

Notes on Some Game Animals of Tanganyika Territory

By G. G. Rushby and G. H. Swynnerton

In view of the present hostile attitude towards game, it is opportune to place on record their habits and peculiarities before they disappear. This paper deals with some of the lesser-known game animals in this Territory.

First, let us study some of the causes which have given rise to this anti-game feeling in recent years. Our unfortunate fauna is accused of causing all manner of ills and diseases to man and domestic animals. Whether this is so or not, the policy of organized slaughter of all game in Southern Rhodesia is to be deplored and resisted as a means of eradicating disease. This policy has, however, a few strong supporters in Tanganyika, Kenya, and Nyasaland who wish to apply it to these territories. Their idea is that, by the removal of all game, tsetse-flies (among other carriers of disease) will be eradicated, but this theory has not yet been proved by actual fact and scientists are sharply divided on the subject. The late Mr. C. F. M. Swynnerton, the world's greatest authority on the practical side of tsetse control, though at one time impressed by the slaughter policy adopted by the Southern Rhodesian Government, did not advocate this policy for Mozambique nor Tanganyika. Writing of *Glossina morsitans*, the predominant fly in East Africa, Swynnerton (1936, 226) states: "After eleven years in game work and fifteen on tsetse research in Tanganyika. I still hold the view which I expressed at the outset of the work (1921). . . . 'In the thicker parts of its habitat wholesale game destruction is proportionately more difficult. I consider that it will be impossible to starve the fly at all generally by ordinary game destruction here, at any rate before the country is very fully settled.' The country referred to was Mozambique but the remark applies to the rest of East Africa also. . . . Further, I consider that in a very great proportion of our fly belts in Tanganyika. . . visibility, far poorer than in the savanna of Southern Rhodesia, is not sufficiently good for measures against game to be successful for our object" (the elimination of the fly). Again, referring to *G. pallidipes*, *G. austeni*, and *G. brevipalpis*, Swynnerton (p. 227) believes "that in the average East African range of any of these species attempts at food-animal destruction will be a complete fiasco, and that the flies will remain quite unexterminated by such destruction as can take place."

From personal observations made on the spot, it can be stated that sleeping sickness proved more deadly and devastating in the Belgian

Congo and French Equatorial Africa where game had been wiped out than in East Africa where there is a fair amount of game left.

In west-central and southern Tanganyika there are large tracts of country covered with miombo wooding where the density of population is somewhere in the region of two (or less) humans per square mile, and game is still plentiful. What do the protagonists of the slaughter policy suggest should be done with these virtually uninhabited areas which abound in tsetse? The country is, above all other, the home of *G. morsitans*. (The question of other diseases in animals does not crop up here for there is no stock.) The majority of the natives live by hunting and trapping and do little in the way of cultivation for their country is not fertile except in the limited alluvial regions. If the game is killed out the inhabitants will be hard put to it to eke out an existence and it is most improbable that the tsetse will disappear. We visualize that the last state of these natives will be worse than the first.

Bax (a strong backer of the slaughter policy, if one may judge by a recent article), states, (1945, p. 54) "it is not a question of killing off the last animal, which would be extremely expensive, but the game is reduced to the point at which the tsetse cannot find food sufficiently frequently to live." This, we consider, is not practicable, and we think our opinion will be shared by anyone who has lived in the bush and who has observed the numerous fauna — other than game animals (it is unfortunate that Bax has not defined the word "game" as used in the above quotation, but we presume that he is referring to the ungulate mammals which form the main source of food and drink for *G. morsitans*) — which occurs in these areas and which would, after the reduction of the game to what we may call "Bax's minimum," supply ample food for an abundant population of tsetses. Swynnerton (p. 227) says that "... a very minute game population indeed is capable of supporting a considerable fly population," so that a reduction of game to "Bax's minimum" need not be accompanied by a disappearance of the fly. To clear the country of tsetse, therefore, other methods will have to be adopted — and other methods there obviously are, for Swynnerton (*op.cit.*) devotes over three hundred pages of his report to a discussion of methods employed for the destruction and control of tsetse. It would appear more reasonable to carry out these other methods and leave the game as a source of food for the local inhabitants, as a source of revenue to Government from the sale of licences, and as a tourist attraction.

