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# Archaeological Expedition in Amyan. Report of the First Campaign (2019)

Barbara Couturaud

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# ARCHAEOLOGICAL EXPEDITION

## IN AMYAN

### REPORT OF THE FIRST CAMPAIGN (2019)

Edited by Barbara COUTURAUD



**Archaeological Expedition in Amyan**

**Report of the First Campaign (2019)**

Edited by Barbara COUTURAUD



General Directorate of Antiquities

Erbil

2020

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## INTRODUCTION

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*Barbara COUTURAUD*<sup>1</sup>

*Hiwa SHIMAL*<sup>2</sup>

The overall objective of the archaeological excavation project in Amyan, under the direction of Barbara COUTURAUD, is to gain a better understanding of the Early Bronze Age (3<sup>rd</sup> millennium BC) in N Mesopotamia, in an area located in present-day Iraqi Kurdistan. The project intends to fill a gap in our knowledge of this part of Mesopotamia.

The first excavation campaign, held between May 19 and June 16 2019, was preceded by a topographical survey of the site, between April 7 and April 11 2019. These missions could not have been carried out without the agreement and support of Kayfi ALI, General Director of Antiquities of Kurdistan, Michel MOUTON, General Director of the IFPO, Dominique PIERI, Director of the Department of Archaeology and History of Antiquity at the IFPO, and Hiwa SHIMAL, Director of Antiquities in Akre. Financial support of this first campaign was provided by the IFPO, the Service of Cooperation and Cultural Action of the French Embassy in Baghdad, the University of Liege, through the Assyriology and Archaeology of Western Asia Service, and the University of Lille, through the Department of Ancient Languages and Cultures. May they all be thanked here for their precious support.

Finally, we are deeply grateful to the *Land of Nineveh Archaeological Project*, led by Daniele MORANDI BONACOSSO, who shared information and data collected on the site, including aerial survey images by drone, which were of great help in the preparation of this campaign.

### **Background of the Research**

Mesopotamian territory, corresponding to the river basin formed by the Tigris and the Euphrates, has been the subject of archaeological excavations for almost two centuries, distributed in very unequal ways from both a geographical and a chronological point of view. Indeed, the first excavations date from the first half of the 19<sup>th</sup> century, with projects focussing on the Neo-Assyrian capitals of the 1<sup>st</sup> millennium BC, such as

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<sup>2</sup> Head of the Directorate of Antiquities-Akre.

Khorsabad<sup>3</sup> and Nineveh,<sup>4</sup> in N Iraq. S Mesopotamia (S Iraq) and central Mesopotamia, particularly the Diyala region (NE of Baghdad), were excavated as early as the end of the 19<sup>th</sup> century and important sites of the 3<sup>rd</sup> millennium BC, such as Ur<sup>5</sup>, Kish,<sup>6</sup> Girsu<sup>7</sup> and Eshnunna,<sup>8</sup> to name a few, have produced a valuable amount of archaeological data. These discoveries led to a better understanding of Mesopotamian history and culture of the 3<sup>rd</sup> millennium; they also laid the groundwork for the historiography of the ancient Near East for this period. However, many regions have not been sufficiently explored, resulting in a partial image of the complex social and political dynamics of this extremely vast territory, composed of several regional entities whose populations regularly came into contact with each other, contributing to the production of a more or less homogeneous culture. Iraqi Kurdistan is one of those entities.

In recent years, this region of Iraq has been the subject of further archaeological research, with more than forty international missions, mainly located in central and SE Kurdistan.<sup>9</sup> This research is welcome because if the N region of Iraq remains very poorly known, it nonetheless hosts a very large number of archaeological sites. However, the data provided by this new research are somewhat unbalanced, from the point of view both of their geographical and chronological distribution, since they mainly concern, on the one hand, the 4<sup>th</sup> millennium BC, known to be the period which witnesses the appearance of so-called complex societies<sup>10</sup>, and on the other hand, the 2<sup>nd</sup> and 1<sup>st</sup> millennia BC, which witnesses the birth and then the apogee of the Neo-Assyrian empire<sup>11</sup>. The 3<sup>rd</sup> millennium, which corresponds to the Early Bronze Age, is, for its part, almost undocumented. Moreover, the governorates of Erbil and Sulaymaniyah that have been the main subjects of archaeological explorations. The NW part of Iraqi Kurdistan remains poorly explored.

