

THE COASTAL PLAIN OF THE GULF OF BENIN FROM THE PLEISTOCENE TO THE SUBACTUAL ERAS: BIOGEOGRAPHIC AND CLIMATIC EVOLUTION

KOUASSI SÉBASTIEN DOHOU

Assistant-Researcher, LECREDE/DGAT/FLASH/, Université Nationale du Bénin 03BP1912 Cotonou, Republic of Benin

E-Mail: kdohou@hotmail.com

The fringing coastal plain of Benin is one of the regions of West Africa of which the dynamics during the Quaternary and the subactual Eras are marked by the major climatic and biogeographic events. Thanks to many sedimentologic studies, mine and hydrogeological researches, the analyses of fossils and sediments facies allow to reconstitute this evolution.

The recent studies on the margino-littoral domain (A.GUILCHER, 1959; M. SLANSKY, 1962; P. GERMAIN, 1975; G.PARADIS, 1976) have allowed us to trace the climatic evolution of south Benin during almost the 40,000. For northern part, a synthesis about the southern edge of lullemeden basin puts forward the concomitance of climatic variations in the northern and southern regions of Benin. There is the most important fact. As the Quaternary related studies on the Sudano-sahelian zone of African Continent are very abundant, it is possible to extrapolate over the country of Benin the climate variations recorded in the zone from the Atlantic Ocean to the Red Sea. Geomorphological data are usefully completed by those from palynological studies. But the mechanisms which seem to explain it have occurred probably since the invasion of the Atlantic Ocean by South Pole water in the miocene, with the glaciation of the Antarctic, and the setting up of circumpolar marine current, about 35.10⁶ years ago.

According to A.Morel (1986), the Quaternary Era started in the Sudano-sahelian zone with a dry phase which became a contrasting climate, and then a dry tropical climate. The differences between these three denominations are not very clear. Is dry phase synonymous with aridity? Is the contrasting climate like the present sahelian one? Moreover did such variations occur southward?

Although devarication exist still about the agreement between the dynamics of the regional paleoenvironments and the well known events of global scale (glaciations and interglacial ages), we may retain some fundamental facts:

From Inehirian Age to Tafolian Age (35,000 to 2,000 BP) humid and dry phases occurred by returns, n variable duration, corresponding respectively to transgressions and recessions of sea,

Coastal sand ridges have been formed during the the last part of the Tafolian Age, after the sea retreat which had uncovered the coastal plain and stretched the course of coastal rivers. This period marked also the settlement of the first mangrove vegetation (3,700 to 2,600 BP), the appearance of oil palm tree (2,800 BP) and vegetation of *Lophira lanceolata* (2,500 to 1,400),

The first traces of human activity had appeared belatedly in the form of accumulations of shells (1,070 BP). A slight sea recession occurred between 400 and 300 BP (1,500 AD) and provoked the disappearance of the mangrove vegetation and the

apparition of fresh water swampy forests round the pre-coastal lakes deprived of sea water.

This evolution may explain the current dynamics of the coastal zone of the Gulf of Benin, mainly the hydrologic continent-ocean exchanges, and its biogeographic aspects.

Key Words: West Africa, Gulf of Benin, paleoenvironment, transgression, recession, lakes, mangrove