

description de ces formes noires est due à une malinterprétation de la présence de mâles à couleurs noires. Comme les *Haplochromis* peuvent changer de couleur d'après leur état de motivation, les mâles territoriaux de plusieurs espèces du lac Kivu, deviennent tout noir à maturité sexuelle. Cette variabilité de coloration chez un même individu n'a donc rien à voir avec le phénomène du polymorphisme génétique.

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PRESENCE OF BLACK RHINOCEROS IN THE HOLOCENE OF THE PEOPLE'S REPUBLIC OF CONGO

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Faunal remains are preserved only exceptionally in archaeological sites from Central Africa. The results described here are from the first faunal analysis for a site in the Congo. The material was found during excavations carried out in a rock shelter named Ntadi Yomba (de Bayle des Hermens & Lanfranchi, 1978; Lanfranchi, 1979). The site is located near Bouansa (some 230 km west of Brazzaville) along the middle course of the Niari valley (13°46'E 4°15'S).

Four units were distinguished within the excavated volume, but we are dealing here only with the main archaeological layer, which yielded most of the fauna as well as a rich lithic industry known as Tshitolian. This Late Stone Age occupation has been radiocarbon dated at approximately 7000 B.P. The vertebrate remains recovered from Ntadi Yomba rock shelter were not very numerous: only 600 fragments of which about 20 % was identifiable. An overview of the fauna from the Tshitolian level is given in table 1.

The material can be divided in four taphonomic groups:

- 1) individuals that died naturally in the cave (majority of the molluscs; small snakes?),
- 2) animal remains brought in as pellets from raptorial birds (microfauna),
- 3) human remains, and
- 4) kitchen debris (the largest part of the assemblage).

Table 1. - Species list of the Late Stone Age layer at Ntadi Yomba. The figures represent fragment counts; for the molluscs: R = rare; F = frequent; FF = very frequent.

CRUSTACEA		
	Crustacea indet.	1
MOLLUSCA		
	<i>Achatina</i> sp.	FF
	<i>Limicolaria</i> cf. <i>cailliaudi</i> and <i>Limicolaria</i> sp.	F
	<i>Pseudotrochus</i> cf. <i>carinatus</i>	R
	<i>Subulina octona</i>	R
	<i>Subulina</i> cf. <i>thysvillensis</i>	R
	<i>Subulina</i> sp./ <i>Subulinidae</i>	R
PISCES		
	Clariidae 3	
	Percomorphi indet.	1
REPTILIA		
	Ophidia indet.	10
	<i>Python</i> sp.	1
	Testudinidae indet.	2
AVES		
	Gen. sp. indet.	2
MAMMALIA		
	Primates	
	<i>Cercopithecus</i> sp.	8
	? <i>Cercopithecus</i>	24
	<i>Homo sapiens</i>	9
	Rodentia	
	<i>Protoxerus stangeri</i>	1
	<i>Funisciurus</i> sp.	3
	<i>Paraxerus poensis</i>	1
	Sciuridae indet.	2
	<i>Cricetomys</i> sp.	2
	<i>Atherurus africanus</i>	2
	<i>Crossarchus</i> sp.	1
	Carnivora indet.	7
	Proboscidea	
	<i>Loxodonta africana</i>	1
	<i>Diceros bicornis</i>	2
	Artiodactyla	
	<i>Potamochoerus porcus</i>	3
	<i>Cephalophus sylvicultor</i>	3
	<i>Cephalophus</i> sp.	9
	<i>Philantomba monticola</i>	3
	<i>Tragelaphus scriptus</i>	1
	Mammalia indet.	351

Whereas the rockshelter is situated today in a predominantly open woodland environment, the fauna from Ntadi Yomba indicates a much denser vegetation type around 7000 B.P. The majority of the species identified are typical of high forest, galleries or dense woodland (Van Neer & Lanfranchi, 1985).

The main importance of the Ntadi Yomba fauna lies, however, in the presence of remains from the black rhinoceros, *Diceros bicornis* (Linnaeus, 1758). A complete P² (fig. 1) was found as well as the buccal part of an upper premolar (fig. 2) of which the exact position in the jaw could not be identified. The distinguishing features of the dentition of the white rhinoceros, *Ceratotherium simum* (Burchell, 1817), and black rhinoceros, *Diceros bicornis*, have been described by Hooijer (1959, 1978) and by Guérin (1980, p. 161).

