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## EDITORIAL

Dear readership,

The December 2020 volume 94 consists of six papers, five in English and one in French. Geographically, two are situated in West Africa with the remainder in East Africa. Chronologically, these pieces cover the fourth century BCE to the late nineteenth century addressing archaeological survey and the preliminary testing in many understudied regions.

Moving from west to east, we begin in Senegal. Diakho and Gokee conducted interviews in 2013 in the village of Itato in southeastern Senegal and subsequent archaeological fieldwork in 2019. According to oral history, Itato holds a key position in immigration and as a slave trade market in the eighteenth and nineteenth centuries. The authors describe in detail the methodology which they adapted to the specific conditions and nature of each of the three Itato sites: at the locality of the slave market as identified by the interviewees, traces of settlement at Itato Diakha, and a furnace near Itato Tata. Further research will include among others luminescence dating and refined analyses of pottery to provide an anchor point for reconstruction of local and regional history.

Reporting on recent research in Nigeria, Okonkwo, Chiekpe, and Ibeanu discuss the identification of archaeological resources related to the Ugwunye clan. To do so, they employ oral history documentation alongside archaeological survey and basic site documentation. Their study focuses on iron smelting and blacksmithing sites.

Two contributions report on archaeological surveys in Sudan.

Bashir presents preliminary findings from a 2018 survey project aimed at identifying archaeological resources in the Third Cataract region of the Nile River ahead of the construction of the Kajbaa dam. The project team's focus was on Meroitic sites and included the identification of cemeteries and village sites, shedding light on a previously under-researched period in the region. This time they concentrated field work on five sites and present the results in this volume.

In the second contribution from Sudan, Hayati, Adam, and Al-Awad seek to document previously unreported sites in the Kordofan territory in middle Sudan. The authors highlight the key geographic and climatic

features of the region as ideal for supporting long-term occupation and settlement. Building upon a 2009 survey of the area by Adam, the team employed test and excavation units at four sites to uncover the stratigraphic and cultural sequence of the Kordofan territory. Their findings highlight a long-term, stable pottery tradition and stable occupation of many sites from the Neolithic into the nineteenth century.

A paper from Ethiopia brings us back to the Nile Valley. Gaudiello reports on the Polish Centre of Mediterranean Archaeology (PCMA) 2019 survey in Tigray with the aim of identifying sites from the Aksum Kingdom. The efforts of the team concerned the mapping of eight sites that chronologically represent the pre-Aksumite, Aksumite, and post-Aksumite periods. Particular emphasis was placed on sites such as Däbrä Gərgi that could shed light on the internal trade dynamics of the Aksum Kingdom.

Finally, Alders' research on the island of Zanzibar focuses on the inland region, building upon previous archaeological research from the first millennium AD through the plantation period of the nineteenth century. Employing STP surveys, Alders documents previously unrecorded sites in targeted interior areas with the goal of expanding our knowledge of the island's occupational history beyond the coast. In total, 127 sites or unique site components were identified.

As always, we hope that our readers find this volume an interesting contribution to the field. We thank all authors for supporting the bulletin, as well as all those who were involved in its production. They include members of the Heritage Studies and Publications services of the Royal Museum for Central Africa who handled manuscripts copy-editing, graphic assistance, layout, and proofreading. We also thank our colleagues at SAfA for the on-line publication, now accessible via a link on the homepage of the brand-new SAfA-website. We take this opportunity to remind our reader- and authorship that according to current policy, there is a 3-year embargo on making articles available online on portals such as ResearchGate or Academia. Papers under embargo can be placed in an offline institutional repository and can also be sent upon request on a one-to-one basis.

Liza Gijanto  
Els Cornelissen  
Editors



## ÉDITORIAL

Chers lecteurs et lectrices,

Le volume 94 de décembre 2020 consiste en six articles, cinq en anglais et un en français. Géographiquement, deux d'entre eux sont situés en Afrique de l'Ouest et le reste en Afrique de l'Est. Sur le plan chronologique, ces textes couvrent une période qui s'étend du quatrième siècle avant J.-C. jusqu'à la fin du dix-neuvième siècle, en abordant la recherche archéologique et les examens préliminaires dans de nombreuses régions peu étudiées.

En allant de l'ouest vers l'est, nous commençons par le Sénégal. Diakho et Gokee ont mené des interviews en 2013 dans le village d'Itato dans le sud-ouest du Sénégal, suivi d'un travail archéologique de terrain en 2019. Itato, selon l'histoire orale, occupe une position clé dans l'immigration et en tant que marché de la traite des esclaves aux dix-huitième et dix-neuvième siècles. Les auteurs décrivent en détail la méthodologie qu'ils ont adaptée aux conditions spécifiques et à la nature de chacun des trois sites d'Itato. Il s'agit plus précisément de la localité identifiée par les personnes interviewées comme étant le marché aux esclaves, des traces de peuplement à Itato Diakha, et d'un four près d'Itato Tata. Les recherches ultérieures inclueront entre autres la datation par luminescence et des analyses plus détaillées de la poterie pour fournir un point d'ancrage permettant de reconstruire l'histoire locale et régionale.

Le compte rendu de recherches récentes au Nigéria, par Okonkwo, Chiekpe et Ibeanu, concerne l'identification de ressources archéologiques liées au clan Ugwunye. Pour ce faire, ils joignent la documentation fournie par l'histoire orale à la recherche archéologique et à une documentation de base du site. Leur étude se focalise sur la fonte du fer et les sites de forge.

Deux articles relatent des recherches archéologiques au Soudan.

Bashir présente les découvertes préliminaires d'un projet de recherche de 2018 destiné à identifier des ressources archéologiques dans la région de la Troisième Cataracte du Nil, avant la construction du barrage de Kajbaar. L'équipe du projet s'est concentrée sur des sites méroïtiques en y incluant l'identification de cimetières et de sites villageois qui met en lumière une période jusqu'alors trop peu investiguée dans la région. Cette fois-ci ils ont concentré le travail de terrain sur cinq sites dont ils présentent les résultats dans ce numéro.

Dans le second texte en provenance du Soudan, Hayati, Adam et Al-Awad cherchent à documenter des sites antérieurement passés sous silence dans le territoire du Kordofan au Soudan central. Les auteurs mettent en évi-

dence les caractéristiques clés, sur les plans géographique et climatique, de la région, idéales selon eux pour permettre une occupation et un peuplement à long terme. S'appuyant sur une étude de la zone menée en 2009 par Adam, l'équipe a utilisé des unités de test et de fouilles sur quatre sites pour mettre au jour la séquence stratigraphique et culturelle du territoire du Kordofan. Leurs découvertes mettent en lumière une tradition céramique sur le long terme, stable, ainsi que l'occupation stable de nombreux sites depuis le Néolithique jusqu'au dix-neuvième siècle.

Une contribution venue d'Éthiopie nous ramène à la vallée du Nil. Gaudiello relate l'étude du Polish Centre of Mediterranean Archaeology (PCMA) en 2019 en Tigrey, dans le but d'identifier des sites du royaume d'Aksum. Les efforts de l'équipe ont porté sur la cartographie de huit sites qui chronologiquement représentent les périodes pré-Aksumite, Aksumite et post-Aksumite. Un accent particulier a été mis sur des sites tels que Däbrä Gərgi qui pouvaient éclairer la dynamique interne du commerce du royaume d'Aksum.

Enfin, les recherches d'Alders sur l'île de Zanzibar ont pour cible la région à l'intérieur des terres, en partant des recherches archéologiques précédentes, depuis le premier millénaire de notre ère et en passant par la période de plantation du dix-neuvième siècle. En se servant d'études STP, Alders documente des sites auparavant non enregistrés dans des zones intérieures ciblées, dans le but d'étendre notre connaissance de l'histoire de l'occupation de l'île au-delà de la côte. Au total, 127 sites ou composants d'un unique site furent identifiés.

Comme toujours, nous espérons que nos lecteurs et lectrices trouveront que ce numéro constitue une contribution intéressante au domaine de l'archéologie. Nous remercions tous les auteurs d'apporter leur soutien au bulletin, tout comme toutes les personnes qui ont été impliquées dans sa production. Ils incluent des membres des services Patrimoine et Publications du Musée royal de l'Afrique centrale qui assurent le *copy editing* des manuscrits, l'assistance graphique, la mise en page et la lecture des épreuves. Nous remercions également nos collègues de la SAfA pour la publication en ligne, à présent accessible via un lien qui se trouve sur la première page du site flamant neuf de la SAfA ! Nous saisissons cette occasion pour rappeler à nos lecteurs et à nos auteurs que, selon la politique actuelle, il y a un embargo de 3 ans sur la mise à disposition des articles en ligne sur des portails comme ResearchGate, Academia, etc. Les PDF des textes sous embargo peuvent être placés dans un répertoire institutionnel sans accès internet et peuvent être utilisés pour répondre à des demandes purement individuelles.

Liza Gijanto  
Els Cornelissen  
Éditeurs

## ■ Ethiopia

**The first short visit of PCMA in Tigray (Northern Ethiopia). An overview of the activities and an attempt to date the archaeological sites.**

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### Introduction

After 60 years of successful research by the Polish Centre of Mediterranean Archaeology (PCMA) in Egypt and Sudan, finally the Polish archaeologists look to the south, in Ethiopia, to launch therein a new project and archaeologically discover this southern part of the ancient Nile Valley System. After signing the Memorandum of Understanding with Mekelle University, we were invited by the local authorities<sup>2</sup> to visit selected sites in Tigray. This northern region of Ethiopia was the place of the powerful kingdom of Aksum that had documented relations with the Mediterranean and Red Sea countries, and with the closer African powers. Although our first goal was searching a new archaeological site in the southern and western sub-region of Tigray, because the area was quite completely untouched by archaeologists (Figure 1), we had to temporarily downsized our ambition. In fact, time allowed us to visit only Central Tigray, where the king-

dom of Aksum originated and developed, and the Eastern part, where the Aksumite civilisation is alleged to have continued during the Late Aksumite, after the collapse of Aksum city as political centre (Phillipson 2014: 209-211). Aware of plenty of new sites in the Eastern Tigray that spread from the Pre-Aksumite to the Post-Aksumite periods (Phillipson 2014: 72, Fig. 20) we opted for a possible Late Aksumite site.

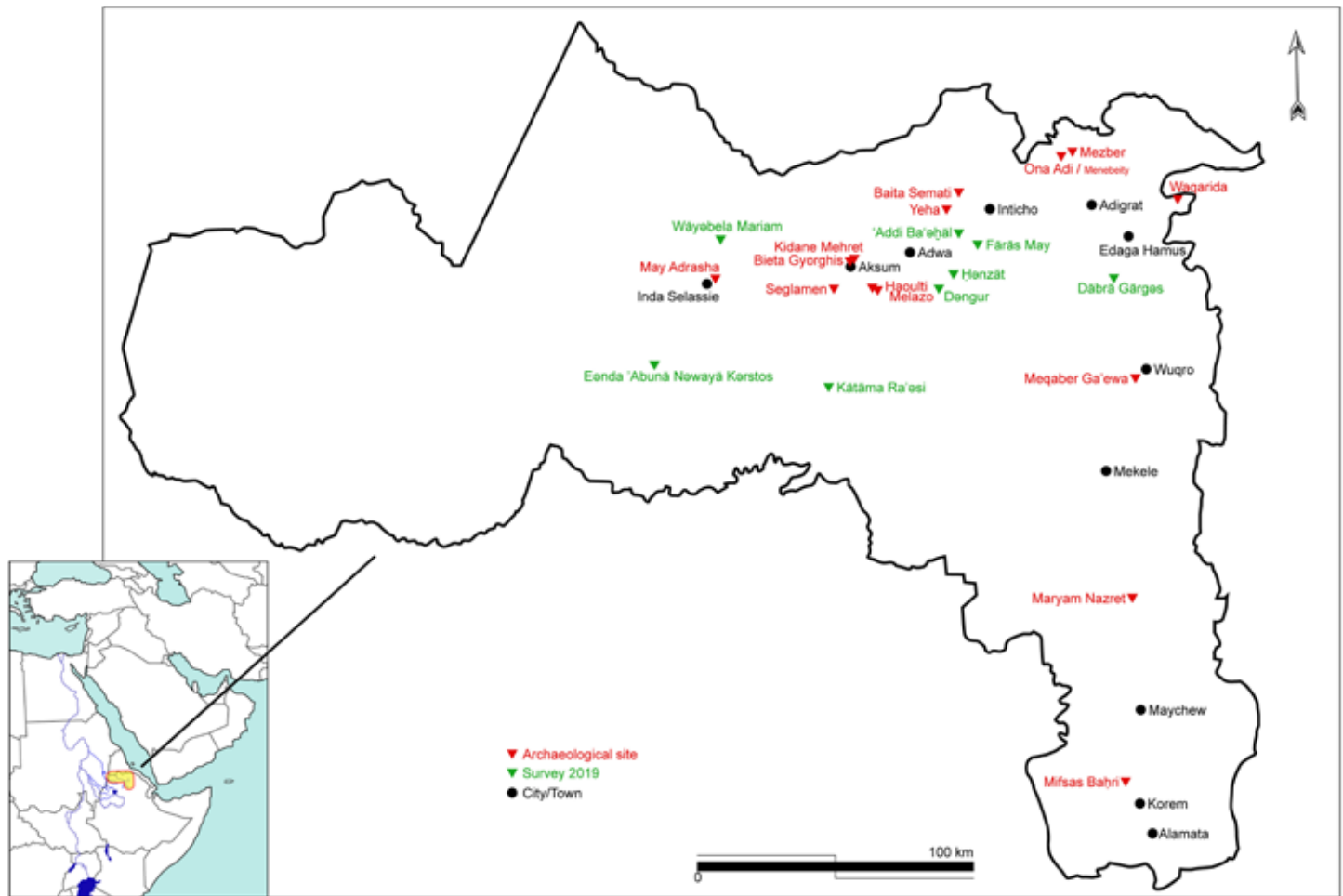
### The sites

From 29 May to 05 June 2019 we mapped eight sites using the handheld GPS Garmin Montana 650 (see Figure 1). By observing the potsherds scattered on the site surfaces, we attempted to date them and in the end it is our opinion that as a whole, the sites represent a wide timeframe of the Aksumite period: from the Pre-Aksumite site to the Post-Aksumite. After careful evaluation, Däbrä Gərgis was deemed of particular significance to our study because of its possible representation of the internal Aksumite trade system and the possible hierarchical and territorial organization of the Aksumite Kingdom. Below we provide an overview of each site we surveyed.

### *Hənzät*

This site is located two hours north of Abi Adi, the main city in the Tembien region, and is reachable by car through the new asphalt road from Mekelle to Adwa-Aksum. At the core of the village is the church of St. Gabriel, in front of which are two stelae that were relocated there in an undefined ancient time. Those monoliths show rectangular sections, roughly hewn surfaces, and rounded tops (Figure 2). Many of those types of stelae are found throughout the stelae fields in Aksum (Phillipson 1997: 47-65), as well as on top of the hill of Bieta Giyorgis (Bard *et al.* 1997: 388-393). An inscription in proto-Ge'ez language is engraved on one of the two *Hənzät* stelae. Additionally, assemblages of white and yellowish chert as well as obsidian and potsherds were observed. Most of the sherds were pieces of yellowish-red cooking pots which, based on the decoration, shape, and fabric, can be dated to the first phases of the Aksumite polity's development (ca. 400 BC-AD 400, Fattovich 2019: 256). Moving to the north, other pieces of large stelae were discovered in the sub-recent houses reused as threshold and roof beam, while another stele lying down on the field was broken into two pieces, likely due to impact with the ground. One of the farmers collected several complete and fragmentary pots, bronze bracelets, and a clay human figurine near the

<sup>2</sup> The interested local authorities that manage permits and supervision of all archaeological, paleontological, and ethnological research in Ethiopia are the national Authority for Research and Conservation of Cultural Heritage (ARCCH) in Addis Ababa and in our case the regional Tigray Culture and Tourism Bureau (TCTB) in Mekelle.



**Figure 1.** The Tigray region with archaeological sites, the main towns and the PCMA’ surveyed sites. (Adobe Illustrator drawing by author.)

fallen stele (see Figure 2). A comparison of these pots with the materials analysed in Bieta Giyorgis (Bard *et al.* 2014: 292-294, Figure 3) and by Wilding, for Aksum pottery (1989: 235-316), allows us roughly date the Hanzät hoard between the Proto-Aksumite and the Middle Aksumite period. The pots in the foreground of Figure 2 are similar to the Aksum ceramics described by Wilding: the globular jar (1989: 274, Figure 16.256), the cauldrons (1989: 268, Figure 16.226), the large undecorated pot-stand, the plain bowls with simple strap arc handle (Wilding 1989: 249, Figure 16.102), as well as the plain beaker and several pieces of the supposed foot-washer basins (Wilding 1989: 261-265).