Thus, at least three gaps in current research in Iraqi Kurdistan can be reported: limited archaeological evidence for the NW part of Kurdistan (Dohuk Governorate), limited knowledge of the Early Bronze Age, and the lack of a reliable chronological sequence for this area.

### *A Relatively Unknown Region: NW Kurdistan*

In general, it is striking that current research in Iraqi Kurdistan is mainly concentrated in the governorates of Erbil and Sulaymaniyah. In the governorate of Dohuk, apart from the old excavations, conducted by the Oriental Institute of Chicago in Jerwan<sup>12</sup>, there has been very limited archaeological research. Further S, on the outskirts of Mosul, excavations were also carried out on the sites of the Neo-Assyrian capitals of Khorsabad and Nineveh, as well as on proto-historical sites such as Tepe Gawra.<sup>13</sup>

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<sup>3</sup> Botta & Flandin 1867-1870.

<sup>4</sup> Layard 1849-1853.

<sup>5</sup> Woolley 1934.

<sup>6</sup> Moorey 1978.

<sup>7</sup> Parrot 1948.

<sup>8</sup> Delougaz 1952; Delougaz *et al.* 1967; Delougaz & Lloyd 1942.

<sup>9</sup> Kopanias & MacGinnis 2016.

<sup>10</sup> Baldi & Gomez Bach 2019.

<sup>11</sup> Altaweel 2008.

<sup>12</sup> Jacobsen & Lloyd 1935.

<sup>13</sup> Speiser 1935; Tobler 1950; Rothman 2002.

More recently, the Mosul Lake salvage excavations have provided new data on the occupation of this area, W of Dohuk.<sup>14</sup> But it is mainly survey programs that have dominated archaeological research in recent years, with three projects in the Dohuk Governorate: the *Eastern Habur Archaeological Survey* (EHAS, directed by Peter PFÄLZNER),<sup>15</sup> the *Land of Nineveh Archaeological Project* (LoNAP, directed by Daniele MORANDI BONACOSSO)<sup>16</sup> and the *Upper Greater Zab Archaeological Reconnaissance* (UGZAR, directed by Rafal KOLINSKI).<sup>17</sup> The first two teams have recently started excavations, respectively at Bassetki since 2015<sup>18</sup> and at Gomel since 2017.<sup>19</sup> While the data provided by these surveys are of great value, they do not provide the precision of analysis that only archaeological excavations can achieve.

### *A Poorly Documented Period: the Early Bronze Age (3<sup>rd</sup> Millennium BC)*

The Early Bronze Age is an important moment in the formation of complex societies. Indeed, this period witnesses not only the beginning of massive urbanization in this region of the world, but also the birth of a major political upheaval: the change from small independent kingdoms to a territorial unification under the Akkadian dynasty, with the apogee of what is called the First Empire, around 2300 BC, followed at the end of the 3<sup>rd</sup> millennium by the powerful Ur III kingdom, the organization of which laid the foundations of a bureaucratic and hierarchical system that allowed the control of very remote territories, foreshadowing the Assyrian and Babylonian territorial empires of the 2<sup>nd</sup> and 1<sup>st</sup> millennia.

Data from the beginning of the 3<sup>rd</sup> millennium, including the transition from Chalcolithic to Early Bronze Age, are relatively rare. Currently, survey data show a significant decrease of sites between the Late Chalcolithic and the period known as Ninevite 5, at the beginning of the 3<sup>rd</sup> millennium.<sup>20</sup> Then, for the period commonly called Mid-Late 3<sup>rd</sup> millennium, there is a massive reoccupation of the region with an significant number of urban settlements. The phenomenon that would explain these variations must be explained through excavations, especially since survey data cannot clarify whether there was continuity or a break in the occupation during the 3<sup>rd</sup> millennium. It is also important to understand to what extent this region was dependent or not on the empires that emerged in S Mesopotamia, in Akkad and Ur, in order to better understand the nature of local societies: did they pass under the control of the Akkadians? Did the city-state system that prevailed in the N also exist in the N? Who are these ‘mountain peoples’ mentioned in texts?<sup>21</sup> ‘Barbarians’? People subjected to the cities of the S? Or federated and organized societies, whose power was certainly more important than supposed? And what about the repeated campaigns of the kings of Ur against these N regions?<sup>22</sup>

### *An Unreliable Chronology: The Ceramic Sequence (Ubaid-Ottoman Period)*

The region has been the subject of intensive surveys that have yielded extremely interesting results on the dynamics of occupation. But these surveys obviously have

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<sup>14</sup> Ministry of Culture and Information, State Organization of Antiquities and Heritage 1986; Rova 2017.

