

FURTHER DATA ON NORTHERN RHODESIAN UNGULATES

by

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1. The present and believed former ranges of several ungulates in Northern Rhodesia are discussed, and previous information supplemented or modified in the light of recent investigations.
2. Attention is drawn to the natural absence of a number of species from the Baiovale, Kalabo and Mongu area.

A recent account in *Mammalia* (Grimwood *et al.*, 1958) reviewed the present status of the ungulate mammals of Northern Rhodesia, particularly the extent to which they are holding their own. This paper is to expand the information therein given on certain species. The map in Grimwood *et al.* (p. 458) may be referred to for the areas mentioned.

For present purposes I regard « original range » as the area of distribution prior to the great reduction in game that has occurred as a result of human activity, principally since the beginning of the present century (1). However, this not in all cases easy to assess, for it often becomes difficult to judge whether an animal once inhabited a particular area but has been locally exterminated, or if it never occurred there at all. With some species again the general area of distribution may still be wide, and not in itself significantly altered, though numbers are greatly reduced — the zebra (*Equus burchelli*) and the roan antelope (*Hippotragus equinus*) are examples. Almost exactly the opposite situation is seen in the case of the rhinoceros (*Diceros bicornis*) and the impala

(1) Alterations in the areas occupied by animal species take place of course irrespective of human agency. But such expansions and contractions occur normally over extended periods, and, in terms of geological time, are associated with changes of climate, vegetation and so on, the natural decline and extinction of some forms, and the evolution of others. This is a quite different phenomenon from the violent fragmentation of the ranges of so many large mammals during recent times in Africa and elsewhere.

(*Aepyceros melampus*), which no longer occur in many places but which are, in general, holding their own well where they do remain. It is admittedly true that these two species are today largely in reserves where protection is effective, but nevertheless it does appear that even before such protection the decrease in overall range had proceeded faster than numerical reduction in the areas where they now survive.

In other words reduction towards extinction point was much more rapid in some areas than in others, instead of there being a general and more or less even decline. Certain other species, even if reduced in numbers, can continue to survive in most places, often in conditions where one would hardly believe it possible. This is either because of their habits and adaptability to changed conditions of environment, or the nature of their specialised habitat (thickets, swamps etc.). The species falling in this category are the three species of duiker (*Sylvicapra grimmia*, *Cephalophus sylvicultor* and *Cephalophus monticola*), the bushbuck (*Tragelaphus scriptus*) and the sitatunga (*T. spekei*). A further one not only survives, but often tends to increase noticeably in farming areas — the bush pig (*Potamochoerus porcus*). In the case of such species as these it is but reasonable to regard their original ranges as unchanged, and to treat definite absence from any area as natural.

Information from African sources, especially of past occurrences, is often useful, but has to be very carefully considered in conjunction with other factors rather than always accepted at face value.

Over and above all the foregoing considerations it must be remembered that the density of populations varies both from place to place and from time to time. We have practically no information in central Africa about natural fluctuations in range or numbers, though they must surely occur. But in the case of the larger ungulates the position today is that population cycles would be in most places completely obscured by the artificial effects of human activity. Nevertheless it is to be hoped that future studies of ungulate population dynamics may be possible in the larger reserves.

The following terms for certain areas are used throughout :

Diceros bicornis (Black Rhinoceros).

Most of the original range has been dealt with by Pitman (1934) and the present status by Grimwood *et al.* (1958). From the distribution view-point the main interest lies in its original westward limits.

There is no record of any sort as far as I have been able to trace from Kabompo, Mwinilunga or Solwezi districts, or western Balovale. Possibly it may have occurred at one time in extreme eastern and southeastern Solwezi near the Ndola border. Local information is that rhinoceros were present a very long time ago in eastern Balovale north of the boma, and around the Kabompo-Zambesi confluence. There is no means of telling today if this was the case or not. The reports came from old men in the area, but they themselves may have only been repeating things at second-hand, and it can at best be regarded only as hearsay.

In Barotse the species, though apparently rather localised, was once widespread east of the Zambesi river, definite records existing for all districts except Mongu. West of the Zambesi the only indication I have been able to find is from the District Commissioner Senanga. This is that: « Up to 1945 rhino (Black) were reported on the Silowana (the high grasslands between the Mashi and Zambesi) ». This seems very probably correct, though of course, there is no way of checking it today (1).

In Kalabo district there is no record of rhinoceros, nor any reason to suppose they may ever have existed there.

