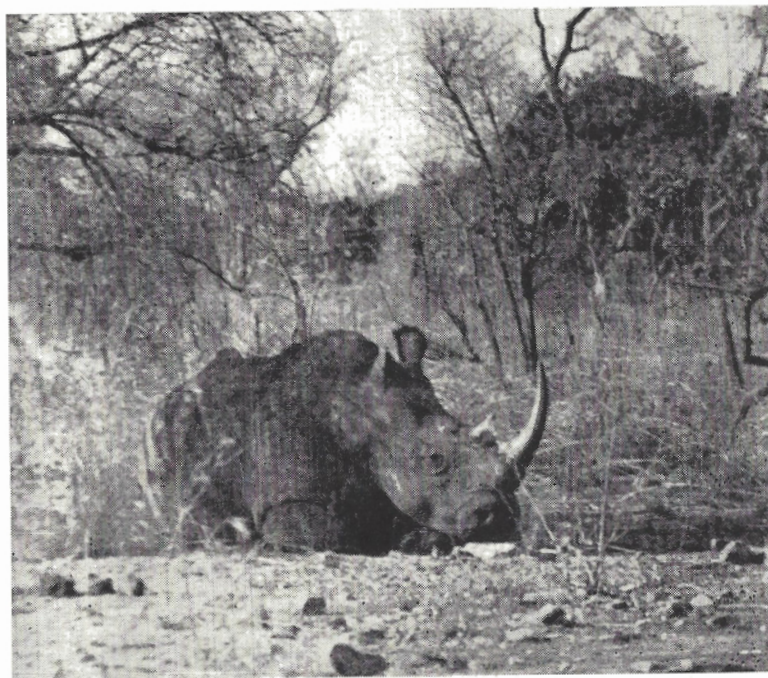


White rhino in hilly country, the little odd-shaped tail is well illustrated when held in an alarmed position.



Typical white rhino habitat and type of shade-tree preferred.

The White Rhinoceros in Uganda

Written and illustrated by J. B. HEPPEES

THE white rhinoceros is only found in Africa and is to-day very limited in numbers, being generally classified as one of the world's "vanishing species". Unlike most others thus classified, whose decline has steadily taken place over a great period of time, the very existence of this rhino was not known until the last century.

We now know that there are two distinct sub-species of white rhino, generally referred to as the Northern (*Ceratotherium simum cottoni*) and the Southern (*Ceratotherium simum simum*).

The Southern race was once fairly large in numbers although its distribution was confined to a fairly limited area. However, the slaughter was so great, both by white hunters and by natives, that within a short time the race was in great danger of dying out. In 1892, Nicholls and Eglinton wrote that there was every reason to suppose that it was then extinct. Bryden also wrote in 1897 that it was practically eradicated and that its last home was reputed to be in a small north-eastern corner of Mashonaland. Later a few more were found in the lower reaches of the Umfolozi River in Zululand, and it is from this small remnant, probably under a dozen, that the southern race is to-day mainly descended. These survivors are now nearly all living in the Umfolozi Game Reserve and are believed to number well over five hundred.

The survival of the Northern race was nowhere near as dramatic. The first definite proof of the animal's existence was a single horn believed to have been taken from an animal shot by Major A. St. H. Gibbons, near Lado on the White Nile, and exhibited in America in 1900. Nothing further was then heard of the species until Major P. H. G. Powell-Cotton collected a series of skins and skeletons on an expedition into the then Lado Enclave in 1904-1907. The skeletons were examined closely and the race was declared distinct from the southern one, chiefly on the strength of distinctive differences in skull measurements.

Because of the tragedy of this species nearing extinction in the south, the animal was fairly soon placed on the protected list of animals in most of the areas in which it was found, and so fortunately it is still in existence in the majority of areas in which it was first discovered fifty years ago. This northern sub-species is found to-day in the north-west of Uganda, in part of the southern Sudan west of the Nile and as far north as the Bar-el-Ghazal Province, in the Garamba National Park in the Belgian Congo, and in the areas of French Equatorial Africa adjoining the Sudan and the Congo.

