



O Ideário Patrimonial О идеарио

Culturas oriundas da África,
América e Europa

ARTIFACTS, HERITAGE, IDENTITY, AND SITE PROTECTION: A JOURNEY INTO PUBLIC ARCHAEOLOGY IN THE MIDDLE SENEGAL VALLEY

ARTEFACTOS, PATRIMÓNIO, IDENTIDADE E PROTECÇÃO DE SÍTIO: UMA VIAGEM NO SEIO DA ARQUEOLOGIA PÚBLICA NO VALE MÉDIO DO SENEGAL

Recebido a 30 de setembro de 2021

Revisto a 13 de setembro de 2021

Aceite a 28 de setembro de 2021

Alioune Deme

Archaeology Laboratory, Department of History, Cheikh Anta Diop University, Dakar,
Senegal

alioune.deme@ucad.edu.sn

Moustapha Sall

Archaeology Laboratory, Department of History, Cheikh Anta Diop University, Dakar,
Senegal

moustapha1.sall@ucad.edu.sn

Ousmane Sow

Graduate student, Department of History, Cheikh Anta Diop University, Dakar, Senegal

ousmane12.sow@ucad.edu.sn

Mariama Ba

Graduate student, Department of History, Cheikh Anta Diop University, Dakar, Senegal

mariama15.ba@ucad.edu.sn

Aissata Thiam

Graduate student, Department of History, Cheikh Anta Diop University, Dakar, Senegal

athiaiba@gmail.com

Oumar Sow

Master student, Department of History, Cheikh Anta Diop University, Dakar, Senegal

fromfouta10@gmail.com



Abstract

The Middle Senegal Valley is a floodplain that, in the past, has attracted several groups. This is evidenced by the hundreds of listed archaeological sites; the vast majority of which has not been excavated. The lack of direct historical connections between the sites and local populations makes sites protection a major issue amid threats by natural and anthropogenic agents. Some baby steps initiatives are taken to try to change the situation. They combined scholarly activities and the necessity to take into consideration the political, social and cultural contexts in which fieldwork is undertaken. The strategies consist of taking in account the point of view, attitudes and aspirations of local communities and the possibilities that archaeology offers as a tool for education and peace. This chapter highlights three cases of successful public archaeology work in the Middle Senegal Valley.

Keywords: Public archaeology, open archaeology, collaborative archaeology, peace archaeology, Middle Senegal Valley, Walalde, Meri, Diongui – Thikite.

Resumo

O vale do Médio Senegal é uma planície de inundação que, no passado, atraiu vários grupos humanos. Tal é evidenciado pelas centenas de sítios arqueológicos listados ainda que a grande maioria dos quais não foi escavada. A falta de conexões históricas diretas entre os sítios e a população local torna a proteção dos sítios um grande problema que se torna mais evidente quando nos deparamos com fenómenos tafonómicos como os agentes naturais e os antrópicos. Algumas iniciativas são tomadas para tentar mudar a situação. Elas combinam atividades académicas e a necessidade de levar em consideração os contextos políticos, sociais e culturais nos quais o trabalho de campo é realizado. As estratégias consistem em levar em consideração os pontos de vista, as atitudes e as aspirações das comunidades locais e as possibilidades que a arqueologia oferece como instrumento de educação e paz. Este capítulo destaca três casos de sucesso da arqueologia pública no vale do Médio Senegal.

Palavras-chave: Arqueologia Pública, Arqueologia Aberta, Arqueologia Colaborativa, Arqueologia da Paz, Vale do Médio Senegal, Walalde, Meri, Diongui – Thikite.



1. Introduction

Archaeology has never been for archaeologists only. Even though the scientific research is conducted by archaeologists, the results and the fieldwork involved other stakeholders: general public, local communities, government agencies and the scientific communities (Okamura & Matsuda, 2011). This wider use of the archaeological knowledge is due to the recognition that, besides scientific and scholarly purposes, archaeology is relevant to society in terms of education, identity building, economic development, peace, and heritage protection.

The Middle Senegal Valley (hereafter MSV) is populated mostly by the Haalpulaar who constitute 89.5% of the local population (Gueye, 1998) and are organized into several specialist groups (Kane, 1973; Kyburz, 1994; Schmitz, 1986; Wane, 1969). Kane (2004) who has analyzed the spatial distribution of the ethnic groups across the Middle Senegal Valley, revealed the presence of pockets of Soninke, located mostly in the east [(called *sebbe alambe*; (in reference to the kingdom of Galam)] and of other ethnic groups members who were later assimilated by the Pulaar (called *sebbe wuronkobe*). According to Schmitz (idem), the term *sebbe* used to characterize the Wolof, the Seereer and the Soninke, was invented during the 14th century amid the domination of the MSV by the Fulani Denyanke dynasty. This ethnic diversity is the byproduct of several episodes in the rich history of the area.

Archaeological sites were not considered by the majority Haalpulaar as part of their local heritage. The Haalpulaar, who are Muslim, stress that the sites were not built by their ancestors, but rather, by the Seereer, an ethnic group living now in the center of Senegal. Oral records affirm the Seereer left the MSV with the arrival of Islam during the second millennium AD (Gravand, 1983, Chavane, 1985). Because of the lack of direct historical and religious connections with the archaeological sites, local populations did not care about them. Worst, they take the sherds from the sites for the paving of bathroom floors. New strategies were needed to solve that problem. This paper reports on activities that have helped foster education, identity building and archaeological sites protection.

2. The Middle Senegal Valley: background

The Middle Senegal Valley is a reasonably fertile floodplain located at the core of the African semi-arid climate zone known as the Sahel which is located within the zone



of 300 mm to 500 mm mean annual rainfall. The division of the year into a rainy and a dry season is caused by the fluctuating position of the moisture-bearing Inter Tropical Convergence Zone (ITCZ) during the year (Deme, 1991). In the West African Sahel, the overall atmospheric circulation is under the influence of desiccating anticyclones that bring dry winds from the northeast. The climate today is characterized by high inter-annual variability and, in the past, by major climate fluctuations at the scale of decades, centuries, or millennia. Since the beginning of the Holocene, many climate fluctuations have engendered environmental degradation and ecological changes at both the regional and the local scales (Elouard, 1962, Michel 1973, Petit Maire, 1979).