**Däbrä Gärgäs**

The archaeological site of Däbrä Gärgäs is located about 8 km north-east of Sinq’ata city, a few kilometres of dirt road east from the Mekelle-Adigrat main road. The first mention of the Däbrä Gärgis ruins was provided by Mordini during the 1940s, who briefly reported that the site

was characterised by remains of columns, pillars, stelae and Aksumite graveyards (1944-45: 151). The landscape is quite rocky, with scattered prickly pear cacti and few trees. It dominates two lower green valleys. Built on the top of an isolated hill south of the church of Çerqos is a mound of ruins which measures ca. 29x20 metres in width and ca. 3 metres in height. The lower perimeter of the mound as measured by the GPS is about 85 metres. On the top of the mound on its northern side is a monolith and pieces of five other pillars that are standing or partially collapsed (Figure 3). The pillars appear to have been originally arranged in two rows of three pillars each. Only one pillar in the central northern row stands completely intact with its rectangular undecorated capital. This pillar was constructed from a single stone block, while the others are characterized by two stones joined by rounded mortices and tenons. No archaeological materials have been observed on the top of the mounds or in its immediate environs. About 150 metres to the west from the ruins, near





**Figure 2:** Hənzät: stelae replaced in front of St. Gabriel church and pottery hoard. (photos by author.)



**Figure 3:** Däbrä Gärgəs: detail of ruins, viewed from the south-west and view of the stele from the east. (photos by author.)



**Figure 4:** Kätäma Ra'əsi: miniature vessels and coins. (photos by author.)

the hill slope, stands a monolith about 6 metres high (see Figure 4). The stele has a sub-rectangular section and its top was likely pointed. Wolbert Smidt, during his ethno-historical research in the area, suggested that an inscription was incised on the top of the stele and was removed and moved elsewhere (2007: 109). However, there is no archaeological proof to support his assertions, because it is unusual that an inscription would be engraved on the top of the stele where nobody could read it. The site most probably belonged to the Late Aksumite period.

### *Dəngur*

The Dengur site is located about one hour north from the main road leading from Abi Adi to Adwa-Aksum. The study surveyed a flat terrace with a sub-oval shape and a perimeter of ca. 107 metres in the compound of a modern household, as well as the fields just west and south-west of the mound. Despite the local belief that Dəngur was the site of an ancient palace, no corresponding structures have been observed, and the few lithics and several yellowish-red sherds are not sufficient to prove this local speculation. Specific rims, shapes and decorations of the diagnostic sherds found do suggest a Late Pre-Aksumite – Proto- Aksumite period, dating roughly from 400-300 BC.

### *Kätäma Ra'əsi*

The site, located in proximity to the administrative border between Central and Western Tigray, is reachable about 43 kilometres from Abi Adi in north-north-west direction as the crow flies, or from Aksum driving south-south-west for about two hours. The site lies in the village of Embuke Jira, just before the hill slopes overlooking the mountains that protect the course of the Tekeze river. The site is located on private land in the household of Ato Abay who claimed to be a descendant of Emperor Yohannes IV (1837-1889). Before approaching his house, the ruins of a large building greet the people from the top of a fairly high mound. The building is of dry-stacked masonry construction using small irregular flattish stones. The whole complex occupies an area of 1,573 square metres and is arranged around a wide courtyard with the main building in the central-eastern portion, a northern gate, and rounded annexes at the south-west and southern side of the enclosing wall. The external wall is preserved for about 1-1.10 metres in height and 167 metres in perimeter. The façade, the central building and the perimeter wall are characterized by common elements of Aksumite architecture such as recesses and projections (Phillipson

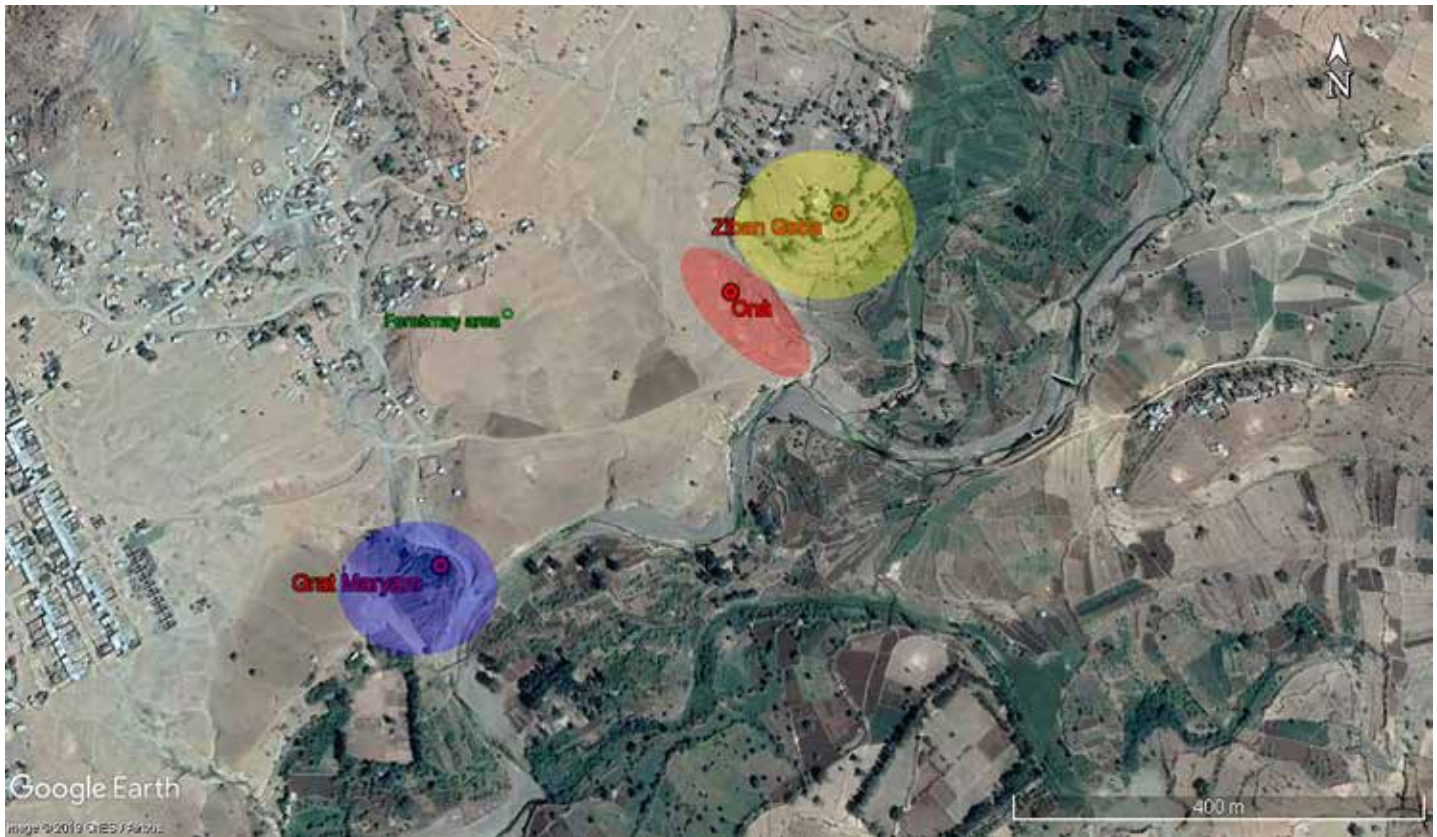
2014:123-125). The plan of the central building is difficult to understand as it is almost completely demolished and collapsed. It should also be noted that parts of Ato Abay's modern home were built with stones robbed from the ancient building.

Across the entire surface of the building the lack of archaeological finds has inhibited any efforts at dating the site. Nevertheless Ato Abay collected a considerable amount of miniature pottery from his land (see Figure 4). These objects are fragments from miniature incense burners and bowls, identified as lamps by Wilding (1989: 287, Figure 16.329). Although the abraded surfaces are difficult to read, the three Aksumite coins, two in copper and one in silver, are of great value (see Figure 4). The portraits and the legends are impossible to distinguish but the presence of crosses on the reverses and the precious descriptions of about four centuries of Aksumite coinage made by Hahn (2000) and Munro-Hay (1991: 180-185) permits the identification of the coins to the Christian period, between the first half of the fourth century and the beginning of the sixth century. In fact, the type of crosses and portraits on the copper coins are quite similar to copper coins attributed by Hahn to the anonymous king coeval to Ebana and to Kaleb (Hahn 2000: 309).

### *Eənda 'Abunä Nəwayä Kərstos*

Given our scientific interest in examining Western Tigray, the TCTB brought two specific areas to our attention. Apart from the UCLA team of Willeke Wendrick, who are working in Mai Adrasha, since 2014, no archaeologist has pursued an examination of this sub-region of Tigray. Along a flat area near a seasonal stream, we identified rounded Muslim graves characterized by small accumulations of irregular stones in an area called Meqaber Islam, or 'Burial place of Islam'. In addition to the Islamic tombs, we identified iron slags, cherts and flints of different colours, and obsidian pieces on the surface. In a vast wooded area enclosed by a modern fence, several alignments of stones comprising ancient fence walls and houses likely connected to the ancient church were also recorded. A modern church, still under construction, houses the remains of an ancient building that locals recognize as the church of Eənda 'Abunä Nəwayä Kərstos. Two pilasters of the portal of the ancient church are still visible, built from square stones of different sizes and thickness with a semi-circular base, as well as a few corner stones of the façade. Other stones from the basement of the church are preserved on various sides of the building. Local priests have reconstructed what must have been the original





**Figure 5:** Färäs May archaeological areas: Gərat Maryam (blue circle), Zəban Gäba (yellow circle) and ‘Onà (red oval).

elevation of the church and covered everything with a wooden roof and aluminium. Unfortunately, there is no known manuscript or archaeological material to advance any hypothesis about the dating and use of the church.

***Wäyabəla Mariam***

A second church was briefly visited in Western Tigray: the church of Wäyabəla Mariam, located about 12.70 kilometres north-east from Enda Sellasie as the crow flies. Outside the church enclosure, monoliths and carved stones of a previous church dedicated to St. Mikael, St. Gabriel, and St. Mary have been rearranged to form a sort of altar with two lateral seats. Other remains of the ancient church were found scattered within the compound of the church, such as the stone gargoyles and worked stones incorporated in the access steps of the modern churches and the priest’s house or reused as a base of the *tabot*. According to reports from the priests, the ancient church was destroyed by Queen Gudit in the tenth century and they are in possession of the ancient manuscript on its foundation and destruction.

***Färäs May and ‘Addi Ba‘əḫäl***

The Färäs May area is located about 16 kilometres as the crow flies south of the pre-Aksumite site of Yeha, and it contains three distinct archaeological sites as well as the

present-day village of ‘Addi Ba‘əḫäl. Kifle Zerue has previously investigated the site on several occasions and analysed several potsherds under my supervision as well as that of the late Professor Fattovich for his master’s thesis of 2014. As noted by Zerue and Beldados (2019: 1) the ceramic material from the Aḥfärom Wärädä site ‘reflects evidence of Pre-Aksumite, Proto-Aksumite and Early Aksumite occupation.’ In the Färäs May area, we visited the Gərat Maryam graveyard (Figure 5, blue circle) and the possible settlement areas of ‘Onà and Zəban Gäba (Figure 5, red and yellow circles respectively). Unfortunately, the ceramic and bronze objects described by Zerue & Beldados (2017: 20-22) that were kept by several farmers have not been viewed. The burials of Gərat Maryam have been almost completely destroyed by intense agricultural activity and the construction of terraces, making it just possible see ceramic fragments scattered all around the area. Moving along the slope of one of the tributaries of the Bäräkīt river, we crossed both sides of this tributary that divides the two archaeological areas of ‘Onà and Zəban Gäba. The area of ‘Onà is characterized by three mounds of raised stone alignments and yellowish-red potsherds with abundant whitish inclusions, a typical ware of the Early Aksumite period.



On the opposite bank of the tributary, the site of Zəban Gäba lies on about 4 metres of overlapping archaeological strata. Among the archaeological material inserted into these strata or those that have eroded into the riverbed include several stone implements, obsidian and flint tools, and yellowish-red ceramic. One sherd with a large ledge rim and deep grooves on the external surface and rim, has decorations similar to Early Aksumite basins found in Bieta Giyorgis and Aksum. Two ceramic fragments with a ledge rim and a thickened, rounded inward lip with a snake-shaped application on the rim could represent a local decoration. The core of Zəban Gäba is characterised, instead, by several fragments of stele, worked stones, obsidian, flint and ceramic of the Proto-Early Aksumite periods, and stone alignments that the locals attribute to an ancient church.

The last site visited in Färäs May area is the village of ‘Addi Ba’əḥäl, well known for the discovery of a Sabaic inscription, translated by Lusini as an *Addendum* to the Zerue & Belbados contribution (2019: 39-40). The land where the inscription was found does not offer any other archaeological material. However, moving north-east, we visited the area called the ‘beads site’. The site hosts a copious number of small stelae, fragments of obsidian, black topped potsherds, and beads, which allows us to speculate about a possible Pre-Aksumite/Proto-Aksumite cemetery.

Period	Fattovich 2019
Proto-Aksumite	360? – 120/40 BC
Early Aksumite	120/40 BC – AD 130/190
Classic Aksumite	AD 130/190 – 360/400
Middle Aksumite	AD 360/400 – 550/610
Late Aksumite	AD 550/610 – 800/850

**Table 1.** Aksumite periods and date range based on Fattovich 2019. The Early to Late Aksumite periods correspond to Aksumite 1 to Aksumite 4 in Bard *et al.* 2014.

**Conclusions**

After eight days of survey, a careful evaluation of the potential of the sites described above was made, along with a feasibility study of conducting archaeological excavations in areas of the Tigray that do not fall within the concession areas of other archaeological missions. It was determined that the site of Däbrä Gärgəs offers the best potential for additional investigations for the first PCMA project in Tigray. The first Polish archaeological season in Däbrä Gärgis was conducted last March 2020 for a short time because the Covid-19 pandemic which forced us to evacuate Ethiopia.

**Acknowledgements**

These activities were entirely supported by the PCMA, therefore I would like to express my special thanks to the director, Dr. Artur Obłuski. I am also grateful to Prof. Kindeya Gebrehiwot, President of Mekelle University, W/ro Brikti Gebremehdin and W/ro Zenebu Halefom, Head and V/head of TCTB in Mekelle, who suggested several sites to visit. I am also immensely grateful to Ato Demerew Dagne, Cultural Heritage Research Directorate Director of ARCCCH in Addis Ababa, who always provides his great assistance and support to my projects. Last but not least, I express my friendly thanks to Hagos Abrha Abay, coordinator of St. Yared Centre for Ethiopian Philology and Manuscript Studies in Mekelle, for the correct transliteration of Tigrigna sites’ names.

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## ■ Nigeria

### Historical archaeology and technology of Ugwunye Clan in Udi, Nigeria

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#### Introduction

Historical archaeology is a form of archaeology dealing with places, things, and issues from the past or present when written records and oral traditions can inform and contextualize cultural material. Today, archaeologists study the material remains of the past, which is indicative of human activities and/or environmental changes overtime (Fagan 1978). The material remains like an artifact (be it stone, wood, metal, clay or bone) are mostly obtained through excavation, which represent the human behavioral patterns that produced, used and discarded them. An archaeological investigation is usually initiated in human habitations most likely to contain archaeological material that are of sufficient importance, and time and resources must be invested in it to ensure that the information contained there is not lost.

Interestingly, most historical archaeological investigations have pointed to the fact that in the pre-colonial era in Igbo land, there were flourishing traditional technologies and industries, and organized settlement patterns (Anozie 2002; Chikwendu 2002; Okpoko 1979). These studies x-rayed indigenous technology in the study areas; however, the authors did not give any details of how the technologies served and affected the settlement pattern and the lifestyles of the people where they existed.

Investigation into historical archaeology and technology of Enugu State has been centered in Nsukka and its environs namely: Opi, Umundu, Ogboduaba, Obimo and Lejja. Little or no archaeological investigations of any sort have been carried out in Udi town, Obioma, Obinagu, Umuaga, Oji Amokwe, Eke, Awhum, Ebe, Ukana, Umulumgbe, Okpatu, Akpakwume, Affa, or Egede, to mention but a few communities that make up the Udi Local Government Area. It is a fact that very little work, if any, has been done towards reconstructing the cultural history of the Ugwunye clan in Udi L.G.A. For example, no archaeological work has been done at Egede and Affa, despite huge evidence of slag deposits in the areas and their proximity to Okpatu, which still has evidence of iron smelting and standing furnaces. Thus, the relevance of archaeological research, which constitutes a reliable database for historical reconstruction of any society, is frequently dismissed. Furthermore, there is no documented evidence of sites/features in the Ugwunye clan. This research hopes to bring out meaningful historical information about the communities, which would place the Ugwunye clan on the archaeological world map.