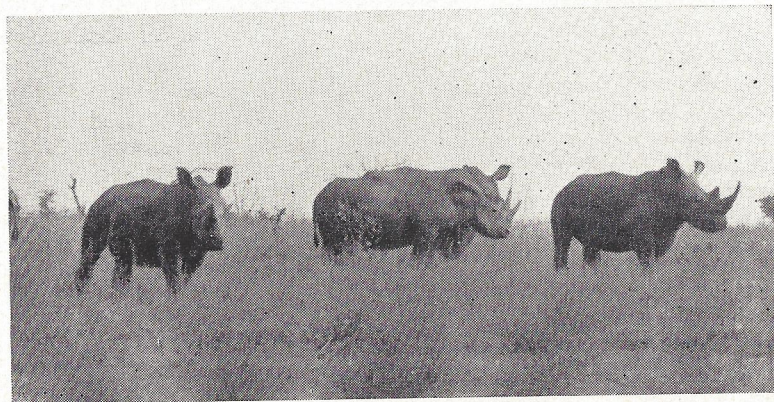
In Uganda itself, the animal is limited to the areas west of the Nile and north of Lake Albert—the West Nile and West Madi districts. The southern limit of the area is approximately the Ora River; to the west, the Nile valley escarpment generally, with the

exception of the Mount Kei and Midigo areas. The eastern boundary is the Nile itself, and in the north the area extends into the Sudan. The areas covered by the white rhino in Uganda are not the same as those covered by the black, the former being found only west and the latter east of the River Nile. No records have been found of either of them crossing into the other's area, even during the periodical occurrence of the "dry crossing" on the Nile at Nimule.

The fascination this animal has for most people is the complete air of mystery which surrounds it. This is not only due to its sudden discovery and its dramatic fight for survival in the south, but also to its very localised distribution, and even to the name itself. For instance, why should this animal be found only in a comparatively small area of southern Africa, and then be completely unheard of for nearly two thousand miles until it is next encountered in north-west Uganda? Nobody knows. Even within its own territory the rhino is still comparatively localised. You will find a number of them together in one small area, and then a complete absence of their traces and tracks for a great distance, and then another pocket of them in a new area.

Even the name itself remains a mystery to this day. They are certainly not white, in fact it is doubtful if they are any lighter in colour at all than the black species. Due to their habit of rolling in mud wallows they often take on different colours from different soil areas, but in general they are a light battleship grey. The white species, of course, differs in that instead of the prehensile lip of the black, it has a wide, square-lipped mouth. In fact, when one gets a head-on view of the white rhino, walking towards one with its enormous "boxed" head held low cropping the grass, it is remarkably like the enormous mouth of the hippo.

The head is much longer, in some specimens as much as a foot, than in the black, and differs greatly in many details. Also there are differences between the skull measurements of the northern



A general view of white rhino in open country. The square mouth and box-shaped head are well illustrated as is the usual position of the tail.

and southern white rhinos which led to their being declared separate sub-species. As compared with the black, besides having a broad square upper lip the white has its anterior horn slightly further forward so that the front of the horn is level with the upper lip and tends to wear flat at the front of the base. Moreover, the eye is placed entirely behind the line of the second horn, and the structure of the upper cheek teeth is different. Also, the teeth of the black show a "ridged" appearance, whereas the white normally have flat grinding surfaces. The ears are held upright, are sharply pointed at the extremity and heavily fringed, while the lower portion is completely closed for some distance, so as to form a tube.

The white rhino is, after the elephant, the second largest land mammal in the world to-day. A good bull will stand 6 ft. 6 ins. to 6 ft. 8 ins. at the shoulder, an average being about 6 ft., and is reputed to weigh anything up to $3\frac{1}{2}$ tons, as against $1\frac{1}{2}$ tons for an average black. In addition to having a much longer head it also has a more "bulky" appearance and, perhaps for this reason, appears on first sight to be much shorter in the leg than the black. The body has a barrel effect and the animal is remarkably "low-slung". On the nape of the neck there is a fleshy lump, but the skin does not tend to form folds as in the black, although these folds are present to a smaller degree around the base of the limbs. There are three toes on each foot, making the spoor the same as the black but approximately twice the size. It carries a shortish tail and when alarmed will curl it over its back—pig-fashion. The female has only a single pair of mammae on a small udder situated inguinally.