The floodplain and a diverse hydrography have made the MSV an economic, social, and cultural contact zone between the Sahara and the Sahel. It played a very important role in West African Prehistory during the last millennium BC and the two millennia A.D. (Deme, 2003, 2019, R. McIntosh et al., 2016). Early written information about the region came from Arab historians and geographers (Cuoq, 1975, Levtzion & Hopkins 2000). Oral and Arab records suggest that, during the second millennium AD, the MSV was the location of several polities such as the kingdom of Takrur (A. Ba, 2002, Bocoum, 1986, Chavane, 1985, Delafosse, 1934, 1963, 1972).

Takrur was the most important polity. Cuoq mentions that, during the 10th century, Takrur was involved in slave raiding, trade in salt and gold. Rival to the Ghana Empire, Takrur was influenced by Islam. The king of Takrur (War Jarbi) was even converted to Islam and his son, Ben Rabbis, was a general in the Almoravid army. Takrur was so important and so famous that its name ended up being associated with all West Africa (Naqar, 1969). The privileged geographic, economic, and cultural location of the MSV hastened its domination by the Ghana and Mali empires. The hundreds of surveyed archaeological sites are witnesses of that dynamic past (Figure 1).

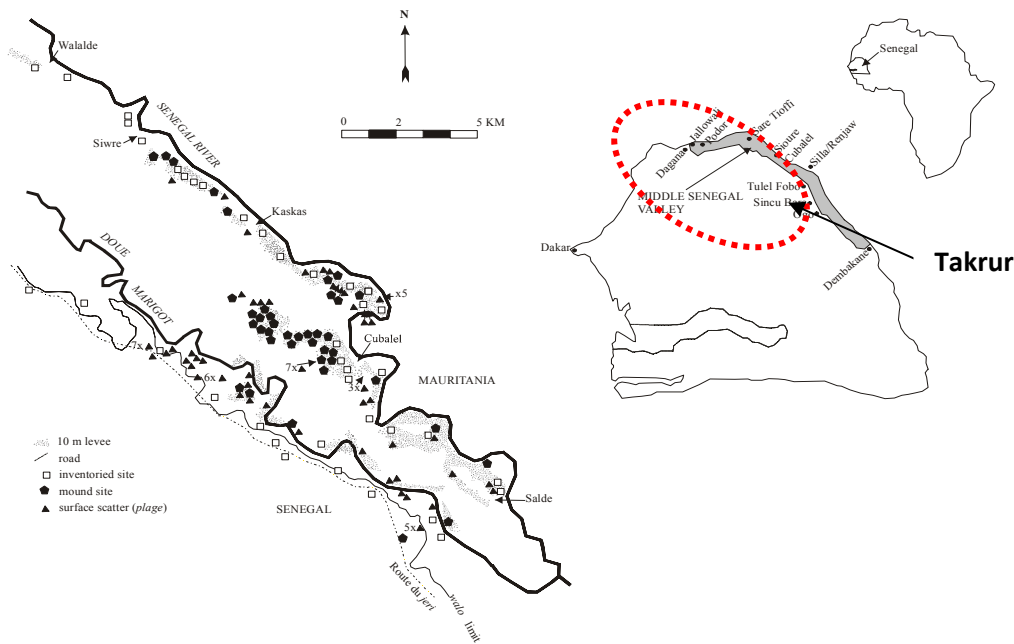


Figure 1 - Estimated location of the Kingdom of Takrur. The map on the left show archaeological sites found in the Middle Senegal Valley Archaeological Project study region. Source: redrawn from Deme, 2003, p. 50.

There are several topographic units, defined in terms of geomorphology, present-day land use, and perception. Each unit has its specific pedology, grass cover, tree species and a specific use. A lateral cross-section of the MSV first established by Elouard (*op. cit*) shows the existence of three major human exploitation zones that are defined by the topography of the floodplain: 1) the floodplain (*walo* in Pulaar); 2) the non-inundated areas outside the floodplain (*jeri*) and 3) the transition zone between the two (*jejeengol*) (Figure 2). Each exploitation zone is defined based on its topography, pedology, and historical experience with subsistence and settlement activities.