#### Research Objective

The general objective of this research is to study the archaeological resources of the Ugwunye clan. Specifically, the objective is to identify and document archaeological sites and features in the Ugwunye clan with a view to expand our understanding of early human habitations and adaptation to natural environment.

#### Research Methodology

In order to effectively pursue the investigation, the researchers use archaeological reconnaissance and ethnographic study. For the ethnographic study, three instruments were designed to elicit relevant information. These are oral tradition, key informant interviews and in-depth interviews. Oral tradition was employed in this work as one of the cardinal means of gaining information on locations of sites, their uses and values in the Ugwunye clan, as well as information on socio-cultural settings of the study area. Key informants (knowledgeable people of Affa and Egede communities) were selected and interviewed. This method allowed the unexpected to emerge. In-depth interviews entail the collection of semi-structured or unstructured data through interviewer-interviewee verbal interactions or conversations. Archaeological reconnaissance is vital and indispensable





**Figure 1:** The furnace base in Mr. Ogwo’s compound. (photo E.E. Okonkwo)

in fieldwork and helps in the collection of surface/sub-surface data. In this study, a survey of the two major communities (Affa and Egede) that make up the Ugwunye clan was conducted in order to identify notable archaeological resources for the study.

The survey was carried out on foot and on a few occasions, motorbikes were used to cover long distances, as no car or other vehicle can be used in the rugged terrain where these sites were located. Movements around the communities and within the sites were smooth despite the rugged terrain of the areas under study. With the assistance of a foreman (an indigene of Ugwunye clan) who acted as our guide, sites/features and knowledgeable people to be interviewed were easily identified. More importantly, the researchers had traveled earlier to the communities on several occasions to make consultations and arrangements for the research. The actual research lasted for two weeks.

**Data presentation: archaeological resources in Ugwunye Clan**

**Iron smelting sites**

There are high proliferations of slag (locally known as *Efuru*) in different villages of Affa especially in Ikono, Inoyi, Ogor, and Amukwu villages. Throughout the major expressway that leads to Affa town, slag deposits along the un-tarred roads are being exposed as the earth surface is washed away by rainfall. Within the community, at intervals of 500 meters to 1 kilometer, one can see evidence of slag everywhere, but there are areas where the slag

deposits are more abundant than elsewhere. Upon close observation, we saw a suspected furnace base in front of Mr. Ogwo’s house (Figure 1) located 9.3 m from the first house in Ogwo’s compound (our datum point) facing the rural main road. The circumference of the suspected furnace base measured 3.96 m and had a height of 0.36m.

Opposite Ogwo’s compound is the Ononachi’s family house with a distance of 8.9 m away from the identified furnace base in front of Ogwo’s house. Within the vicinity, there is another evidence of high slag deposits that were unearthed by water-run off in the patch walkway that separated Ogwo’s house from Ononachi’s house, and it is about 19.2 m away from Ononachi’s family house.

Behind Ogwo’s house is Mr. Vitalis Ojiegbe’s house, located 42.8 meters from our datum point. In front of Mr. Ojiegbe’s house is another high concentration of slag deposits, especially broken ones. Worthy of note is that the zone from Ononachi’s house to Ojiegbe’s house shows a high concentration of slag, indicating a probable smelting center before the present occupants inhabited the area.

In Mr. John Edi’s compound at Amiyi (a ward in Amaozalla autonomous community in Affa) there were high deposits of slag. Here, the slag was heaped to a height of 0.85 meters and length of 3.96 meters *in situ*. Onsite observation revealed current use of slag by the inhabitants to include reinforcement of building base/foundation walls, as well as to forestall erosion or demarcate farmland boundaries. In times past, children used slag for hunting of reptiles (like lizards etc.); slag also served as missiles during intertribal wars (Nwanyibuife Modayeni, pers. comm. 15/9/2015).

Our informant, Mrs. Bridget Edi admitted that they meet slag deposits in their compound and have no knowledge of what it is. To her, slag is a type of stone that comes from the ground and gives birth (breaks) to smaller ones. The smaller heaps around the edge of their building were parked by them. About 450-600 meters away from Mr. Edi’s compound was more evidence of slag buried under the ground.

Similarly, in Egede town if one mentions *efuru* (slag), the people will refer you to Umuokpala village where they have high deposits of slag. The place is called *Ikpo-efuru* (dumping place) in the Amofia–Amaozalla axis of Umuokpala village. Beside the heap of slag, there are proliferations of slag all over the area up to 150 meters away from the *Ikpo-efuru*. The meaning and



**Figure 2:** An abandoned smithing workshop in Anaekeneze village. (photo E.E. Okonkwo)

uses of slag are unknown to Egede people. It is believed to be a type of stone created by God, which are a nuisance during farming because it makes farming difficult and sparks of fire are generated when a hoe hits the slag. Our informant (Mr. Ofor) admitted that as children, they used the stone (slag) to hunt birds and lizards; however, the origin/source of slag is unknown to the inhabitants of Egede town.

**Blacksmithing**

Blacksmithing is the production of iron tools/artifacts from bloom or iron scraps by forging the metal and using tools to hammer, bend, and cut the object to achieve the desired shape. The people of Affa and Egede towns admitted that they practiced blacksmithing in the olden days, but the technology was learnt from nearby towns like Amokwe, while itinerant smiths came from other towns like Nsukka, Awka and Udi and taught their people (Affa and Egede) how to smith. Presently, while some still practice this act in a basic form, others have abandoned it for other occupations like trading and farming. Smiths in our study area produced hoes (*Ogu*), matchets (*Nma*), sickles (*Nko*), etc. These tools are of high relevance to their agricultural practice because both communities are agrarian in nature. Today, most of their farming implements are bought in their local and nearby markets.

As noted above, the act of blacksmithing is in decline in Affa and Egede, while in Affa, the people still have vestiges of blacksmithing. Mr. Ezeoba Bernard (a retired blacksmith in Ogor village of Affa) explained that

blacksmithing is tedious and that explains why the youths of this present generation are more interested in getting white collar jobs after graduation. He further explained that his children had no interest in smithing and lamented that he remained the last of his kind in this occupation. Mr. Ezeoba’s workshop is an open hut with a zinc roof and no walls on its sides. It measures 3.51 m in width and 2.53 meters in height. Inside the workshop were many traps and hoes yet to be repaired, and now abandoned. Mr. Ezeoba admitted that new methods of smithing made it less stressful, such as using batteries or electricity to power the bellows, but he is tired and old and can no longer practice smithing.

There is no standing smithing shop in Egede. Instead, some of the areas shown to us as abandoned blacksmith shops are either overgrown by bushes or reused as residential houses; while in most cases, they were incorporated into farmland making their location and identification quite difficult (Figure 2). The majority of the smiths in Egede were non-indigene and left Egede at the decline of the industry as a result of old age, lack of patronage or family demand for the person to return home. In Anaekeneze village, we identified abandoned bellows that have been covered by grasses and shrubs, most probably an abandoned smith workshop.

**Settlement pattern**

For the purpose of this study, we shall define settlement pattern as an archaeological term used to describe how cultural activities were distributed over a given area at a particular time period. The different shapes of settlements are called patterns. The people of Egede have a nucleated type of settlement. They live in close proximity with each other while their farms are between 1-2 kilometers away from residential areas except for small ones that can be seen in neighbouring spaces separating one village from another. In Affa, the Amaozalla autonomous community has two settlements, Amaozalla-Uno and Amaozalla-Agu. Amaozalla-Uno was first occupied by the people of the village before a group left for Amaozalla-Agu, which is about 4-5 km away from Amaozalla-Uno. The people of Amaozalla-Uno explained the reason behind their brothers settling in Amaozalla-Agu. Firstly, land is fertile in Amaozalla-Agu; secondly, there is a long distance between home in Amaozalla-Uno from the farm. Coupled with the fact that after farming, the individual is already exhausted, people preferred to settle in Amaozalla-Agu for farming activities.



**Figure 3:** Ceramic pots arranged for collection of rain-water from the roof. (photo E.E. Okonkwo)



**Figure 4:** *Nkwu-mmiri* system: 135 pots for storing water and some for cassava processing. (photo E.E. Okonkwo)

The buildings or architectural patterns in our study area are virtually the same mud houses of usually two to three rooms, where one is used as kitchen and the remaining two are used as a room and parlour, though some can have two rooms – one for kitchen and the second one a living room. Worthy of note is that this type of building is no longer in vogue due to modern building technology. Blocks and cement, and in some cases, an integration of mud, cement and blocks, have replaced many mud houses.

Another important feature of settlement patterns in the study area is the unique arrangements of pots within compounds. Pots are set in a way that water run-off from the roof of the house will enter the pots; this is a result of water scarcity especially in Egede (Figure 3). Affa people do not suffer perennial scarcity of water as experienced in Egede due to the proximity of streams like Dinapata and Mmiri-Okwute. The number of pots observed in some compounds depends on the volume of water needed and used by the family; thus, the number of pots in each compound is an average of 50 pots. In Egede, the collection of pots for water storage is called '*Nkwu-mmiri*' (water reservoir) (Figure 4).

Within the compound of Mr. Agu Ucheweteyi, we counted about one hundred and thirty-five pots at the left corner of his house; the ones in front of the house, and those in use in his kitchen were not counted. Apart from water storage, pots are used for cassava (*Fufu/Akpu*) processing. In Affa, pots are acquired through various means: 1) as gifts to daughters during marriage by her mother, friends, and well-wishers; 2) during '*Ogba*' age-grade ceremony (women exchange pots as gift items); 3) through purchase in the local market.

These pots are of different sizes. Our informant Mrs. Celine Agu explained that her largest pot can contain

18 to 25 liters of water. The circumference of the biggest pot in Mr. Agu Ucheweteyi's compound is 18.3 centimeters and was 64 cm in height; the smallest one measured 16.5 centimeters in height and 4.9 centimeters in circumference. Currently, the Egede local government project of drilling a borehole is a welcome development as it will reduce the problem of perennial water shortage in Egede.

#### Discussion of Findings

**Slag:** This is a solid material resulting from the interaction of flux and impurities in the smelting and refining of metals. The solid product generally forms a silicate glass-like material which is primarily non-metallic. The rock-like waste (slag) separates from iron (bloom) and is removed from blast surfaces. The proliferation of iron slag in the study area indicates that extensive iron smelting was carried out in the area by either the descendants of the present occupants or the past occupants of Affa and Egede. Close examination of the slag revealed different sizes and colours: some are amorphous, fingering, flow-shaped and flow-like amorphous, while others are dark, dark brown or reddish brown in colour. The people use the amorphous conglomeration types of iron slag to support building foundations and/or for erosion control. In some cases, bigger slag is used as a tripod stand and is also used in road construction or even as seats in some places outside the study area like in Lejja town.

**Pottery/Potsherds:** The people of Egede do not produce pots but are heavy users of pots for water storage and cassava processing, among others. The people depended on Olo/Agubuowa people in the Ezeagu local government area as well as the Uzowani local government area for their pottery needs. Pottery wares are found in most



households and are also found in shrines. These pottery wares are greatly valued in archaeology and tourism. Clark (1964) noted that the work of the potter is highly prized in Japan and the proceeds from the sale of one pot are often very rewarding. Among the Ugwu-nye clan, pottery is a symbol of material and spiritual heritage. It is well integrated into the living pattern of the people and inseparable from their belief systems and worldview. They are therefore valuable objects for the promotion of tourism and cultural heritage. The type and numbers of pots used per household reflect the rich culture that exists within the studied towns and can provide tourists with a unique opportunity to understand and appreciate the Ugwu-nye clan's indigenous knowledge and cultural practices.

In Egede town, the arrangement of pots for the collection of runoff rainwater from the roof is unique, while the intermittent gaps from one pot to another within a compound, pots half-buried in the ground, remain a spectacular arrangement for tourists to behold (see Figure 4). Eleven potsherds were collected in the course of our archaeological reconnaissance within the iron smelting sites, out of which 8 were body sherds and 3 were rim sherds. The uniqueness of these potsherds is that they are of one decorative motif (net); however, the rims are decorated by incision (Figure 5). A close examination of the pots in Mr. Agu Ucheweteyi's compound indicates that there is cultural continuity in the type of pots used as well as the technique and motif of decorations.

### Conclusion

Archaeology involves the method of reconstructing the history of an area using the physical or material remains of the past inhabitants of the area under study. It is a discipline that studies extinct societies through material culture (Andah & Okpoko 2004 in Bakinde 2005). Archaeology has its main thrust in the reconstruction of human cultural history, the extinct way of life, and building a verifiable chronology. This is done through scientific examination of material remains of past human activities. The discipline relies on any of the following: artifacts, features, ecofacts, sites, chronofacts (Andah & Okpoko 1994) for the interpretation of past environments. Artifacts like charcoal, potsherds, bones, slag and blooms are pointers to a potential archaeological site.



**Figure 5:** Body and rim sherds from Egede town. (photo E.E. Okonkwo)

The Ugwu-nye clan (Affa and Egede) is endowed with archaeological resources that are of great interest to both archaeologists and tourism professionals. The rich information that can be gleaned from pottery, iron smelting sites, settlement patterns, etc. in the study area can help give a clear insight into the socio-cultural and religious lifestyle of the people and their intergroup relations with their environs. This hopefully would help place the Ugwu-nye clan in the archaeology map of southeastern Nigeria, if fully investigated. Similarly, the tangible and intangible heritage resources available in the study area could be harnessed to promote both cultural and eco-tourism development.

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## ■ Sénégal

### Itato : un village historique dans la Haute-Gambie

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#### Introduction

Itato est aujourd'hui un village sénégalais situé sur la rive ouest du fleuve Gambie à 15 km de la base du Futa Jallon (Figure 1), où le paysage permet l'élevage et la culture du mil, du maïs, du coton et des légumes. Selon les traditions orales de la région, ce village est l'un des premiers à avoir été fondés par des immigrants diakhanké et peul au cours des derniers siècles. En même temps, Itato est considéré comme le plus grand marché des esclaves de la région (Diallo 2011). Pour cette raison, ce village et ses environs sont importants pour cartographier le paysage historique de la Haute-Gambie en tant que « zone d'éclatement » définie par la coopération et le conflit entre les ancêtres de divers peuples contemporains, surtout les Peul, les Diakhanké, les Malinké et les Bedik (Chataigner 1963 ; Tardif 1965).

Bien que les sources historiques disponibles étayent d'une manière biaisée la trajectoire des populations anciennes de la région, il n'en demeure pas moins que l'archéologie, en tant que source s'intéressant à la culture matérielle, fournit des données complémentaires

pour les périodes historiques et plus anciennes. À la recherche de traces archéologiques de la traite négrière le long du fleuve Gambie, nous avons visité Itato pour la première fois en 2013 au commencement du Bandafassi Regional Archaeological Project (BRAP). Après avoir raconté l'histoire du village, le chef et plusieurs notables du village nous ont guidés vers plusieurs sites à proximité (Gokee *et al.* 2015 ; Kroot & Gokee 2018). Ceux-ci incluaient la fondation d'une mosquée associée au quartier diakhanké du village (Itato Diakha), ainsi que de plusieurs grands baobabs connus pour être le site du marché aux esclaves (Itato Tata). Nos guides nous ont également montré un abri rocheux et une fosse profonde (Kambi Lowri) dans la terrasse latéritique, qu'ils ont associée à la détention et à la punition des esclaves, et des fondations de fours, qu'ils interprétaient comme des supports de pots destinés à préparer le riz pour nourrir ces captifs. Ces sites ainsi que des conversations avec nos guides ont révélé l'opportunité pour la recherche archéologique de retracer le développement d'Itato en tant que communauté villageoise, et son rôle dans le paysage historique de la Haute-Gambie.

Avec cette possibilité en tête, nous sommes retournés à Itato en 2019 pour six semaines de travail de terrain avec le soutien de l'Unité en Ingénierie culturelle et en Anthropologie (URICA) et le ministère de la Culture au Sénégal. Plusieurs questions ont guidé nos recherches : quand et comment Itato est-il devenu un village ? Comment les relations politiques, économiques et culturelles entre les villageois ont-elles évolué au fil du temps ? Et comment ces relations se sont-elles croisées avec les réseaux de coopération, de conflit et de commerce à travers la « zone d'éclatement » historique de la Haute-Gambie ? Pour y répondre, nous avons adopté à Itato une démarche archéologique à échelons multiples : la cartographie de surface, la prospection géophysique, les sondages de test à la pelle (STP) et les fouilles. Ce rapport présente les méthodes et le résumé des résultats de ce travail de terrain, ainsi que quelques interprétations préliminaires répondant aux questions initiales.