In N. Rhodesia, as in other parts of the world, the species proved especially vulnerable, perhaps more so than all others, to firearms, and with their advent soon disappeared from many areas. It is thus proportionately difficult to determine its original status. However, with all relevant considerations in mind, it seems reasonable to infer that within historical times it has always been absent from Kalabo; Balovale west of the Zambesi; the northern parts at least of Kabompo (and perhaps all the district); Mwinilunga; and Solwezi (save possibly in the extreme east and southeast). Its former presence in eastern Balovale is unproven and perhaps doubtful. In the Nyika plateau there is no indication of any sort, though one

(1) There have also been rumours of white rhinoceros (*D. simus*) in the area and in adjacent parts of Angola. But these, as the D.C. Senanga remarks, are mere legend than fact. In any case *D. bicornis* would undoubtedly be the species, and not *D. simus*.

would say it is an unlikely area. Elsewhere it doubtless occurred in suitable country throughout the territory, both at the lower levels and in the plateau areas, though I have seen no actual record from Ft. Rosebery.

The following former localities in addition to those elsewhere published may be of interest for record purposes:

a) Chili Forest, about 12 miles northeast of Chinsali boma; along the Namwala to Kalomo road; Magoye, where one was shot by a ganger in 1909; « not many miles from Ndola »; Bell Point, 29°10' E. 14°40' S.; near Livingstone Memorial, approx. 30°19' E. 12°20' S. (E. Knowles Jordan *in litt.*).

b) From Uninji Pan (6 miles or so south of Abercorn) and Saisi river south to the Chambeshi (Abercorn district); also east, south, and west of Mporokoso (unpublished report by H. C. Marshall dated 1903, in the Rhodes-Livingstone Museum).

c) Kasempa district about 25° E. 13°55' S. A record obtained from an old Game Guard who recalls seeing a rhinoceros several years ago at the Loba stream where he used to live. This is accepted as entirely reliable.

d) Extreme northeast Mankoya near the Lalafala source, about 25°30' E. 14°35' S. where Game Guards reported spoor of a pair in 1950. This is also considered reliable.

e) Northern Mankoya. G. E. Curtis, formerly Assistant Director of Game and Tsetse Control, stated (*in litt.* dated 28-10-48) as follows: « The spoor of a rhinoceros was definitely seen in 1934 near the confluence of the Mwimba and Dongwe rivers in Mankoya district. This is just west of the Lalafala-Dongwe confluence. It was presumed then that this animal had wandered over from Kasempa district ». The locality indicated by Mr. Curtis is about 24°38' E. 14° S. The continued existence of rhinoceros has been confirmed in the Gwembe valley where fresh spoor was recently seen in a thicket near the Lusito river by Mr. Edelman (I. R. Grimwood, *in litt.*). This is between the Kariba Dam and the Kafue-Zambesi confluence, and there was an unconfirmed report of the species in the area a few years ago.

An alleged record from the Northern Province plateau was regarded as unlikely by Grimwood *et al.*, and since their paper was written I have been able to obtain further information which confirms this doubt. Mr. E. R. Rumsey, who has been in the area since before 1917, writes: « Wildlife were never up in this part of the Northern Province. During the month of October in 1917 while in the war I met a hunter by the name of Austin. It had been informed Austin had shot wildebeest on the Mangwa river at that time ». It may be noted that this was four years earlier than the date given by Pitman (1934) for the incident. Moreover, had Austin really shot a wildebeest in the N. P. plateau in 1921 Rumsey would not only have recalled it, but would undoubtedly have remembered the animals there too. It therefore seems wholly justifiable to reject the N. P. plateau as a former wildebeest locality.

Schouteden's suggestion (Schouteden, 1948) of the possibility of *G. l. cooksoni* in the Congo appears unfounded.

Tragelaphus scriptus (Bushbuck).

It has generally been considered that this species is found throughout N. R., but recent investigation has shown that it is quite absent in western Balovale, and reports recently obtained from Barotse indicate that it occurs neither in Kalabo nor Mongu district. In Senanga district it is found, according to the District Commissioner, « in the better wooded areas along the banks of the river about Sioma ». It is also rare in eastern Balovale district, however, noted as rare. There is no reason to suppose it occurs between the Mashi and Zambezi rivers. As noted above, this is one of the species whose distribution has not become greatly modified by human agency, and there can therefore be no doubt that these western districts are unfavourable habitat for bushbuck.