The horns are square at the base and are bulkier than those of the smaller black rhino, an average front horn being 30 ins. long and weighing 15-20 lbs. in the male. The horns of the female are, in both species, generally longer and more slender.

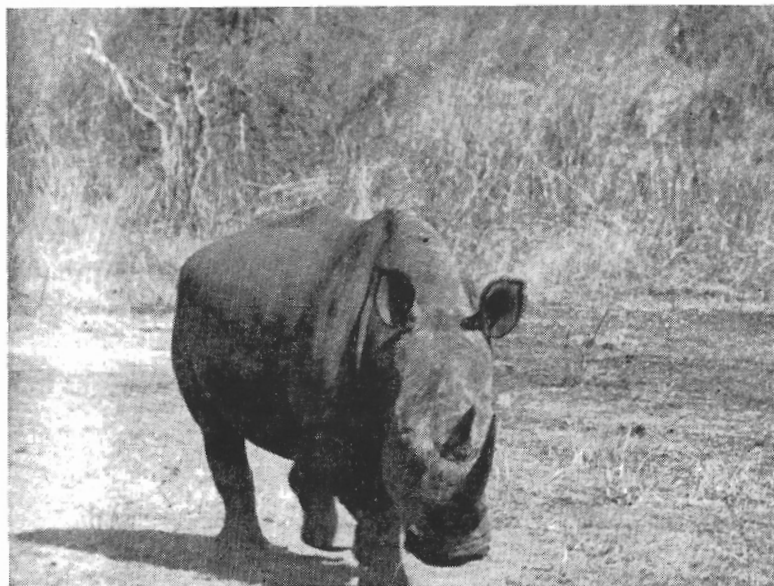
The white rhino is a very docile and even-tempered beast. It is a relatively simple matter to approach to within 30 yards, and even when provoked it very seldom pushes home a charge. This, of course, makes the animal an easy prey for poachers—and photographers. When disturbed, it will often appear to "charge" towards the intruder, but this is merely a gesture and it will always stop about 15-20 feet away. The beast generally snorts, shakes its head as though utterly bewildered, and then calmly turns and moves off. It also appears to be on the best of terms with other wild animals, especially elephant and buffalo.

In the Nimule Reserve they have been seen lying asleep under the same tree as a small herd of elephant was using for shade; they have also been seen grazing with buffalo and they appear to take no notice of the smaller animals. I have never heard of clashes between rhino and lion, which are also found in the same area.

As opposed to the black rhino which is normally found singly, the white rhino is gregarious and is usually found in family parties of two to five animals, whilst herds of up to 24 animals have been seen in the Waka area.

The animal is, of course, a grazer and is generally found in short grass country which has a scattering of small bushes. The usual method of feeding is to walk slowly forwards with the head held very low, the horn often ploughing a furrow in front, and the jaws munching off the grass fairly shortly. In general it feeds during the cool hours of the morning, say up to 9.00 or 9.30 a.m., and then selects a suitable resting place. A peculiarity is that the rhino will often rest under a very small thorn tree giving little shade, so that the whole of the beast is often not even under the available cover. It will, remarkably, often choose these inadequate shade trees when there are larger and shadier trees in the immediate vicinity. From this one can only assume that the rhino does not feel the heat greatly, and also that it has no great fears and does not think it necessary to find a place of concealment for its rest, as is usual with most other animals. When it finds a suitable tree, the animal usually stands in its shade for about half an hour before lying down to sleep. Its method of lying down is rather odd, as, unlike most animals, it gets down hindquarters first into a sitting position, and then draws its front legs under its body. Unless it is molested, it will stay asleep until about 4.00 p.m., when it will rise and, once again, stand quietly under the tree for at least half an hour before moving off to feed again.

Feeding at this time of day is generally in the direction of water, which is normally reached between dusk and midnight. Each



Illustrates the animal walking with the head held low, as well as the very hairy tubular-shaped ears.

family group appears to have a definite watering spot to which it regularly returns. It seems to have no particular preference for either static or slow-running water, but although often using the Nile swamps tends to avoid the river itself. In fact, it seems to have a fear of any large expanse of water and although numbers have been seen wading across rivers about a foot deep, and even on one occasion when alarmed through water about 4 feet deep, in general it tends to avoid the deeper and swifter flowing streams. After watering the rhino loves nothing more than a good roll in a mud wallow and the resulting coat of mud is responsible for the complete variation of skin colour in different soil areas.