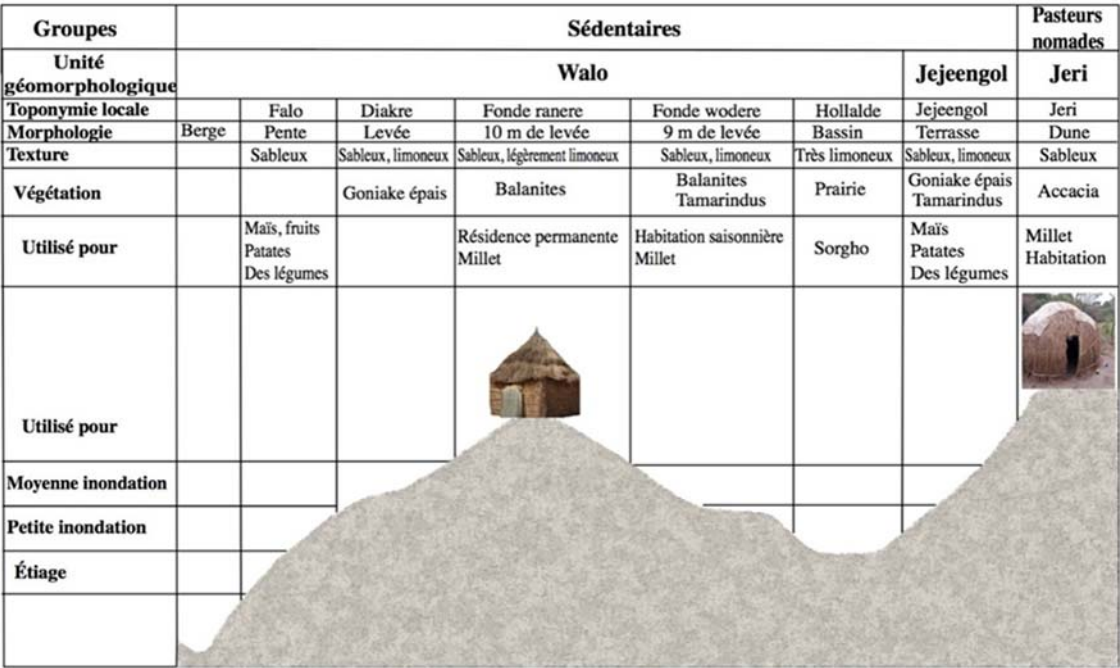


Figure 2 - Geomorphological section of the Middle Valley of the Senegal River. The high levees, which are non-floodable and permanently habitable, were 100% prospected. Source: Deme, 2019, p. 5.

3. Threats to archaeological sites

Schiffer (1972) has demonstrated the need for archaeologists to take into consideration processes of formation of archaeological contexts. For him, before analyzing the artefacts, archaeologists must first understand the process of aggregation, the movement of artefacts and the abandonment of activities. Before interpreting the relationships between artefacts, it is necessary to ensure that these relationships as discovered in an archaeological context were caused by man in the past and not by disturbance agents such as rain, wind or humidity (Schiffer, 1987). These warnings are very important in the MSV where archaeological sites are threatened by anthropic and natural agents.

Anthropic threats: There are several development programs undertaken in the MSV. In its search for food sovereignty and self-sufficiency, the Senegalese government, in partnership with its international financial partners and the private sector, has invested billions in local currency with the aim for an agricultural revolution in Senegal. The country is aiming at producing enough rice (the dominant staple) and vegetables such as



onion, potatoes, tomatoes... These policies involve the constructions of road to transport the products to Dakar (the main port and the biggest market). Unfortunately, amid the lack of systematic CRM, sediments and artefacts from archaeological sites are washed away and used during the construction of roads, agricultural facilities and developments. This was particularly the case for Grands Kaskas and Diongui - Thikité that were completely destroyed to build dikes.

The other anthropic disturbance agents are local populations who take sherds from the site to build or renew bathroom floor. Moreover, pastoralism is also a threat: the herd breaks and displace artifacts such as sherd: disturbing the archaeological context (Figure 3).



Figure 3 - Herd crossing the Meri site looking for pasture. Source: Photo taken by M. Ba

Naturel threats. Climate change is the biggest threat. According to the European Environment Agency, climate change is real, persistent and long-lasting. The agency predicts, among other things, "an increase in temperature from 1.4 to 5.8 ° C by the year 2100, an intensification of the hydrological cycle, with increased intensity of precipitation, but at the same time more frequent droughts in the arid and semi-arid areas, a sea level rise of 0.09 to 0.88 m by 2100 and an increased frequency of storms locally" (UNESCO, World Heritage Center, 2007, p. 17).

Climate change has an adverse effect on heritage, artefacts and archaeological sites. For example, heavy rains affect the composition and position of the surface material causing the displacement of artefacts; and, therefore, the formation of new archaeological contexts and new associations that have nothing to do with anthropogenic actions. Another example comes from England where, in 2002, the English Heritage organization commissioned studies which showed that climate change affects soil texture and moisture, which ultimately affects artefacts (Cassar & Pender, 2005). This humidity also affects plant and genetic materials. The latter, thanks to the advancement of science, are increasingly proven to be a very important source of information to understand the past.

As a result, it is now accepted that climate change is one of the natural disruptors of archaeological and heritage contexts. This has serious consequences, including a threat to the Outstanding Universal Values of some World Heritage sites. According to Hambrecht and Rockman: “(...) the threats of climate change to cultural heritage will seriously damage our common historical heritage. Damages to a cultural heritage site can result in the loss of irreplaceable cultural, social and economic assets for local, national and global communities. The multitude of uses that cultural heritage serves in society are threatened by climate change, from the formation of community identities to the financial returns of tourism.” (2017, p. 627).

Similar climate change induced damages can be done to the archaeological sites.

As stated in the 2007 World Heritage Center report; “Climate change will be accompanied by a number of changes in environmental conditions that could threaten the evidence buried in the ground by exacerbating the mechanisms of disintegration of archaeological sites. Archaeological evidence is preserved in the soil because it has reached a balance with the hydrological, chemical and biological processes of the soil. Changes in these parameters may make the level of survival of sensitive materials lower (...). But the greatest concern for archaeological evidence, compared to other types of property, is that climate change may compromise the conservation of valuable evidence, the existence of which is not yet known.” (*idem*, p. 52).

While initiatives are taken by organizations and governments in North America, Europe, Asia and Australia to counter these damages, this is not the case in Africa. The situation is direr in sub-Saharan Africa where the threats and impacts of climate change

are increasing in intensity (causing flooding and rapid erosion) and the overwhelming majority of sites have not been excavated.

The MSV is a perfect showcase to demonstrate the harmful effects of climate change on archaeological sites and heritage. The archaeological sites are constantly exposed to climatic risks and damages: floods and rapid erosion caused by extreme precipitation, mixing of artefacts, destruction of plant material and genetic evidence, and disturbance of the stratigraphy. Periodic heavy rains create gullying and transport of sediments and artifacts from the top to the bottom (Figure 4). It is also extremely difficult to collect paleo DNA because the preservation conditions are not the best (Wang et al., 2020). As a result, we risk to never know entire sections of the past genetic history, paleopathology, genetic mutation, and subsistence evolution.



Figure 4 - Gullies at Walalde. Source: Photo taken by Deme.