Further east the species occurs throughout the territory, though noticeably more plentiful in some places than others. The only race appears to be *T. s. ornatus* Pocock (but see Roberts, 1951, 314).

This species is absent from Mongu district (D. C. Mongu) and in Kalabo is found only in the extreme south (D. C. Kalabo). Elsewhere in Barotse it occurs throughout, including west of the

TABLE
To show changes in the Ungulates on the western border of N.R.

SPECIES	WESTERN BALOVALE	KALABO	EASTERN BALOVALE	MONGU
<i>Loxodonta africana</i> (Elephant)	Virtually absent	Absent as residents	Marginally present (perhaps regular in past time)	Present in northeast, possibly
<i>Diceros bicornis</i> (Rhinoeros)	Absent	Absent	?	No records (possible formerly)
<i>Phaechoerens aethiopicus</i> (Wart Hog)	Absent	Absent	Absent	Believed formerly present (few)
<i>Syncerus caffer</i> (Buffalo)	Absent	Present (few only)	Formerly present	Present
<i>Kobus defassa</i> (Waterbuck)	Absent	Absent	Formerly present (possibly one or two remnants may still exist)	Absent (possibly formerly present in extreme north)
<i>Kobus nardoni</i> (Puku)	Absent	Absent	Absent	Formerly present (now extinct ?)
<i>Kobus leche</i> (Lechwe)	Present	Present	Absent (Possibly once present in the extreme south)	Present
<i>Tragelaphus scriptus</i> (Bushbuck)	Absent	Absent	Present	Absent (possible on Balovale border ?)
<i>Tragelaphus strepsiceros</i> (Kudu)	Absent	Absent (But see text)	Absent	Absent
<i>Aepyceros melanopus</i> (Impala)	Absent	Absent	Formerly present	Absent
<i>Hippotragus niger</i> (Sable Antelope)	Absent	Absent	Present	Present

Zambezi. In the Northwestern Province it is known only from Kasempa district, though may perhaps range into the Kabompo-Dongwe fork, which is in extreme southeastern Kabompo district on the east bank of the Kabompo. In Kasempa it is widespread save in the very northwest and northeast, from which apparently absent. A single male was recorded in 1956 on the Kasempa-Solwezi border at about 25°20' E., but actually within the Kasempa district, being on the south bank of the Chifwe river which here forms the boundary. From the Western Province there appears to be no definite records, but a report of the species about 18 miles south of Ndola may be correct, though requiring confirmation. As Grimwood *et al.* note, the kudu has never been known in the plateau areas of Serenje district, or the Northern Province (1) (i. e. above the line of the Luangwa valley western escarpment) except in the north of Isoka district where it has been recorded near the Tanganyika border and northeastern (Chinsali) where recently reported.

Elsewhere in the territory the kudu is found throughout, both in the plateau areas and the low-lying unit-Zambesi and Luangwa valleys. It is, however, inclined to be rather local in distribution.

THE BALOYALE / KALABO / MONGU AREA

It seems worth while drawing attention to the noticeable change in the ungulate fauna in this part of the territory, characterised by the marked absence of several species from western Baloyale and Kalabo district, and to a lesser degree eastern Baloyale and Mongu. It should in this connection be noted that the zoogeographical limits do not necessarily coincide with the administrative boundaries. Thus extreme eastern Mongu may not be dissimilar in fact from Mankoya faunally; while the small part of Kalabo lying south of the Southern Luedi river (about 15°30' S.) has affinity with the adjacent part of Senanga, as indicated by the presence of wart hog, kudu, sable antelope, and giraffe (no longer present, but formerly occurring), all of which are absent farther north. (Kudu, as noted above, do in fact occur in the vicinity of Lukona.

(1) The Kawambwa and Fort Rosebery districts have now been excised to form the Leapala Province, but the term « Northern Province » is here used in its previous and wider meaning.

but this does not upset this generalisation.) On the basis of the foregoing it is not impossible that waterbuck (*Kobus ellipsiprymnus*) may range as far as this extreme southwest corner of Kalabo, though actually unrecorded north of about 16°20' S.

The attached table shows the situation in these districts, and includes certain animals not discussed above. Species common to all four districts concerned, or to which other considerations in regard to distribution apply, are not included. « Kalabo » and « Mongu » are used in the zoogeographical sense noted above rather than strictly according to their political boundaries.

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