

# Some Notes on the Rhinoceros

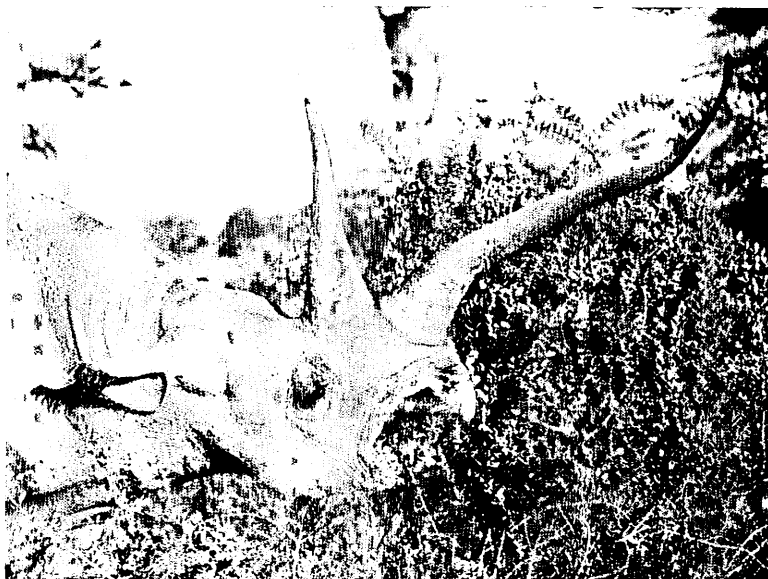
Written and illustrated  
by C. A. SPINAGE

THE prehistoric-looking rhinoceros has excited the interest of zoologists from the earliest times, but in common with most of our African fauna, little is still known of its habits.

The horn is peculiar amongst mammals and is invariably referred to as "a mass of hair cemented together". I would prefer to call it a keratinous material of fibrous nature, as there does not seem to be any evidence that it is hair in the strict sense of the word. Due to its soft nature it frequently adopts odd shapes: there is one in the Coryndon Museum, Nairobi, for example, in which both the horns curve downwards. Reports of rhinos with three horns instead of two are not uncommon in earlier literature, but are unheard of today.

Many people are familiar with the two famous cow rhinos "Gladys" and "Gertie" of the Amboseli National Park in Kenya, and they provide an interesting point for discussion, for they have both possessed horns of outstanding length, probably exceeding the world record. Normally the rhinoceros keeps its horn ground to a fairly sharp point by goring the earth, rubbing it on anthills, etc. In all zoos they keep them well ground down by rubbing them on stonework and similar objects, so that they always look rather poor in captivity. Some captive specimens have rather laterally flattened horns, caused by rubbing them between the cage bars. As the horn grows throughout the rhino's life, it possibly has to keep it ground down to avoid it growing to the uncontrollable lengths that have been attained by the rhinos mentioned above. In all probability they inherit a rather weak and spindly strain as there are other rhinos in the same area that do not appear to possess very well shaped horns. These two being rather docile rhinos they have probably allowed them to grow without rubbing them down. They are fairly soft and, as can be seen in the photograph, the underside of "Gertie's" horn has become flattened from resting on the ground.

It is the African rhinos' primary weapon of attack and long horns are quite useless for fighting. This has recently been demonstrated by these two animals who have both broken off their exceptional horns in fighting. At one time "Gladys" possessed the longest anterior horn by several inches, but broke off about eighteen inches in 1955. As it was never found we shall never now know how long this great horn was. Until about a year ago "Gertie" reigned supreme as the rhino with the largest horn, and probably became the most photographed animal in the world, and then she, too, lost it in fighting. First of all the tip was broken off, snapping where it had worn thin on the underside, and then, apparently in repulsing the attentions of an undesirable bull, the whole of the remainder of



“Gertie” feeding on *Balanites* sp. She is selecting the soft tips of the thorn branches. Note the wet nostril and the flattened underside of the end of the horn.

