Archaeology of the Ounjougou Site Complex

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### Ounjougou Site Complex, Archaeology of the

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**Introduction**

The Malian site complex of Ounjougou is located in the Boucle du Niger (or Niger Bend) in the Dogon Country, more precisely on the Bandiagara Plateau about 15 km east of the town of the same name (Fig. 1). It includes more than a hundred archaeological sites in a valley around the confluence of four rivers, of which the main one, the Yamé, joins the Niger 30 km north of the town of Mopti. Topographically, this zone presents as a series of gullies cut through a
Ounjougou Site Complex, Archaeology of the, Fig. 1 Location and geomorphological presentation of the site of Ounjougou. 1: Sandstones and scarps in sandstones; 2: Main terrace-glacis; 3: Eroded sectors of main glacis; 4: Holocene terrace (8th millennium BCE); 5: Secondary terrace-glacis; 6: Sands and silts of alluvial accumulation; 7: Hydrographic network and permanent lakes; 8: Stratigraphic limits; 9: Terraces and glacis edges; 10: Track and relics of the colonial track; 11: Height (meters); 12: Archaeological sites; 13: Infiltration of Boumbangou through sandstones; 14: Paleoriver of Yamé (Mapping: M. Rasse)
complex succession of Quaternary eolian, alluvial, and colluvial formations (Lespez et al. 2011). The stratigraphic sequence, which can in places be 16.50 m thick, has yielded archaeological material from the Lower Paleolithic to the present. The deposits also contain abundant vegetal remains (pollen, leaves, charcoal, wood, seeds, etc.) of excellent preservation. As a result, the site complex offers the possibility to place human occupations in relation to climatic and environmental changes over a long chronological sequence.

After the discovery in 1994, 13 field seasons were undertaken between 1997 and 2009 in the framework of an international and interdisciplinary research program entitled Human settlement and paleoenvironment in West Africa, with 12 research institutes involved from Mali, France, Germany, and Switzerland and coordinated by the Swiss Archaeological and Ethnoarchaeological Mission in West Africa (MAESAO), now the Laboratoire Archéologie et Peuplement de l’Afrique at the University of Geneva (Huysecom 2002). Research carried out in this program has contributed many elements that have significantly changed our understanding of the prehistory and history of the Dogon Country, and more broadly of West Africa. In addition, while remaining attentive to the causes that lead to migration or technological innovation, they have confirmed that climatic variations that affected the modern Sahel region throughout the Pleistocene and Holocene had a decisive effect on human groups and their adaptive responses, whether by controlling the environment by systematic burning or by developing ceramics, herding, and agriculture.

Key Issues/Current Debates/Future Directions/Examples

Paleolithic Occupations
The earliest evidence of human occupation is seen at several sites in the complex where the lithic industry contains polyhedrons and sub-spheroids in quartzitic sandstone associated with worked cobbles (Soriano et al. 2010) (Fig. 2). These artifacts, which reflect an early phase of the Paleolithic by their typological and technological traits, were observed in stratigraphic context, sealed in plates of coarse sands adhering to bedrock. An OSL date for the Final Middle Pleistocene was obtained for the deposits overlying these formations, providing a terminus ante quem of 180 ka for this lithic industry. The degree of arenization (surface weathering) of the
plated layers in which this industry was discovered, suggests that these deposits underwent long periods of leaching under damp warm conditions, and on typo-technological comparisons with Paleolithic material from the Maghreb, an age between 1 and 500 ky can be considered for this polyhedral industry at Ounjougou (Soriano et al. 2010).

Although having a broad archaeological visibility, the Acheulean is still absent across the entire Ounjougou zone, the Bandiagara Plateau, and the Seno Plain. This may indicate the existence in West Africa of regions not frequented by Acheulean populations, although they are well represented in neighboring regions.

A Levallois core with preferential removals, found isolated in stratigraphic context, marks the first evidence for the Middle Paleolithic at Ounjougou (Fig. 3). An OSL date places this core around 150 ky, in the Late Middle Pleistocene. Middle Paleolithic occupations in the Ounjougou site complex, all open air, become more common during the Upper Pleistocene: 25 typo-technologically distinct assemblages were identified between 100 and 22 ky, with a particular concentration during oxygen isotope stage 3 between 50 and 30 ky (Rasse et al. 2004; Soriano et al. 2010). All of the known occupations are open-air sites, and the lithic material for most of them is preserved in primary position or very slightly reworked in colluvial silts. Most of the reduction techniques typically recognized are represented at Ounjougou: Levallois, discoidal, unidirectional, blade, and facies with leaf-shaped bifacial pieces. The lack of technological recurrence in the chronological succession of lithic industries at Ounjougou raises questions, particularly given their diversity. We nearly never find two successive occupations with the same lithic industry. The diversity of lithic industries found in stratigraphic context at Ounjougou and their sequence without obvious logic further raises questions about population dynamics in Sahelian West Africa during the Upper Pleistocene. Even more than the observed diversity is the rate of change, which is very high since the most of the
known occupations are situated during OIS 3 over a period of 30 ky years. The succession seen at Ounjougou enables us to reject the hypothesis of gradual local evolution in technological traditions for this period. It suggests rather that human groups with different technological traditions regularly succeeded one another in the region (Soriano et al. 2010).