4. Public archaeology as a solution?

To counter threats on archaeological sites, it was necessary to change first the attitude and mindset of the populations towards these same sites. One important step was to resolve the deficit of information related to the MSV archaeology. Archaeological processes, practices, and works are published in French and are hence not accessible to the majority of the population. It was important to make archaeology and archaeological sites relevant and meaningful to local populations. We decided to open a dialogue with local authorities and other stakeholders including students in order to inform them about

MSV Archaeology and its findings, and convince them to take ownership of the site as part of their local land, Senegalese, African, and world history. This dialogue which is necessary in knowledge production during archaeological practice in an African setting (Pikirayi, 2015) is also fundamental for site protection.

Hence, to solve the deficit in archaeological information, an amateur documentary production unit called Hispam Videos¹ was created by Deme, Sall, and their students to produce archaeological and historical documentary films. The documentaries are then posted on youtube with one French version and one version in the local language. It was one way to reconstitute their history to the local populations, but also to educate and, hopefully, motivate. Media archaeology has the potential to be a powerful tool in local community acceptance of local archaeological site. It plays a major role in making archaeology popular and fascinating to the public (Moshenshka, 2017). Walalde is a good example.

Collaborative archaeology at Walalde: Walaldé is so far one of the two sites in Senegal that provides initial insights in the last millennium BC occupation process of the MSV and the contacts with the Sahara. Radiocarbon dates and a remarkably consistent material culture have pushed back the beginning of the occupation of the Middle Senegal valley to 800 cal BCE. Data showed an evolution from transition Late Stone Age-Iron Age with the initial use of iron, followed by iron smelting and forging (500 BCE) and after 500 BCE the use of copper with a distinctive chemical signature of Akjoujt mines (Mauritania) (Deme, 2003, Deme & McIntosh, 2006).

Data from Walalde recovered by Deme (2003) showed “evidence of what some call the “holy grail” of later West African prehistory, namely the LSA-IA transition. There are virtually no other LSA deposits in the Ile a Morphil, despite the river having been a natural attractor for populations forced to find refuge from the drying Sahara of the last few millennia BCE. With ceramics of a transitional nature, with some lithics mixed with more typical Iron Age materials, this remains one of the very few sites we possess in the sub-continent with an in situ transition (another being Akumbu in the Malian Mema [and check S.Dupelchen]).” (McIntosh, Deme, Thiaw et al., 2014, p. 2). Moreover, Walalde dates are among the few to come from stratified excavations and in a controlled manner.

¹ HISPAM is the acronym for Histoire, Préhistoire et Archéologie Médiévale.

This importance of Walalde in the prehistory and protohistory of Africa attracted the attention of the people of Walalde. During a training and research mission with students, we were well received by the Mayor, who offered us food and accommodation. We used this surplus to invite each day the Vice Mayor and, sometimes, some other leaders to share meals with us and to discuss with them the data collected and their preliminary implication. We invited them sometimes to the site. We also made interviews on metallurgy and pottery in the area and on the history of Walalde as well. All these scholarly and open archeology activities were included in a documentary film called "Hamady Walalde, le premier habitant du Fouta" which was posted on Youtube². The film had a French and a Pulaar versions. For the Pulaar version, we enlisted the help of Pulaar celebrities and cultural activists to lend their voices. The documentary was well relayed by the Senegalese media.

The documentary was very well received. He created enthusiasm, pride. Better still, the archaeological data and the film began to be used in the reaffirmation of identity. Walalde's history and socio-demography are linked to the *cebbe* (warriors group). For the inhabitants of Walalde and their diaspora, the archaeological data push back the historical grandeur of the village long before Farba Walalde (a leader who dominated the region during the second millennium A.D) (Kane 1986). The site was integrated into the *Cebbagu* (the pride and values of being *Cebbe*). Site visits and conferences were organized during the village annual homecoming. With the integration of the site into the history of the land, endogenous proposals arose such as the fencing of the site and an eco-tourism project. These initiatives are in the draft stage, but they show how far we have come.

The documentary was a powerful and galvanizing tool that emulated a few other villages in wanting archaeologists do research in their zones and in protecting their own site. Meri is an example.

Open archaeology at Meri: According to Deme (2003), Meri is among the largest MSV archaeological complex. Composed of 8 sites, it covers more than 12 ha. In fact, almost the whole village of today Meri sits on part of the archaeological cluster.

² <https://www.youtube.com/watch?v=xkmA7RYkGgM>

The quite exceptional geographical location of the site (located in *Jejeengol* where the large villages are today) favors the practices of several agro-pastoral activities. It is probably this factor which could have played a role in the large number of archaeological sites found in this area, especially since it does not present too many constraints as it is the case in the *Walo* where the populations must settle on the 9 – 10 m levees (M. Ba 2016) (Figure 5).