<sup>15</sup> Pfälzner & Sconzo 2015; 2016.

<sup>16</sup> Morandi Bonacossi & Iamoni 2015.

<sup>17</sup> Kolinski 2017; 2018.

<sup>18</sup> Pfaelzner & Qassim 2017; 2018.

<sup>19</sup> Morandi Bonacossi *et al.* 2018.

<sup>20</sup> Gavagnin 2016.

<sup>21</sup> Kozad Mohamed 2012, 51-166.

<sup>22</sup> Frayne 2008.

limitations, since the interpretation of the pattern of occupation results from the surface collection of ceramics. In addition, only the diagnostic forms are taken into account, belonging to forms known by the surveys of neighbouring regions. Thus, there is no reliable ceramic reference sequence, something which only excavations can produce.

In fact, only archaeological excavations on multi-period sites make it possible to calibrate the results of surveys with discoveries made in known archaeological contexts and thus to establish a reliable sequence for the ceramics, as well as for all the material culture of a micro-region. From this point of view, the surveys conducted by the LoNAP team have yielded interesting results concerning the plain of Akre, also called Navkur Plain, which has an exceptional density of sites and almost continuous occupation since the 6<sup>th</sup> millennium BC.<sup>23</sup> The survey has identified more than 1,000 archaeological sites in this extremely fertile area, crossed by a multitude of streams and rivers, the largest of which, Al Khazir, flows into the Greater Zab. This is where the site of Amyan is located.

### **Excavations in Amyan: Description of the Project**

The site of Amyan is located halfway between Tell Brak and Kunara, 55 km NW of Erbil, 12 km SE of Gomel (Fig. 1). Roughly triangular, 30 km wide, this extremely fertile plain, which has been heavily occupied, is bounded by the Zagros foothills to the N, the Jebel Maqlub and Bardarash mountains to the S, the Dohuk plain and the modern lake Mosul to the W and the Great Zab to the E (Fig. 2). The site of Amyan is composed of a high mound and a lower town on its S and E sides, partly covered by a modern village (Fig. 3). At the foot of the high mound, on its W side, is the Kurabak River, a tributary of the river Al Khazir. The survey and surface collection carried out on the site by the LoNAP team has evidenced occupation during the following periods<sup>24</sup>: Neolithic, Chalcolithic, Ninivite 5, Mid-Late 3<sup>rd</sup> millennium, Middle Bronze, Mitanni, Medio Assyrian, Neo-Assyrian, Hellenistic, Parthian, and Islamic.<sup>25</sup> The most represented periods on the site are the Early Bronze Age and the Middle Bronze Age (3<sup>rd</sup> and 2<sup>nd</sup> millennia BC). On the periphery of the mound, many smaller sites have been identified.<sup>26</sup>

The long-term objectives of the archaeological project in Amyan are threefold.

#### *Establishment of a Complete Chronological Sequence of the Occupation of the High Mound and the Lower Town and a Ceramic Typological Reference System*

The reference system for the ceramic sequence is currently based on the results of the excavations carried out S of the Tigris, in the Sinjar area,<sup>27</sup> and in the neighbouring Syrian Khabur region.<sup>28</sup> The excavation in Amyan will reveal material from all levels of occupation of the site, and help in establishing a complete stratigraphic and ceramic sequence that can serve as a reference for a regional chronology. In collaboration with

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<sup>23</sup> Morandi Bonacossi & Iamoni 2015; Gavagnin *et al.* 2016.

<sup>24</sup> The site has already been visited in 2009; Reade & Anderson, 73-74.

