "Gertie's" calf had its ears bitten off, then I must hasten to add that this abnormality was observed within a day or so of its birth.

A habit of the Black Rhino that has given rise to fanciful stories is that of breaking up its droppings. You hear that it is such a bad-tempered animal that it turns round and breaks them up in fury with its horn. I've never seen one do this. It is always done by a scraping, kicking movement of the hind legs, just as a dog will do. A Rhino often has several defecating places within its territory, but this is not a strict rule, neither does it always break up the droppings. In forest and thick bush country one can often find them intact, but in hot open country they are often reduced to a shapeless heap anyway in one or two hours by the rapid action of numerous dung beetles that invade them. I have watched females indulging in this habit with the calf at heel copying the parent. Various suggestions have been advanced to

explain the habit, but we may be attempting to write more purpose into an animal's behaviour than really exists. It seems highly likely that regular defecating places mark out the animal's territory although, as the associations of Rhinos at Amboseli show, this is not jealously guarded. If this is so the breaking-up may be merely to prevent the heap from becoming too high. Another suggestion is that it breaks them up so that other animals cannot easily tell what animal it was; this is the opposite of the other suggestion.

Yet another suggestion is that it may be an instinctive reaction to try and rid itself of a parasite known as the Bot fly, but I don't think that its actions are effective enough for this. If we knew why our domestic dog does it then we might be nearer to knowing why the Rhino does likewise.

The Bot fly infests not only the Rhinoceros but Horses and Zebras too (Pl. 7). The Rhino ones are perhaps the more interesting because of their large size and imitative appearance. The adult flies have a wing span of some two and a half inches and are coloured a dark blackish brown, including the wings, with reddish-brown legs. This colouring is interesting in that it mimics the African Pompilid Wasps which have a powerful and unpleasant sting. Of course when the insects are set and pinned out side by side this resemblance may not look very close; but one must think of the living, moving insects to appreciate the mimicry. The Rhino Bots have no stinging or defence mechanism but even so it is difficult to attach any importance to the mimicry as there do not seem to be any potential predators of the Bot fly that might be deterred.

The adult flies can often be seen in great swarms on the back and flanks of the Rhino (Pl. 48), flying up in a buzzing cloud when it rolls in the mud. As the Rhino never rolls right over on to its

spine there is always a dry patch left where the Bots immediately settle again. These flies are almost certainly mating and egg-laying; they do not feed in the adult state and therefore have nothing else to do before they die. Although our knowledge of their life histories is almost non-existent their occurrence is probably seasonal, explaining why one does not always see them on a Rhino. On the other hand, I have seen plenty on Rhinos in one area and, moving to another place some two hundred miles away, have been unable to spot a single specimen.

According to one authority the eggs are laid on the skin of the ears, neck and shoulders, having a little stalk that spreads at the base and holds the egg firmly in position. The next stage is unknown, but somehow the emergent larvae or maggots enter the stomach of the host. In the Horse this is said to occur from the animal licking itself, but this would be impossible for the Rhino because it can't bend its neck round that far; so presumably they bore their way through the skin. In an infected animal they always seem to occur in vast numbers, the stomach wall being absolutely covered with them. They attach themselves by means of hooks and remain in this position for an unknown length of time. They then detach themselves and are passed out in the host's droppings, being about an inch long at this stage. Their outer skin forms a hard case and they pupate within this on the ground, eventually emerging as the adult fly.

Despite the thickness of its hide a Rhino still has plenty of ticks and it is perhaps not surprising that they are the largest of all. When we speak of the thickness of a Rhino's skin, like the Elephant and Hippo, it is the layer underneath which is thick; the dry outer layer is little thicker than that of any other animal. The Rhino also has hairs over its body but they do not extend above the surface, except when it is very young. Its ticks are eagerly

sought after by the Tick Birds which are constant companions of the Rhino (Pl. 45). The fact that they warn it of the approach of enemies is well known but may be more of a coincidence than a knowing association between bird and beast. They are easily scared birds and, even on an animal like a cow, will still set up a chatter if a man comes near and hide on the far side of the animal.

Tick Birds, *Buphagus sp.*, are highly specialised members of the Starling family and obtain the whole of their food, mainly in the form of ticks, from the larger animals, undoubtedly doing them a service of incalculable value. They have a stout, blunt beak, with which they explore the hide in a rapid scissoring motion, and curved, sharply pointed claws with which they can safely cling to the hide of an animal without any danger of falling off. Probably flocks of them work over quite a large area; whether particular birds follow a particular animal is doubtful, as the supply of ticks would soon give out if they followed one host for long. They are often said to be carnivorous, for if an animal has a sore they rapidly enlarge it; but there is nothing to show that they start such a sore in the first place. Once a wound has been opened up they keep the surface clean and free of maggots or other infection but do not allow it to heal. Animals with sores never seem to show any resentment towards the birds' attentions. Popular opinion has long held the Tick Bird to be responsible for what appear to be suppurating wounds behind the shoulder of the Rhino. If a Rhino has been wallowing in dust or mud, as is often the case, these wounds are not visible; and this is doubtless one reason why they are so often overlooked. One authority states that they are glands, which one might suspect from their frequency in the same position, and another that they are the result of infection by a small parasitic worm. In neither case is the Tick Bird responsible.

Another of many inaccurate stories about the Rhino concerns its liking for thorns. How often does the cinema screen, for example, picture one having its dinner off a thorn bush, and then move in to a close-up of the two-inch thorns? I have examined some of these thorn bushes immediately after a Rhino has left them and found that they only select the choice soft end-pieces. No doubt they might eat the tougher parts if they were hard pressed, but it is not the general rule. Although primarily a browser, using its pointed upper lip to select and tuck food into its mouth (Pl. 1), the Rhino will also feed off the ground and does not seem very particular about what it eats, garden flowers even finding their way into its mouth! I once published a close-up photograph of a Rhino in the act of tucking some food into its mouth with its upper lip. From the letters and comments that I received it was apparent that few people had ever actually seen this. Because its lip wasn't sticking out they thought that it had been shot away.

The Rhinoceros is without any doubt a strange and fascinating creature. But with its horn fetching the present high price the prospects of its continued survival in the face of the poachers' onslaught are not very bright. The cause of its extermination is ridiculous—the people who seek it as an aphrodisiac could get the same concoction by grinding up their own toenails!

The BUFFALO, *Syncerus caffer* (Pl. 49-52), offers a challenge to the hunter purely as a trophy, and is not eagerly sought after by poachers who like to keep out of its way. Its interest lies mainly in the reputation that it has earned as the most dangerous of all African animals, more hunters having lost their life to this animal than to any other. The reason usually given for this is that the Buffalo, if wounded, circles round and attacks its pursuer from



PLATE 49: *Gertie's "earless" calf (right)*
BELOW: *Buffaloes in western Uganda showing a
light brown one in the centre*