

ANNEXES - CHAPTER 5

Annexe 5-3 Volume III

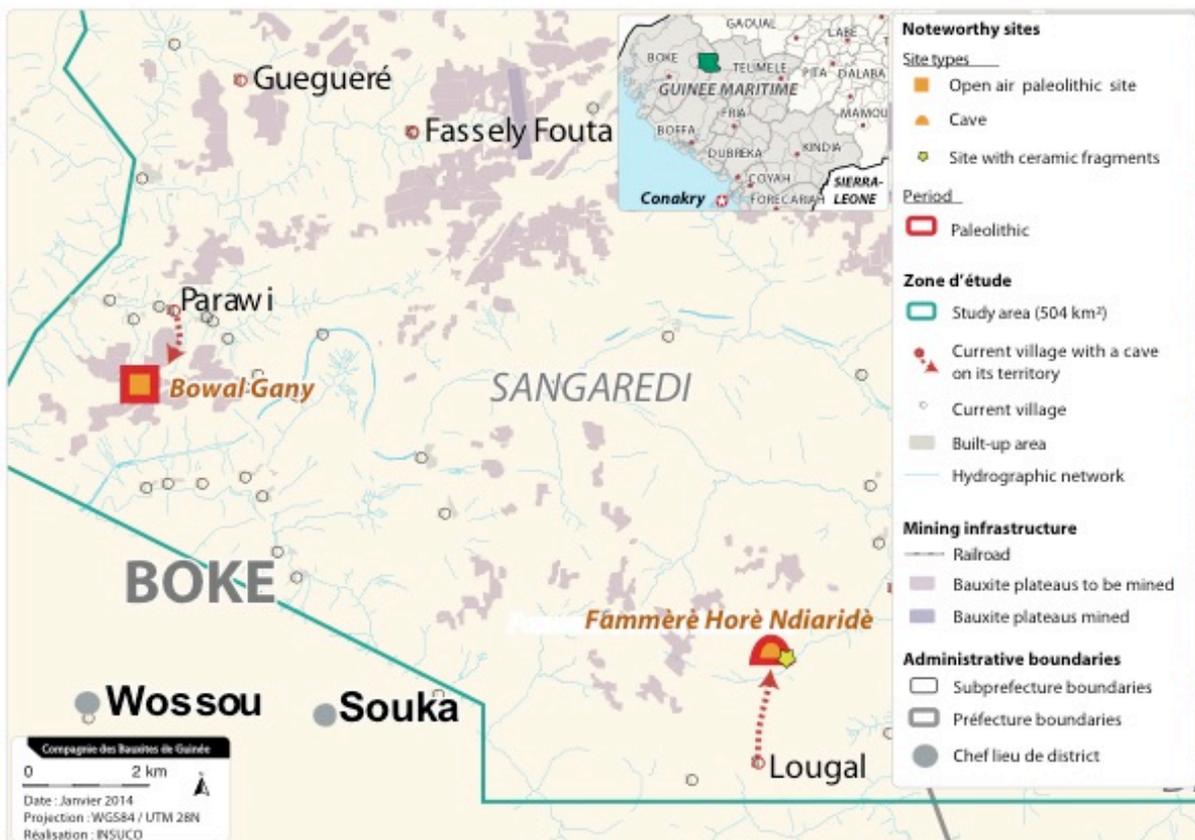
Report on Analyses of Geological Materials CBG Expansion Project

Introduction

The survey to assess the archeological potential of the area affected by CBG’s proposed mining development (the Expansion Project) was carried out in January 2014 by a team comprised of an international archeologist and a national consultant.

The two-week survey in CBG’s mine expansion area resulted in the discovery of a number of stone structures, the remains of old villages and worship areas, as well as **ceramics** and **chipped stone tools**.

Although the survey’s most important discovery is undoubtedly the open-air site on the periphery of the Gany bowl, which was identified by its high concentration of surface debitage, the discovery of ceramics in a cave turned out to be just as important to a better understanding of the relationship men have had with these caves from prehistory to the present day.



The analyses reported in this document were carried out by the Laboratoire Archéologie et Peuplement de l'Afrique (APA – Archaeology and Population in Africa Laboratory), of the University of Geneva’s Department of Genetics and Evolution.

