

# **Wildlife in Southern Darfur, Sudan : Distribution and status at present and in the recent past**

by

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L'auteur compare dans ce travail le statut passé et présent de 49 grands mammifères du Darfour méridional, région qui couvre 160 000 km<sup>2</sup>, à l'ouest de la République du Soudan. Beaucoup d'informations anciennes proviennent d'archives difficilement consultables. Les données concernant l'état actuel de la faune ont été recueillies de 1972 à 1977.

La plupart des espèces ont subi une sévère réduction en nombre et on constate aussi une contraction de leur répartition au cours des 75 dernières années ; seules quelques-unes cependant ne sont plus représentées dans la province. Par destruction de l'habitat, l'homme et le bétail domestique sont les principaux responsables de la dégradation du statut de la plupart des espèces sauvages. L'éléphant et la girafe sont victimes du braconnage et de la chasse traditionnelle. Les grands carnassiers sont systématiquement exterminés pour protéger le bétail.

Il faut malheureusement s'attendre à de nouvelles réductions du peuplement des espèces sauvages du fait de la concurrence du bétail toujours plus abondant.

The province of Southern Darfur, in the west of the Republic of the Sudan, occupies an area greater than 160,000 km<sup>2</sup>, bounded approximately by latitudes 9°30' N to 13°15' N and 22°30' E to 27°00' E. This area and its relation to north-east Africa as a whole is shown in Figure 1.

The ecology and domestic livestock resources of the south-central part of the area have been described recently (Wilson & Clarke, 1975) : the climatic conditions, landforms and vegetation over much of the eastern and western areas of the province, as well as domestic live-stock densities and the semi-nomadic pastoral system of land-use are similar to those of the southern area. The climate can generally be considered to be semi-arid with rain (varying from 900 mm in the south to about 400 mm in the north) from June to September and a long dry season of about eight to nine months. Average annual temperatures of the order of 27 °C prevail but diurnal variations in excess of 20 °C are common in the dry season. Vegetation is largely of a low-rainfall woodland savanna type with thorny, predominantly *Acacia*, species in the north being replaced by more dense, taller deciduous trees in the south. Topography is generally level to gently undulating with an average elevation of 500 m to 600 m.

The north-western corner of the province is dominated by the dormant tertiary volcano, Jebel Marra, which has a maximum elevation of over 3,000 m. Several descriptions of this part of the area are available, of which that by Lebon and Robertson (1961) is the most comprehensive. Both the seasonal duration and the amount of rainfall are affected by the mountain massif, as is temperature, with frosts occurring at higher altitudes. The middle and upper

slopes of the mountain are largely covered by man-made terraces and have been cultivated for centuries, as a result of which only remnants of the original vegetation remain. The very highest slopes, above 2,800 m, and the caldera itself are mainly covered with short grass with a few scattered *Olea laperrini* trees. The lower slopes and the pediments are again mainly acacia scrub. The water courses, dry for most of the year, have considerable stands of *Acacia albida* on the flood terraces.