One further remark before we leave the subject of tsetse. Bax (*op.cit.*) seems dubious about tsetse feeding on vegetable juices and quotes various authorities in support of his view, including Lloyd's experiment, which only proved that tsetse will not feed on the latex of stale, warmed-up *Euphorbia*, and nothing more. Whilst on elephant control work in the Ulanga Valley, the senior author had to deal with a large herd of marauding elephants. Following this herd in high *matete* grass he noticed that

the tsetse were numerous and vicious. On the first shot being fired the herd, as is usual, stampeded, pushing down the high grass before them. After the noise had died down the writer went a short distance along the broad path which the elephants had trampled to rest in the shade of a bent-over clump of grass left standing. On sitting down he noticed that the tsetse had left him and he saw two or three of them settled on the broken ends of matete and feeding on the juices. One of the flies was only about four feet away and he plainly saw it feeding.

Apart from tsetse, farmers in the European settled areas of East Africa blame game for bringing various bovine diseases on to their lands, thereby infecting their cattle. East Coast Fever is one of these diseases for the spread of which game is blamed. But is game the only agent at work? If one examines the yellow fever and east coast fever maps of Africa it will be seen that where yellow fever is endemic there is no east coast fever, and where E.C.F. is endemic, as in East Africa, there is no yellow fever, although the yellow fever mosquito is widespread in Tanganyika and conditions would appear to be extremely favourable for the disease to spread throughout the Territory. By this it is not implied that should E.C.F. be stamped out in East Africa — and to do this would probably mean the slaughter of a vast amount of game — that yellow fever would make its appearance. At the same time, he would be a bold man who would say that there is no connection between the two

But it is not only the "experts" and laymen interested primarily with diseases in stock who have adopted the defeatist "blot-the-game" attitude. Agriculturists, white and black, official and non-official, are following suit. Not so many years ago, Africans realised that it was their responsibility to furnish sufficient food for themselves and their families to last till the next harvest. If they failed, they knew that there was no bountiful *serkali* who would feed them when their own supplies were exhausted. The two main causes of food shortage were drought and depredations by animals. The former was beyond the control of the agriculturalist, but the latter was something tangible that he could combat. Fields of crops were surrounded by fences or ditches, and raised platforms were built from which a continuous watch was maintained by day and night to keep off marauders — baboons, monkeys, birds and insects by day, pig, hippo and elephant by night.

This has now all changed. Crops are guarded (sometimes) by day, very seldom by night, and fields are rarely fenced or ditched. Why should the natives do more? They know that if they have poor crops a kind Providence (in the form of Government) will see that they do not starve. The effect of this on the animals is obvious. No longer are they driven off with the same determination as in former times and consequently their raids become more frequent and daring. More and more reports of depredations are sent in and the hate against the luckless animals increases. Damage caused by elephants is spectacular but greatly exaggerated. Over a large area only a minute proportion of the shambas are "written off"

entirely, more are damaged but not destroyed utterly, and the majority are untouched. On the other hand the damage done by small seed-eating birds, though not spectacular, is far greater than that done by elephants, and rarely given the publicity it deserves. Elephant control is, quite rightly, Government's responsibility, but the onus of guarding crops against all other marauders is definitely within the means of the natives. If they were encouraged, and instructed how to defend their fields and so become independent of Government aid, reports of depredations would become less frequent and some of the sting would be lost from remarks that are frequently made about game. It is not essential to kill marauders, though this is a method preferred by Africans since it helps to satisfy their craving for meat. Preventive measures would as often as not have the same effect as killing.

The sadistic desire to destroy is probably a symptom of the conditions prevailing in the world today and fits in with the modern conception of progress and advancement. "Research and yet more research" (to quote again from Bax) is the only answer but it must be remembered that, except for politicians, scientists have come to more wrong conclusions than any other body of men in modern history. For these reasons any wildly enthusiastic schemes should be treated on their merits only and an idea should not be taken as an established fact.