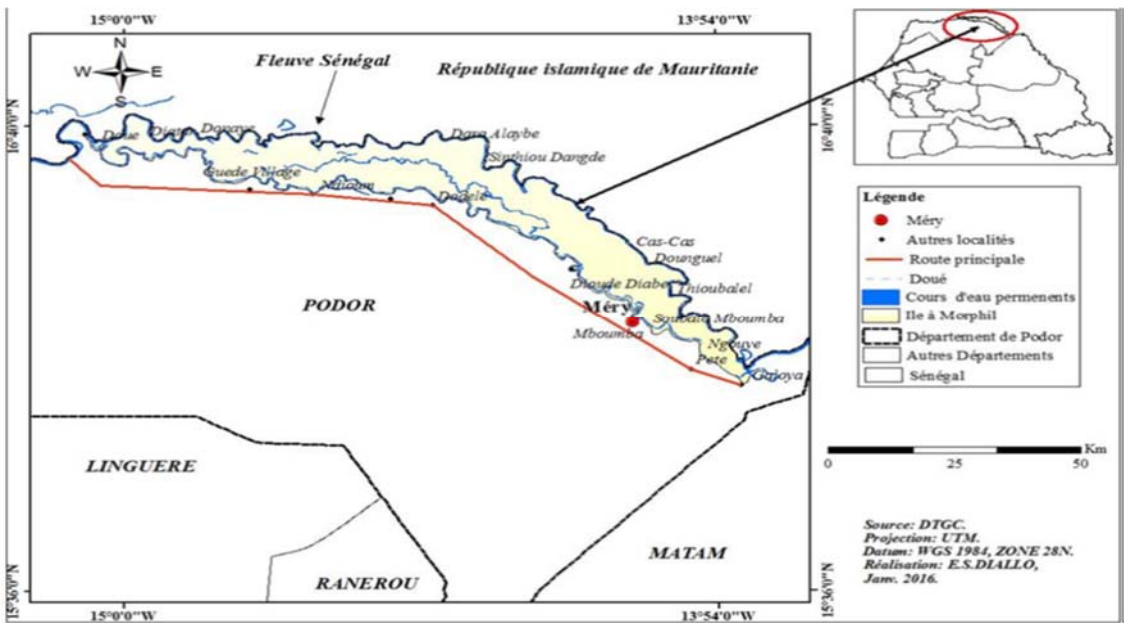


Figure 5 - Location of Méri. Source: M. Ba, 2016.

A training and research mission was organized in Méri. Discussions with the local populations and the Mayor resulted in a great awareness of the site during the excavations. In fact, some populations ended up sometimes bringing us graciously meals on the site. In their view, it was a way to say thanks since what we do aims to enhance their village and their culture. Moreover, since part of the site was used as a garbage dump, the City Council decided to put a sign prohibiting the dumping of garbage on the site under penalty of a fine (Figure 6).



Figure 6 - Sign posted by the City of Meri prohibiting the deposit of garbage under penalty of a fine. Source: M. Ba.

5. Peace archaeology at Diongui – Thikite

In March 2020, the Ibnou Massaer Diagne archaeology lab was informed of the fortuitous discovery in the villages Diongui and Thikite of stones with Islamic epigraphs.

The stones (laterite blocks) were accidentally discovered around the Diongui-Thikité irrigated perimeter three months earlier. They quickly went viral on social networks. They became the object of pilgrimage because they were considered as stones "descending from heaven". With funding from the Senegalese Minister of Higher Education, Research and Innovation, a rescue archeology mission was dispatched to the area.

The archaeological sites were first mentioned by Martin and Becker (1974), then by Thilmans (1980), and by Deme (2003) who studied their surface material. There were two sites. The one located one kilometer from the village of the Diongui and commonly called *Toulet Diongui* (the Diongui hill), corresponds to site MB3 mentioned by Deme (2003). It is a 2m high mound with a large amount of well-preserved surface ceramic, burials, slag, and other materials. The other site MB4, is a small archaeological

accumulation (called *plage*), now used as soccer field by the Thikite youth (Figure 7). Deme (2003) mentioned that the surface material of both sites corresponded to Phase IV (950-1200 AD) in the ceramic chronology established in 1990-1992 by during the MSV Project³. That phase is chronologically associated with the arrival of Islam in the MSV.

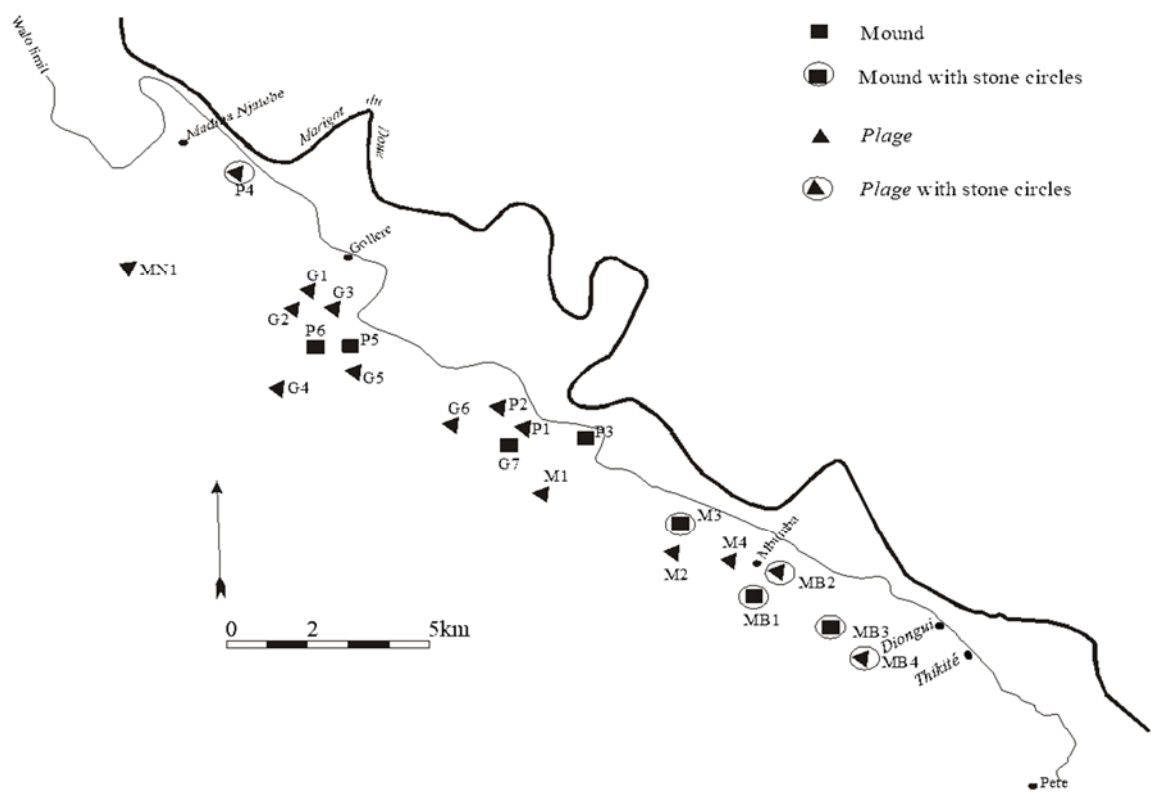


Figure 7 - Diongui – Thikite within the zone surveyed by Deme. Source: redrawn from Deme 2003, p. 251.