#### Itato Tata (BRAP-603)

Le site d'Itato Tata (Figure 2), d'une superficie de 0,9 ha, est centré sur trois baobabs dont on se souvient comme étant le lieu d'un marché aux esclaves. Aujourd'hui, cette zone est cultivée par la famille Dabo, dont la maison est située à l'ouest du site. La rareté des artefacts et des vestiges archéologiques à la surface du



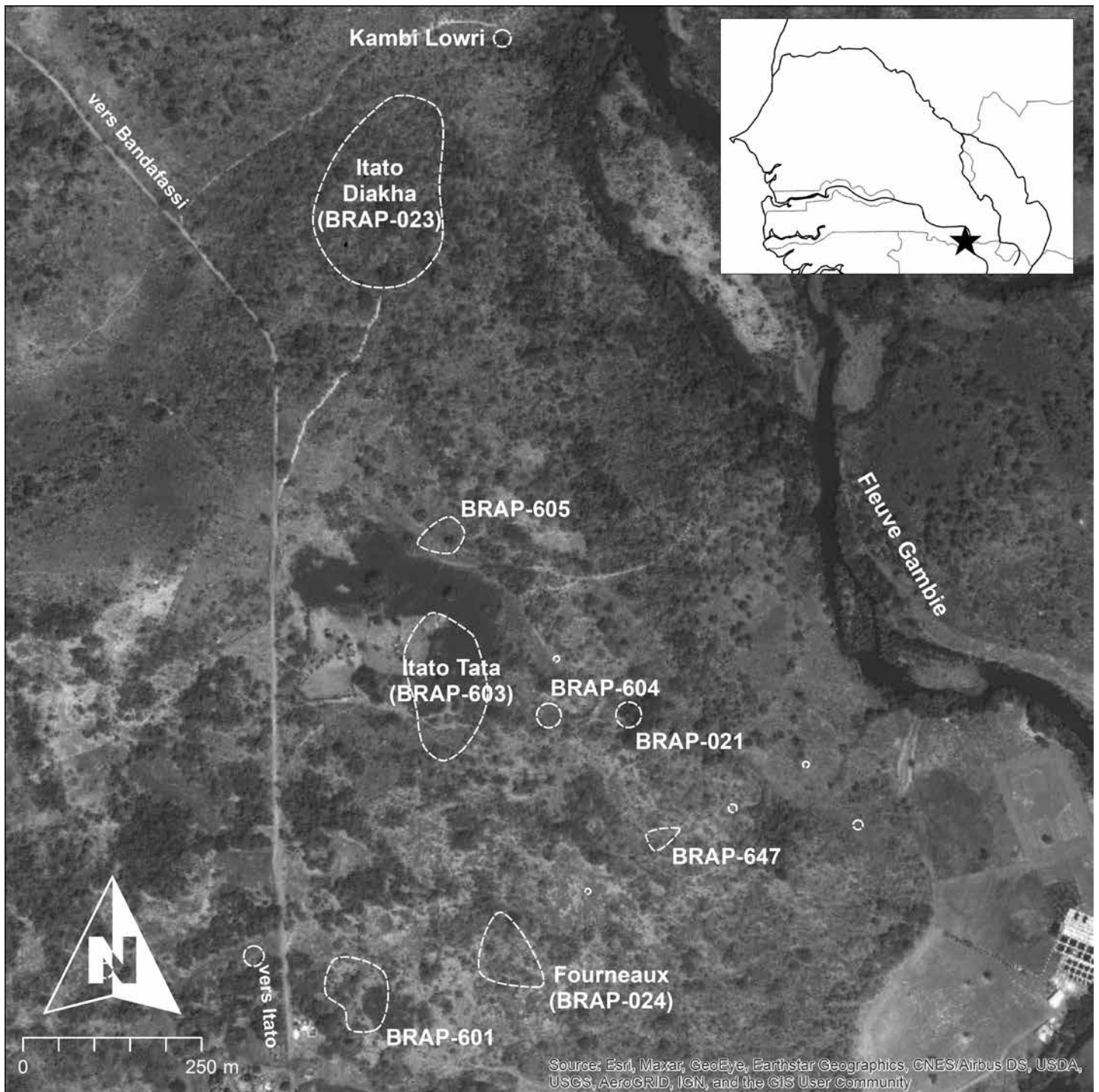
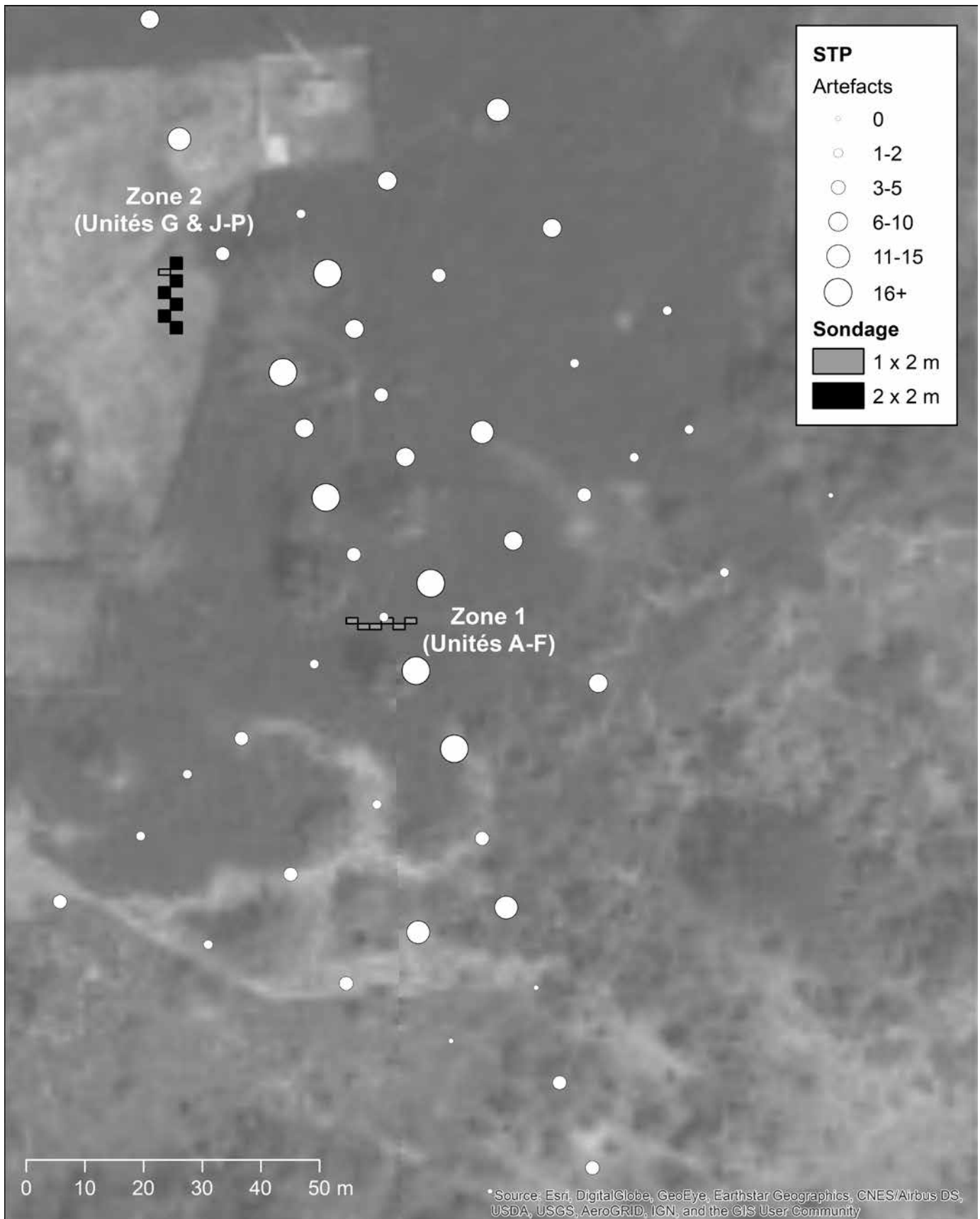


Figure 1 : Zone archéologique d'Itato.



**Figure 2 :** Le site d’Itato Tata (BRAP-603) montrant les STP et les sondages.

	BRAP-603			BRAP-023			BRAP-024
	Zone 1	Zone 2	STP	Zone 1	Zone 2	STP	F. 1
<b>Céramiques</b>							
Locales	762	1907	317	73	330	88	
Européennes	1						
<b>Lithiques</b>							
Éclats	5	27	1	1			
Silex de fusil	1	6	2			1	
<b>Organiques</b>							
Ossements	7	167	16				
<b>Métallurgie</b>							
Fer	3	41	2	1	1	1	
Scories		10					Oui
Tuyères							Oui
<b>Verre</b>							
Perles	2	23	3				
Éclats	15	129	8	2			
<b>Terre cuite</b>							
Pipe				2			

**Tableau 1** : Résumé des artefacts récupérés à partir de sondages et de STP sur trois sites de la zone archéologique d’Itato.

site rendent difficile la documentation des activités historiques à cette échelle spatiale. Pour cette raison, nous avons commencé avec un programme de STP pour cartographier l’organisation spatiale du site et identifier les gisements stratifiés les plus propices pour les fouilles.

À partir d’un point de référence établi au centre du site, nous avons effectué des STP le long de deux axes principaux à des distances de 20 m. Ensuite, nous avons échantillonné les quadrants nord-est et sud-ouest définis par ces deux axes, en évitant la maison des Dabo au nord-ouest et la latérite au sud-est. Nous avons donné à nos STP différentes orientations selon la caractéristique du site et de son accessibilité, tout en respectant l’ordre des points ciblés pour ces derniers. Pour chaque STP (diamètre 30 cm), nous avons utilisé des pelles, des herminettes et des truelles pour creuser et des tamis (de 1/4 inch) pour récupérer les artefacts jusqu’au sol stérile. Nous avons également enregistré la texture et la couleur des sédiments visibles de profil.

Comme présenté sur la figure 3, le nombre des STP sur le site (n = 47) nous permet de distinguer la quantité et la variété de matériel culturel à travers le site d’Itato Tata. Certains STP décapés n’ont fourni aucune trace archéologique, peut-être du fait que ces parties

du site n’ont pas été exposées aux phénomènes anthropiques ; par contre, les deux zones avec des densités d’artefacts plus élevées peuvent correspondre aux activités quotidiennes dans les maisons, telles que la cuisine et les repas.

Pour interpréter et comparer ces zones, nous avons fouillé deux groupes de sondages rectilignes (1 x 2 m ; 2 x 2 m) dans des tranchées parallèles, mais avec des orientations différentes. Nous avons creusé par une combinaison de niveaux arbitraires et stratigraphiques en utilisant les mêmes outils et techniques de tamisage que pour les STP décrits ci-dessus. Cette méthodologie nous a permis de faire une lecture à la fois horizontale et verticale des contextes archéologiques. La Zone 1 (Unités A-F) avait un profil montrant deux couches. La couche supérieure (0-15 cm) était un limon argileux brun foncé (Munsell 7.5 YR 3/3) avec des gravillons latéritiques (1-2 %), des traces de banco (<1 %) et des racines fines à moyennes. La couche inférieure (15-31 cm) était un limon argilo-sableux, brun rougeâtre foncé (Munsell 5 YR 3/3) avec des gravillons latéritiques (10-20 %). Les artefacts, dont la densité a nettement diminué entre les couches supérieure et inférieure, comprenaient des tessons de poterie et des objets exotiques tels que des éclats de verre, des





**Figure 3** : Fondations de murs au fond de sondage J (BRAP-603).

perles et un silex de fusil (Tableau 1). Quelques fragments d'os d'animaux ont également été récupérés. L'absence de vestiges architecturaux ou de traces de banco suggère que cette zone pourrait avoir été un tas de déchets liés aux activités à proximité.

La Zone 2 (Unités G et J-P), située du côté ouest d'un petit monticule aplati dans un champ cultivé, avait un profil montrant trois couches stratigraphiques. La première couche (0-22 cm) était un limon argileux brun (Munsell 7.5 YR 4/2) avec des gravillons latéritiques (1-2 %) et des racines fines (1-2 %). La deuxième couche (22-35 cm) était une argile limoneuse d'un brun rougeâtre (Munsell 2.5 YR 5/4) avec des gravillons latéritiques (2-5 %) et des racines fines à moyennes (1-2 %). La troisième couche (35-40 cm) était formée du même sol stérile qu'on a trouvé dans la zone sud : un limon argilo-sableux, d'un brun rougeâtre foncé (Munsell 5 YR 3/3) avec des gravillons latéritiques (10-20 %). Les tessons de poterie étaient les artefacts les plus nombreux dans les trois couches, bien que les deux supérieures comprissent également des fragments d'os, des éclats de verre, des perles et des silex de fusils (Tableau 1). Dans la deuxième couche, les traces de fondations et de murs en terre pisé suggèrent que cette zone était un espace domestique (Figure 3). Par hasard, nous avons découvert, à une profondeur de 34 cm, une inhumation dont les ossements étaient dans un certain état de dégradation. Cela indique que les anciennes populations d'Itato ont enterré leurs morts dans ou près de leurs maisons, bien que cette pratique ne soit plus connue aujourd'hui.

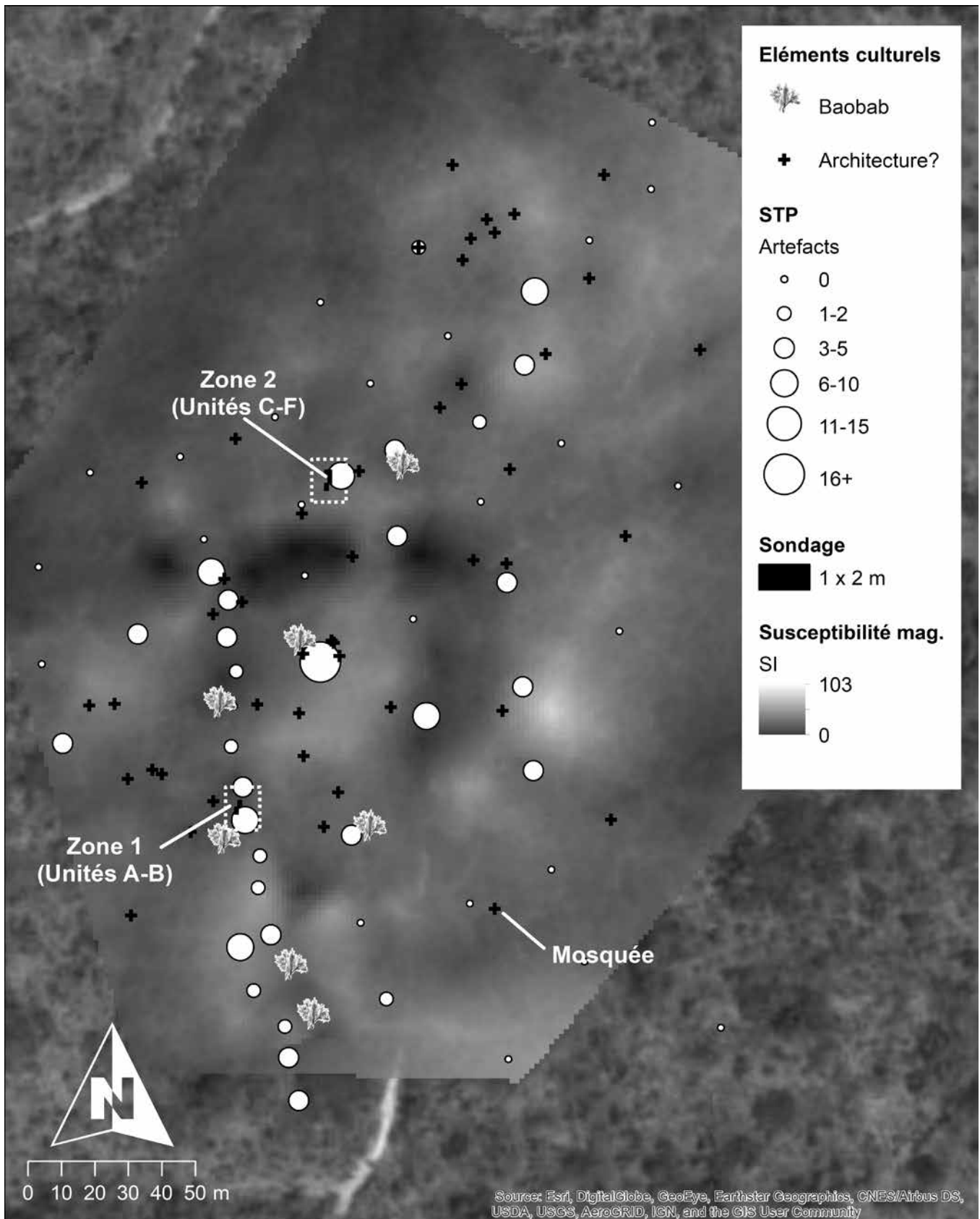
Pour la question de la chronologie, les artefacts récupérés d'Itato Tata sont en accord avec une occupation aux XVIII<sup>e</sup> -XIX<sup>e</sup> siècles. Par exemple, les perles de « galet rouge », telles que celles trouvées dans les strates supérieures de chaque zone, ont été fabriquées en Europe pendant cette période et apparaissent comme des produits commerciaux courants sur des sites contemporains du Sénégal oriental (DeCorse *et al.* 2003). Néanmoins, nous cherchons à obtenir des dates plus précises pour l'histoire stratigraphique de ce site à partir de deux tessons de poterie (et sédiments associés) que nous avons récemment soumis pour datation par luminescence.