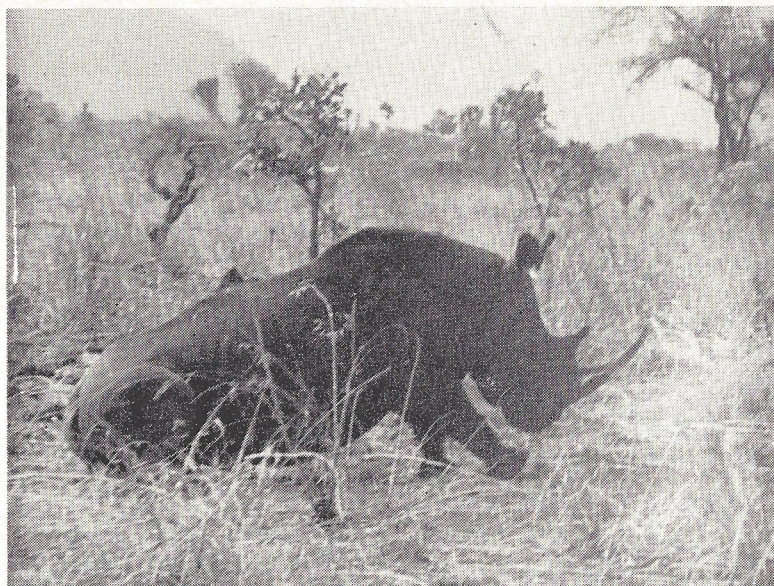
These beasts are not attracted to fires in the night, as are the black rhino, nor do they appear to be particularly alarmed at camp fires. I have known one to pass between a camp fire and my tent at night, the fire being about 10 yards from the tent, and it seemed to show no alarm either at the fire or at the presence of man. The animal was obviously on its recognised path to water, and after drinking at the stream below the camp it again returned and passed close by the tent.

They are essentially creatures of habit. Each family group has its own grazing area and its own distinct watering place. The paths between the two areas, which are generally between two and three miles apart, are used with such regularity that they become deeply grooved. In addition, the rhino is very regular about its toilet habits and returns every day to selected dung heaps, which are generally by the side of the path to its watering place, although, unlike the black, the white rhino does not scatter its dung with its horn.

Seasonal movements appear to be only those of necessity during the rains, when the animals move off the black cotton flats and onto the harder and rockier hills. At the end of the rains they generally return to their own particular dry weather areas.

If a white rhino is in the habit of using certain paths and tracks, there is not much that will make it deviate from its normal habits; for example, as mentioned above, a rhino continued to use its usual watering track although it passed through the middle of a safari camp. If the animal should be chased or alarmed it gallops off and once running will go in a dead straight line and cannot be diverted. Small ant hills and bushes are no obstacle and the rhino will run straight over or through them. This run or gallop is rather peculiar. The front legs work independently whilst the two hind legs gallop together. This gives the appearance of the animal being about to fall on its nose the whole time, as the hind legs seem to push and the front legs appear to have difficulty keeping up! In fact, the whole animal is a mixture of the awesome and the ludicrous.

Another peculiarity is that although in general the white rhino is a very docile and even-tempered animal, during the mating season it appears to be extremely ferocious among its kind. Most of the adult bulls carry large scars which are probably marks of fighting during the mating season. Although this fighting of the bulls amongst