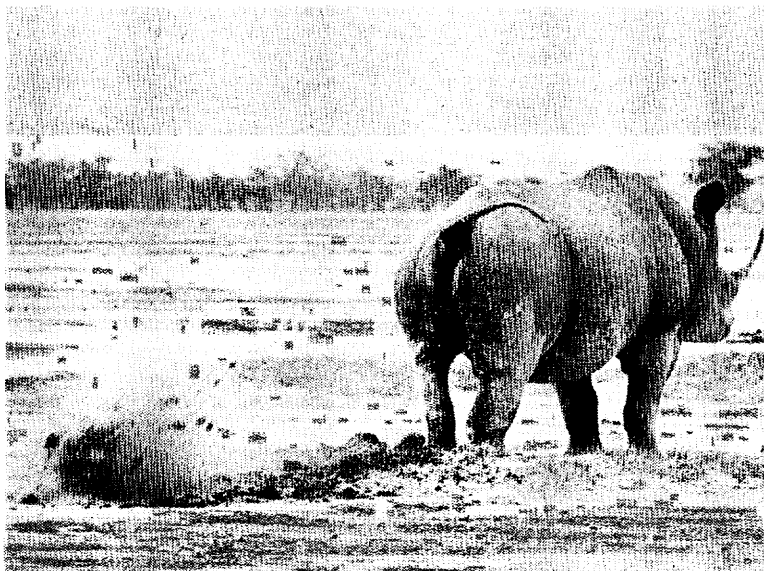
the anterior horn was torn off right at the root, leaving it bleeding profusely. The wound has now healed, and doubtless the horn will begin to grow again, although it will probably not reach a very great length as she must be a pretty old animal by now. There is nothing unusual in the regeneration of rhino horns, a specimen in the Pretoria Zoo once tore off the anterior horn in similar manner, and careful records were kept of its re-growth. In 1952 “Gertie’s” horn was estimated at about forty inches in length. When she broke it off recently the majority was recovered and measured thirty-nine and a half inches. This was matched against photographic enlargements of the intact horn in life and its total length thus estimated at fifty-four and a quarter inches. It would appear from this that the horn had grown about eighteen inches in six to seven years.

The rhino also uses its horn in some areas for digging out salt. The writer has examined complete caves dug out entirely by rhinos in the Aberdare Mountains of Kenya. The roof of such caves is covered with thousands of indentations like the marks of a pick-axe, where the rhinos have dug into the earth with their sharp horns. A particularly large cave exists on Marsabit Mountain in Kenya’s Northern Frontier District. As the rhinos at Amboseli presumably do not need to dig for salt, there is no necessity to keep their horns sharp for this purpose, but as there are animals there with normally-shaped horns, particularly amongst the bulls, it would appear to

be inherited in the first instance, that is, the tendency to exaggerated growth.

It is interesting to note that during the last century some horns "of great length and slenderness, coupled with a 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 classified as "Holmwood's" rhinoceros, although others thought, quite correctly, that they might be abnormal horns of the common female. Such horns would appear to be identical with the type exhibited at Amboseli.

"Gertie" has further distinguished herself by giving birth to an "earless" calf. This was in 1953, and it is still holding its own in the area. Such congenital abnormalities do occasionally occur amongst animals, but they do not appear to survive for long. In this case it is only the external pinna of the ear that appears to be missing; all that can be seen is a round orifice on either side of the head signifying the entrance to the auditory meatus. The pinna in animals is thought to be merely an aid to identifying the direction of sound and not a means of magnifying it. In the rhinoceros it is quite large and I have noticed with this "earless" animal that it always appears very nervous when one approaches in a motor vehicle. Approaching it one day in the open, it obviously heard the sound of the motor car, but although it had orientated the sound correctly, as could be deduced by its looking in my direction, it nevertheless did not seem to trust itself, and ran off to join another pair. In their company it did not seem to worry unduly. Whether this was normal behaviour, or whether it was aware of its deformity, is a matter of conjecture. Such an abnormality is possibly more

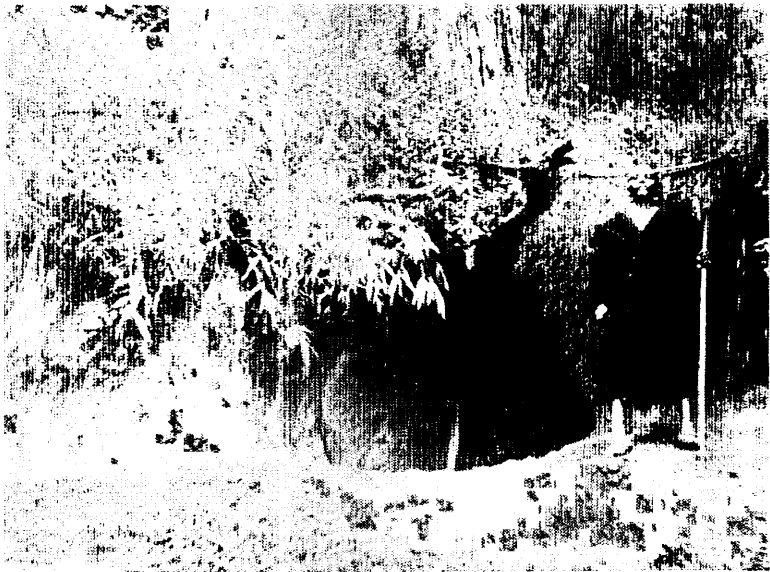


Rhinoceros breaking up its droppings after defaecating.