Thanks to its well developed parastyle



Fig. 1. - Occlusal view of the second upper premolar of black rhinoceros from Ntadi Yomba (scale bar is 1 cm).



Fig. 2. - Occlusal view of the buccal part of an upper premolar of black chinoceros from Ntadi Yomba (p = parastyle; scale bar is 1 cm).

the buccal fragment of an upper premolar can assigned to *D. bicornis*.

Both species of rhinoceros have many characteristics in common on their P² (Guérin, 1980) and moreover, the identification is hampered by the fact that the complete tooth found at Ntadi Yomba does not show any wear. As a result of this, some distinguishing features are not yet visible. Fortunately, the collections of the Koninklijk Museum voor Midden-Afrika contain a black rhinoceros skull of the same odontological age as the Ntadi Yomba specimen. A rather inconspicuous parastyle is present on the fossil P², but the cingulum that normally should be well developed in black rhinoceros is completely absent at the mesial side of the tooth.

Since the present-day distribution of the black rhinoceros has become very patchy, it is better to consider the approximate distribution at the beginning of the colonial period. Such a reconstruction based on the literature and on localities of captured specimens is given by Ansell (1971) (fig. 3). To these "classical" data should be added the localities of Lavauden (1934) who suggests that in the 1930's black rhinoceros was living in the region lying between 1 and 3 degrees North of latitude and between 15 and 17 degrees East of longitude (fig. 3 and 4). For the sake of completeness it should be added that on his journey through Central Africa Lavauden (1934) did not traverse this area himself. Blancou (1954) wonders whether a forest rhinoceros - which

would be a third African species - lived in the dense forest of southeastern Cameroun and the northern part of the Congo. This supposition was based on sight records of unidentified rhinoceros by Europeans at the beginning of the 1950's and on inquiries made among the local people. An encounter with an unidentified rhinoceros in the savanna of the Bas-Ogoué in Gabon about 1930 has been mentioned by Trial (1952). As far as we know none of these occasional observations have ever been confirmed by captures.

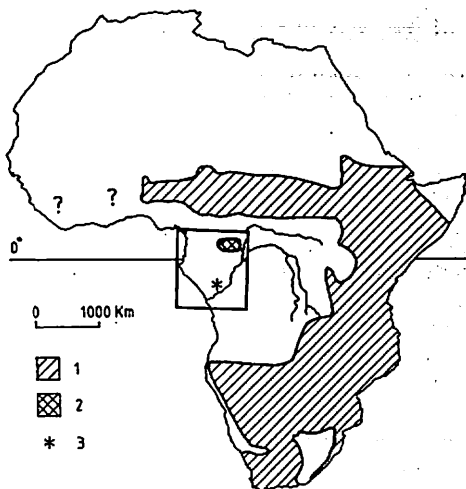


Fig. 3. - Approximate distribution of black rhinoceros at the beginning of the colonial period (1) according to Ansell (1971). The detail is enlarged on the next figure and shows the site of Ntadi Yomba (3) and the area (2) where black rhinoceros was present in the 1930's according to Lavauden (1934).

