

Historical distribution of the black rhinoceros (*Diceros bicornis*) in West Africa

L.C. Rookmaaker

Rhino Resource Center, c/o IUCN Species Survival Programme, 219c Huntingdon Road, Cambridge CB3 0DL, United Kingdom

Received 27 February 2003. Accepted 1 May 2003

The historical distribution of the black rhinoceros has recently been mapped as occurring as far west as Senegal. The accuracy of the extent of this range is investigated. The rhinoceros is depicted in west-central Africa on maps prepared in the early 16th century and it was included in an engraving published by Marees in 1602. There are rock paintings dated 2000 years B.P in the far north of Niger. In recent times, the occurrence of the rhinoceros has been substantiated in northern Nigeria and eastern Niger on the shores of Lake Chad. However, evidence from regions farther west is circumstantial. Footprints of the rhinoceros were seen by the German traveller Heinrich Barth west of the Niger River in 1853. The animal was allegedly killed in Bouna (Ivory Coast) in 1905. Local names for the animal were recorded in the Ivory Coast, Burkina Faso and Liberia. It is suggested that there is a western border of the historical distribution of the black rhinoceros either in western Niger, or more safely in north-central Nigeria.

Key words: historical distribution, early maps, marees, rock engravings, Lake Chad, Mandingo, Schomburgk, Peulh, Barth.

INTRODUCTION

The black rhinoceros, *Diceros bicornis* (Linnaeus, 1758), was common in many parts of Africa until the middle of the 20th century. Currently threatened with extinction over much of its range, it is believed that no more than 3100 animals remain on the entire continent (Emslie 2002). Found in Central and West Africa, it ranged from east to west through the northern part of the Central African Republic (CAR) and the southern part of Chad to northern Cameroon and across the border into Nigeria. There is no doubt that the rhinoceros was present until at least the 1930s in CAR (Blancou 1948, 1960; Sidney 1965: 79–80) and in Chad (Malbrant 1930). At present, the few black rhinoceroses in Cameroon are in serious need of conservation and efforts have been initiated by the national government and backed by international organizations to ensure future protection (Planton 1999; Zecchini 1999). In Nigeria, *D. bicornis* was recorded from eastern regions in the early years of the 20th century, while previously it may have occurred right across the northern part of the country (Zukowsky 1965: 143–159; Happold 1987).

For regions to the west and north of Nigeria, recently produced maps of the historical (c. 1700 and 1900) distribution of the black rhinoceros show a range extending through Benin, Togo, Ghana, Niger, Burkina Faso, the Ivory Coast, Mali,

Liberia, Sierra Leone, and Guinea to Senegal (Cumming *et al.* 1990; Emslie & Brooks 1999; Fig. 1). It is implied that there is evidence of the occurrence of a species of rhinoceros before 1700 in those countries and that the animal became extinct between 1700 and 1900. By contrast, the recognized compilations on the mammals of West Africa give no further data; in fact, most are completely

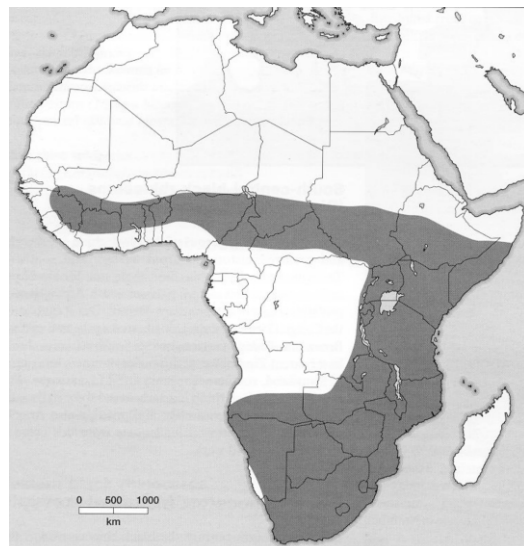


Fig. 1. Map of supposed historical distribution of the black rhinoceros, published by Emslie & Brooks (1999) after Cumming *et al.* (1990).