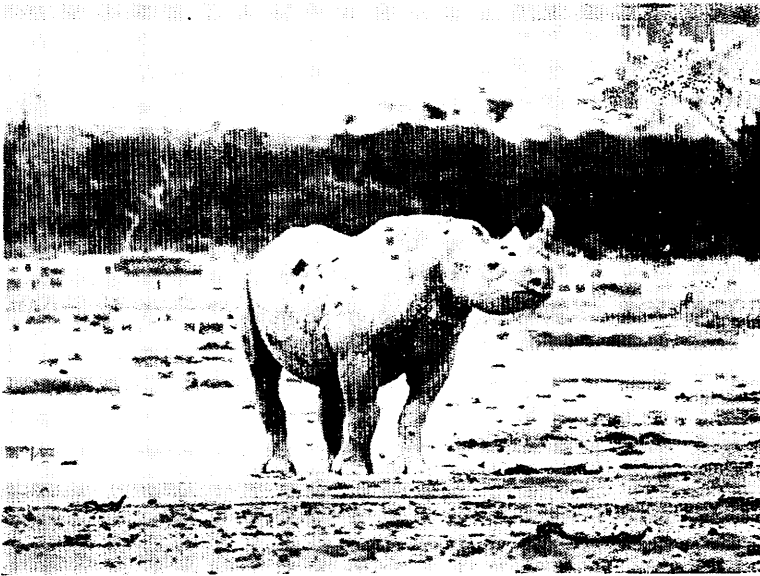
prevalent amongst rhinos as another earless one occurs in Ngorongoro Crater, some hundred miles to the southwest.

Sir Samuel Baker, an early African explorer, refers to the rhino as fighting with its teeth amongst its own kind, and biting off one another's ears. Although such behaviour is common with the Indian rhinoceros, and is the latter's primary method of attack, this is the only report that the writer has ever come across of such behaviour in the African rhinoceros. But an interesting point is that "Gladys", already referred to, has a badly torn ear. Possibly it was torn at the same time that she broke her horn. It is difficult to see how it could have become torn by any other means than fighting. The Indian rhinoceros never uses its horns in fighting, for it has very sharp incisor teeth, teeth which are only rudimentary or absent altogether in the African species.

Rhinos are generally referred to as solitary animals, but at Amboseli, which must be the finest place in the world for observing them, groups of up to seven have been reported together. These are invariably females with calves at foot, and young animals that have been driven off by their parents. The large bulls keep to the undergrowth during the day and are seldom seen. These groups of rhinos never appear to show any signs of aggression towards one another and are quite affectionate at times, rubbing themselves against one another like cats. Tales of the rhino's bad-tempered aggressiveness are often exaggerated by sensation-seeking writers, thus giving a false picture of their true intra-specific relations.



A cave in the Aberdare Mountains, Kenya, dug out by rhinos searching for salt.



**"Gertie's" earless calf whose congenital abnormality does not appear to have affected its survival.**

A habit of the black rhinoceros that has excited many fanciful stories is that of breaking up its droppings. The writer has never seen this done with the horn as is usually suggested, it is done by a kicking, scraping movement of the hind legs, just as a dog will do. The black rhinoceros often has several regular defaecating places that it visits, but this is not a strict rule, neither does it always break up its droppings. In forest and bush country one can often find intact faeces; in hot, open country however, within one or two hours, intact droppings are often reduced to an irregular mound by the rapid action of various species of dung beetles that invade it.

The habit is probably learned behaviour, as the writer has watched female rhinos indulging in this habit with the calf at heel copying the parent. Various suggestions have been put forward to explain the habit, one being that it is an instinctive attempt on the part of the rhino to rid itself of intestinal parasites which possibly cause it much annoyance. It certainly seems to be afflicted with warble flies, and masses of these flies can be seen clinging to the hide of most rhinos, although I am not aware that they have been positively identified as warble flies.

Another explanation is that it has a survival value, the rhinoceros breaking up its droppings so that other passing animals will not be able to tell so easily that it has just passed that way. On the other hand where they visit regular dropping places it may be merely to prevent the heap from becoming too high! An entirely contrary

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.