In East Africa we, the British people, are faced with a grave responsibility before the world, namely the conservation of the last remnant of that abundance of wild life which in Pliocene times covered the whole earth. Those who have been privileged to see the large mammals of Africa in the wild state cannot but be impressed by the spectacle they provide of beauty and interest. Already in South and West Africa, where animals at one time abounded in numbers rivalling those found in East Africa at the present day, the hand of man has caused the disappearance of these riches — for riches they undoubtedly are. Let us on the east of the continent be warned in time by the follies of others, for once these animals are destroyed they can never be replaced.

But we have wandered slightly from the main purpose of this paper which is to put on record a few facts about some of our game animals. Ten animals are included here which have been selected either because of their extreme rarity, or because we can add a few notes about their habits and distribution, or because we think that there is some doubt as to whether or not they should be included in the Tanganyika fauna.

The information given below is by no means all original. Many of the records of occurrence have been taken from published works; others have been kindly given to us by various naturalists in Tanganyika; a few are our own. Where information has been borrowed, a note to this effect is inserted.

ABBOT'S DUIKER.

(Cephalophus spadix True)

This is the largest of the group of red forest duikers found in East Africa and has so far only been recorded from Tanganyika. They were first discovered by Dr. W. L. Abbott, who collected an adult male on Kilimanjaro between 1888 and 1889 (True, 1890, p. 227), and for twenty years this specimen remained unique in collections. In 1908, the British Museum received a specimen from Rowland Ward, collected in the Shume Forest at an altitude of 7,000 feet, in the Usambara Mountains, thus extending the known range of the species over 100 miles to the south-east. In 1919 five more specimens reached the British Museum from Magamba, near Lushoto, one collected by H. C. Stiebel, the other four by A. C. Hollis.

In 1928 the range of the species was extended still further to the south by a native record (reported by A. Loveridge) from Nyingwa, at 7400 feet in the Uluguru Mountains, and in 1945 this record was confirmed when a specimen, now in the Game Department collection, was obtained from the same area.

R. A. Bousfield has informed us that in 1931 he was shown the skull of a male duiker alleged to be this species, shot by R. P. Ross on the Mfrika scarp east of Lupembe in Njombe District. They have recently been reported seen, once by S. P. Teare, late Game Warden, and once by Rushby, in the densely forested section of the Rift Wall lying between Mbulu and Babati. These sight records have yet to be confirmed by specimens. Rushby also thinks that the species occurs in the forests on the Poroto Mountains east of Mbeya and he hopes shortly to collect a specimen.

Little seems to have been recorded about the habits of these antelopes but in view of the paucity of specimens in collections we may presume that they spend most, if not all, of the time in the dense forests which clothe the various mountains where they have been recorded. Natives of Kilimanjaro and in the Usambara Mountains hunt the animals with dogs and, at any rate on Kilimanjaro, there are instances of a hunted animal entering a pool in one of the mountain rivers to escape from its pursuers, remaining with only its head above water until detected or until the hunters have passed. On the Uluguru Mountains they are caught by being driven into game nets placed across their runs in the forest. In 1945, Swynnerton was shown a form, said to have been used by this species, under a bush on the steep sides of the Kikafu River, on the southern slopes of Kilimanjaro, below the forest reserve.

On Kilimanjaro, the Usambara and Uluguru Mts., natives refer to Abbott's duiker as *minde*. They differ from all other East African duikers by their large size, resembling quite closely in size and colour the black duikers of West Africa. In colour they are chestnut brown on the body and legs, becoming seal brown on the rump and tail, the latter having a few white-tipped hairs. The top of the head, face and outside of the ears

are chestnut like the body, and the crest of long hairs on the crown is blackish. A full-grown animal stands about 28 inches at the shoulder (Harvey's Duiker stands 18 to 19 inches, and the diminutive blue duiker only 13 to 14 inches), and the horns, which are carried by males only, measure from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches.

SUNI.

(*Nesotragus moschatus* von Deuben, and *N. livingstonianus* Kirk.)