### **Itato Diakha (BRAP-023)**

Le site d'Itato Diakha se trouve à environ 100 m au nord d'Itato Tata et couvre une superficie d'environ 3,8 ha centrée sur un axe nord-sud de sept baobabs (Figure 4). Selon les histoires orales, ce site a été colonisé par les Diakhanké : une classe de marchands musulmans dont les descendants, comme la famille Dramine, se trouvent aujourd'hui dans le village d'Itato. Malgré la rareté des artefacts en surface, plusieurs alignements de pierres (vestiges architecturaux possibles) et une fondation de mosquée nous ont permis de délimiter le site.

Pour mieux définir les zones d'activités, comme les espaces domestiques et/ou publics, nous avons d'abord expérimenté la prospection géophysique par susceptibilité magnétique. En utilisant un instrument Bartington MS2, nous avons visité 388 points placés à des intervalles de 10-20 m. Pour chaque point, nous avons pris deux ou trois mesures de la susceptibilité magnétique de masse (SI) à une fréquence de fonctionnement de 4,65 kHz (HF). Les résultats démontrent au moins cinq « zones chaudes » de susceptibilité magnétique élevée au centre du site par rapport à la surface du sol hors site (Figure 4). Bien que ces zones puissent nous aider à localiser des foyers et/ou des couches d'habitation, il est important de reconnaître que les feux de brousse, l'utilisation des terres et la géologie contribuent également au magnétisme du sol.

Pour cette raison, nous avons ensuite lancé un programme de STP similaire à nos méthodes sur le site d'Itato Tata. Toutefois, l'environnement dans lequel les recherches se sont effectuées présentait de nombreux obstacles dus à la présence d'herbe et d'arbres ne facilitant pas l'accessibilité. Néanmoins, nous avons effectué 17 STP à des intervalles de 10 m le long de l'axe principal des baobabs, et encore 41 STP à des intervalles de 25 m ailleurs sur le site (Figure 4). Ces petits sondages



**Figure 4 :** Le site d’Itato Diakha (BRAP-023) montrant les résultats de la prospection de susceptibilité magnétique, les STP et les sondages.



**Figure 5 :** Une petite concentration de tessons (à gauche) au bas du sondage C (BRAP-023).

ont démontré la faible profondeur des sédiments archéologiques (<20 cm) et que la distribution spatiale des artefacts semble corrélée avec les « points chauds » magnétiques et la disposition des baobabs, ensemble suggérant que le site était occupé par quatre ou cinq maisons.

Notre système d’implantation des sondages visait à comparer deux zones sur le site, suivant la même stratégie de fouille que nous avons utilisée à Itato Tata. La Zone 1 (Unités A-B) n’avait qu’une seule couche archéologique peu profonde (0-12 cm) ; son sédiment friable était un limon argileux gris (Munsell 5 YR 5/1) avec de fines racines (1-2 %). La couche stérile sous-jacente (12-22 cm) était un limon argileux ferme avec une couleur plus brune (Munsell 7.5 YR 5/3). La Zone 2 (Unités C-F) présentait plus ou moins la même stratigraphie. La couche archéologique (0-11 cm) était un limon argileux gris (Munsell 5 YR 5/1) avec des racines fines à moyennes (1-2 %) et sans gravillons latéritiques. Contrairement à Itato Tata, les sédiments ici ne contenaient pas de gravillons latéritiques, et la quantité de culture matérielle était faible (Tableau 1). Malgré l’absence de vestiges architecturaux dans les sondages, la présence de plusieurs dizaines d’alignements de pierres en surface du site indique des espaces et des activités domestiques. Cette interprétation est étayée par de modestes densités de tessons de poterie, y compris plusieurs gros tessons provenant de deux pots différents en Zone 2 (Figure 5).

En ce qui concerne la chronologie, le seul silex de fusil récupéré pourrait correspondre à une occupation aux XVIII<sup>e</sup>-XIX<sup>e</sup> siècles, contemporaine de celle du site voi-



**Figure 6 :** Profil du sondage au Fourneau 1 (BRAP-024).

sin d’Itato Tata. Afin de clarifier les dates d’occupation, nous avons aussi envoyé quatre tessons de poterie (et sédiments associés) pour datation par luminescence.

#### **Itato Fourneau (BRAP-024)**

En dehors de nos investigations sur les sites d’habitat, nous avons sélectionné une fondation de fourneau pour excavation sur le site de BRAP-024 (Figure 6). Ce dernier se localise un peu plus près d’Itato Tata vers le sud-ouest (voir Figure 1). Nos principaux objectifs étaient d’établir la date de ce site par rapport aux sites d’habitation d’Itato et de comprendre la technique d’installation du fourneau en comparaison avec d’autres sites pour la production de fer découverts lors de notre prospection mais également ailleurs au Sénégal oriental (Walmsley *et al.* 2020).

Nous avons commencé par cartographier et photographier soigneusement le fourneau le mieux conservé du site (Fourneau 1). Bien qu’il y ait eu une absence de tuyère et de scorie en surface, il est resté une quantité importante de dépôts sur les parois de la superstructure du fourneau. Pour éviter la destruction complète du fourneau, nous avons fait un décapage partiel de sa moitié sud jusqu’au sol stérile (0-40 cm). Le profil a révélé un bassin avec une seule tuyère entrant par l’est, mais très peu de scories. Cela suggère que ce fourneau a été utilisé pour des activités de forge plutôt que pour la réduction du fer (Dana Rosenstein, communication personnelle). Cette dernière activité est documentée par des dépôts plus importants de scories sur des sites de fourneaux à



plusieurs kilomètres au nord et à l'ouest. Afin de déterminer si ces activités de forge étaient contemporaines des deux sites d'habitation d'Itato ou d'un seul d'entre eux, nous avons enlevé et soumis des échantillons de la paroi du fourneau et de la tuyère pour datation par luminescence.

### Perspectives

L'archéologie semble confirmer les traditions orales sur le rôle important d'Itato dans le paysage historique de la Haute-Gambie. Malgré son isolement des royaumes centralisés, le village peut très bien avoir émergé comme une communauté et/ou un marché important pour les personnes de différents groupes ethniques. Nos recherches ne prouvent ni ne réfutent la vente d'esclaves à Itato Tata, mais la densité des produits européens (fragments de verre, perles et silex de fusil) est certainement en accord avec la participation au commerce atlantique, en particulier pour les armes de guerres de razzia. De plus, la division spatiale entre ce site et Itato Diakha et la forge de BRAP-024 pourrait représenter des divisions socio-économiques entre différentes activités et/ou groupes ethniques vivant ensemble dans le village. Des études ethno-archéologiques dans la région (Pelmoine & Mayor 2020) suggèrent que les styles architecturaux et l'organisation spatiale domestique peuvent concrétiser davantage les distinctions sociales à travers le village.

Ces premiers résultats démontrent le potentiel des données archéologiques d'Itato pour éclairer notre compréhension de la Haute-Gambie en tant que « zone d'éclatement » au cours des derniers siècles. Un certain nombre d'analyses en cours aideront à faire avancer ce programme de recherche. Tout d'abord, nous attendons les résultats de la datation par luminescence des tessons de poterie et fragments de fourneaux des sites d'Itato. Ces dates aideront à établir une chronologie locale, ainsi qu'une chronologie régionale reposant sur des assemblages de tessons similaires des sites voisins. Deuxièmement, l'analyse stylistique et pétrographique des tessons de poterie nous permettra d'évaluer les relations entre les gens d'Itato Tata et d'Itato Diakha et les réseaux régionaux d'artisanat ou d'échange. De même, des analyses plus détaillées des os d'animaux et des biens échangés révéleront des similitudes et des différences dans la cuisine et la consommation dans le site et ses alentours du site. Troisièmement, nous visons à mettre ces données archéologiques en relation avec des histoires orales et des sources écrites pour la

région de la Haute-Gambie. Et enfin, nous prévoyons de partager les résultats de cette recherche en menant des activités de sensibilisation avec des aînés, des étudiants et d'autres membres de la communauté d'Itato, et en installant une exposition muséale au Centre culturel de Bandafassi.

### Remerciements

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## Sudan

### Meroitic Archaeology along the Nile in the Third Cataract Region

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#### Introduction

As a result of successive dam buildings on the Nile in Aswan, much of the Nubian Nile Valley saw an increase in archaeological investigations all throughout the twentieth century (1907-1969). The Mahas Survey Project of the University of Khartoum (1990-2012) has built upon this body of work (Edwards *et al.* 2012: 450). The focus of this project is on the Third Cataract, approximately 700 km upriver of the First Cataract, within a survey concession extending over some 80 km of the Nile and its immediate hinterlands, an area now under threat by the construction of Kajbaar dam (Edwards *et al.* 2012: 451) (Figure 1).

In this region, the river runs through a course of Nubian sandstone where limited down cutting contributes to a varying width of alluvial plain. Numerous small islands and banks occur in the river above the Third or Hannek Cataract which is composed of biotite gneiss, locally associated with marble bands to the west (Berry & Whiteman 1968: 28). The river changes its direction many times in the region. For instance, at the Arduan Islands, the river flows east-west to the Kaibar Cataract, near Fareig, where it again turns northwards and flows on towards Delgo (Berry & Whiteman 1968: 28).

The Third Cataract region of the Nile begins at the northern end of the Dongola Reach extending from the area of the villages of Hannik (west bank) and Tombos (east bank) at the top of the Third Cataract, downriver as far as the area of Jebel Dosha (west bank) and Wawa (east bank), in the north (see Figure 1). Its northern boundary is most visibly marked by the cliff-face known as Jebel Dosha, overlooking the west bank of the river some 5 km downstream of Soleb, the end of a long ridge which runs about 3 km into the desert, forming a prominent natural feature (Osman & Edwards 2012: 37).

The archaeology of this region has revealed evidence of prehistoric and historic period occupations. Evidence of the New Kingdom, Meroitic, Christian, and Islamic sites have been identified in this region. Kerma (2500-1500 BC) and Nabatan (eighth to sixth century BC) sites are easily identified in this region (Osman 1984: 228-229). In addition, the recent archaeological work has also demonstrated the limited nature of the Meroitic sites (350 BCE-350 CE) compared with other periods (Osman & Edwards 2012: 126). The Meroitic presence in the region is dominated by a small number of cemeteries separated in the entire region and the only prominent settlement site with its associated cemetery is located at Kedurma, some 9 km north of Khajbar rapids which forms the north end of the Third Cataract (Edwards 1995:37).

Archaeological material indicates that while there is some Meroitic presence in the area, there is very little evidence for permanent settlement within the cataract zone. This is well indicated by the few sherds scattered in several areas (Osman & Edwards 2012: 463-64). Drawing on this information, this paper is an attempt to explore the Meroitic presence in the region and to shed light on the conditions that led to the limited occupation. Specifically, I am reporting on the field survey conducted by the University of Khartoum's Department of Archaeology in the region in 2018.

The survey occurred over two weeks during the winter of 2018 season with the aim to examine the region's archaeological features and was designed using available archaeological reports on known Meroitic sites. This paper examines the Meroitic settlement patterns in order to establish an understanding of the factors that may have affected settlement in the region. Indeed, Meroitic settlement patterns, like any other settlement patterns, are the outcome of a long and well-established adaptation to environmental conditions, geography, and human needs.

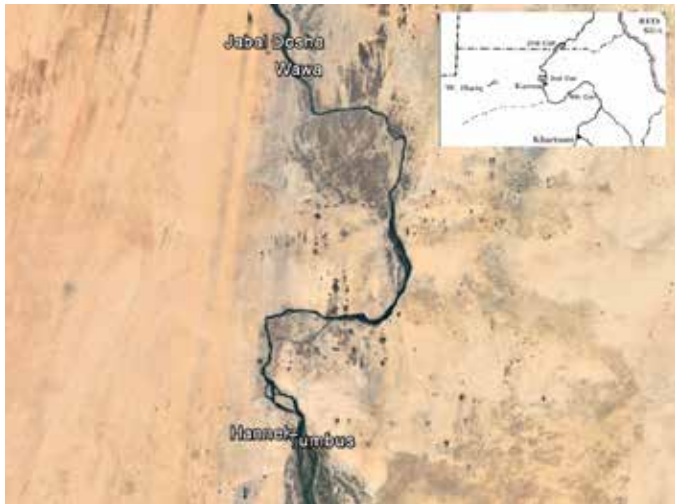


Figure 1: Satellite image of the Third Cataract region.

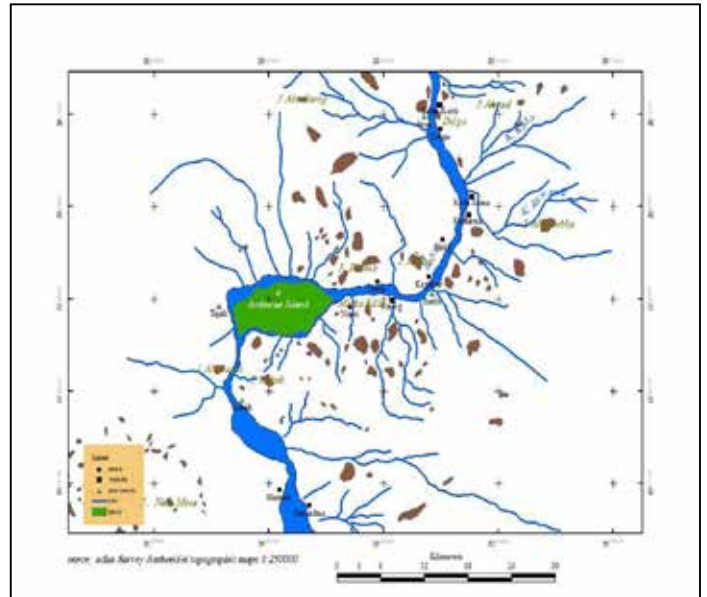


Figure 2: Landscape of the Third Cataract region.

**The geography of the Third Cataract**

The Third Cataract region of the Nile represents an environmental unit in itself. It is characterized by many elements, such as the fact that the river here runs in through channels, and between two cataracts. The cataract of Tombos in the south and the cataract of Sabu-Kajbar in the north are very rocky and rugged, which is part of the cataract system itself (Osman 2004: 34). Whiteman (1971: 11) has described the geographic subdivisions of the area and its geological formations as consisting of a pre-Cambrian basement complex enclosed by Nubian sandstone. The basement complex consists of sedimentary rocks as well as a variety of igneous and metamorphic rock. Also reported are a variety of conglomerates, grits, sandstones, and mudstones (Whiteman 1971: 54-55). Furthermore, Edwards (1989: 13) states that the Nubian sandstone and the basement complex consist of sands and clay deposits and Barbour (1961:138) points out that the river leaves the zone of blackened igneous rocks and flows over the Nubian series, which is represented by orange-yellow sandstone.

In this area, the character of the Nubian Desert landscape has been determined almost entirely by different erosion patterns of the two formations. The surface configuration of the granite zones is narrow and consists of deep *Wadis* (Adams 1977: 22). For that reason, the riverbed is narrow, steep and broken by several islands and cataracts (Adams 1977: 23).

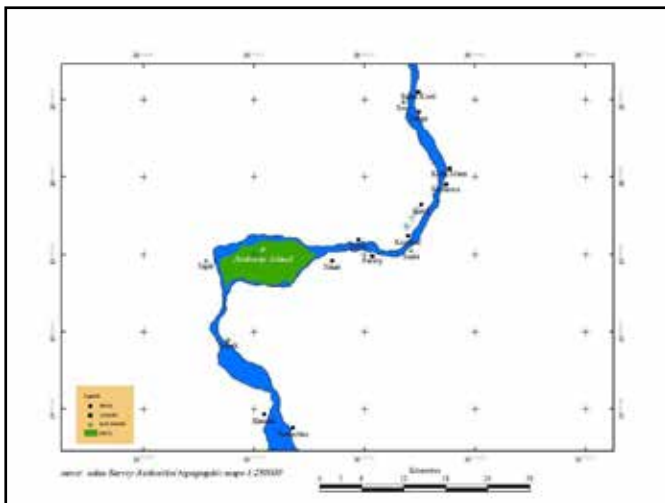
As usual, in most parts of the Nile, especially in cataract areas, available agricultural land is restricted

to a narrow strip along the banks. However, in contrast with other cataract regions, this strip in the Third Cataract region is rich alluvial land, especially the area between Nauri and Sabu-Kajbar which has a width of about 3 km on the southern bank and is more than 13 km in length (Osman 2004: 34-35).