Results

Chipped stone tools

On the periphery of the Gany bowal, directly on the ground, the team found an assemblage of lithic materials characterized by 40 cores and 150 flakes. The placement of these stone fragments was obviously random, thus ruling out the hypothesis of accumulation as a result of transport by water. The material is concentrated in an area of about 8 m² generally in the center of the study area.

After surficial fragments were systematically collected, the study focused essentially on any artifacts of an informative nature, namely the cores.

Save for a few very rare specimens, virtually all of the cores were found in a very poor state of conservation. They all made of highly altered dolerite, a magmatic rock readily found in the area.

Both faces of the fragments have been heavily altered by tropical erosion (water action and pH), which gradually breaks down the dolerite's aggregates.

The analysis of seven cores (see appendices hereto) can be described as follows: six of the cores exhibit a Levallois flaking surface. The production method points to recurrent centripetal flaking (cores 1-5), except for Core 7, which implies preferential flaking (although this particular core was highly eroded). Core 7 seems to exhibit a discoid structure. Core 1, for its part, is of great interest in that it does not seem to have undergone any tropical erosion. It was the only core found almost entirely within the sedimentary layer, and it was therefore protected from weathering. This discovery pointed to a high possibility of finding other materials that were buried and therefore might be in an excellent state of conservation.

In all the cores, the presence of scar negatives confirms the hypothesis that the tools were abandoned on site. It is difficult to determine, however, whether these flaking mishaps were due to the poor quality of the raw material or the poor skills of the flintknapper.

The homogeneous nature of the assemblage of stone materials attests its completeness. Moreover, technical analysis of the cores has confirmed the technical homogeneity and completeness of the assemblage. All these observations can accordingly be combined to produce an image of the primary context, but only boring could characterize the materials in stratigraphic terms (relative dating).

Ceramics

The ceramic fragments collected in the rock shelter of Fammère Horè Ndiaridè feature imprinted ornamentation that is currently unknown in the regional pottery traditions.

The clay composition of the shards is homogeneous, and all exhibit evidence of the use of grog (a degreasing agent of ground pottery, also called *chamotte*). One of the decorations (Shard 8), featuring diamond-shaped patterns made with a toothed comb and framed with horizontally incised grooves made with a dragged comb, clearly evokes pottery of the late Neolithic, such as can be found farther north, notably in Mali and Burkina Faso. This shard also characterizes the vase-making method whereby the upper portion was evidently

assembled by coiling and where the lower portion, below the widest diameter, seems to have been made with the convex mold technique, whereby a flat section of clay is shaped over a convex mold.

One large fragment (9) features direct impressions made with a cord-wound twig and is also reminiscent of the late Neolithic as it is known in the Saharo-Sahelian belt.

The third and last ceramic fragment (No. 10) is apparently imprinted with a rolled pattern made with a cylinder carved into chevrons, combined with horizontal grooving. This motif is reminiscent of protohistoric traditions found in the Falémé valley of eastern Senegal.

Conclusion

Although we may well think that, like Western Europe, Southern and East Africa played a predominant role as possible crucibles of modern history and mankind, the last few decades have seen West Africa gradually make its way into discussions regarding the Middle Stone Age (MSA). In northwestern Africa, a number of discoveries have brought to light human fossils (both modern and prehistoric), evidence of tools made of bone, pigments and shell beads. Although sites in West Africa also corresponding to this period have been known for a long time, their stratigraphic context has often been imprecise or totally absent, making it impossible to accurately date the sites or reconstitute a chronology. In Southern Africa and Western Europe, any knowledge developed about this period depends chiefly on the establishment of a chronological framework, preferably aligned with climatic changes and validated with any absolute dates available. In West Africa, it is imperative to continue with research in the field in order to locate new sites, unearth them and collect samples for dating by optically stimulated luminescence to ascertain the history of this territory.