The sunis, or pigmy antelopes, are primarily animals of the thick coastal belt of East Africa, occurring from the region of the Tana River in the north, southwards to northern Zululand and extending inland up to 250 miles from the coast. The East African species (*N. moschatus*) was first described in 1846 by Baron von Deuben from specimens obtained by himself on Chapani (Grave) Island, a small islet in Zanzibar harbour; in 1861 Layard referred to this form as *Cephalophorus zanzibaricus*. Specimens obtained at Arusha were subsequently separated under the name *kirchenpaueri* by Pagenstecher in 1885, and in 1913 Heller, an American collector and systematist, further sub-divided the species into two more races, *akeleyi* from the south-east slopes of Mt. Kenya at 7000 ft., and *deserticola* from the arid coastal belt of Kenya at Maji-ya-chumvi. How many of these names are valid is difficult to say, but Allen (1939, p. 499) recognizes three of them, namely *moschatus*, *akeleyi* and *deserticola*, placing *kirchenpaueri* and *zanzibaricus* in the synonymy of *moschatus*. On the other hand, Moreau and Pakenham (1941, pp. 120, 126) state that *moschatus* is endemic on Zanzibar and two adjacent islets so that *kirchenpaueri* is the first name available for the mainland forms. The specific name *moschatus*, by the way, refers to the strong odour of musk excreted by the face-glands.

The Zambesi form (*N. livingstonianus*) was named by Kirk in 1865 from specimens collected by Dr. Livingstone at Shupanga, a locality on the south bank of the Zambesi in P.E.A. In 1898 Oldfield Thomas gave the name *zuluensis* to specimens collected in the Umkuja (Umkozi) Valley of Zululand. So much for the systematics of the sunis.

In the coastal belt of Tanganyika sunis are recorded from Morogoro, Tununguo (in Ukami), and Kidenge (in Uzaramo) by Matschie (1895, p. 119), from Mkarazi (Uluguru Mts., 1500 ft.) by Allen & Loveridge (1927, p. 439), and from the Rufiji Delta and Boydu Island by Rushby (personal observations). Outside the coastal belt they are known from Magamba (Usambara Mts., 5500 ft.) (Allen & Loveridge, l.c.), the forest on Kilimanjaro (True, 1892; Lönnberg, 1910, p. 44), Arusha and Mpwapwa (Matschie, l.c.), and Sambala (south of Mt. Hanang near the boundary between Mbulu and Kondoa Districts, at 3700 ft.) (Jackson, 1930, p. 496).

It is fairly certain that the above records all refer to one or other of the described races of *moschatus*, but besides these records there are others from the Southern Province, a specimen collected by Fischer at Lindi

(Matschie, l.c.), an imperfect skin and skull from Lindi in the Game Department collection, and several sight records by C. J. P. Ionides from Kilwa, Lindi, Liwale, and Mikindani Districts. Whether these records should be referred to the East African or to the Zambezi species is impossible to say until more specimens are available for comparison and until the northern limits of the range of *livingstonianus* are known.

The East African sunis stand about thirteen to fourteen inches at the shoulder and are greyish brown to cinnamon rufous above; the throat is pale rufous separating the white of the chin from the white underparts. The legs below the knees and hocks are rufous with the exception of the pasterns which are brown or black; the tail is coloured like the back above, white below. The horns, which are carried by the males only, measure from 2 inches to 3½ inches, are small and spike-like, heavily ridged and directed backwards and upwards.

Livingstone's sunis are very similar, but may be distinguished from the East African species by their slightly larger size (shoulder height 14 to 15 inches) and longer horns (3½ to 4½ inches). The upper parts of the body are rich rufous, redder than in *moschatus*; underparts white. The tail is black above as are also the backs of the pasterns.

Both species live in and around the densest undergrowth and are found singly, rarely in pairs. Their call is a single whistling snort, low in tone. They feed on leaves, young shoots, and certain roots, and they are apparently independent of water.

In the Kilimanjaro area the name *sunu* is used for these antelopes but in coastal Tanganyika the word *pa*, which is used for most small antelopes, is believed to be the only word in use.

ORIBI.

(*Ourebia ourebi* Zimmermann)

Of the twenty four species and subspecies of oribi described from the continent of Africa only two concern us here, namely, Cotton's oribi (*Ourebia ourebi cottoni* Thomas & Wroughton), and Peter's oribi (*O.o.hastata* Peters).