*E-mail: rhino@rookmaaker.freereserve.co.uk



Fig. 3. A rhinoceros, indicated by the letter H, hidden in the background of a depiction of African fauna by Pieter de Marees, *Beschryvinghe ende historische verhael van het Gout Koninckrijk* (1602, pl. 12).

countries on the Gulf of Guinea, listing elephants, tigers (lions) and monkeys, but no rhinoceros. Incongruously, Marees included the rhinoceros in his plate 12 depicting the African fauna (Fig. 3). The animal is kept in the background, partly hidden by the forest, but the caption to the plate ensures that he meant this to be a *Renochoero* in Dutch: 'a great enemy of the Elephant. They are abundant in Pegu and Bengal.' If De Marees had actually seen a rhinoceros in Africa, he would have described it more fully. Maybe he wanted to show the greatest enemy of the elephant, whose depiction dominates the plate. The statement by Marees (1602: 68b) that both the rhinoceros and the elephant occurred in Pegu (in Lower Burma) and Bengala (in eastern India), may lend support to this interpretation, because no earlier author writing about the rhinoceros had mentioned its presence in Pegu. Although the figure of the rhinoceros on the plate is unimaginative and naive, it was not based on any of the existing iconographic traditions (Rookmaaker 1985).

The account of the African fauna by Marees was often followed by his successors with appropriate

additions and deletions (Tye 1993). Jean Barbot (manuscript of 1688, in Hair 1992) developed a new version of plate 12, this time without the rhinoceros, possibly recognizing the absence of the species in the text (Hair 1992: 476). I have been unable to find mention of the rhinoceros in later chronicles of the Gold Coast, which include Villault (1669), Bosman (1704) and Loyer (1714). Although it is described in detail in the general compilation on Africa by Olfert Dapper (1668: 21b), there is no specific mention of its presence in the western parts of the continent. Later travellers in West Africa, like Mungo Park (1799) or Burton (1863) are equally silent about the rhinoceros.

THE BLACK RHINOCEROS IN NIGER

In the northern part of Niger, on the edge of the Sahara Desert, a number of rock paintings of the rhinoceros have survived (Störk 1977: 134–142; Fig. 5, Nos 1, 2). For instance, images of the animal have been documented in shelters in the Monts de Dada at Dao Timni (Vedy 1962: 345), in the Rochers d'Orida at Drigana (Lhote 1952: 1296) and at Djao (Huard 1961: 480), and further to the west in the





Fig. 4. An evocative paintings found in a rock shelter in Dao Timni, northern Niger, after Védý (1962), dated about 2000 B.P. The animal may well be a white rhinoceros.

Air Mountains near Iférouane (Lhote & Huard 1965: 450). These paintings are thought to be at least 2000 years old. While most of them are too stylized to allow confident identification, some seem to show the broad upper lip and nuchal hump characteristic of the white rhinoceros, *Ceratotherium simum* (Burchell, 1817), shown in Fig. 4. There is no written evidence recording the rhinoceros in these areas, about 700 km north of Lake Chad.

In the southern part of Niger, I would expect to encounter the black rhinoceros on the northwestern shore of Lake Chad, as it was once present around the lake in the territories of Chad, Cameroon and Nigeria (Sidney 1965). In fact, besides a few older reports, it is documented that Captain Largeau shot one in 1910 in the vicinity of Nguigmi (Bigourdan & Prunier 1937; Fig. 5, No. 3). Johnston (1906: 712) stated that the presence of the rhinoceros was 'constantly asserted or reported by Arabs, Hausas or Mandingos' in the large tract of land between Lake Chad in the east and the Niger River in the west. While the source of this information is not stated and has remained elusive, it could refer to areas in Niger as much as to the northern provinces of Nigeria. A review of ancient sources on the rhinoceros by Störk (1977: 406–455) has no Arab references to the rhinoceros in western Africa.

