



The peopling of mangroves in Senegal in the late Holocene: relationship with climate and political changes in West Africa

Matthieu Carré, Louis Quichaud, Abdoulaye Camara, Moufok Azzoug, Rachid Cheddadi, Diana Ochoa, Jorge Cardich, Alexander Pérez, Rodolfo Salas-Gismondi, Julien Thébault, et al.

► To cite this version:

Matthieu Carré, Louis Quichaud, Abdoulaye Camara, Moufok Azzoug, Rachid Cheddadi, et al.. The peopling of mangroves in Senegal in the late Holocene: relationship with climate and political changes in West Africa. 6th PAGES Open Science Meeting, May 2022, Agadir (Virtual event), Morocco. hal-03813591

HAL Id: hal-03813591

<https://hal.science/hal-03813591>

Submitted on 13 Oct 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

The peopling of mangroves in Senegal in the late Holocene: relationship with climate and political changes in West Africa

Matthieu Carré^{1,2}, Louis Quichaud³, Abdoulaye Camara⁴, Moufok Azzoug⁵, Rachid Cheddadi⁶, Diana Ochoa², Jorge Cardich², Alexander Pérez⁷, Rodolfo Salas-Gismondi², Julien Thébault⁸, Yoann Thomas⁸

1 LOCEAN laboratory, CNRS, IRD, MNHN, Sorbonne Université, 4 Place Jussieu, Paris, France

2 Centro de Investigación para el Desarrollo Integral y Sostenible, Facultad de Ciencias y Filosofía, Laboratorios de Investigación y Desarrollo, Universidad Peruana Cayetano Heredia, Lima, Peru

3 École normale supérieure de Lyon, Département de biologie, Lyon, France

4 Laboratoire d'archéologie, Institut Fondamental d'Afrique Noire, Université Cheikh Anta Diop de Dakar, Dakar, Sénégal

5 Département de Génie des Procédés, Faculté de Technologie, Université de Bejaia, 06000, Bejaïa, Algeria

6 Institut de Sciences de l'Evolution de Montpellier, CNRS, IRD, Université de Montpellier, France

7 Departamento de Ingeniería, Facultad de Ciencias y Filosofía, Laboratorios de Investigación y Desarrollo, Universidad Peruana Cayetano Heredia, Lima, Peru

8 Univ Brest, CNRS, IRD, Ifremer, LEMAR, 29280 Plouzané, France

Abstract

We present a reconstruction of human demography and shell fishing activity in the Sine-Saloum mangrove Delta (Senegal) in the Late Holocene using the summed probability density (SPD) of radiocarbon dates in archaeological shell middens. We explore how this local history relates to the climatic and political history of West Africa. We find that traces of human presence were scarce from 6000 to 2000 yr BP, partly because the geomorphology of the estuary was less favourable to human settlements at that time. A specialized shell fishing population migrated massively to the Sine-Saloum around 2000 yr BP, at the end of the aridification trend that followed the African humid period. This population, likely coming from the northern coast in search of land and resources, fleeing the Saharan desertification and the subsequent warfare, found refuge in the coastal mangroves and reached a maximum activity at about 1700 yr BP. This period corresponds to the beginning of trans-Saharan trade, and to a political complexification that would give rise to the Ghana empire. The incoming migration may have occurred in two waves as suggested by two peaks in the SPD curve at 200-400 CE and 600-800 CE and by cultural differences within the Delta. Most sites in the Sine-Saloum islands were abandoned in the 14th century, before the arrival of Europeans, possibly because intensive shell fishing was not sustainable anymore, or because of the regional political destabilization associated to the fall of the Ghana empire and the beginning of the Mali empire. Shortly after, in agreement with oral traditions, a new population lead by the Manding Guelwars, moved to the Sine Saloum after a military defeat and founded the modern towns. They had a reduced shellfishing activity compared to previous inhabitants, possibly because activities were more oriented to the new trade with Europeans or to a prosperous agriculture in more humid climatic conditions that prevailed from 1500 to 1800 CE.