<sup>25</sup> Periodization based on Ur 2010, after Wilkinson & Tucker 1995; this periodization is the one used for the survey by EHAS, LoNAP and UGZAR. See Morandi Bonacossi in this volume. See also Morandi Bonacossi & Iamoni 2015; Gavagnin 2016; Gavagnin *et al.* 2016.

<sup>26</sup> Morandi Bonacossi in this volume.

<sup>27</sup> Wilkinson & Tucker 1995; Ball 2003 & 2007.

<sup>28</sup> Meijer 1986; Lyonnet 2000; Ur 2010.



other teams currently working in this area of Kurdistan, the data from the Amyan excavations will contribute to the establishment of a reliable sequence specific to the region, based on a comprehensive study of ceramic material.

### *Study of the Early Bronze Age Period*

The excavation of soundings both on the high mound and in the lower town will make it possible to understand the Early Bronze Age period and the transitions from the previous period, the Late Chalcolithic, and to the following period, the Middle Bronze Age. The results acquired will, among other things, confirm or refute the hypotheses based on the LoNAP team's surface collections, namely a reduction, followed by an increase in the number of settlements in the Early Bronze Age,<sup>29</sup> and help in understanding the mechanisms at the origin of this variation. Through the study of material culture, the results will also help to clarify what the political influences on the region were, through the empires of Akkad and of Ur III, until the second half of the 2<sup>nd</sup> millennium, at a time when the region was perhaps integrated into the kingdom of Nurrugum.<sup>30</sup>

### *Environment of the Site*

Research in the plain of Akre shows that this rich and fertile plain was extensively occupied during Antiquity. Therefore, one of the objectives of the Archaeological Mission of Amyan will be to understand the relationship between the site and its direct environment, notably with the *wadi* on the W flank of the high mound (Fig. 4). The study of the cluster of smaller sites will also make it possible to understand the functioning of a medium-sized urban site with surrounding rural occupations from the 4<sup>th</sup> to the 1<sup>st</sup> millennium BC, periods during which Amyan saw the most intensive occupation.

## **The First Campaign**

The first campaign was divided in two sessions. The first was a topographical survey of the high mound, prior to the excavation. This survey was carried out from April 7 to April 11 2019 by Soizik BECHETOILLE (architect, IFPO-Amman), Barbara COUTURAUD (archaeologist, IFPO-Erbil), and Omar SHAREF (archaeologist, Directorate of Antiquities-Akre).<sup>31</sup>

The second session was held from May 19 until June 16 and was dedicated to the excavations (19 days of excavation). The objective of this short campaign was to explore the levels of occupation of the high mound in order to get an idea of the chronology of the occupation of the site. For that reason, a step trench oriented E-W along the E slope was opened (Fig. 4). This trench (Area A) is 32 m long and 3 m wide (Fig. 5). It was divided into three soundings of 10 m long, separated by two baulks 1 m wide:<sup>32</sup>

- sounding A1 in the upper part, excavated by Narmin ALI AMIN (archaeologist, University of Salahaddin-Erbil), Morgane PIQUE (Master student, University of Lille) and Omar SHAREF (archaeologist, Directorate of Antiquities-Akre);

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<sup>29</sup> Morandi Bonacossi & Iamoni 2015, 23-24; Gavagnin 2016.

<sup>30</sup> Charpin & Ziegler 2003, 97-99; Morandi Bonacossi *et al.* 2018.

<sup>31</sup> See Couturaud & Bechetoille in this volume.

<sup>32</sup> See Pique *et al.*, Colonna d'Istria and Couturaud in this volume

- sounding A2 in the middle, excavated by Laurent COLONNA D'ISTRIA (philologist and archaeologist, University of Liege);
- sounding A3 in the lower part, excavated by Barbara COUTURAUD (archaeologist, IFPO-Erbil).

The ceramic material has been studied by Taos BABOUR (archaeologist & ceramicist, CNRS UMR 7041-VEPMO)<sup>33</sup> and the objects by Barbara COUTURAUD (archaeologist, IFPO-Erbil).<sup>34</sup> Twenty-two excellent workers were part of the excavation team (divided in three groups of eight workers, each group working only one week on the site), and we must also mention the precious help and logistical support of Mohammed AZIZ KARIM, *mokhtar* of Amyan.