It was long thought that the rhinoceros never existed in the western part of Niger. One day in the 1930s, Jacques Bigourdan and Roger Prunier happened to show a photograph of a rhinoceros to a local inhabitant of Niamey. He immediately recognized the animal, saying that it was called an

illi-fo (meaning *one-horn*) in the Djerma language, and had been known until seventy years earlier in the region of Djerma-Ganda (Bigourdan & Prunier 1937). This area was located between Niamey and Tillabery, to the east of the Niger River (Fig. 5, No. 5). When they reviewed the older literature for supporting evidence, they found that Barth had mentioned the presence of rhinoceros between Say (on the Niger River) and the River Sirba. The same information was repeated by Dekeyser (1955: 314), Mauny (1956: 257), Blancou (1960: 101) and subsequent authors.

Heinrich Barth (1821–1865) from Germany had been recruited by the British government to accompany James Richardson and Adolph Overweg on a journey of exploration from Tripoli across the Sahara Desert to Lake Chad (Anon. 1855). Soon after leaving the Libyan capital in 1850, Richardson and Barth decided to separate and to meet again on the shores of Lake Chad, but Richardson died of fever three weeks before the rendezvous. Barth replaced him as the leader of the expedition and after a long sojourn near the lake, he travelled to Timbuktu between November 1852 and September 1853. He described his journey in five large, well-illustrated volumes published in 1857/58, simultaneously translated into English. He first saw the rhinoceros (called *birni* by the Bagirmi, *ngirmé* locally) at Logone, just south of Lake Chad (c. 11°42'N, 15°18'E; Fig. 5, No. 4), in an area where the animal was subsequently also observed (Barth 1857, II: 278; 1965, II: 463). He again recorded the rhinoceros further westwards, when he travelled from Ssai (Say) located on the Niger River towards Timbuktu. He passed the small towns of Tschampagori and Tschampalauel, before reaching the hamlet of Bangapelle on Thursday 30 June 1853, where he saw much game, including elephants. More interesting, he said, were the traces of a rhinoceros, 'die Spuren vom Rhinoceros', because this animal was thought to be absent in the area bordered in the west by the Niger River and in the east by the River Schari or Shari (Barth 1858, IV: 269; 1965, III: 189; cf. Jany 1967: 289). The map provided by Barth (1858, Vol. 5) certifies that he saw the rhinoceros tracks at a locality with coordinates 13°18'N, 01°32'E (Fig. 5, No. 6), and contains the text that 'von hier östlich bis zum Schari kommt das Rhinoceros nicht vor' ('east of here, up to the River Schari, the rhinoceros does not occur'). Barth never saw the animal itself near Bangapelle, but he must have recognized the tracks from previous experience near Lake Chad.