**The archaeological survey**

Throughout the two-and-a-half-decade course of archaeological research conducted by the University of Khartoum Mahas Survey Project in the region of the Nile Third Cataract, a substantial amount of archaeological and ethnographical data pertaining to the region has been amassed. These include the results of archaeological surveys and excavations which have been carried out since the early 1990s. The first of these were extensive surveys meant to document the entire region (Edwards et al 2012: 450). A summary of this combined data comprises the Third Cataract Region Database, which includes information on the location, dating, size, and settlement types, among other information that were presented in the final report of the Mahas Survey Archaeological Project in 2012 (Osman & Edwards 2012).

From 2018 intensive systematic surveys focusing on more discrete areas have taken place. This paper will present the results of that season which was carried out under the direction of the author. Several goals were accomplished in this short two-week season; several already investigated archaeological sites are located within the



**Figure 3:** Distribution map of the Meroitic sites in the Third Cataract region.

area such as Arduan and Kedurma, while other new sites were recorded in Saddin Korta and Kada Musa. At the same time, the problems for archaeological ground survey became evident as well. Gold mining activities and intensive agricultural practice during a very long period appears to have resulted in a high rate of destruction of Meroitic sites and of individual finds. The total number of sites examined to date as part of this study is five. Most of the remaining sites were recorded by Edwards and Osman in the Mahas Survey Project (Osman & Edwards 2012: 93-110).

In the cataract zone, Osman and Edwards (2012: 463-64) have noted that there was some Meroitic presence in the area, while there is little evidence of permanent settlement. This is well indicated by the few sherd scatters found. Looking to the south, it seems that the Kerma basin presented greater opportunities for Meroitic occupation than the cataract zone. There, many archaeological sites were recorded by the Harvard-Boston archaeological expedition and Swiss mission in the area and included settlements, workshops, and cemeteries (Reisner 1923: 21; Bonnet & Valbelle 2006: 40-45; Ahmed 1999: 45-46).

### ***Kadruka***

The previously known Meroitic cemetery site of Kadruka was first mentioned by Reinold (1987: 44). He reported the presence of a Meroitic cemetery near the modern village of Kadruka on the margins of the Kerma basin. A revisit to the area was undertaken and the site was relocated. Unfortunately, a significant amount of damage has occurred in and around the site from gold mining attempts.

### ***Arduan Island***

The one substantial Meroitic site identified by Edwards and Osman (2000: 58-60) within the cataract zone was located on Arduan Island. This cemetery site (ARD013) is located on a low bank on the desert edge to the south of Arduan Village. Moreover, Osman and Edwards (2012: 97) have excavated three graves in the area. Unfortunately, there is no evidence for related settlement with this cemetery in the area of Arduan. The project did find that recent construction efforts and cultivation in the area precluded any systematic survey.

Edwards and Osman (2012: 93) also identified a small number of Meroitic sherds amongst scatters of Kerma and Medieval material north of the village of Saadeeg (SDK015). Another thin scatter of early Meroitic handmade sherds was found to the east of Arduan Island at Faad (Faad002). Again, few Meroitic sherds were identified on what may be another burial site at the east end of Freig village (Osman & Edwards 2012: 93).

Although our mission recorded and tested two sites in the northern part of the region (Kad Musa and Sadden Korta), the site of Kedurma was already known from previous Mahas Survey studies.

No further Meroitic sites were identified within the cataract zone, although it is possible that some rock drawings of this period may be found amongst the large group at Sabu-Jeddi, (GED011) or on the west bank at Jebel Noh (KJB005). Some carved rocks have been investigated and appear to date to the Kushite period in the Sabu-Jeddi area (Osman & Edwards 2012: 84-85). Those are the most likely to be Meroitic and some may be carved footprints, which are now documented as a feature found in several Meroitic temples, included Meroe (Shinnie & Anderson 2004: 27). Such carvings have also been reported from Kerma (Ahmed 2004: 26), Qasr Ibrim (Wilson 2008), as well as Philae (Griffith 1912: 42-42). These rock scenes are sometimes accompanied by brief Meroitic inscriptions, though not at this site (Rilly 2007: 202-203).

### ***Kedurma***

A major Meroitic site is located at Kedurma about 10 km south of Delgo and 9 km north of the Kajbar rapids, which form the north end of the Third Cataract (Edwards 1995: 37).

The substantial settlement of Kedurma covers 2-2.5 ha and has not yet been excavated; only parts of its overall plan have been recovered through the 1991 surface survey at the season of the Mahas Survey Project (Edwards 1995: 37). Additionally, the area of interest here



has been tested by the University of Khartoum mission (2018-2019). The investigated settlement area includes domestic structures and official buildings, an industrial area, a small temple and cemeteries (Osman & Edwards 2012; Bashir 2019: 28-29).

This work has demonstrated the importance of the site as a Meroitic headquarters of the Nile Third Cataract region. The existence of both the settlement and its associated cemetery mark these off as a site of major importance with great research potential. It is worth stressing that despite intensive survey and excavation programs carried out in more northerly areas of Lower Nubia, no substantial Meroitic settlement and its associated cemetery have yet been investigated together (Edwards 1995: 46).

**Kada Musa**

A Medieval and Meroitic cemetery site was recorded at Kada Musa and includes several graves located on top of Kada Musa hill, a little to the north of Kedurma, that were exposed by the effects of erosion, quarrying and random gold mining activities. It seems likely that at least 50 cm of surface soil has eroded since the graves were originally disturbed by gold miners. Scattered bones near the surface were poorly preserved and had been exposed by robbing. In addition, different kinds of pottery sherds and Meroitic beads were recovered.

**Sanden Korta**

The cemetery site of Sadeen Korta, located ca. 7 km north of Kedurma, is one of the more prominent cemetery fields reported by our mission in the area. This cemetery is on a low hill in the middle of the modern village extending about 50 m in length from north to south and 60 m from east to west. Once again, this site has been heavily damaged by gold miners. As part of this survey, one grave was selected for a test excavation. This grave had previously been damaged by quarrying and gold mining activities. Overall, the grave was greatly disturbed both from robbing in antiquity as well as more recent activity. The individual was buried in an east-west oriented grave with a sloping shaft at least 2 m long leading to a chamber at the west end. The chamber entrance was blocked by a stone, parts of which remained *in situ*. Large parts of one body were recovered from the shaft fill including the well-preserved skull.

Small pottery sherds and other materials were found on the surface of the site. Orange-burnished, wheel-made wares appeared to be the most common find, including some decorated fragments. No sherds of the distinctive

Meroitic black-burnished or brown handmade wares were found.

Site Name	Type	GPS location
Kadruga	Cemetery	(N19 23/ E30 30)
Arduan Island	Cemetery	(N19 56 112/ E30 19 609)
Kedurma	Settlement and cemetery	(N 20 01 971/ E 030 35 732)
Kada Musa	Possibly cemetery	(N20 03 686/ E30 35 320)
Sanden Korta	Cemetery	(20 08 259/ E30 33 860)

**Table 1:** Inventory of the Meroitic sites in the Third Cataract region.

**Conclusion**

The field assessment in this region draws attention to the overall lack of Meroitic settlement in the Third Cataract region. There are many factors that could explain the dearth of Meroitic settlements and the possibilities for future archaeological investigations in the region. Environmental factors must have played some role in the degradation of the potential Meroitic settlements. Likewise, contemporary human activities such as local gold mining, building, and farming contributed significantly to the degradation of archaeological sites in the area.

It seems reasonable to assume that there were Meroitic settlements in the region despite the current lack of evidence. This assumption could possibly be supported by the limited amount of pottery scatters and a large number of Meroitic cemeteries in the entire region. It is known that a cemetery is a random sample of the living population. Therefore, the Meroitic cemeteries are indeed direct evidence of a population that inhabited this region. On the other hand, Osman and Edwards (2012: 110) attributed the limited size of Meroitic settlements in the area of the Third Cataract to severe environmental conditions. Yet environmental conditions in this area cannot be held principally responsible for the absence of a human settlement. All over the world, human settlements were not achieved by the agency of several factors including environmental conditions.

It is both interesting and frustrating that previous archaeological work within the Third Cataract region has not located a significant number of Meroitic sites in this region. It must be supposed that Meroitic settlement was confined to areas close to the present course of the river

like today. Along the river, farming and limited animal husbandry can support settlements along the riverbank. No doubt that if such settlements ever existed, they may lie under modern villages thus preventing archaeological identification. Moreover, Edwards (1999: 68) raises the possibility that Meroitic settlement between Kawa and Kerma was confined to areas close to the present course of the river. To date, all identified Meroitic sites have been found in the core of modern villages.

Therefore, the issue of Meroitic settlement remains a crucial aspect of understanding the whole civilization of Meroe. Meroe was not restricted to political and religious centers. It must have been rich in a population close to the centers. Nonetheless, this vital aspect of the Meroitic civilization remains elusive. Accordingly, the situation demands more urgent focused archaeological investigations in the region. This urgency is motivated by current gold mining activities, which will eventually preclude future archaeological investigations that address the question of settlement patterns.

Of course, there is still a lot to do to gain a better understanding of Meroitic existence in the study region. More generally, it may be hoped that we can begin to develop some of the wider potential for settlement archaeology. Past macro-settlement studies have considered the role of basic environment determinants and subsistence regimes on the nature and patterning of settlements (Edwards 1999: 93) but have not gone beyond this. We suggest that a natural expansion of this includes conducting intensive and comprehensive archaeological surveys and test pit excavations at the Meroitic sites in the region, as well as introducing a landscape approach. We also suggest highlighting the role of this region in the international trade of Meroe, especially with the Roman Empire through Roman Egypt during the last century BC and the first century AD. This is in addition to the establishment of interdisciplinary projects for the study and discussion of the issue of Meroitic settlement in the North.

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## Sudan

### **Preliminary report on the excavations of Jebel Al-Ain and Qasr Al-Maraga – North Kordofan state**

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#### **Introduction**

The concession of work in this district was granted by the authorities of antiquities in Sudan to the Department of Archaeology at the University of Khartoum in order for the authors to undertake archaeological investigations in the area of the North Kordofan territory. The authors sought to focus our research here because the region has not been a focus of archaeological research for some time. Our aims during the 2016 field season were to record all the archaeological evidence in the area evident through surface deposits with limited excavations. Thus, we tried to follow recent theoretical and methodological trends in archaeology that primarily emphasize the cultural sequence and make a general inference about behavioral patterns in the past (socio-economic organization, regional networks, demography, subsistence activities, etc.). At the same time, we hoped to improve our present knowledge of the rich archaeological heritage in western Sudan, in order to make its preservation feasible in the

near future. The 2016 season was preceded by a general survey, completed in 2009, that had been initiated by the University of Khartoum, Department of Archaeology, that identified several archaeological sites in the area of central Kordofan (Adam 2009). The data from this previous survey served as the basis for our study and the sites excavated were selected from those identified in 2009.

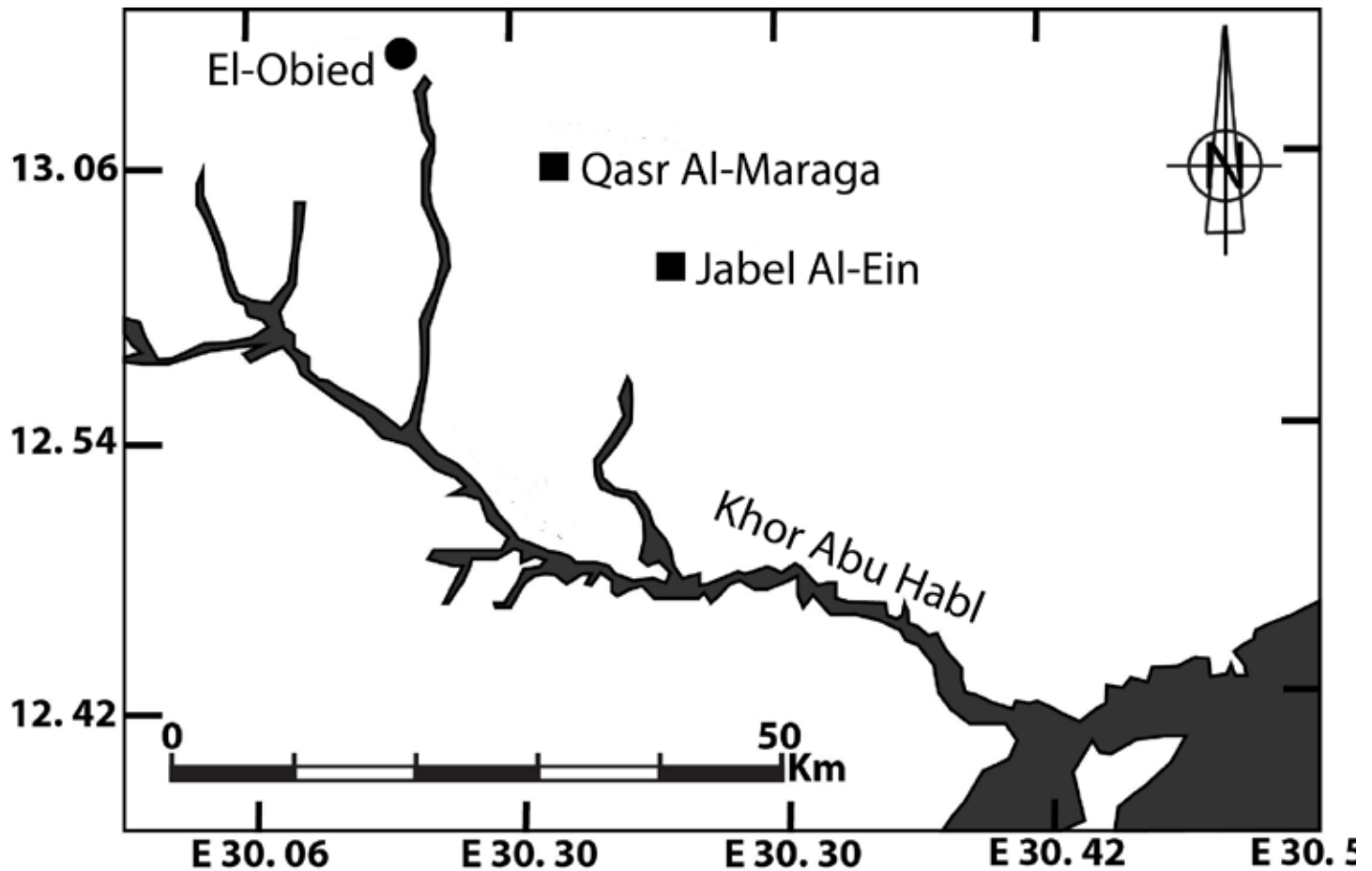
In November 2016, test pits and systematic excavations were conducted at four sites in the southeast of El-Obied. Each was chosen for investigation based on the evident stratification and the quantity of archaeological material reported in the previous survey (Adam 2009). The sites include: 1) Al-Ain 14; 2) Al-Ain 15; 3) Al-Ain 16; and 4) Qasr Al-Maraga (Figure 1). Below we report on our work and findings at each site.

#### **The North Kordofan Territory**

The North Kordofan territory is characterized by several cultural and environmental phenomena, including its location in the middle of Sudan in a sandy plain. The region is interposed by a number of wadies (Lloyd 1910: 521), making it a cultural and ethnic convergence zone. We are fully aware that the wadies and channels that come from the Darfur region, passing Kordofan, have had a great impact in that cultural correlation and intermingling. There are a number of these wadies feeding the Nile, particularly during the humid periods that prevailed during the early Holocene. The most significant are Wadi El-Melik, which passes through the northern part of Kordofan province, and it includes Umm Badir, Abu Zeima and other villages up to the Nile at the southern part of Ed-Debba region; Wadi El-Maqaddam, which passes through the land of Kababish tribe, and connects to the Nile in the Kurti area; and Khor Abu Habl which comes from the Nuba Mountains area until it connects to the White Nile at Kosti. These channels have worked to control the movement of people between the Nile and Kordofan (Hayati 2017: 42). In addition, the area consists of several hills, outcrops and plateaus that form a refuge suitable for dwelling, providing protection from environmental and human disasters. This included many caves that could be occupied during periods of upheaval. These outcrops also contain useful raw material for manufacturing stone tools and grinding stones such as quartzite, chert and sandstone to name a few.

