Thème 2 : The impact of past human activities upon Africa's natural environment.

New archaeological datas of human way of life in the forest-savannah ecotone (limits) of central Cameroon during the last three millenaries.

Michèle Delneuf

ORSTOM, YAOUNDE

Texte oral.

The subsistence means of prehistoric peoples in african rainforest were a subject of interrogation, and even a controversy, those ten last years. The width of the debate corresponds to the expansion of fieldworks in such ecosystems : Zaïre, Gabon, Congo and south Cameroon in particular (such points reviewed by de Maret, 1986; and Eggert, 1993).

The expansion of the corresponding fieldworks, organized from several large surveys with excavations, has covered more specially the last three millenaries, with a particular interest for the Neolithic, the Iron Age and the transition between these two central phases.

The contribution of our team (belonging to ORSTOM, and camerounian MFSRES) and correlated to « ÉCOsystème des Forêts INTertropicale » (ECOFIT) takes place in an ecological study of the biodiversity into the limits (ecotone) between forest and savannah.

This programm is based on multidisciplinary studies, where reconstruction of peopling in those environments takes the diachronic part, more specially since the 3 thousand last years.

The location of the programm is at the northeast limit of semi-deciduous forest, in central Cameroon, 200 km north of Yaoundé. This forest contains included savannahs composed with monospecific landscapes scattered with *Terminalia glaucescens* and *sissongo* grass.

CARTE 1 + DIAPO

Culturally and historically, we are in the Tikar country, a complex ethnic group of bantu languages, using a farming system based on savannah practices, developped and adapted to a forest context after several movements of migration.
This part of the observations is the subject of the studies, in a multidisciplinary perspective, of our team which includes the collaboration of ecologist, botanist, biologist, and soils’ specialists.

1. **Archaeological results since 18 months of field works** are represented by:

   - About 40 sites, mapped in the southern part of Tikar’ country, where the forest context is the best represented today. The surface of this forest covering is increasing today, under the effects of several factors (decreasing population, decreasing cultivated surfaces,...);
   
   Chronologically, they cover the period from 2500 BP to XIXth century AD.

   DIAPC

   From archaeological point of view they compose **two groups of sites**:

   - The 1rst group of a dozen of pits of two forms:
     - the first : rounded based, like basket;
     - the second deep (3,50 m.) and narrow, larger than the 1rst ones. I wish to make clear that the material culture suggests a chronological precedence of the second upon the first pits. But in both types, 2 or 3 levels of occupation have been distinguished.
   
   - The second group consists of old villages settlements showing fire places, ceramic remains, grinding tools, traces of collapsed houses (of mud and sticks presumably)

   DIAPO

2. **Following the cultural datas, revealed by archaeological findings:**

   - The group of pits, specially those near **Ngoume village**, reveals a ceramic assemblage which can be associated in form and decoration to the Obobogo group.

   This cultural assemblage was defined by Claes (1985) from sites in the suburbs of Yaounde now; and, recently, was developed by the study of Mbida (1996) through the site of Ndindan. We have there the northern extension of this cultural group previously observed near Yaounde, where the landscape is supposed to be under a relative opening around 2000 BP. We are there probably also at the transition between Neolithic and Iron Age.

   This comparison is supported by radiocarbon dates: **2420 +/- 40 (OBDY 1680) et 2500 +/- 60 (OBDY 1671)**, that we can associate to the scale 2300 / 2600 BP of the Obobogo group and a little bit older than the Ndindan’ pits, dated around 2000/2415 BP.
• The old villages are the marks of sedentary and agricultural communities that we can link, after study of oral history, with people’s movements from Adamaoua mountains (300 to 500 km north) toward the south-west, longing the actual border between Cameroon and Nigeria. The cultural marks of those migrants could be joined to Mboun ethnic groups, which were mixed with local populations of bantu speaking, the Tumu. The whole form today the Tikar community. The time scale of those movements lies between XVIIth and XIXth century AD (Mohammadou, 1986).

The chronological and cultural contexts have revealed:

• For the first group, around 2500 BP, where first attestations of iron working is in contact with the neolithic assemblages. With Ngoume site we can observe perhaps the beginning of this transition, looking also southward to Obobogo group. It is a major event to understand the cause of the opening of the environment.

• For the second group: the latest peopling of this part of country lies down in the movement when the size and the number of groups were the more numerous in spite of a relative dispersion of communities inside a landscape probably of savannas. Several oral traditions speak about more extended savannas. But they give also evidence of the presence of agriculteurs like Tikar or pre-tikar in association with several pigmies groups in yet wide forested parts.

The preliminary results of these studies show the absence, for the moment, of informations on the fifteen hundred years between these two periods. This part of time and history is the subject of the future work. They correspond to the time when the landscapes have had its maximum opening, and, in the same way, when the maximum human activities have an influence on this opening, specially around metallurgic workings.