The Islamic epigraphs mentioned the names of Allah and Prophet Muhammad (Deme, Sall et al., forthcoming) (Figure 8). For the Diongui – Thikite populations, these holy names mean the stones are from heaven: hence sacred. This engendered a dispute between the two villages over the control and the ownership of the stones.

³ The MSV Project was a major and extensive multistage research project designed to procure data necessary to establish reliable foundation for understanding the economic, social, and political development of the MSV over the past two millennia. It was led by Susan McIntosh, Roderick McIntosh, and Hamady Bocoum.

This case was not about negotiation and conflict over meaning (Merriman 2004, p. 5) but rather about a disputed heritage between two villages, each of whom wanted to take ownership of the Islamic epigraphs to claim the importance of their heritage, place and people. Hence, we were dealing with a single past with competing claims of ownership aimed at strengthening claimants' identity, belief system, ontology, and place in the world.

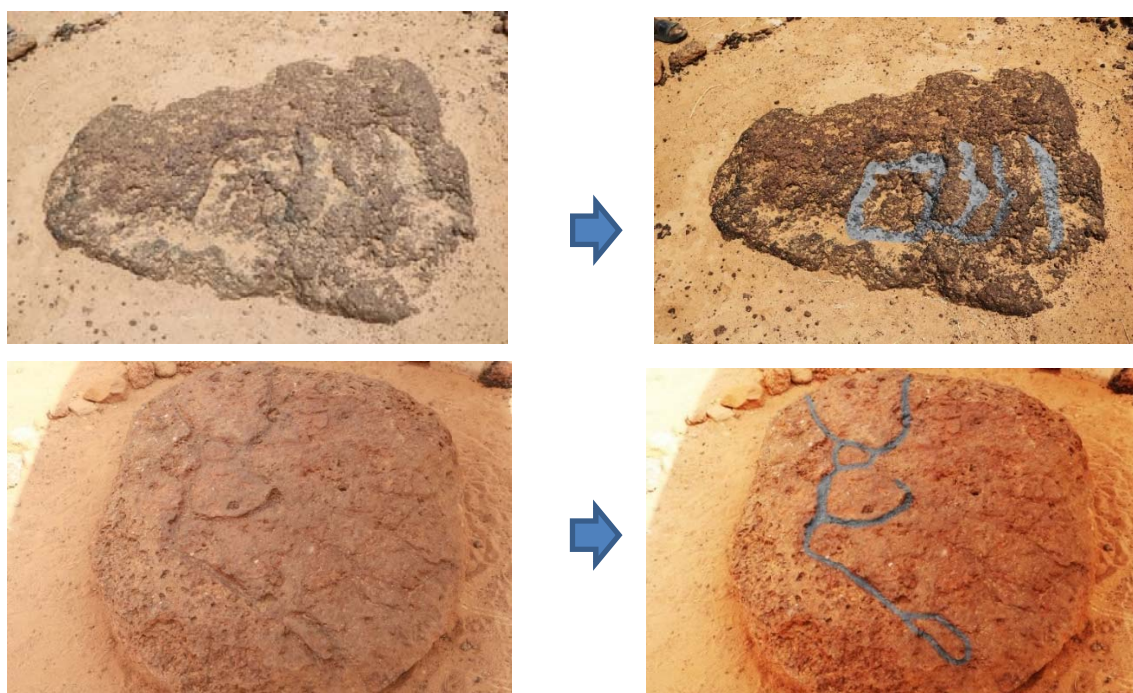


Figure 8 - Islamic epigraphs on laterite block mentioning the name Allah (top) and Mohammad (bottom). Source: Deme, Sall et al., forthcoming

Archaeologists in that context will directly have to face the challenges related to the politics of the past through dispute over the material culture. However, this is not the case of different pasts. Instead, it is the case of a single past that has such an important meaning, that, in the eye of different villages, its ownership should be special.

Soft skills were needed. Because we are archaeologists, villagers see us as endowed with scientific knowledge, method, and theory. This generates esteem and respect from them. That esteem and respect, give us the possibility to be peace archaeologists (Little, 2009). The ownership of the artifact needed to be reflected on how the artifact is represented, portrayed and displayed. The control of the past included a control over the picture and over the name of the site. Images are very important in archaeology. They are lasting record of archaeological contexts as well as a visual proof

and source in our interpretation of the past. We took the following decisions: after our research, each village will keep its already claimed stones, the site MB 4 (the naming of which should reflect dual ownership) will be called Diongui – Thikité. That name was used in all the forms and in the photo board (Figure 9). This was a special experience in the practice of archeology and in the production of meaning in a context of inter subjectivity between two different understandings of the past (secular, critical, and fact driven VS. religious, intuitive, and identity driven).