During OIS 2, after 22 ky, the Ounjougou region underwent extremely arid conditions and appears to have been deserted by humans until the climate improved at the onset of the Holocene (Rasse et al. 2004).

Holocene Occupations
The discovery of ceramic sherds associated with grinding tools and small bifacial armatures in Holocene layers dated to the beginning of the 10th millennium cal BCE and to the 8th mill. cal BCE has significantly altered the state of archaeological knowledge (Huysecom et al. 2004, 2009; Soriano & Huysecom 2012) (Fig. 4). Indeed, these are the oldest ceramic known today in sub-Saharan Africa. The solid stratigraphic and chronological context of the site of Ravin de la Mouche at Ounjougou (Rasse et al. 2006; Lespez et al. 2008; Neumann et al. 2009; Ozainne et al. 2009) indicates that knowledge of ceramic production appeared in sub-Saharan West Africa at least as early as in the Nile Valley, prior to 9400 cal BCE. This innovation, as well as very specific bifacial armatures, is probably linked to the reoccupation of the open tropical savannas that regenerated in the Dogon Country at the start of the Early Holocene. This new typo-technological complex would have spread rapidly to the north, particularly toward the central Sahara, at the same time as the movement of the front of intertropical convergence, when the Saharan zone became increasingly green, developing surfaces of edible grasses and major changes in the composition of wild fauna hunted.

During the Middle and Late Holocene, around the 5th and the mid-3rd mill. cal BCE, we observe two phases of human reoccupation, at the sites of Promontoire Néolithique and Ravin du Hibou, showing affinities in their material culture with some Neolithic complexes in the central Sahara (Huysecom et al. 2004; Kouti & Huysecom 2007). A millennium later, during the seventeenth and sixteenth centuries cal BC, cultural complexes of the Final Neolithic that developed in the Ounjougou region present unique traits, with the appearance of pottery decorated by different kinds of roulettes with highly characteristic motifs (Ozainne in press). The existence of stone dwellings along the river, with grinding materials and abundant calcined grass stalks, is established, while the practice of millet (Pennisetum glaucum) agricultures is confirmed by the discovery of burned seeds dated by AMS. The Neolithic occupations were abandoned near the middle of the 1st mill. cal BCE (Ozainne et al. 2009; Ozainne in press).

Protohistory
Protohistoric occupations over the last two millennia are less well represented at the site complex, maybe following a dry episode during
the first centuries BCE/CE (Mayor et al. 2005). Excavations at Promontoire protohistorique, with a sequence of colluvial layers, document the domestic pottery used between the seventh and thirteenth centuries CE by populations who settled in the region prior to the arrival of the Dogons. The excavation of a rockshelter with ritual function, Dangandouloun, yielded abundant ceramic material of excellent quality, including jars, bowls, and many tripod cups, as well as iron weapons and ornaments (Fig. 5). A series of thermoluminescence dates places this set of objects between the seventh and twelfth century CE. Stylistic and technical analyses of the ceramics have demonstrated the primarily local production of pottery by a group of the Gur linguistic family, shaped by pulling out of a lump of clay, the use of recipients produced by Mandé groups from the Inland Niger Delta and rare importing of recipients produced on the Seno Plain or further east, shaped by pounding in a concave form above a straight mat. This indicates that the Bandiagara Plateau was located at the crossroads of at least three large cultural spheres from the second half of the 1st mill. CE (Mayor 2011).

In addition, the study of modern and past ceramic traditions, through the excavation of historical sites and collection at abandoned villages known by oral tradition, has enabled us to follow changes in styles through time and to formulate hypotheses concerning the settlement of the plateau. Finally, the reconstruction of very complex Dogon migration routes on the plateau over the last three to four centuries, understanding of the relationships that were established between the different clans, and the delimitation of ancient territories, at the heart of current land ownership disputes, were made possible through oral tradition survey (Mayor et al. 2005).

Ethnoarchaeological research has moreover been extensively undertaken for the modern ceramic traditions of the region and has enabled identification of a peasant tradition (tradition A) in the center of the Dogon Country and a series of traditions made by the wives of smiths (traditions B, C, and D). The latter are either of local origin or from societies on the periphery of this region. The map of these traditions is extremely useful to interpret archaeological remains, particularly those from the Ounjougou site complex (Mayor 2011). Finally, archaeological and ethnohistorical studies have been carried out with the smith clans and traditional iron production on the Dogon Plateau during the period between the last precolonial empires (mid-2nd millennium CE) and the arrival of French colonization (late nineteenth to early twentieth century). They have made it possible to develop an overall scenario for the history of settlement
of smiths in the region and their production and to situate them within the dynamics of the central Nigerian plateau (Robion-Brunner 2010).

Cross-References

- Adaptation in Archaeology
- Archaeobotany
- Archaeobotany of Agricultural Intensification
- Ethnoarchaeology: Approaches to Fieldwork
- Human Migration: Bioarchaeological Approaches
- Landscape Domestication and Archaeology
- West and Central Africa: Historical Archaeology
- West and Central African Neolithic: Geography and Overview

References


Further Reading