Another distinction, relevant to the geographic location of this area, is that it represents a junction between the Nile Valley and western regions of Africa. This characteristic is strongly visible through the archaeological





**Figure 1:** The area of investigation, south-east of El-Obied town and east of Khor Abu Habil. (Figure by author.)

features having some similarities to cultures lying along the White Nile in particular (Clark 1973: 63), and the Sudanese Nile Valley in general (Arkell 1975). Furthermore, it represents a good correlation between west and central Africa and the Nile Valley (Jousse *et al.* 2008: 2).

**Al-Ain 14: N 13° 01' 42.8", E 30° 25' 7.9"**

Archaeological excavations here consisted of a 1x1 meter test pit located in the south-western edge of Al-Ain mountain, and toward the south of Al-Ain 14 site. The test pit was excavated to 50 centimeters in depth via 10 centimeter arbitrary levels. A quantity of pottery was found in the first level. At the base of this level, animal bones were encountered. In level 2, a few beads made from ostrich eggshell were encountered. Pottery sherds were recovered in level 3, however the quantity decreased toward its base. There was also a dearth of stone tools in this level, especially microlithics, as well as few animal bones throughout this level. The fourth level was similar. Excavations ended

at 50 centimeters because a new settlement context was encountered.

Several archaeological finds associated with the Neolithic settlement (sixth millennium to third millennium BCE) were visible on the surface of the site, such as pottery, and an abundant of stone tool debitage rather than proper tools, suggesting that the site might have been a lithic workshop. In addition, there were a variety of sizes and shapes of grindstones. The team collected the surface finds that included an abundance of pottery, but a scarcity of stone tools. It was clearly notable that the pottery was characterized by a variety of decorations.

**Al-Ain 15: 13°00'9.1" N 30°25'041" E**

Excavations at Al-Ain 15 were more extensive than at Al-Ain 14. Here, a 10 x 10 meter grid was established and then divided into 25 squares (each 2 x 2 meters). All excavations were done by 10-centimeter arbitrary levels. Three of the squares were selected for excavation: A3, C3, E2.



**Figure 2:** Grooved tool from E2. (Photo by author.)

**A3**

The surface layer of this square contained a substantial amount of pottery sherds in a variety of shapes and sizes. There was also some debitage consisting of quartz and quartzite. Again, the levels excavated produced a range of finds including pottery, lithics, and animal bones. One unique find appears to be a lip plug made of stone. The archaeological finds began to decrease by the third layer, and were mostly pottery, animal bones, and a few stone tools. The archaeological finds become very scarce in the fourth layer, after which sterile soil was reached and the unit was terminated at 40 centimeters in depth.

**C3**

C3 is characterized by similar specifications as A3, in terms of a large number of surface artefacts collected and the hardness of the ground in the first level; it is essentially clear that this occurs whenever the excavation turned northward, towards the waterway that runs down from the mountain. The first level also contained a lot of archaeological material. A few stone tools appeared in the second and third layers but the quantity of finds significantly decreased in the third layer. The excavation reached sterile soil in the fourth layer terminating at 40 centimeters in depth.

**E2**

E2 is in a low-sloping area towards the small stream. The surface layer contained Neolithic pottery. Generally, there were few archaeological finds in the first level that included some forms of pottery likely post-Neolithic in dates. A grooved tool was also found (Figure 2). A fireplace was



**Figure 3.** Various microlithics made of quartz. Test Pit at Al-Ain 16. (Photo by author.)

found, where a layer of ash appeared, but it was significantly damaged. We suggest that it may have been part of a furnace for iron-melting/smelting, or possibly used for pottery manufacture, as the remains of iron slag and charcoal were found. Through the third and fourth layers the ground became very hard, and few archaeological remains were recovered. The excavation stopped at a depth of 40 cm within the fourth layer.

**Al-Ain 16: 13°00'8" N, 30°25'0.53" E**

A small square within the site Al-Ain 16 was excavated, with measurements of 1 x 1 meter. There were a large number of archaeological artefacts on the unit's surface, yet the first and second levels were scarce in archaeological material. The greatest abundance of finds came from the third level with sterile soil appearing in the fourth level. Prior to reaching sterile soil, a general decrease in the amount of pottery and microlithics was observed (Figure 3).

**Qasr Al-Maraga: 12°57 '31"N, 30°19'49" E**

The test pit at Qasr Al-Maraga was located in Wad Al-Bagha, located toward the southeast of El-Obied town. Qasr Al-Maraga is one of the largest historical sites in the Kordofan region. Its name means Soup Palace, which refers to the tradition that the builders had of mixing mortar with soup because of the abundance of animals and meat, as a tribute to the greatness of the chiefs.

The team dug a test pit in the center of the site, in order to determine the stratigraphic and cultural sequences of the site, particularly as there are what look like the ruins of buildings visible at the site. A 2 x 1 meter unit was excavated extending over four meters in depth and

Site	Stone Tools	Grinding Stone	Pottery	Bones	Mollusca	Other	Period
Surface			130				Islamic
Level 1		2	14	.....			Islamic
Level 2		1	9	.....			Islamic
Level 3	6	2	10	.....			Islamic
Level 4	17		26	.....			Islamic
Level 5	8	1	5	.....			Islamic
Level 6	11	1	9				Islamic
Level 7	8	1	23				Islamic
Level 8	3	1	9				Islamic
Level 9	6		13	.....			Islamic
Level 10	18		11				Islamic
Level 11	1		6	.....	.....		Historic
Level 12	11		11	.....			Historic
Level 13	4		5				Historic
Level 14	4		7	.....			Historic
Level 15	5		7	.....			Historic
Level 16	4		11	1			Historic
Level 17	9		7	.....			Neolithic
Level 18	4		12	.....			Neolithic
Level 19	5	1	5	.....		Bird bones	Neolithic
Level 20	7		12	.....			Neolithic
Level 21	9		1			1	Neolithic
Level 22	27		17				Neolithic
Level 23	23	1	18			Ostrich Eggshells	Neolithic- Mesolithic
Level 24	6	2	7			Grooved	Neolithic- Mesolithic
Level 25	9		6				Neolithic- Mesolithic
Level 26	8	2	40				Mesolithic
Level 27	1		37	.....			Mesolithic

**Table 1.** Archaeological material from Qasr Al-Maraga excavation unit. (Table by author.)

a collection of surface finds was made, which included thick, mostly undecorated pottery sherds (Figure 4). In the first level of the unit, there was a large amount of animal bone present that continued throughout the remaining levels and included goats and sheep. This fits with the site’s association with abundance. Also, some coarse pottery was found, and quartz debitage. The soil was very loose in this level, but as the excavations proceeded, the soil became more compact in the second level. The second level contained fragments of pottery distinguished by some geometric motifs and grinding stones. In addition, the ground was clayey and contained the remains of mud brick and ash was found. Therefore, this level represents a domestic occupation dating to the historic period.



**Figure 4:** Depth of the excavation, Qasr Al-Maraga. (Photo by author.)

The ground became more compact in the third level and was dug with difficulty. The debris contained the remains of mud brick, a little pottery, and stone tools. The fourth level was similar and the compactness increased. These levels did not contain distinctive artefacts; rather it appears that these were mixed with clay, with which they made the brick used to build the palace and thus a secondary deposit. The next level to stand out is level 7. The seventh level contained ash, particularly in the eastern part of the trench which continued into the eighth level.

Because of the overall continuity of the archaeological finds inside the trench, we decided to divide it into two parts, where the focus of work was on the eastern portion in the ninth level in which the ash layers disappeared. The tenth layer varied greatly from the previous layers and contained a larger quantity of remains. These consisted of poorly made pottery and various shapes and sizes of stone tools, and an increase in the number/amount of animal bones. The soil in level 11 was looser and it contained a dense accumulation of archaeological remains that continued into the twelfth level. The remaining levels were relatively consistent and revealed a steady decrease in material with depth (see Table 1). While all levels were 10-centimeter arbitrary levels, by level 19 the scarcity of materials and relative uniformity of the soil led the team to excavate it as a 20-centimeter level.

The same archaeological remains continued uninterrupted until level 23, the continuity of the ash layers was noticeable, as well as the remains of charcoal, bones and ostrich eggs, in addition to grooved stone, which appeared at level 20. At level 24, a depth of 3.20 meters was reached and the type of the soil changed to a gravel soil that tended to be yellow and contained poorly made pottery, some grinding stones and stone tools. The excavation was continued until level 27 terminated at 4.15 meters in depth (see Figure 4). The levels were similar, but at level 27, the soil was wet and contained only the remains of pottery, in contrast to the preceding layers, which contained ash, charcoal, pottery, stone tools, animal bones and ostrich eggshells.

## Discussion

It is clear that the North Kordofan province is wealthy with a huge cultural heritage existing from before the ninth century BCE, and consequently up to the Islamic period (651-1898 AD). It shows some aspects of chronology starting from prehistory and up to the recent period. The general chronology of the region starts from the Mesolithic (ninth millennium to sixth millennium BCE), continuing through

the Neolithic (sixth millennium to third millennium BCE), with some chronological hiatus during the proto- and historic period (2500 BCE to the first century AD). However, after that period, several features of recent historic period (651-1898 AD) are clearly visible. Most of the archaeological sites that have been unearthed in this area are affiliated to the late prehistory (Mesolithic-Neolithic ninth millennium to third millennium BCE), and our excavations reported here cover prehistoric sites, with the exception of Qasr Al-Maraga which contained a long time depth of more than four meters, with the archaeological artifacts in the Islamic period. In contrast, the excavations at a couple of sites at Jabel Al-Ain stopped at a depth of 40 centimeters, which is evidence of the shallowness of the stratification in this area. However, this is likely due to the location of the remaining sites reported here in an area on the edge of the mountain, which is exposed to erosion and other climatic forces. Neolithic material was found at all the sites, but it varied from Jabel Al-Ain to Qasr Al-Maraga in terms of amount and quality of the materials. However, it was noticeable that the pottery was very heterogeneous in terms of its fabric and decoration. In general, most of the pottery at Jabel Al-Ain is decorated and of better quality than the pottery of Qasr Al-Maraga given that the pottery of the latter is very coarse and the majority is undecorated (Figure 5).

With regard to the stone tools, it is obvious that most of the retouched tools are made of quartz and quartzite, as they are not distinctive in terms of knapping and serrating. Also, there are some tools made of sandstone, such as grooved stones. Most of the excavations contained grinding stone tools and shells. The majority of the archaeological finds date to the historic period and comprise crude pottery and some grindstones. Finally, there were small finds found through the excavations that include various sizes and shapes of eggshell beads and small mineral rings.

The results of this work can be summarized as follows:

1. The sites near Jabel Al-Ain are very rich in terms of the archaeological material; however, they have been eroded gradually by rain, which has left shallow stratigraphy.
2. There was visible variation in the archaeological remains recovered from Jabel Al-Ain, mainly in pottery sherds that were characterized by several motifs.
3. The site of Qasr Al-Maraga is one of the deepest sites in this area, as it consisted of a long cultural sequence ranging from the Mesolithic up to the Islamic period.





**Figure 5:** Various forms of pottery varying from coarse to polished. (Photo by author.)

4. The area has essentially benefited from the outcrops and plateaus that provide natural shelter as well as being a catchment area for the raw materials needed for the lithic industries.
5. It is notable that the area has benefited from several streams that cross it from the west and south up to their confluences with the White Nile; these have provided viable routes for population movement.

This project has highlighted a previously understudied region. This fact increased its value as a new area of study. The latest season in this area was devoted to excavation and examination of some of the richest sites and the results of this work, we hope, will encourage further efforts in the region as well as others outside the Nile Valley.

**Acknowledgments**

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## Tanzania

### Preliminary Results of a 2019 Survey in Inland Zanzibar, Tanzania

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#### Introduction

This report describes the results of a shovel-test pit (STP) survey conducted from June to September 2019 on the island of Unguja. Unguja is the local name for the island commonly known as Zanzibar, the southern island of the Zanzibar archipelago in Tanzania; here I refer to it as Zanzibar. The aim of this survey was to investigate the deep history of the inland region, from the earliest settlements in the 1st millennium AD to the development of the plantation system in the nineteenth century. My research asks the following questions: When agricultural production intensified in the nineteenth century, did Swahili and Omani landowners place their plantations on top of earlier, hitherto unrecorded Swahili settlements? To what extent did earlier Swahili landscape modifications and settlement forms shape the intensification of agriculture, and the social impacts of the nineteenth-century transformations? Here I present preliminary results of a survey aimed at charting the general long-term settlement patterns of the region.

The last several decades of research on Zanzibar have emphasized the economic and social relationships between Swahili settlements at different geographical scales (e.g., Crowther *et al.* 2016; Fitton 2017; Juma 2004; LaViolette & Fleisher 2009; Stoetzel 2014; Walshaw 2010). Furthermore, archaeological research on the so-

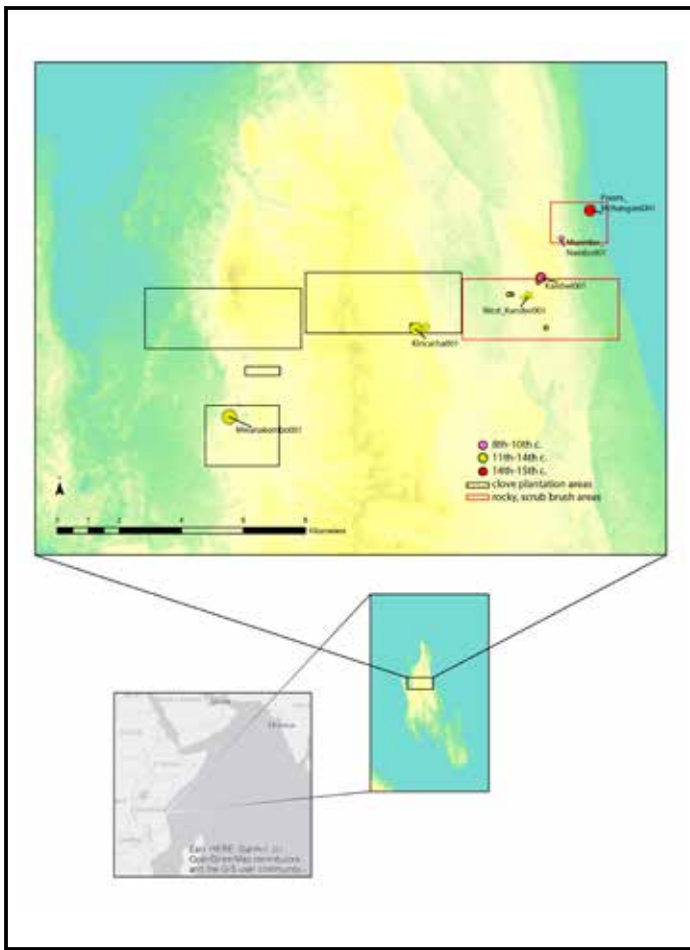
called Portuguese and Omani periods has begun to elucidate the connections between Zanzibari communities and the colonial world of the Indian Ocean from the sixteenth to nineteenth centuries (e.g., Croucher 2006; Norman & LaViolette 2016; Leech 2017). Historical scholarship has also shed light on transformations on the East African coast from the late eighteenth to twentieth centuries, focusing on the growth of slavery and the agricultural export economy, increased circulation of global industrial commodities, and political and legal factors of Omani and British colonialism (e.g., Bishara 2017; Glassman 1995; Prestholdt 2008; Sheriff *et al.* 2016; Vernet 2017). These studies have shown that while transformations in nineteenth-century Zanzibar were related to emerging global capitalist processes and consumer demand in Europe, the Americas, South and East Asia, and the Persian Gulf, they were also based in indigenous systems of land tenure, dependency and slavery for agricultural production, and the social networks of Swahili and Omani elite.

Until the present survey, all known first- and early second-millennium Swahili sites on Zanzibar were located on the island's coast and were oriented toward marine resource exploitation and coastal trade (Fitton 2017). Unlike on Pemba Island, northern neighbor to Zanzibar (e.g., Fleisher 2003; LaViolette & Fleisher 2009; Walshaw 2010; Stoetzel 2012), little research has been conducted to understand the settlement systems in the interior during the precolonial period, or to understand how such systems developed and changed from the onset of colonialism to the high point of the plantation system in the nineteenth century.

#### The Survey

In this study, sites were defined as spaces with three or more positive STPs, findspots, or artifact surface scatters within at least 40 m of proximity. A positive STP was defined as an STP with 3 or more artifacts. A findspot was defined as a surface find of one or more artifacts. We recorded 49 sites, most having many more than the minimum criteria. Sites represent areas of deposition related to human occupation and activity. Site components are discrete finds of materials 40 m or more from two other discrete finds; we recorded 127 of these site components.