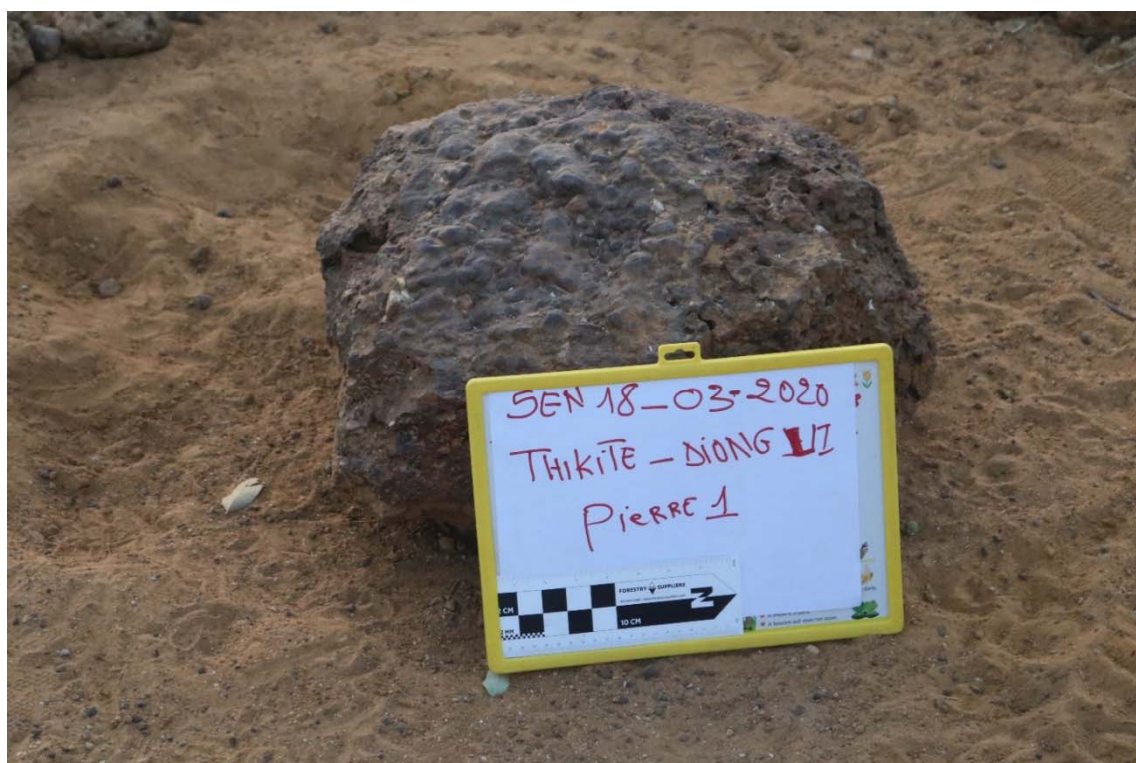


Figure 9 - Photo board reflecting the agreement on the shared past between the villages of Diongui and Thikite. Source: Deme, Sall et al., forthcoming.

6. Conclusion

The hundreds of archaeological sites in the MSV are threatened by natural and anthropogenic factors. To curb this threat, it is necessary to increase research campaigns and to combine scholarly activities with public archaeology initiatives. Our efforts have begun to pay off. Examples from Walalde, Meri and Diongui – Thikite, demonstrate that local populations have begun to have a clear sighted view of the role of archaeology in highlighting the history of their locality. They have started to see the social, historical and cultural values of archaeology. In fact, they utilize archaeology to create meaning that is used to reinforces identity (increasing the cultural value of the group) and pride.

We are witnessing a shift from previous assumption that sites are not part of the local history to new ones that go with the acceptance and integration of the archaeological sites into the general and long term history of the *leydi* (ancestral land). This is far from being a general shift. But we have started to have few cases of the use of archaeological sites to elevate the importance of the *leydi* and its habitants. This has led to local campaigns and actions to protect these archaeological sites (decision to fence the site, help from emigrants, signs to protect sites, sharp increase in the number of students from the area specializing in archaeology and working in the archaeology of their communities). This is a new beginning that hopefully will spread!

References

- Ba, A. (2002). *Le Tekrur, des origines à la conquête par le Mali [VI^e - XIII^e siècle]*. R. CRIAA-Nouakchott. Dakar: IFAN/UCAD.
- Ba, M. (2016). *Recherche archéologique sur le site Protohistorique de Méri (Moyenne Vallée du Fleuve Sénégal)*. Mémoire de Master, Université Cheikh Anta Diop
- Bocoum, H. (1986). *La métallurgie du fer au Sénégal: approche archéologique, technologique et historique*. Thèse 3^{ème} cycle. Université Paris I.
- Cassar, M. & Pender, R. (2005). “The impact of climate change on cultural heritage: evidence and response”. In Verger, I. (ed.) (*Proceedings*) *ICOM Committee for Conservation: 14th Triennial Meeting*. James & James, 610-616.
- Chavane, B.A. (1985). *Villages de l'ancien Tékroure*. Paris: Karthala.
- Cuoq, J.M. (1975). *Recueil des sources arabes concernant l'Afrique occidentale du VIII^e au XIV^e siècle*. Paris: CNRS.
- Delafosse, M. (1934). “Takrur”. In *Encyclopédie de l'Islam*, IV, Leiden: E.J. Brill
- Delafosse, M. (1963). *Chroniques du Fouta Sénégalais, traduction de deux manuscrits arabes inédits de Siré Abbas Soh*. Paris: Ernest Leroux.
- Delafosse, M. (1972). *Le Haut-Sénégal-Niger*. Paris: Larose.
- Deme, A. (1991). *Evolution Climatique et processus de mise en place du peuplement dans l'Ile A Morphil*. Mémoire de Maîtrise. Université Cheikh Anta Diop.
- Deme, A. (2003). *Archaeological investigations of settlement and emerging complexity in the Middle Senegal Valley*. Doctorate Thesis, Rice University, Houston, Texas.
- Deme, A. (2019). Études archéologiques du peuplement de la Moyenne Vallée du Fleuve Sénégal: résultats depuis les années 90. In *Afrika Zamani*, n^o. 27, 1-14.