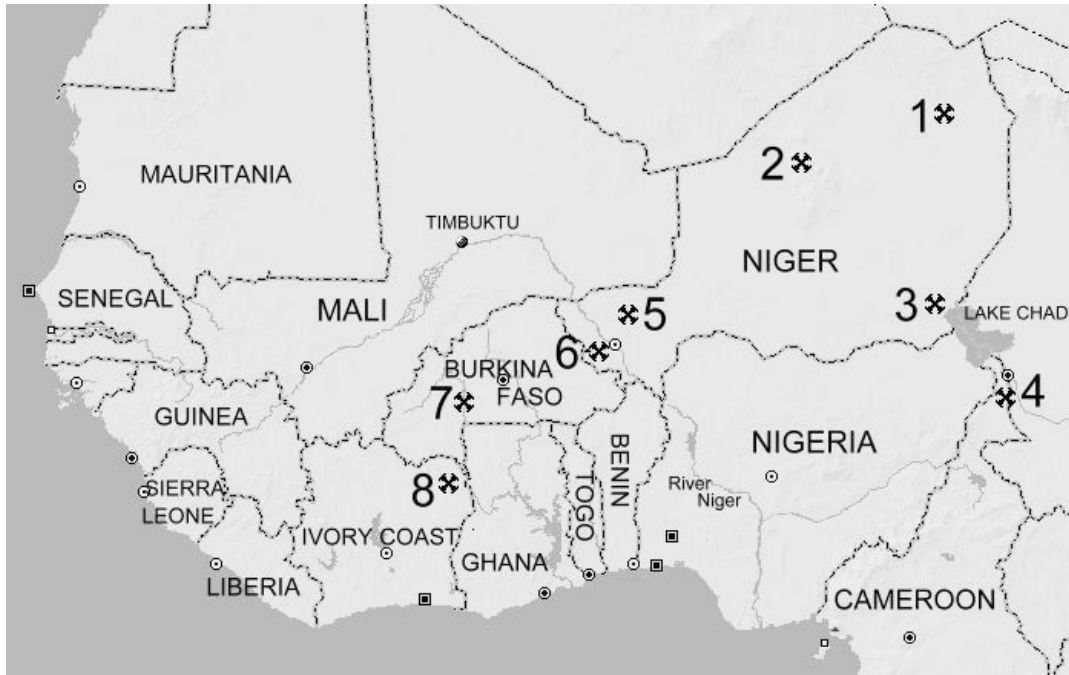


Fig. 5. Records of the black rhinoceros in West Africa. The numbers (explained in the text) refer to the following places: **1**, Approximate locality of rock shelters at Dao Timni, Drigana and Djao, Niger; **2**, rock shelter in the Aïr Mountains, Niger; **3**, Nguigmi on Lake Chad, where Largeau shot a rhinoceros in 1910; **4**, Logone, Chad, where Heinrich Barth saw rhinoceroses in 1852; **5**, Djerna-Ganda region of Niger; **6**, Bangapelle, where Barth saw rhinoceros tracks in 1853; **7**, Boromo region of Burkina Faso; **8**, Bouna region of the Ivory Coast, where rhinos were rumoured to be in 1905.

THE BLACK RHINOCEROS IN BURKINA FASO

Bigourdan & Prunier (1937) discovered that the rhinoceros was called *safêwa* in the Peulhs language of the Volta (Boromo), now in Burkina Faso (Fig. 5, No. 7). No other evidence has been found.

THE BLACK RHINOCEROS IN THE IVORY COAST

When Bigourdan & Prunier (1937) investigated the former presence of the animal, an unnamed European hunter told them about the existence of the rhinoceros in the northeastern part of the Ivory Coast, in very small numbers, primarily near Bouna (09°15'N, 02°58'W), where in fact one or two animals were killed around 1905 (Fig. 5, No. 8). In a more general sense, Lavauden (1934: 436) stated that there was a local name for the rhinoceros. Accordingly, rhinoceros was thought to exist in the Ivory Coast until just after the arrival of the Europeans in the early 20th century (Dekeyser 1955; Blancou 1960). It is strange that nobody ever recorded to have seen rhinoceros between Bouna and western Niger, a distance of 730 km in a

straight line. Rhinos were never again found near Bouna (Ansell 1971).

THE BLACK RHINOCEROS IN LIBERIA

When Johnston (1906: 712) interviewed Mandingo tribesmen of Liberia, they recognized pictures of the rhinoceros and referred to it as *kowuru*. Based on this small piece of evidence, he assumed that the animal might have existed in this part of the world. However, the Mandingos originally lived in more eastern areas and often travelled as traders, hence their use of the word may be less significant than it at first appears. Just a few years later, Maugham (1920: 175) stated that no trace of the rhinoceros had ever been found in Liberia. When Heuvelmans (1955, 1958, 1995) reviewed the literature in search of undetected animals, he referred to the expeditions to Liberia undertaken by Hans Schomburgk in 1911/12 in search of the pigmy hippopotamus, *Hexaprotodon liberiensis* (Morton, 1849). Schomburgk not only saw them, he was even able to capture five specimens alive and bring them to Germany (Schomburgk 1912,