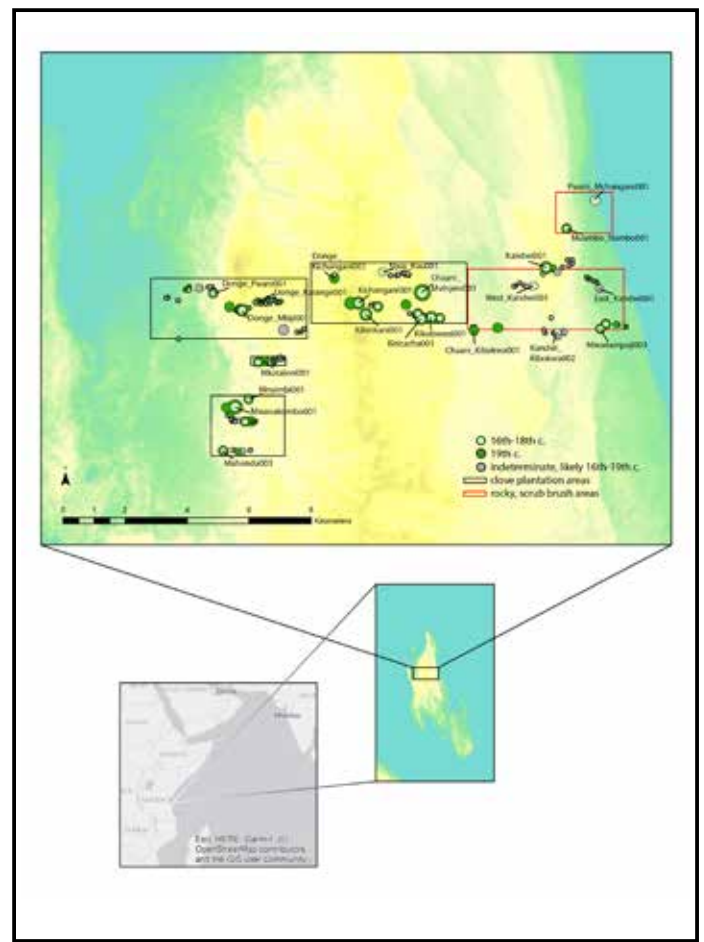
The methodology employed here was based on Fleisher's (2003) survey of northern Pemba, which I elaborate more on below. I chose the survey region for this study (see Figures 1 and 2) based on a reconstruction of nineteenth-century clove plantation areas



**Figure 1:** Map of sites, late first to mid-second millennium AD. Circles indicate relative site size. Survey regions indicate areas of historical clove plantation areas (based on Sheriff *et al.* 2016: 20).

(Sheriff *et al.* 2016: 20). Transects of 100 x 1000 meters were planned in the west, central and east regions in a staggered grid pattern using a stratified random sampling method. Each region measured 10 km<sup>2</sup> and was chosen based on its intersection with plantation areas, feasibility to survey, and diversity of environmental features. Three other areas were sampled using transects placed judgmentally, based on previous research and on-the-ground observations.

Our team carried out STP surveys along most of the planned transects. Thirty STPs were dug along these transects at regular intervals. Upon encountering a positive STP or artifact surface scatter, we dug STPs in four cardinal directions to investigate whether a site was present and to define its boundaries. All archaeological materials were collected and bagged. Three teams would dig, sieve, and record soil colors, depths of deposits soil



**Figure 2:** Map of sites, late second millennium AD. Circles indicate relative site size. Survey regions indicate areas of historical clove plantation areas (based on Sheriff *et al.* 2016: 20).

types, artifacts found, any photos taken, and bag catalog numbers for artifacts, before immediately backfilling the STP. While walking from one line of STPs to the next, we would spread out and scan for any surface remains, which were recorded either as find spots or artifact scatters. In total, we completed 21 transects and dug 935 STPs.

**Results and Discussion**

A primary aim of this research was to reconstruct the general settlement pattern of the inland region, and a complete list of newly recorded sites with dates and size in hectares can be found in Table 1. Early sites are mapped in Figure 1, and later period sites are mapped in Figure 2. Furthermore, Table 2 shows the diagnostic artifacts and comparative examples used for determining site age in each period. Figure 3 and Figure 4 show diagnostic artifacts from different periods

Site Name	Date Range	Area (ha)	Site Type	Region
Mahonda004	16 <sup>th</sup> to 18 <sup>th</sup> c.	0.01	Field house	Mahonda
West_Kandwi002	16 <sup>th</sup> -20 <sup>th</sup> c.	0.01	Field house	east
Kandwi002	19 <sup>th</sup> c.	0.02	Field house	east
West_Kandwi003	11 <sup>th</sup> to 14 <sup>th</sup> c.	0.02	Field house	east
Kanisani001	19 <sup>th</sup> c.	0.06	Field house	Mahonda
Donge_Karange001	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.07	Field house	west
Mwanampaji001	11 <sup>th</sup> to 12 <sup>th</sup> c., 19 <sup>th</sup> c.	0.09	Field house	east
Mahonda002	19 <sup>th</sup> c.	0.09	Field house	Mahonda
Mahonda_Mkataleni002	indeterminate	0.09	Field house	Mahonda
Kandwi_Kibokwa001	indeterminate	0.1	Field house	east
Donge_Pwani001	indeterminate	0.11	Hamlet	west
Kandwi003	indeterminate	0.12	Hamlet	east
Kikobweni003	18 <sup>th</sup> -19 <sup>th</sup> c.	0.14	Hamlet	central
Chaani_Kibokwa001	19 <sup>th</sup> c.	0.14	Hamlet	east
Mahonda003	16 <sup>th</sup> to 18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.16	Hamlet	Mahonda
Mwanampaji003	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.17	Hamlet	east
Kandwi_Kibokwa002	16 <sup>th</sup> -18 <sup>th</sup> c.	0.18	Hamlet	east
Kandwi_Kibokwa004	indeterminate	0.18	Hamlet	east
Kandwi_Kibokwa003	16 <sup>th</sup> -20 <sup>th</sup> c.	0.2	Hamlet	east
Mwanampaji002	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.23	Hamlet	east
Donge_Kichangani001	19 <sup>th</sup> c.	0.26	Hamlet	central
Kikobweni004	19 <sup>th</sup> c.	0.26	Hamlet	central
Mahonda001	16 <sup>th</sup> -20 <sup>th</sup> c.	0.28	Hamlet	Mahonda
Donge_Mbiji002	19 <sup>th</sup> c.	0.31	Hamlet	west
East_Kandwi001	16 <sup>th</sup> -20 <sup>th</sup> c.	0.31	Hamlet	east
Chaani_Kibokwa002	19 <sup>th</sup> c.	0.35	Hamlet	east
Muembe_Nambo001	9 <sup>th</sup> -10 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.38	Hamlet	northeast
Daraja_La_Mwanakombo001	19 <sup>th</sup> c.	0.4	Hamlet	Mahonda
Donge_Pwani002	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.4	Hamlet	west
Mkataleni002	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.49	Hamlet	Mkataleni
Kichangani003	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.65	Hamlet	central
Mkataleni001	19 <sup>th</sup> c.	0.7	Hamlet	Mkataleni
Kikobweni002	16 <sup>th</sup> to 18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.71	Hamlet	central
Mnyimbi001	16 <sup>th</sup> to 18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.74	Hamlet	Mahonda
Mahonda_Mkataleni003	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	0.78	Hamlet	Mahonda



Mahonda_Mkataleni001	19 <sup>th</sup> c.,	0.8	Hamlet	Mahonda
Donge_Karange002	16 <sup>th</sup> -20 <sup>th</sup> c.	1.08	Small Village	west
Donge_Mbiji001	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	1.09	Small Village	west
West_Kandwi001	11 <sup>th</sup> -14 <sup>th</sup> c., 16 <sup>th</sup> -18 <sup>th</sup> c.	1.15	Small Village	east
Kandwi001	14 <sup>th</sup> -15 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c.; 19 <sup>th</sup> c.;	1.53	Small Village	east
Kichangani001	16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c.	1.59	Small Village	central
Kiricacha001	11 <sup>th</sup> -14 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c.; 19 <sup>th</sup> c.	1.67	Small Village	central
Njua_Kuu001	16 <sup>th</sup> -18 <sup>th</sup> c.	1.77	Small Village	central
Kibirikani001	16 <sup>th</sup> -18 <sup>th</sup> c.; 19 <sup>th</sup> c.	1.99	Small Village	central
Kichangani002	19 <sup>th</sup> c.	2.04	Small Village	central
Kikobweni001	11 <sup>th</sup> -12 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c.; 19 <sup>th</sup> c.	2.8	Small Village	central
Mwanakombo001	11 <sup>th</sup> -14 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c., 19 <sup>th</sup> c., 20 <sup>th</sup> c.	4.24	Village	Mahonda
Pwani_Mchangani001	11 <sup>th</sup> -14 <sup>th</sup> c.; 14 <sup>th</sup> -15 <sup>th</sup> c.; 16 <sup>th</sup> -18 <sup>th</sup> c.	5.56	Village	northeast
Chaani_Mvinjeni001	16 <sup>th</sup> -18 <sup>th</sup> c.; 19 <sup>th</sup> c.	~60	Town	central

**Table 1:** Chart of all sites, with dates of associated artifacts.

Centuries	Imports found	Decorated Local Pottery found
800-1000	none	Types 1, 2 (Fleisher 2003: 282-291)
1000-1100	none	Types 1, 2, 3, 4, 5 (Fleisher 2003: 282-295)
1100-1300	Green, Apple-Green, yellow, brown glazed late sgraffiato	Type 3, 4, 5, 7, 8, 10b (Fleisher 2003: 292-295, 299-304)
1300-1500	Islamic monochromes (blue, green, white), Chinese Longquan celadon	Type 3, 4, 6 (Fleisher 2003: 292-295)
1500-1800	Chinese blue-and-white porcelain	Type 13 (Fleisher 2003: 307), and square and diamond impressions on carination (Kirkman 1975: 219)
1800-1950	European imports, stonewares, various unglazed earthenwares, glazed Gulf wares, late Chinese porcelain	Arcs impressions (Croucher 2006; Kirkman 1974), carinated undecorated pots with everted rims

**Table 2:** Centuries and associated materials.



**Figure 3:** Local and imported ceramics, a spindle whorl and *mofa* (bread oven) fragment, 1100-1500 AD.

The earliest possible evidence for settlement that we recorded comes from the northeast at the site of Muembe Nambo, where we located iron slag and TIW/Early Tana Tradition ware (Chami 1998; Horton 1996: 253; Fleisher & Wynne-Jones 2011) among large baobabs, a dry-stone wall, and later sixteenth-nineteenth century materials. Outside of this, most of the earlier sites recorded in survey date from the eleventh to fourteenth centuries AD (see Figure 1). We located two village sites, Mwanakombo and Kiricacha, on bluffs overlooking perennial streams in the west and central regions, respectively. These sites were identified and dated by green-, apple green-, brown-, and yellow-glazed late sgraffiato, neck-punctated wares, necked jars with late TIW decorative motifs, spherical hole-in-mouth pots, and open bowls with applied bases (Fleisher 2003; Horton 1996). Mwanakombo produced iron slag, bead grinders, circular ceramic discs that are possibly either game pieces or unfinished spindle whorls, and fragments of a *mofa* (a type of oven common on the coast for baking millet bread; see Fleisher 2003: 330), suggesting that this site was a small village community involved in craft production and some communal food consumption. Kiricacha also produced *mofa* fragments and yielded a larger and more diverse array of late sgraffiato wares. Ceramic types and the site’s location nearby a large rice-growing valley suggest communal feasting practices centered around rice consumption, a phenomenon well developed on Pemba Island from the eleventh to fifteenth centuries (Fleisher 2003; LaViolette and Fleisher 2009; Walshaw



**Figure 4:** 16<sup>th</sup>-19<sup>th</sup> century ceramics. Industrial European polychrome whitewares, Chinese blue and white porcelain, *Bahlā* ware, and locally produced decorated earthenware, including “Type 13” (Fleisher 2003: 258).

2010). This phase of settlement relates to urban sites like Tumbatu (Rødland 2018) and Shangani (Fitton 2017; Horton forthcoming) during this period.

In the east, two sites with Islamic monochromes were found, suggesting dates from the fourteenth to fifteenth centuries. The larger site is Pwani Mchangani (different from another site in the west of the same name), a large shell-mound site with Islamic monochrome, celadon, and a sherd of Husuni modelled ware, linking it to fourteenth-century Kilwa (Chittick 1975; Wynne-Jones 2005). Kandwi, the other site, was located inland on good soils, and produced evidence for Islamic monochromes and spindle whorls, suggesting textile production from the fourteenth to fifteenth centuries.

For the sixteenth to eighteenth centuries, motifs like those on Fleisher’s (2003: 258) Type 13 ceramics from northern Pemba were a main line of evidence for dating, also comparable to motifs at the fifteenth to seventeenth century site of Pujini in Pemba (LaViolette pers. comm.). However, Croucher (2006: 284) suggests that Type 13 may also continue into the twentieth century, possibly limiting its use as a sole diagnostic for the sixteenth to eighteenth centuries. Two motifs found in abundance on Chinese blue-and-white pottery, the “Allah pattern” and Sino-Sanskrit “comb” pattern, are found from the seventeenth to early nineteenth centuries as well but are most common in the eighteenth (Madsen & White 2011; Thompson 2002). This suggests that while

sixteenth to eighteenth century occupations are plausible, most sites were occupied closer to the end of the period, in the eighteenth century (see Figure 2).

For the late eighteenth-nineteenth century, sites were identified and dated through imported European wares including hand-painted polychrome whitewares and pearlwares; edged wares; undecorated white refined earthenware or white granite wares, plain and ribbed; dipped annular wares; sponge-decorated wares; wares with combined hand-painted and cut-sponge impressions; and black, blue, brown, red, and green transfer print wares, many with the common “Willow” pattern. The forms and types of European (largely English and Dutch) imported wares are identical to those found by Croucher (2006) and largely comparable to those from other eighteenth-nineteenth-century colonial sites (e.g., Samford & Miller 2012). Some, but not all types of European polychrome hand-painted glazed earthenware persisted through the early twentieth century, meaning that sites ascribed to the nineteenth century based on hand-painted European ceramics alone may have occupations which extend slightly later (Fleisher 2003: 274, Croucher 2006: 174). Decorations on locally produced pottery were also used to date nineteenth-century sites, specifically variations of incised arc decorations on carinated pots with everted rims (Croucher 2006: 468; Kirkman 1974: 260).

Other finds which may span the sixteenth to twentieth centuries include Indian red unglazed earthenware, indeterminate Chinese blue-and-white porcelain, East Asian grey stoneware, green-glazed and unglazed Chinese “ginger jars,” undiagnostic European yellow and grey salt-glazed stonewares, Bahla ware from Oman, unglazed Julfar earthenware, and a buff paste, brown-glazed imported earthenware similar to late Islamic glazed wares from the Gulf (Power 2015).

Sites from the sixteenth to nineteenth century with slag finds include Chaani Mvinjeni, Njua Kuu, Kibirikani, and Daraja la Mwanakombo, though small finds of individual slag pieces do not necessarily indicate iron production at the scale of earlier periods (e.g., Baužytė 2019).

## Conclusions

My research questions asked if nineteenth-century plantation systems grew out of earlier, hitherto unrecorded Swahili settlements, and how earlier Swahili landscape modifications and settlement forms shaped nineteenth-century transformations. While hamlets and field houses

of the late second millennium were present outside any areas of earlier settlement, some of the largest nineteenth-century sites indeed developed directly over or adjacent to earlier village sites. The nineteenth-twentieth-century sugar plantation at Mwanakombo was built directly over an eleventh to fourteenth-century village, which also had evidence for sixteenth-eighteenth-century occupations based on local ceramic decorations. This suggests continuous occupation from the eleventh century to the present. Chaani Mvinjeni, the largest site located in the survey, was a major hub in the nineteenth-century settlement system, and it developed just directly north of the eleventh-fourteenth-century village at Kiricacha, which also had smaller numbers of ceramics indicating later phases of occupation from the sixteenth to nineteenth centuries. Both sites overlook a large rice valley, suggesting a continued reliance on agricultural production in the inland areas from the eleventh century onward. Finally, the nineteenth-century village site at Kibirikani did not have evidence for early occupation, but the site appears to have grown prior to the development of the slave-based clove plantation economy based on the preponderance of eighteenth-century materials recovered.

While early to mid-second-millennium settlement is based around villages with craft production taking place, links to other Swahili towns, and links to the western Indian Ocean, the expansion of the late second millennium suggests a dramatic reorganization of rural life. Instead of the isolated villages of the early second millennium, by the eighteenth century numerous small hamlets and field houses were spread out across diverse microenvironments in the rural areas. By the nineteenth century, nearly all sites had evidence for imported mass-produced European ceramic wares, and the development of several larger villages and towns around Mahonda and Chaani suggest rapid demographic and economic expansion.

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