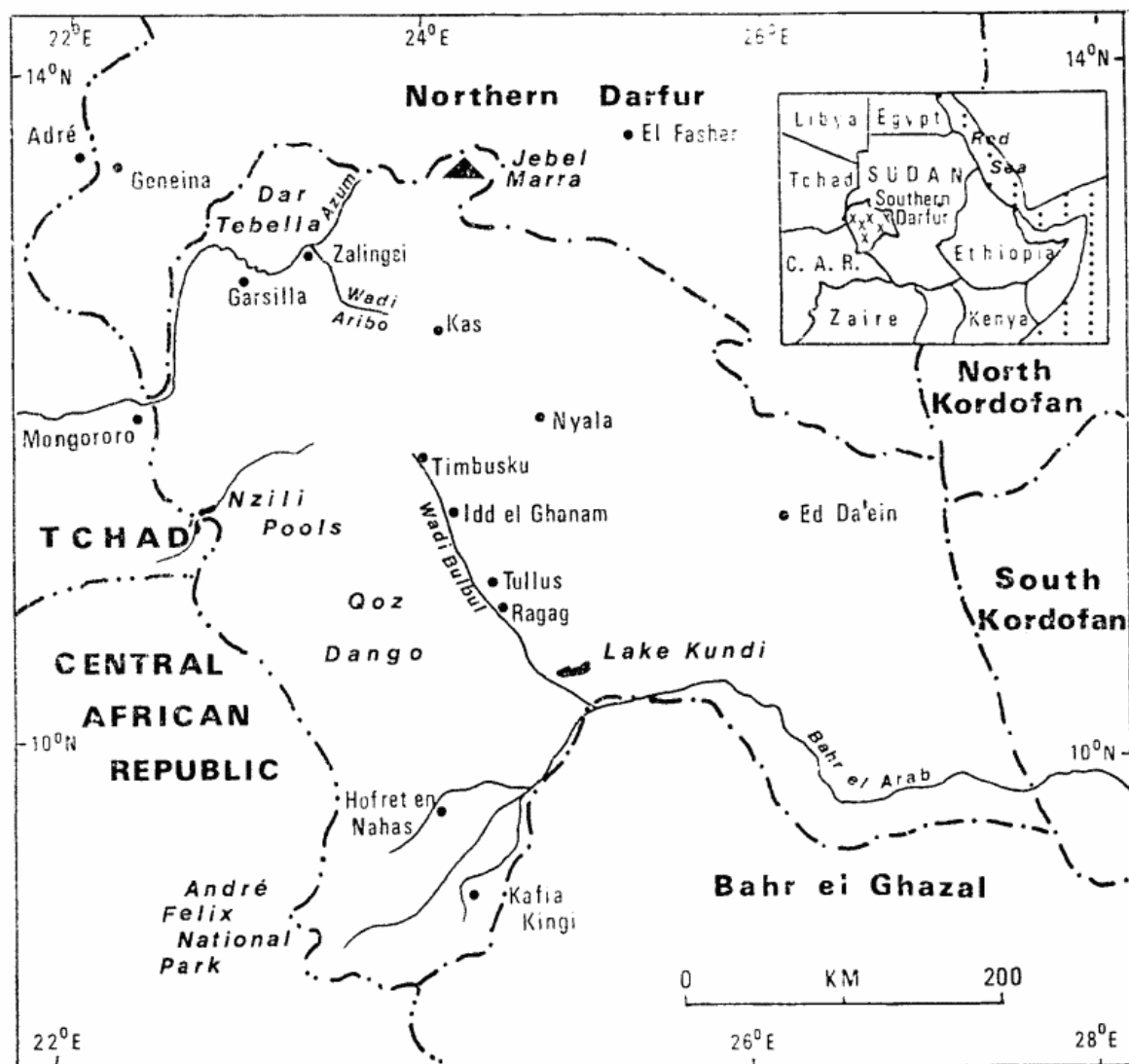


Fig. 1. — Southern Darfur and its location.

#### SOURCES OF INFORMATION

Few formal studies on the wild mammalian fauna of Southern Darfur exist, and information on distribution in time and space, and on status, has

been obtained from a number of sources. Works of early travellers in and close to Darfur often contain references to distribution and give some information on relative abundance (Browne, 1779 ; Burckhardt, 1819 ; Nachtigal, English edition 1971). The reminiscences and memoirs of members of the Egyptian army and the Sudan Political Service provide considerable information (French-Comyn, 1911 ; Boustead, 1971) although as far as Darfur is concerned some are disappointing (Chapman, 1921 ; Dugmore, 1924) if not actually misleading in their titles — although in fairness it must be remembered that much of what now constitutes Darfur was not reincorporated into the Sudan until 1916. The first serious attempt to provide a comprehensive cover of the Sudan's game, by a former Chief Game Warden (Brocklehurst, 1931), is a mine of facts, but perhaps seems rather quaint by modern standards.

An invaluable and rich source is to be found in the archival material in the Sudan Library of the University of Khartoum. In particular, the Intelligence Reports of the Governor-General from 1892 to 1924 are, perhaps surprisingly, remarkably rewarding ; as are the regular reports — the Darfur Monthly Diary — of the Provincial Commissioner for Darfur in the years 1944 to the immediate pre-independence period in 1954. Subsequently in this paper, these two sources will be referred to respectively as S I R with a reference number and date and D M D followed by a date. The journal of the Philosophical Society of the Sudan, *Sudan Notes and Records*, also contains many references to and notes about wildlife from 1918 onwards.