- Deme, A., & McIntosh, S. K. (2006). Excavations at Walaldé: New light on the settlement of the Middle Senegal Valley by iron-using peoples. In *Journal of African Archaeology*, 4(2), 317–347.
- Deme, A. Sall, Thiam, M., Ba, A., Ndiaye, M., Seydi, M., Diouf, O. S., Sakho, M., Tall, F., Diouf, H., Mane, J.A., Ba, L., Cisse, A.M. & Traore, N. K. Forthcoming: “Découvertes d’épigraphies islamiques à Diongui-Thikité (Moyenne Vallée du Fleuve Sénégal)”. In *Annales Faculté des Lettres*.
- Elouard, P. (1962). *Etude Géomorphologique et hydrogéologique des formations sédimentaires du Guelba mauritanien et de la Vallée du Sénégal*. Mémoires B.R.G.M. N° 7.
- Gravrand, H. (1983). *La civilisation sereer: Cosaan: Les origines*. Dakar: Nouvelles Editions Africaines.
- Guèye, N.S. (1998). *Poteries et peuplement de la Moyenne Vallée du Fleuve Sénégal du XVIème au XXème siècle: Approches ethnoarchéologique et ethnohistorique*. Thèse Doctorat et lettres. Nanterre: Université de Paris X.
- Hambrecht, G. & Rockman, M. (2017). International Approaches to Climate Change and Cultural Heritage. In *American Antiquity*, 1-15. DOI:10.1017/aaq.
- Kane, O. (1973). Les unités territoriales du Futa Toro. In *Bulletin de l’IFAN*, Serie B, 35 (3), 614-631
- Kane, O. (1986). *Le Fuuta Tooro des Satigi au Almaami*. Thèse d’Etat, Université Cheikh Anta Diop.
- Kane, O. (2004). *La première hégémonie peule Le Fuuta Tooro de Koli Tenella à Almaami Abdul*. Paris: Karthala.
- Kyburz, O. (1994). *Les hierarchies sociales et leurs fondements idéologiques chez les populations halpularen (Sénégal)*. Doctoral thesis. Nanterre: Université Paris X.
- Levtzion, N. & Hopkins, J.F.P. (2000). *Corpus of early Arabic sources for West African history*. Princeton: Markus Wiener.
- Little, B. (2009). “What Can Archaeology Do for Justice, Peace, Community, and the Earth” *Historical Archaeology*, 43 (4), 115-119. Retrieved September 5, 2021, from <http://www.jstor.org/stable/25617585>.
- Marie, M. (2010). Quand ethnologue et imam croisent leurs plumes: voyage au pays de l’anthropologie collaborative. In *Cahiers d’études africaines* [En ligne], 198-199-

200 | 2010, mis en ligne le 02 janvier 2013, consulté le 19 avril 2019. URL: <http://journals.openedition.org/etudesafricaines/16435>.

DOI: [10.4000/etudesafricaines.16435](https://doi.org/10.4000/etudesafricaines.16435).

- McIntosh, R., Deme, A. & Thiaw, I. et al., (2014). Linking Radiocarbon and Archaeomagnetism to Improve Radiometric Dating along the Middle Senegal River Valley, Senegal, Western Africa. NSF proposal.
- McIntosh, R., McIntosh, S. & Bocoum, H. (2016). *The search for Tékrou: Archeological excavation and Reconnaissance along the middle Senegal Valley*. New Haven Yale University Publication, Anthropology department, N ° 93.
- Merriman, N. (ed.) (2004). *Public Archaeology*. London: Routledge.
- Michel, P. (1973). *Les bassins des fleuves Sénégal et Gambie: étude géomorphologique*. Mémoire ORSTOM, N° 63, Paris.
- Moshenshma, G. (2017). Public archaeology as practice and scholarship where archaeology meets the world. In G. Mosjenska (ed.) *Keys concepts in Public archaeology*. London, UCL Press, 1-13.
- Naqar, U.A. (1969). Takrur: the origin of a name. In *Journal of African History*. X (3), 365-374.
- Okamura, K. & Matsuda, A. (2011). Introduction. In Matsuda, A. and Okamura, K. (eds.) *New Perspectives in global public archaeology*. New York: Springer, 1 – 18. DOI: [10.1007/978-1-4614-0341-8_1](https://doi.org/10.1007/978-1-4614-0341-8_1).
- Petit Maire, N. (ed.) (1979). Le Sahara Atlantique à l'holocène: peuplement et écologie. In *Mémoires du centre de recherches anthropologiques, préhistoriques et ethnographiques*. XXVIII, Alger.
- Pikirayi, I. (2015). The future of archaeology in Africa. In *Antiquity*, 531-541. DOI: [10.15184/aqy.2015.31](https://doi.org/10.15184/aqy.2015.31).
- Schiffer, M.B. (1972). Archaeological context and systematic context. In *American Antiquity*, 37, 156-165.
- Schiffer, M.B. (1983). *Formation process of the archaeological record*. Albuquerque, University of New Mexico Press.
- Schmitz, J. (1986). L'Etat géomètre: les leydi des peuls du Fuuta Tooro (Sénégal) et du Maasina (Mali). In *Cahiers d'Etudes Africaines*, 26 (103), 349-394.
- Schmitz, J. (1994). Cités noires: les républiques villageoises du Futa Tooro (vallée du fleuve Sénégal). In *Cahiers d'Etudes Africaines*. 34, (133-135), 419-460.

- UNESCO World heritage center 2007 (2007). *Climate Change and World Heritage Report on predicting and managing the impacts of climate change on World Heritage and Strategy to assist States Parties to implement appropriate management responses*. Paris, UNESCO World Heritage Center.
- Wane, Y. (1969). *Les Toucouleurs du Futa Tooro (Sénégal): Stratification sociale et structure familiale*. IFAN, Initiations et Etudes Africaines, 25.
- Wang, K., Goldstein, S., Bleasdale, M., Clist, B., Bostoen, K., Bakwa-Lufu, P., Buck, L.T., Crowther, A., Deme, A., McIntosh, R.J., Mercader, J., Ogola, C., Power, R.C., Sawchuk, E., Robertshaw, P., Wilmsen, E.N., Petraglia, M., Ndiema, E., Manthi, F.J., Krause, J., Roberts, P., Boivin, N. & Schiffels, S. (2020). Ancient genomes reveal complex patterns of population movement, interaction, and replacement in sub-Saharan Africa. In *Sci. Adv.* 6, eaaz0183 (2020).