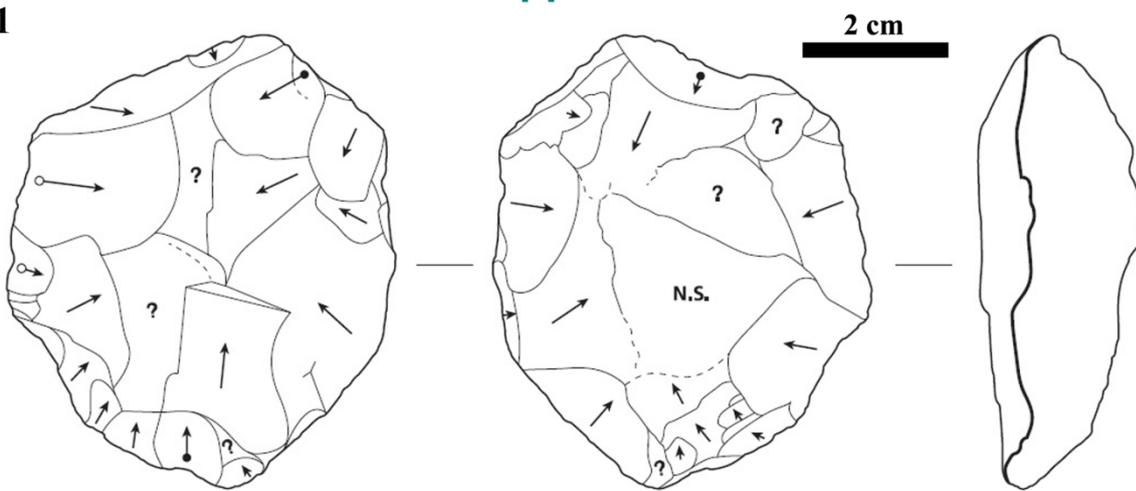
In the 1970s, the Russian archeologists Boriskovsky and Soloviev published their analysis of materials discovered in Guinea but originating from different locations. They classified all the sites as assemblages of tools from different eras, without providing any stratigraphic context, and their sampling was very selective.

Accordingly, this discovery on the Gany bowal, which on analysis seems to date from the Middle Stone Age, is a unique archeological opportunity for Guinea.

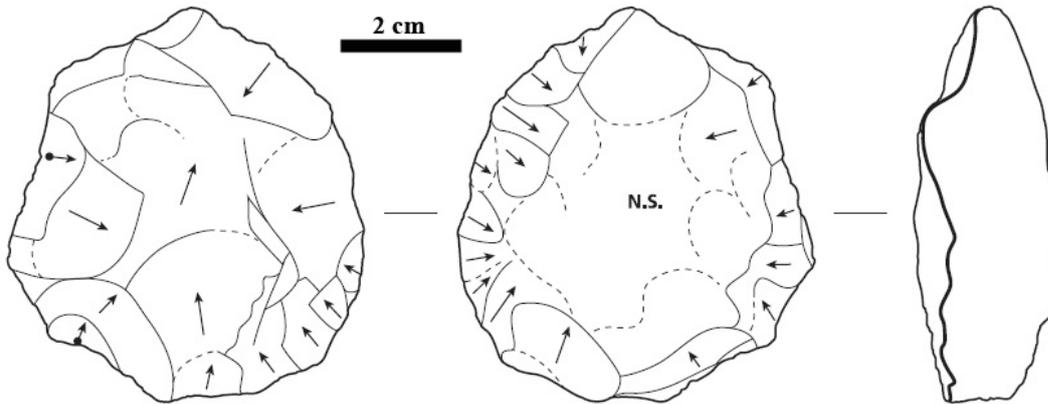
When it comes to ceramics, archeological expertise regarding Guinean pottery traditions is especially lacking in terms of both the Neolithic and protohistoric periods. **The discovery of stratigraphically contextualized pottery shards is accordingly of great importance to a fuller understanding of the history of the country in particular and more generally of the entire subregion.**