Cotton's oribi was described in 1908 from a specimen collected by Major Powell Cotton on the Uasingishu Plateau of Kenya. Its range is given by Roosevelt and Heller (1915, ii, p. 560) as extending from the southern and eastern shores of Lake Victoria northwards to the Turkwell River, and eastwards to the western wall of the Rift Valley. In Tanganyika, Loveridge (1923, p. 734) collected it at Zagayu on the Simiyu River, and Matschie (in Werther, 1898, p. 237-8) records an oribi from Tabora which is doubtless referable to this race. C. F. M. Swynnerton (1936, map 7), records oribi from the Ufipa Plateau south of Namanyere. More recently, Capt. M. S. S. Moore, the Game Warden, has reported oribi from the Serengeti Plains in Musoma District, and Dr. C. H. N. Jackson tells us that

he has seen them at Chaya Swamp, on the borders between Tabora and Dodoma (Manyoni) Districts. Swynnerton (personal observations) has seen oribis at various places in eastern Singida and southern Mbulu Districts, and again between Itigi and Rungwa in western Dodoma (Manyoni) and eastern Tabora Districts, and on the Chunya to Mbeya motor road near Chalangwa. J. E. Rogers also reports oribi from two localities in eastern Chunya District.

Peters's oribi was described in 1852 from a specimen collected at Sena, on the Zambesi River in P.E.A. It ranges through southern Nyasaland, parts of northern and eastern Southern Rhodesia, parts of Northern Rhodesia northwards through P.E.A. to the southern coastal regions of Tanganyika where G. J. P. Ionides has seen it in Kilwa, Liwale and Masasi Districts. No specimens have yet been examined from this latter area.

Oribis are graceful little animals standing 24 to 26 inches at the shoulder. They may be readily distinguished from all other antelopes of their size by the presence of a bare glandular patch below each ear and tufts or brushes of long hairs which are developed below the knees. In colour they are bright tawny above, white below, with a variable amount of black on the upper side of the tail. Their horns incline backwards, are heavily ringed at the base, and vary in length from 5 to 7 inches. They are grass feeders and are generally found in small parties of three (one male and two females). They show a marked preference for open country, whether it be flat or hilly open grassland such as is found in the Lake Province, or small mbugas entirely surrounded by woodland such as are to be found in the Central and Western Provinces. When alarmed or curious they give a shrill, thin whistle, similar to that of the reedbuck, which may be repeated several times at intervals.

Oribis are probably the swiftest of all East African antelopes. Amongst the foxhunters in England it is said that the fox enjoys the hunt as much as the hounds and huntsmen. There may be some doubt about this but there is no doubt that the oribi enjoys being coursed with greyhounds. To see two or three oribi fool a pair of hounds is a joy to watch. As soon as the hounds are slipped the oribi springs into the air two or three times, landing on stiff legs. When they have the measure of the hounds they slacken speed until there are only a few yards between them and then with a magnificent burst of speed they leave the dogs standing. The oribi then does a little prancing, stops and watches the dogs straining after it. This will happen a few times when the dogs will give up and the oribi shows his pleasure with a number of stiff-legged jumps and gleesome flicks of his tail. The course is magnificent to watch, with the added pleasure that one knows that the dogs cannot catch the oribi.

SHARPE'S GRYSBOK.

(*Raphicerus sharpei* Thomas)

Sharpe's grysbok was discovered in southern Angoniland (Nyasaland) by Sir A. Sharpe in 1896. It was until recently considered to be more

closely related to the steinboks than to the grysboks on account of the supposed absence of false hoofs, though it is much more akin to the Cape grysbok in general appearance and habits in the field. Recently, however, Shortridge (1934, ii, p. 496) has pointed out "that minute false hoofs are occasionally present, and still more commonly indicated, in adult males of Sharpe's grysbok from Northern Rhodesia" thus confirming their closer relationship to the Cape grysbok than to the steinbok.

