Giraffe south of the Niger-Benue river system

Acknowledgements

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Zusammenfassung

Halsbandmarkierungen von Gemsen in Neuseeland


Literature


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WISSENSCHAFTLICHEN KURZMITTEILUNGEN

Giraffe south of the Niger-Benue river system

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In earlier papers (Happold 1969, 1973a, b), I showed that giraffes (Giraffa camelopardalis peralta Thomas, 1898) are rare or uncommon in many localities north of the Niger-Benue river system from about 8° — 18° N, and that they have not become established in what appears to be suitable savanna within the same latitudes south

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of the rivers. This paper describes two interesting exceptions to this generalised distribution pattern. The first exception concerns giraffes living in the watershed region of the Benue river, and the second is related to the ability of giraffes to cross the Niger river in the Sahel region during times of drought and low rainfall.

The Benue and several of its tributaries originate in the Adamaoua highlands of Cameroun and flow northwards before turning westwards into Nigeria. There are about 100 giraffes in the Parc National de la Bénoué, which is situated south of this westward curve of the Benue river and whose eastern boundary is along the Benue river (J. Dubreuil quoting P. Flizot, in litt., Happold 1973b). Also within the watershed of the Benue and its tributaries is the Parc National du Boubandjidah, about 75 km east of the Parc National de la Bénoué, where there are about 250 to 300 giraffes (J. Dubreuil, op. cit.). Although these giraffes are already south of the Benue, there is a belt of hilly and mountainous country along the Cameroun-Nigerian border, almost as far as Yola on the Benue river, which probably prevents the dispersion of giraffes into Eastern Nigeria from the Benue watershed. There are no records of giraffes from Eastern Nigeria.

The distribution of giraffes along the north bank of the Niger river is irregular. The largest populations, probably about 5500 individuals (S. Moussa in Poche 1976), are within 20–30 km of the river between Ansongo (Mali), Ayorou and Niamey (Niger). However, there is some evidence that giraffes are becoming less common in this region (Jones 1973) even though they are unmolested by local people and are often seen near villages (C. Geerling, pers. comm.). There are few, if any, giraffes between Niamey and the Nigerian border, and in Nigeria itself. To the west of the Ansongo-Niamey populations there are records of small populations where the Niger...
reaches its highest latitude (17° N) near Timbuctoo, but there are virtually no records of giraffes between the flood swamps south-west of Timbuctoo and the headwaters of the Niger in the Guinea Highlands.

Earlier (Happold 1969), I postulated that the Niger river prevented the dispersion of giraffes into the savannas south of river, but subsequently there have been four southern records (Table) which suggest that the river can be crossed when conditions are suitable although no one, as far as I know, has ever seen this happening. Having crossed the river, giraffes disperse into an area which appears to be clearly defined (Fig.): they have not been recorded from the surrounding areas which include the Parc National du W in southwest Niger (Happold and Philp 1971; Poché 1976). Benin (formerly Dahomey) (Raynaud and Georgey 1969), western Nigeria (Happold 1973b; Child 1975), Ghana (Cansdale 1948) or Ivory Coast (Roure 1962). It is said that giraffes were relatively common in the savanna between northern Ghana and Ougadougou earlier this century, but there are no definite records of this.

If all the giraffes seen south of the Niger originated north of the river, it seems probably that the crossings were made somewhere east of Timbuctoo and west of Niamey where the northern populations are comparatively large. Furthermore, there should be a correlation between the occurrence of giraffes south of the river and factors such as low water levels in the river, the existence of useful sandbanks, and food shortages in the north. Unfortunately, ecological records in this region are almost non-existent, and the hydrology of the Niger is so complicated that it is not possible to make exact extrapolations from the data which is available. Nevertheless a general indication of the conditions prevailing over the last 60 years can be gleaned from the following data:


2. At Baro in Nigeria, the lowest low water levels (depth less than 30 cm [12 in]) were recorded in 1915, 1917, 1920-22, 1938, 1945, und 1971-73, although the levels in the last period were masked by the Kainji Dam which was completed in 1968 (Nigerian Federal of Transport, Inland Waterways Division).

Observations of giraffes south of the Niger river

<table>
<thead>
<tr>
<th>Year</th>
<th>Locality</th>
<th>Approximate distance to Niger river (km)</th>
<th>Notes and references</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948-49</td>
<td>North of Ghana-Upper Volta border near Paga, 10 km north of Navrongo (10.51 N, 01.03 W), Ghana</td>
<td>400</td>
<td>‘small herd’ (Morgan 1969)</td>
</tr>
<tr>
<td>1969-71</td>
<td>Markoye, 70 km N. of Dori (14.03 N, 00.02 W), Upper Volta</td>
<td>80</td>
<td>‘occasional’ (P. D. Mickelsen, in litt.)</td>
</tr>
<tr>
<td>1973</td>
<td>Gorom-Gorum, 50 km N. of Dori (14.03 N, 00.02 W), Upper Volta</td>
<td>120</td>
<td>About 5 individuals (P. D. Mickelsen, in litt.)</td>
</tr>
<tr>
<td>1973-74</td>
<td>Gourma region of Mali, extending south to the Upper Volta border</td>
<td>0-240</td>
<td>Largest herd near Gourma Rharous (16.58 N, 01.50 W) contained about 20 individuals (J. A. Sayer, in litt.)</td>
</tr>
</tbody>
</table>
From these data it seems likely that the water level in the Niger was low enough upstream from Niamey for giraffes to cross during several months of the year in about 1914-15, 1920-22, (possibly 1938), 1945-47, and 1971-73. The first observations of giraffes in 1971-73 were in April to July, the months when the river level in this part of the Niger river is at its lowest. There is no evidence, as yet, that giraffes crossed the river during the first three time periods, but there is definite evidence (Table) for the last two periods.

Although giraffes have been seen occasionally south of the Niger river, there is no evidence that permanent populations occur in this area, and presumably the giraffes either die or return to the northern side. The southern habitats may be unsuitable for two reasons. First, human harrassment and habitat modification may prevent the establishment of viable "southern herds". Secondly, there may be an absence or inadequacy of particular food plants or some other environmental requirement. These speculations emphasise the necessity of a thorough ecological study if, at some time in the future, conservation authorities wish to translocate giraffes into the savannas south of the Niger-Benue river system.

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References


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