The results of this first campaign were of deep interest and definitely confirm the importance of Amyan as one of the main urban cities of the plain, probably controlling the road leading from Nineveh to the NE hinterland. In fact, the step trench did not reveal a succession of occupations, but rather, a massive structure, the result of urban planning: a wall, probably an enclosure wall (rampart?) (sounding A2) resting on a glacis or a terrace (sounding A3). Slightly above is a building of which only one wall and part of a possible courtyard were excavated (sounding A1). Unfortunately, few closed and clean contexts have been unearthed. As a result, the dating of these structures swings between the Mid- to Neo-Assyrian period. Further studies and excavations will allow the dating to be refined.

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<sup>33</sup> See Babour in this volume.

<sup>34</sup> See Couturaud in this volume.

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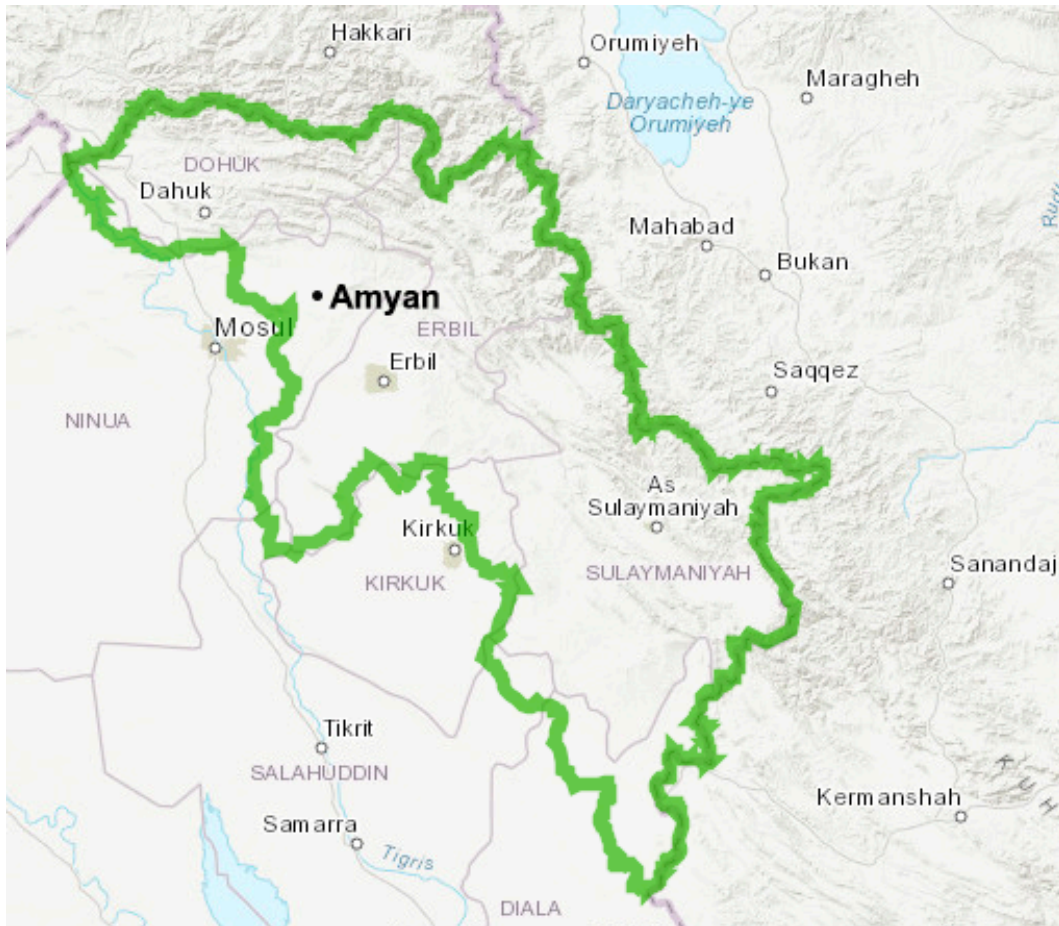


FIG. 1: Location of Amyan in Iraqi Kurdistan (after <http://www.arcgis.com/home/webmap/viewer.html?webmap=d844b2cff7e64b12a42b9d6bc09136db>)