They occur from Southern Rhodesia northwards through P.E.A., Nyasaland and Northern Rhodesia to southern Tanganyika. In the latter country, C. J. P. Ionides records them as sparsely distributed in Liwale, Kilwa, Lindi, Masasi, Tunduru and Songea Districts of the Southern Province. He says that in the main dialects of this area (Kiyao, Kingoni, and Kimagindo) grysboks are known as *kikuru*.

Farther west, J. E. Rogers reports this species from southwestern Tanganyika in the neighbourhood of the Northern Rhodesian border under the native name (probably Kinyamwanga) *tungwa*. They are also reported from Chunya District by Rogers and Swynnerton (personal observation). Northwards grysboks reach at least as far as Tabora District, where Dr. C. H. N. Jackson has found them common at Kakoma in Uganda, where they are known to the Wanyamwezi as *mburunga*. Swynnerton has received reports from natives at Kirurumo (thirty miles southwest of Itigi) of the occurrence of a small antelope known by the name of *kamburunga*. It is said that in the places where this animal has lain down to rest there are generally to be found a few white hairs on the ground. There is little doubt from the evidence of its native name and the presence of white hairs in its forms that the animal is a grysbok, though this requires confirmation.

Sharpe's grysboks are similar in size to steinboks, though stouter in build, standing some 20 to 22 inches at the shoulder. From steinboks they may be readily distinguished by having a sprinkling of white hairs in their otherwise reddish coat. The dark horseshoe mark on the crown, which is not always evident in the East African steinbok, is invariably present in the grysbok. The tail is short, coloured above like the back, white below. The horns are very short, rarely exceeding two inches in length.

Like the Cape species, Sharpe's grysboks are browsers and grazers, feeding on leaves, young shoots, grass and occasional roots and tubers. They are usually found singly (in pairs in the mating season) in thick bush or grass, deciduous woodland, forest and rocky country, and make for thick cover when disturbed. They return daily to the same spot to deposit their droppings, after the manner of dikdiks and civets. Ionides has found them breeding in the early rains.

UGOGO DIKDIK.

(*Rhynchotragus kirkii thomasi* Neumann)

The dikdiks inhabiting central Tanganyika were differentiated under the above name by Professor Oscar Neumann in 1905 on the basis of specimens collected by himself at Itiso in northern Ugogo. Neumann gives the range of this race of dikdiks as extending from Ugogo to the country immediately southeast of Lake Victoria.

Roosevelt and Heller (1915, ii, p. 633), in their map illustrating the distribution of the races of Kirk's dikdik, records the occurrence of *R.k.cavendishi* (Thomas) in northern Ugogo and state, on the preceding page, that the range of this form extends to the "southeastern drainage of the Victoria Nyanza," thus overlapping very considerably the range of the Ugogo dikdik, which these authors fail to mention.

Loveridge (1923, p. 735; 1928, p. 24), and Allen & Loveridge (1933, p. 131) refer specimens from Kilosa, Dodoma, Kondoa, Singida and Mwanza Districts to yet another form of Kirk's dikdik, namely *R.k.nyikae* Heller, described from near Voi in Kenya. Thus it will be seen that the dikdiks from this part of Tanganyika have been at various times and by various authors referred to three separate forms of Kirk's dikdik. In the Game Department collection we have examined specimens of dikdiks from the northeast shore of Lake Rukwa and from Shinyanga which appear to be similar to material from northern Ugogo. Whether in fact the Ugogo dikdik is entitled to subspecific rank or should be treated as a synonym of *cavendishi* which has seven years precedence cannot be decided until a proper comparison of material from the two type-localities is made. For the present it would perhaps be best to treat *thomasi* as a valid subspecies for the dikdiks inhabiting central and western Tanganyika. Lake Rukwa must be near the southwestern limit of the range of dikdiks in East Africa for they do not occur on the Northern Rhodesian border a few miles south of the lake. Beyond this no dikdiks are found until the Damaraland dikdik (*R.damarensis* Günther) is met in southwest Angola and South West Africa.

Dikdiks are only found in pairs, with a young one at heel after the breeding season. It is said that they mate for life and that should one of the pair die the other never takes a second mate but pines away and dies. The young, which are dropped at the beginning of the rains, are a source of food for the larger species of eagles. The dikdik's note of alarm is a soft whistle made apparently by expelling air from the nostrils, as the noise is always accompanied by an elongation of the short proboscis and dilation of the nostrils.