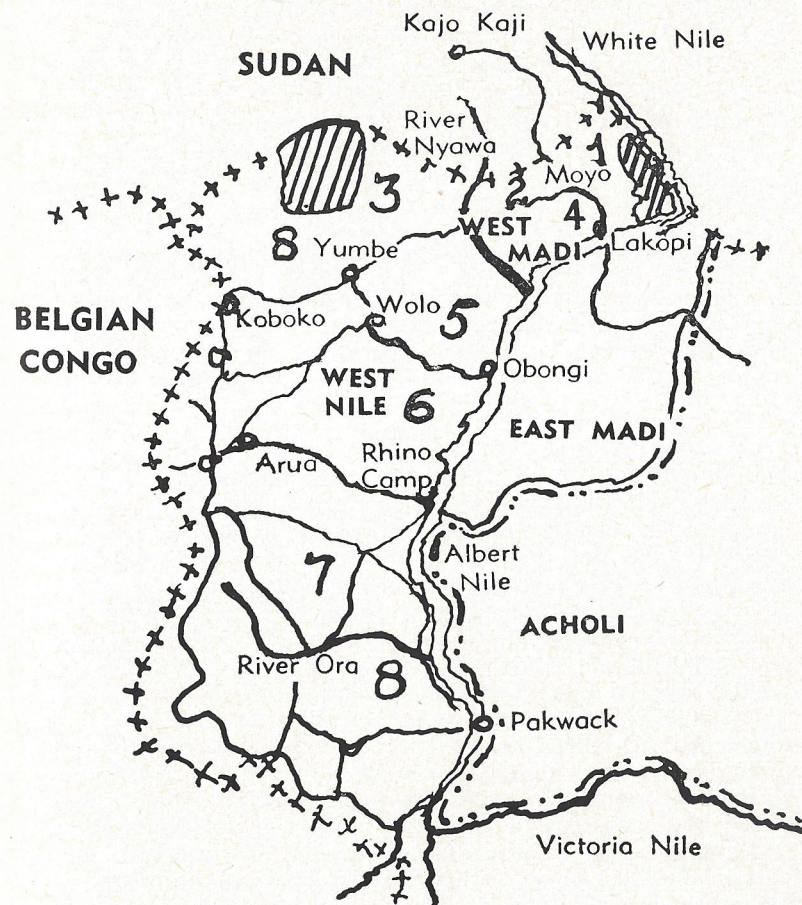


This shows the method of rising—fore feet first, unlike most other animals.

themselves is normal in the animal kingdom, even the cows seem imbued with a pugnacious spirit at this season and, on being approached by a bull, will often charge it and inflict serious damage on the bull's flank and belly with their long, slender front horn.

During the mating season an adult bull was seen to approach an under half-grown cow and bull. The adult bull ran up to the young male and, without warning, horned the youngster between the hind legs, lifting him into a complete vertical position. The young one gave an agonising squeal and limped off. The adult bull then turned and chased the cow into some thick bush, so that further observations were out of the question. In another area a young cow, not more than three years old and most certainly not half grown, was seen to be in difficulties walking. On closer examination she was found to be bleeding from the sexual organs and had very strained and painful-looking hindquarters. This appeared to be the result of a mature bull mounting an immature, or only just mature, cow. Similar signs have been noticed on other young cows and it would seem that they start to breed fairly early, the female probably coming on heat at about three years of age. Often an adult cow is seen accompanied by two calves, one three-quarter grown and the other a youngster. This probably means that a cow will mate not more than once every three to four years, maybe even every five years. Signs of mating are generally found between February and May, and very young calves between August and December, which will give the animals an approximate 17 months' gestation period. Twin calves have never been seen or heard of.

The white rhino does not appear to suffer much from natural disease. During the rinderpest outbreak in their area in 1953/1954 they did not appear to be affected, and although they suffer from continual anthrax, this probably only accounts for a very small percentage of their deaths. Their main enemy is, of course, man—the poacher. Their sight is quite weak and although their sense of hearing and smell seems to be quite good, their docility allows of their being approached and even speared without any undue danger. They are naturally of great profit to a poacher as, in addition to a mountain of meat, the skin itself can be used or sold, and a good price can be obtained for the horn from illegal sources. The majority of this horn is shipped to the Far East where it is generally believed to be a strong aphrodisiac, and as the black



West Nile District, Uganda, showing distribution areas of the White Rhinoceros.

market price recently went up to 85s. a lb. one can only assume that despite the spread of communism in the Far East its potency is still unquestioned. A dealer in the north of England has also been advertising recently for rhino horn in large quantities—but he gives no clue as to why he wants it!