The first, and still the only really comprehensive study on the mammals of Darfur was made on animals collected in 1921 and 1922 by Lynes and Lowe around Jebel Marra and to the west of it along the Wadi Aribo (Thomas and Hinton, 1923). Of the 62 species represented in the collection, the majority of them small rodents, insectivores and bats, 19 were described as new, either as full species, or as subspecies. A further study of the mammals of Jebel Marra was made during the 1960 s (Happold, 1966). A study of museum material (Setzer, 1956) relating to the whole of the Sudan Republic provides some useful information on systematics, although, as has already been pointed out (Happold, 1967) there is a number of omissions for the country as a whole, and for Jebel Marra in particular, perhaps because there is a lack of specimens from the Sudan. A catalogue of wild ungulates (Mackenzie, 1954) is rather disappointing in its textual material, in general being content simply to list the species of animals ; in this work the maps of each species distribution are of too small a scale to be of more than general use. The distribution and abundance of mammals in the former French colonies to the west has, in contrast, been fairly adequately documented (Blancou, 1958*a*, 1958*b*, 1963 ; Happold, 1969) and it is possible to extrapolate for the immediate Sudan/Tchad and Sudan/Central African Republic border areas from these.

Finally, up to date information has been obtained from four main sources : personal correspondence and intercourse with Southern Darfur residents and visitors ; from a report prepared for the Department of Wildlife and Fisheries (Field, 1974) which is considering establishing a Game Reserve in the extreme south west of the Province ; from two aerial surveys carried out in 1975 and 1976 ; and from observations by the author on journeys totalling more than 40,000 kilometres by car, by camel and on foot during residence in the area from 1972 to 1974 and again in 1976 and 1977.

other parts of Darfur is referred to simply as *P. ruficeps*, but outside the mountain massif there are few suitable habitats and the animal is not at all common.

#### PROBOSCIDEA

Ivory, second only to slaves, and followed closely by ostrich feathers, was for long one of the principal exports of Darfur. It is not surprising, then, that there are scores of references to it and to the Elephant, *Loxodonta africana*, in both official and unofficial sources.

Early reports regarding numbers and distribution are rather confusing. Browne (1799) contents himself with reporting their presence and twenty years later Burckhardt (1819) on the evidence of pilgrims questioned in Cairo remarked that they were "very common in the country". They were said to be very numerous in Southern Darfur in 1903 (SIR No. 104 March, 1903 ; SIR No. 105 April, 1903 ; French-Comyn, 1911) and between that year and 1913 quantities of ivory are reported being legally shipped out of Darfur (as well as the seizure of amounts of illegal ivory) often as part of the Sultan's tribute to the Sudan government, culminating in the sending to Mecca as part of the pilgrimage of 600 kg (SIR No. 231 October, 1913). Many tracks of Elephant were seen south-east of Zalingei and numerous Elephants were noted in the bush to the west of Zalingei in 1917 (SIR No. 270 January, 1917). Dugmore (1924), in spite of the rather grandiose title of his book, had obviously never been to Darfur and mentions, merely, that the Elephant presumably extends to there. Brocklehurst (1931) likewise does not specifically mention them in the context of Darfur. Shortly afterwards local hunters were said to be having to travel 35 days each way into French territory to the west to get big tusks and that only small tuskers moved into the Qoz Dango during every rains (Lampen, 1933). An increase in the price of ivory in 1944 led to an increase in the legal marketing of tusks from 15 in 1942 to 72 and 78 in 1944 and 1945 (DMD September, 1945) and in 1944 it was decided to impose an annual quota of six Elephants each on the two southern tribes of the Habbaniya and the Rizaygat (DMD July, 1946). (The Game Preservation Branch's efforts at conservation at this time — they had published a desire to buy wild animals — resulted in the capture of an Elephant by one enterprising individual who was intending to deliver it to Nyala to claim his reward : it was noted, perhaps with tongue in cheek, that the problem of transport from there to railhead — at El Obeid, almost 700 km away — was likely to prove difficult).