NORTHERN PUKU.

(*Adenota vardoni senganus* P. L. Sclater & Thomas).

Little need be said about pukus beyond drawing attention to their curious discontinuous distribution in Tanganyika.

In the Rukwa valley they are common along the southwest shore of the lake from Ngomba at the southeast corner to the mouth of the Rungwa River at the northwest end. They also occur on the northeast shore of the lake at Udinge.

To the southeast, pukus are also found round the north end of Lake Nyasa on the open plains behind Mwaya.

Finally, in the Ulanga (Kilombero) valley they are extremely common from Ifakara ferry in the east to within fifteen miles of Utengule in the west, and from the foot of Uzungwa Mountains in the north to the Lupiro-Malinyi road in the south. The Ulanga valley is the most northeasterly point reached by puku.

Their call is a soft whistle, not so loud as that of a reedbuck or oribi.

SASSABY (TSESSEBE).

(*Damaliscus lunatus* Burchell)

Shortridge (1934, ii, p. 459) records the Sassaby as ranging through "Northern Rhodesia and Nyasaland, northwards to a very short distance across the southern boundary of Tanganyika Territory." This northern extension of the range of the Sassaby is doubtless based on a statement by Dollman (which we have not seen) that it occurs "as far as the south end of Lake Tanganyika." The south end of Lake Tanganyika is in Northern Rhodesia and, as far as we can ascertain, this species does not enter Tanganyika Territory at any point of its range.

DIBATAG.

(*Ammodorcas clarkei* Thomas)

So far as we know dibatags are confined to Somaliland so that it is interesting to note that Matschie (in Werther, 1898, p. 249) records them as having been shot by von Wissman in the neighbourhood of Kilimanjaro, in Tanganyika. As this species has never before or since been seen so far south one can only presume that Matschie's identification was at fault (the animal was probably a gerenuk which occurs in this area) and we suggest that dibatag should be erased from the Tanganyika fauna list.

WHITE RHINOCEROS.

(*Ceratotherium simum* (Burchell))

Speke, who had much experience with black rhinos in central Tanganyika, records (1863, p. 198 et seq.) white rhinos from the country west of Lake Victoria. In trying to confirm or refute this record we heard from A. H. Savile, at one time Agricultural Officer in Bukoba District, that a white rhino had been shot in Karagwe between 1931 and 1934 by Captain Prudhomme of the French Legation, Nairobi. Following this up we learnt that in 1933 Captain Prudhomme had registered two pairs of horns with the District Commissioner, Bukoba, one pair from a black rhino shot by

himself, the other from a black rhino shot by Eddy Edmond Blanc. Doubtless a misunderstanding arose in this instance by presuming that the name "Blanc" referred to the rhino and not to the hunter!

During 1945 a "white" rhino was reported between Mpwapwa and Kibaya. It was seen by a number of Africans and also on two or three occasions at short range by P. Gallagher of the Veterinary Department. There is no question of doubt but that this was an albino black rhino.

Whether white rhinos occurred in Karagwe in Speke's time or not we cannot say, but it is certain that there are now no white rhinos nearer than the Lado Enclave and this species should not be included among the present day fauna of Tanganyika.

BROWN HYAENA.

(*Hyaena brunnea* Thunberg)

Lydekker (1908, p. 452) has recorded the brown hyaena, or strand wolf, "from the extreme south of Cape Colony to Angola on the west and the Kilimanjaro district in the east." Shortridge (1934, i, p. 154) writes that "there have been rare records of its occurrence in Tanganyika Territory (Sclater) and Kenya (Ward) — as far north as Kilimanjaro (Bryden and Lydekker). Pocock (1935, p. 820), in his review of this species, gives the Zambesi River as the northern limits of its range in the east of the continent, but Pitman (1934) has recorded it as occurring, but exceedingly rare, in Northern Rhodesia.

It is extremely doubtful if this species now occurs, if it ever has occurred, in Tanganyika.