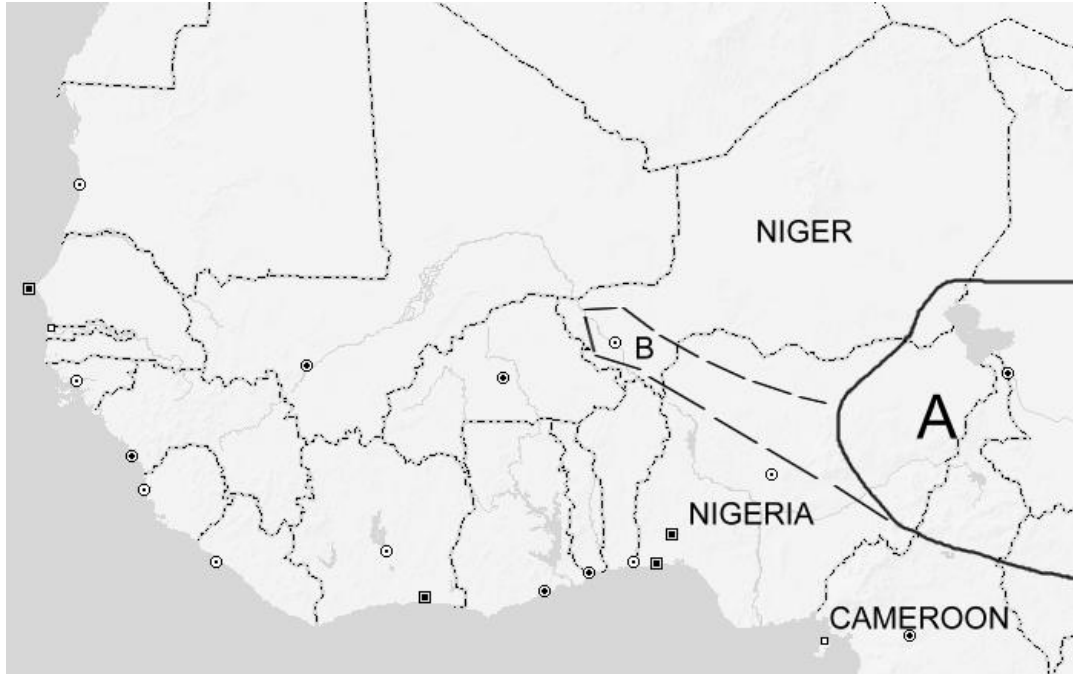


Fig. 6. Map of the historical (pre-1900) distribution of the black rhinoceros in western Africa. Area A is the most likely extent of the range, while Area B is the greatest possible extent of the distribution in the last five centuries.

1913; Dittrich and Rieke-Müller 1998: 230). Because Liberia had such unexplored mountains and dense forests, Schomburgk was inclined to believe a native legend of the Kroo tribe, which referred to a sort of pigmy rhinoceros living in the mountainous parts of Liberia (Heuvelmans 1958: 359). Schomburgk (1913: 115) himself mentioned that even the large hippopotamus was hardly given a name by civilized Liberians: 'sometimes they even call it a 'rhino''

DISCUSSION

Before reviewing the evidence from west to east, it must first be noted that there are no records whatsoever of the existence of the rhinoceros in Senegal, Gambia, Mali, Guinea Bissau, Guinea, Sierra Leone, or from Ghana, Togo and Benin. The evidence from Liberia and Burkina Faso mainly rests upon the existence of indigenous names for the rhinoceros. Such reports are convincing only when it is shown that the people never travelled and had no contact with outsiders. While these indications are valuable when searching for hitherto unknown species, I believe that taken on their own they do not represent sufficient proof of the presence of an animal as large as a rhinoceros.

The records from the northern Ivory Coast, far from any others, cannot be substantiated and should be disregarded until further proof is found. The sighting of tracks in 1853 by Heinrich Barth in Niger on the western bank of the river appears to be the only reliable evidence from that region. Even so, his report is circumstantial, based only on his ability to confidently identify rhinoceros footprints.

There are two options to show the historical distribution of the black rhinoceros in 1700, which in fact may coincide with that of 1900 (Fig. 6). First, on the basis of the footprints seen by Barth in 1853, it can be argued that the animal occurred westward up to longitude 1°E near the Niger River. Second, to be on the safer side, one can put the western border of the range some 700 km further eastward in the north-central part of Nigeria. While there is very little to help us make a choice between these two options, I would suggest that we can state with considerable confidence that neither the black nor the white rhinoceros occurred west of Niger in 1900, in 1700, or at an earlier date. The maps showing the historical distribution of the black rhinoceros should be amended accordingly.

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