Although increased patrolling of its areas by Game Department staff has lessened the amount of poaching to a considerable degree, this menace can never be completely eradicated and, together with certain other factors, makes the position of the white rhino still fairly precarious. In actual numbers the distribution in Uganda is believed to be as follows (see sketch map):

1. North of the Laropi/Moyo road and east of the Moyo/Kajo Kaji road	...	...	...	...	...	...	30
2. North of the Moyo/Arua road and east of the Nyawa River	...	...	...	...	...	...	15
3. North of the Moyo/Yumbe/Koboko road and west of the Nyawa River (Kei 8, Midigo 5, near Nyawa 17)	...	...	...	...	...	...	30
4. South of the Laropi/Moyo/Arua road and north of the Nyawa River (Palorinya 50, Rede 25, Laufori 10)	...	...	...	...	...	...	85
5. South of the Nyawa River and north of the Obongi/Wolo road and east of the Wolo/Yumbe road	...	...	...	...	...	...	100
6. South of the Obongi/Wolo road and north of the Rhino Camp/Arua road and east of Yumbe/Arua road	...	...	...	...	...	...	20
7. South of the Rhino Camp/Arua road and north of the Ora River (Inde 30, others 15)	...	...	...	...	...	...	45
8. South of the Ora River and other areas	...	...	...	...	...	...	10
							335

Although this shows a considerable increase over the figure of 190 given in the Game Department Annual Report for 1949, certain other conditions have recently arisen which make the situation less hopeful. The two sanctuaries that are set aside for white rhino at present are in most unsuitable forest reserves where the conditions are not favourable for them and where, in fact, there are very few rhino at all. Of the estimated 300–350 white rhino in Uganda, probably not more than 35 actually live in sanctuaries, and in the Mount Kei sanctuary the number of rhino has been steadily decreasing over the past years and is now down to 8 animals.

The main areas which do contain rhino at present are now threatened with habitation. Probably the only answer to the question of the preservation of this species is a reserve, or reserves, very strongly patrolled by game preservation staff. These reserves would, of course, have to be situated in areas suitable to the animals and not, as generally happens, in areas which are not required for native habitation or any other purpose. Uganda probably has a higher concentration of white rhino per square mile than anywhere else in Africa and it seems a pity to lose this unique animal whilst it can still be protected.

Member Attends Audubon Camp

By J. R. MALIN

EARLY last year my wife and I arrived in New York on an assignment which will probably keep us in the United States for a number of years. To maintain our life-long interest in Nature we joined the National Audubon Society, which has as its object the conservation of natural resources and wild life in North America.

Realising that the best method of making the nation conservation conscious is to instil the correct ideas into the young, the National Audubon Society regards the establishment of Audubon Junior Clubs as one of its most important functions. These are formed in schools and youth organisations and approximately ten million boys and girls have passed through these clubs.

To ensure that the junior club members receive the proper training, the National Audubon Society has created four training camps in various parts of the United States for school teachers and youth leaders as well as those whose interest in Nature and conservation is either professional or just a hobby. Each of these camps operates five fortnightly sessions during the summer school vacation and together turns out one thousand graduates each year. This summer my wife and I applied for enrolment for one of these sessions at the Audubon Camp of Maine and were accepted.

After the teeming and grubby steel and concrete jungle of Manhattan, which during the summer months adds smells, heat and humidity to its other discomforts, my reactions can be better imagined than described when we arrived on the rugged and rock-bound but sparsely-populated, beautiful, pine-scented and cool coast of Maine.

On our arrival at the Camp the Director welcomed us and then informed us that we were the first South Africans ever to attend an Audubon Camp. Each student was given an identification tag to wear reflecting his or her name and place of origin. At first our fellow students were inclined to regard the "Union of South Africa" which appeared on our tags with a little awe and to look upon us as rather romantic figures coming from the far-off dark continent, but this soon wore off, when they discovered that the only difference between us and them was one of accent. They clustered round us plying questions concerning all aspects of life in Africa, about which the average American is far too often very ill informed. By the time the camp dispersed, my wife and I found that our circle of American friends had been enlarged quite considerably.

The Audubon Camp of Maine is situated on an island just off the mainland. The whole of this island, some three hundred and twenty-five acres in extent, is a wild life sanctuary, where in contrast with the mainland, the primeval woods have been saved from the axes of the lumbermen and tall, straight spruce trees grow right down to the water's edge. The only damage the island has sustained is a