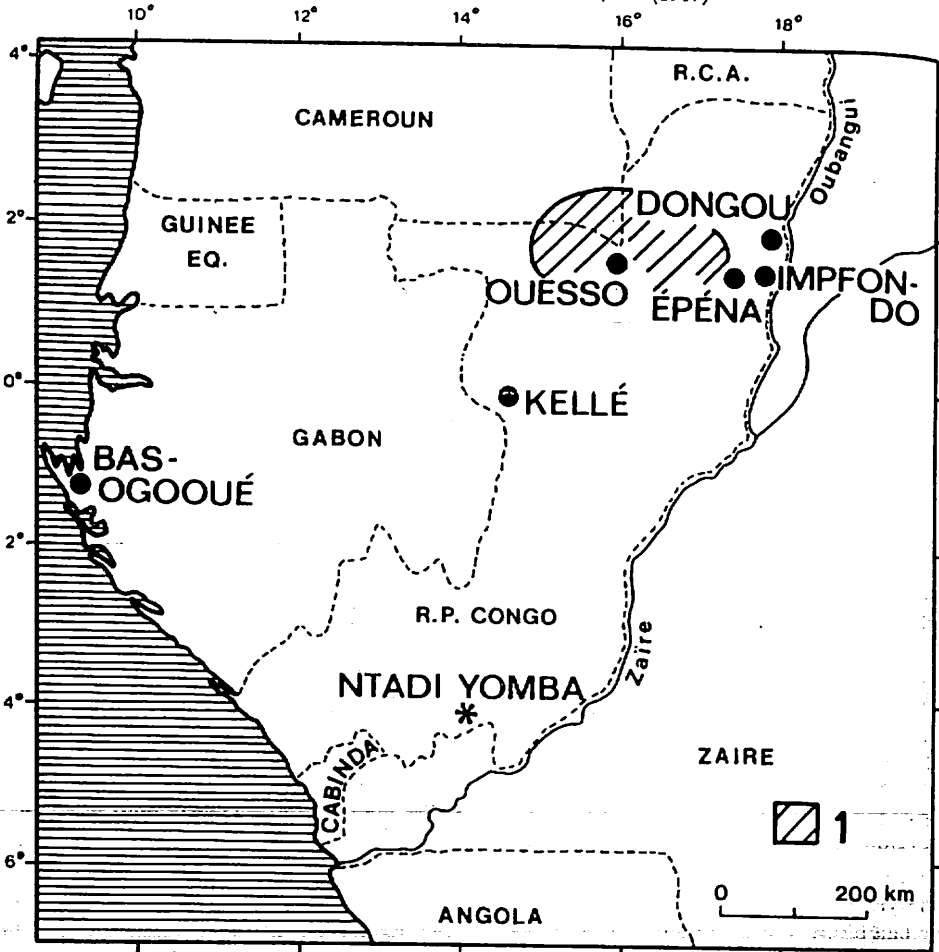


Fig. 4. - Approximate distribution of black rhinoceros in the 1930's (1) according to Lavauden (1934) and sight records of unidentified rhinoceros (black dots) during the 1950's, mentioned by Blancou (1954) and Trial (1952).

These data, together with the presence of black rhinoceros teeth at Ntadi Yomba in a layer dated at 7000 B.P., indicate that the distribution of the species must have been larger in the past. It is likely that an almost continuous distribution occurred around the central African cuvette, when the rainforest was shrunken during a drier period. This would have allowed a savanna vegetation and fauna to colonize new areas. Since the Zaire river seems to form an important natural barrier, it is likely that the black rhinoceros found at Ntadi Yomba was derived from the northern savanna population, that had extended southward. The latest dry phase that may have allowed such a colonization occurred in the Congo between 25000 and 12000

B.P. (Peyrot & Lanfranchi, 1984) and is called Leopoldvillian (De Ploey, 1963).

Other evidence for the former presence of a savanna corridor in the Congo are the finds of fossil termitaries within the present-day rainforest near the border of Cameroon and the Congo (Letouzey, 1968). Moreover, prehistoric industries have been found in the high forest under deposits 10 to 12 m thick, which are unlikely to have been formed in such a forest environment. Usually this colluvium rests on extensive laterite formations of 2-3 m thick (Van Neer & Lanfranchi, 1985). The distribution of the bird taxa, *Dendropicos goertae centralis* (Reichenow, 1900) and *Crinifer piscator* (Boddaert, 1783), is also explained by the

existence of a former savanna corridor. These animals are typical of the northern savanna but have a relic distribution along the right bank of the Ubangi and the Zaïre (Prigogine & Louette, 1983; Snow, 1978).

The dry Leopoldvillian period was succeeded some 12000 years ago by a warmer and more humid phase, the Kibangian (Peyrot & Lanfranchi, 1984). At the moment of the deposition of the black rhinoceros teeth, approximately 7000 years ago, the rehumidification must already have resulted in the closing of the savanna corridor. As is indicated by the faunal remains, the area of Ntadi Yomba was again wooded and the black rhinoceros must have been already a relic species at that time. The fact that this pachyderm is found in association with mainly forest species indicates that its ecological tolerance is higher than normally accepted.

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