Appendices

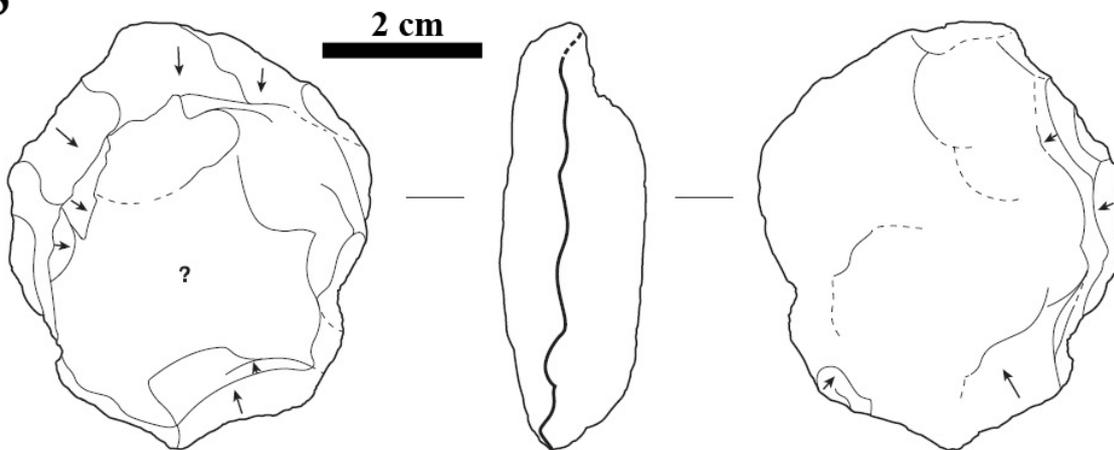
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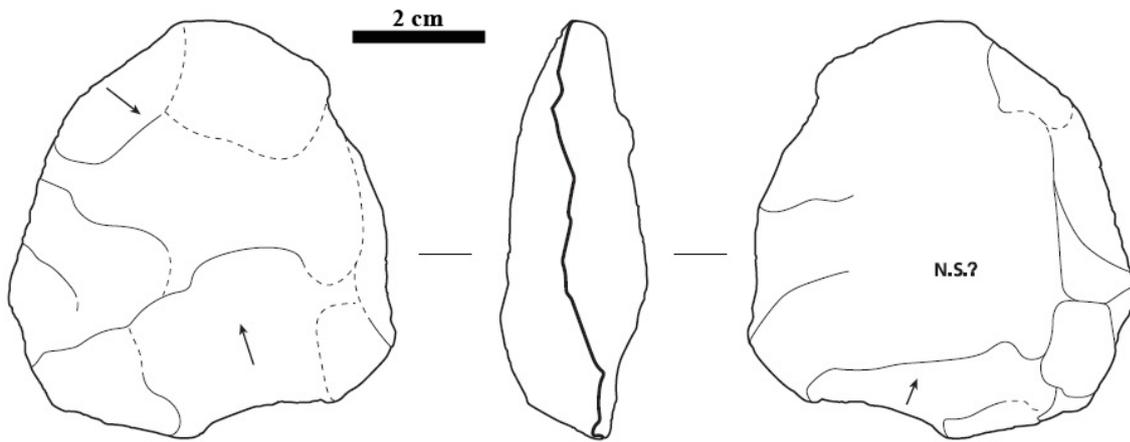
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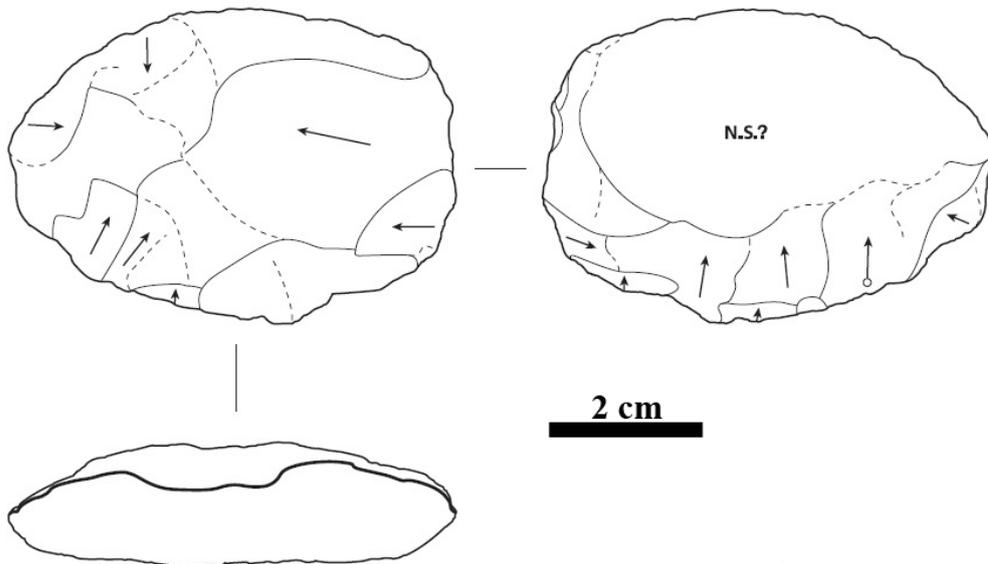
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