3. RESOURCE REMAINS AND RESTITUTION OF ENVIRONMENTS.

It is in this way that the complete covering of the chronological period is important.

A large number of macro-remains were excavated in both groups of sites and have permit to develop a systematic study. They consist in wood charcoal and seeds. They were sampled directly, or by flotation in archaeological sites and in pedological pits excavated in several complementary contexts: savannas, limits between forest and savannas, different densities of forest covering including forest gallery (riparian).
The whole is supported by a reference collection of wood, seeds and fruits collected around the sites, associated with the recordings of ethnobotanic usings in Tikar and Pygmies societies. The anthracological study is realized under the responsability of Thierry OTTO and Michel THINON, from I.M.E.P. in Marseille.

The preliminary results of identifications of seeds and wood charcoal (partially for this kind of remains waiting for the complete preparation of the collection of reference) indicate:

- for the sites around 2400 -2500 BP : the preponderence of Canarium schweinfurthii over Elaeis guineensis; several species, suggesting food functions like Abelmoschus (esculentus or calafi), and a large part of Leguminosae.

- for the second group of villages, belonging to historical times, we point out: decrease of Canarium in front of increase of Elaeis; Raphia surabondant, seeds of Sorgho corresponding to oral tradition speaking about a substitution of the cultivation of this species by maize since less a century.

CARTE I

Preliminary insertion of these results in supra-regional datas.

It is too early to give an environmental and fonctionnal conclusion to these datas but tendancies can be drawed and related to supra-regional observations.

- At first, the map (Bleue) shows the dispersion of seeds and wood charcoal analysis, extracted from anthropic contexts exclusively, from north to south of intertropical rainforest (De Maret, 1986). We observe also the large attestation of the couple Canarium / Elaeis, and in several cases, the presence of Elaeis alone. Such a so limited number of species in this kind of analysis should not be the fact of the scarcity of charcoal and organic remains in the sediments. It should be because of the good resistance of seeds and endocarps of this species in the sediments and consequently their immediate sampling. But also, it should be also because of the limited resort to analysis of organic remains, though the pedological conditions are good for the conservation of charcoal and seeds (limited acidity of soils and presence of sand). For our sites, and for many of them inside the specialized litterature, these remains are effectively not seldom.

- Our earliest group of sites, around 2500 BP, attests the northeast opening evidence of the forest landscape. Today this northern position is caracterized by semi-deciduous vegetal
formations, and this opening was the fact too of the cultural assemblage, around Yaounde, named Obobogo, Ndindan, Nkang, and Okolo between 2600 and 2000 BP (Atangana 1989, 1992). This interpretation is based on the presence of *Canarium schweinfurthii*. Ethnobotanically, *Canarium schweinfurthii* is the mark of gathering practices utilizing fruits and bark. This tree is particularly preserved in modern villages. It doesn’t support closed area. Is its particular abundance in those pits the fact of vegeculture or arboriculture practices for our populations living at the limit between Neolithic and Iron Age? It is too early to have a clear explanation.

- The other fact is the position of *Elaeis*, less numerous in the earliest than in the latest human occupations. *Elaeis* is « the fossile directeur » the most used to recognize the opening of the rainforest, specially by human introduction in this context. Its position, in this way, is surely to examine again in the perspective of, at first, a combination with other species for those early periods. Secondly, for the later and historic settlements, we could resort to a new analysis of its conservation under rainforest, on a longer period than the time indicated by the bio-ecological studies (30 years maximum). For our historical villages, there is no doubt of the exploitation of palm-tree (oil palmtree, or raphia in architecture, for example). But, those occupations are deserted since more a century. Now, the populations speak, about their landscape during their occupation, of a savannah environment. Today, they are completely covered with rainforest trees including plenty of Palm Tree.

- To complete the links between these remains, in intertropical archaeological area, let us consider some chronological and geographical datas, successively:
  - around 2300/2200 BP: from Woleu Ntem to Ogooue Valley (Osirisly, 1994): a same association of *Canarium* and *Elaeis*
  - since 2100 BP: two groups of same attestations geographically significant: towards west: along the littoral of Gabon (Clist, 1995) and Congo (Denbow, 1990); toward east and corresponding to the Zaïre river court: inside Imbonga complex and neighbors (Eggert, 1995); and around Ngovo and surrounding cultural groups in Low Zaïre (De Maret, 1987).

**TO CONCLUDE**

We have exposed there some preliminary results and a step more for the location of human occupations in and around rainforest. Our purpose is to engage dialogue and cooperation in archaeological way, but also in paleoeccological way, to bring more preciscs replies to this particular context of peopling where environment is the major contraint.
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Carte 1 : Répartition des échantillons anthracologiques et carpologiques identifiés en Afrique centrale et chronologie correspondante