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We have made use of the following works in the preparation of this paper. Abbreviations for periodicals follow the form and spelling given in the latest "World List of Scientific Periodicals."

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Notes on Some Birds of the Rufiji District with Native Names

By L. A. Haldane

GEOGRAPHY

The Rufiji District is roughly a rectangle lying between parallels 7° 35' and 8° 20' South and 37° 50' and 39° 25' East with the eastern side bounded by the Indian Ocean and the Mafia Channel.

The main feature of the District is the Rufiji River which passes through the Pangani Rapids at the extreme western end at about 500' contour and runs East by South cutting the District into two unequal parts of which the northern is the smaller. The river is broad, winding and muddy, and in the dry season so shallow that the large dug-out canoes have some difficulty in navigating between invisible sandbanks and snags. Two floods occur each year, a small one during the short rains, and a greater between March and May when the water rises fifteen feet at the Zombe gauge, large areas of the valley are flooded and paddy fields along the banks are liable to be swept away. When the river falls in June it occasionally subsides into a new course, many of the lakes flanking it having been formed in this way. It is at this season that the aquatic birds are best seen as the falling water uncovers fresh feeding grounds each day.

After the rains the river is bounded on both sides by the low undulating valley plain covered in tall grass and crops, chiefly rice. At the western end the typical bush comes almost to the waters' edge but recedes the nearer the river approaches the sea. At each bend the stream cuts into the valley floor forming sand-cliffs of varying size on the outside and leaving the inside a flattish expanse of muddy pools, sandbanks and tall reeds. Quiet reedy creeks and backwaters break the line of the banks on which are situated mango-studded villages, strips of gallery forest or open woods.

The shier waterbirds are best seen from a canoe while paddling about the reedbeds but most are indifferent to a motorboat and rest or feed unmoved on the mudbanks

About ten miles from the coast the river forms a delta whose channels wind among extensive mangrove forests. It is here tidal with stinking mudbanks on which many waders feed. Along the coast coconut palms vie with scrub as background to the sandy beaches which face the open sea.

The Magongo Hills begin ten or fifteen miles north of the Rufiji and continue with varying names almost to Dar-es-Salaam. They are of no

great height, the higher villages lying at about 600 feet, but are steep and intersected by marshy valleys. The greater part of the area is covered with dense coastal scrub and abandoned *shambas*, interspersed with villages and small tracts of forest.

Utete, with its old German *Boma*, is the administrative centre of the District. It is fifty miles inland on the south bank of the Rufiji on a spur of the Kichi Hills with the river on two sides and Lake Lugongwe on a third.

The Kichi Hills run South from Utete to meet the Matumbi Hills which form the southern boundary of the District. All this area is covered with tall bush and occasional thickets, kinder to elephant and other wild game than to the few decaying villages which are sparsely scattered on the lower slopes.

Elsewhere the District is under well-grown and fairly compact bush containing a variety of deciduous trees up to forty feet tall with a thick grass floor in the rains, but ravaged by fire from August till November. Blocks of thicket are dotted about in the moister parts and along rainy-season watercourses.

CLIMATE

The annual rainfall at Utete over a period of ten years averaged 32" of which 10.5" fell in the months of November to January and 19.2" from February to May. Nearer the coast the rainfall must be appreciably higher.

The shade temperatures average 83° plus for the twentyfour hours in January, February and March with maximum temperatures of just over 100°. Humidity 87. In July and August the temperature falls to about 60° at night.

THE BIRDS

List A below gives the English/Kirufiji/Scientific names of birds seen by me while in the Rufiji District between August 1943 and September 1944. The notes are based on my daily diary, unless otherwise stated, and, I hope, give a general picture of the occurrence and frequency of birds in the District as they appeared to a single observer.

Most of the birds were noted on daily walks round Utete with frequent journeys up and down the river and occasional safaris, on foot or by lorry, to the Magongo Hills. Owing to the necessity of combining exercise with observation the notes lack an organised plan, give little account of nesting and other habits, but perhaps give an indication of the variety of birds visible to even a beginner and induce a less jaundiced view of the District than that generally held.

To give a more balanced picture of the bird population List B gives names, extracted from the District Book, of additional birds seen by