In the forties and early fifties Elephant appear to have been present rather far north in considerable numbers. There are numerous reports of crop damage during the harvesting period in the cold dry season : a large herd damaging crops in Western Darfur (DMD November, 1945 ; December, 1945 ; February, 1946) ; considerable damage in Dar Tebella in Western District (DMD, December, 1946 ; January, 1947) ; a big herd of Elephants 25 miles from Zalingei (DMD April, 1947) ; Elephant in Qoz Dango (DMD September, 1947) from whence they obviously moved north to raid crops in Dar Tebella again (DMD October, 1947 ; November, 1947) ; again damaging crops in Western Darfur (DMD October 1948 ; November, 1948 ; December, 1950) ; two herds of 40 each in Western Darfur (DMD October, 1949) ; "normal migration

reported through Zalingei" with damage to cultivation (DMD December, 1952) and "on routine annual move and drinking in places near Garsilla in Zalingei district" (DMD October, 1954 ; November, 1954). In 1951, however, it was estimated that there were 100 Elephants in Western Darfur with a sex ratio of four females to one male because of ivory poachers, in addition to a small herd usually being present in the Jebel Marra area (Game Preservation Branch, 1951).

In other areas they appear to have been rare, one herd of 23 cows and calves being reported in the south-west (DMD February, 1950) and two individuals being reported at Tullus, and later at Ragag, in central Southern Darfur (DMD September, 1954).

Two were seen on the southern slopes of Jebel Marra in 1966 and one was reported from Idd el Ghanam during the rains of 1972, but it appears that Elephants, probably because of harrassment in cultivation areas and poaching, are now confined to the very sparsely inhabited and tsetse-infested areas in the south-west of the province and even these areas are only visited during the rainy season. None was recorded during the aerial surveys of 1976.

#### PERISSODACTYLA

Rhinoceros were reported to be fairly numerous in the extreme south-west, between Hofret-en-Nahas and Kafia Kingi on a number of occasions in the early twentieth century (SIR No. 105 April, 1903 ; French-Comy n,1911) as well as having been previously recorded by Browne (1799) and Burckhardt (1819). These observations do not record whether it was the Black Rhinoceros, *Diceros bicornis*, or the White, *Ceratotherium simum*, which was seen. However, it was "pretty well established that White Rhino are still extant in South Kordofan and seems highly probable that it also exists in Southern Darfur" (SIR No. 114 January, 1904) : this presumably refers to the area north of the Bahr el'Arab. There do not appear to be any later references to them in Darfur other than in 1951 (Game Preservation Branch, 1951) which says that the "White Rhino possibly occurs along the Bahr el'Arab". The most recent actual report of Rhinoceros near to our area was, however, of Black Rhino in 1946 near to Wau about 300 km to the south of the Bahr el 'Arab (Blancou, 1958).

It is certain that neither species now occurs in Darfur, and they have probably been extinct in the whole province for at least forty years.

#### ARTIODACTYLA

Both Browne (1799) and Burckhardt (1819) record the Hippopotamus, *H. amphibius*, as present in Darfur. Mackenzie (1954) says that it is common in all tributaries of the Nile. With the one exception of Boustead (1971) who travelled in south-west Kordofan in 1933 and said that the Bahr el 'Arab was full of hippo at that time, there are no modern records for Darfur. Local residents say that an occasional hippo can be found in the area of the Bahr el 'Arab and Lake Kundi during the rains and the last remembered hippo in Western Darfur was killed near Nzili Pools on the Tchad border in about 1964.

west where the tsetse makes the area unsuitable for most domestic stock and in areas close to this where wildlife are able to make use of land not used by domestic stock during the rainy season.

In general, the larger animals whose social structure requires them to live in groups have either already disappeared from the area or are doing so rapidly, the only notable exception being Hartebeest. Others, such as the Greater Kudu and the Gazelles which live in pairs or small groups are generally more numerous and will probably continue to survive precariously for some time.

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#### SUMMARY

The paper discusses the past and present status and distribution of 49 large mammals and refers to the literature on 40 smaller species in Southern Darfur, an area some 160,000 km<sup>2</sup> in extent in the west of the Republic of the Sudan.

Much of the information on past status and distribution has been taken from archival material which is not generally available while current status has been determined by ground and aerial surveys between 1972 and 1977.

Most species have undergone a severe reduction in numbers and suffered a contraction in their distributional range over the last 75 years, although only a very few animals which have been recorded in the province are not found there now.

The principal causes of the reduction in numbers and range are the indirect effects of man and his domestic animals through habitat destruction. This applies to all except Elephant and Giraffe, which have suffered from poaching and traditional hunting respectively; and the larger carnivores which were systematically exterminated as a livestock protection measure.

Due to the continuing influence of large numbers of domestic animals further reductions in the numbers and range of wildlife can be expected.

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