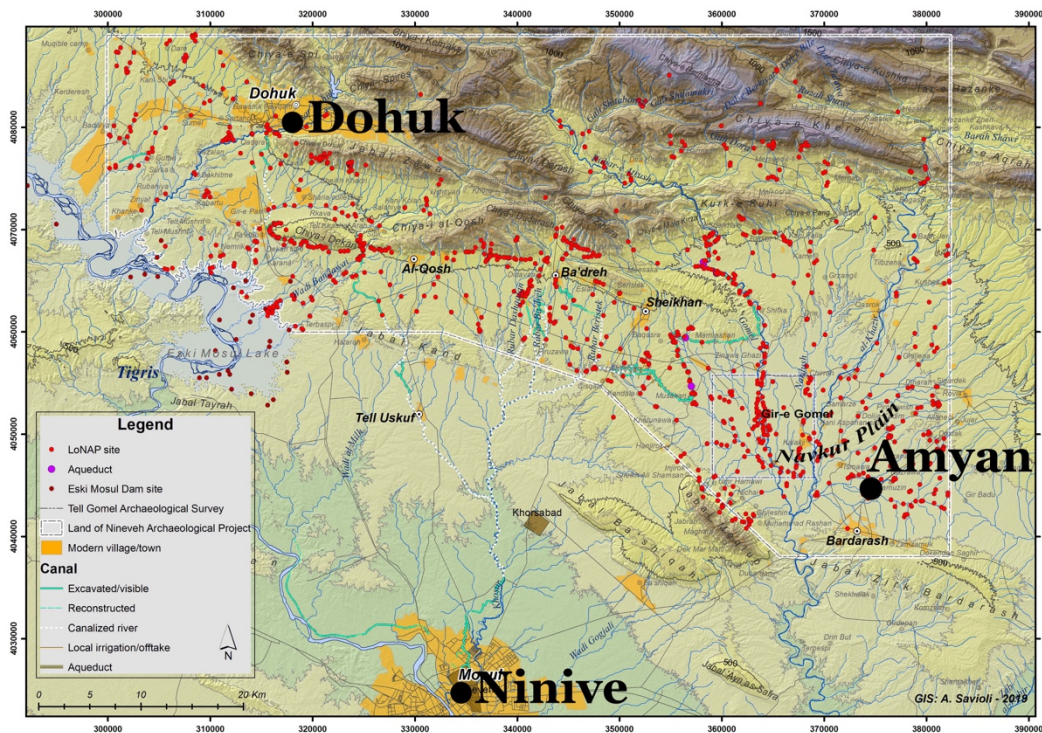


FIG. 2: Location of Amyan in the plain of Akre (after LoNAP)



FIG. 3: Amyan and its surroundings (courtesy of LoNAP)



FIG. 4: Location of the step trench (Area A, black) and possible future soundings (red) (MAA)



FIG. 5: The step trench in Area A after excavation (MAA)



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## THE AMYAN ARCHAEOLOGICAL COMPLEX SURVEY BY THE LAND OF NINEVEH ARCHAEOLOGICAL PROJECT

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*Daniele MORANDI BONACOSSI*

### ***The Survey of the Land of Nineveh Archaeological Project: Goals and Methods***

The Land of Nineveh Archaeological Project (henceforth LoNAP), initiated in 2012 by the University of Udine, is an interdisciplinary landscape archaeology project that aims to understand the formation and transformation of the cultural and natural landscapes of the E Tigris region in N Iraqi Kurdistan from the Palaeolithic to the Islamic period.<sup>2</sup> The project is based on the stratified archaeological survey of an area covering almost 3,000 km<sup>2</sup> (Fig. 1). The investigated region bridges the Duhok and Ninawa governorates and is delimited by the Duhok Plain and the Zagros foothills to the N, the lake formed by the Eski Mosul Tigris Dam to the W and the Navkur Plain that extends from the Jebel Maqloub to the river Al Khazir valley and the Bardarash region to the S and E. Its main objective is to explore patterns of settlement, land use and management in this region located at the heart of Upper Mesopotamia. The survey is combined with the archaeological excavation of the Gir-e Gomel site, aimed at establishing a regional stratigraphic reference sequence and well-stratified and absolutely-dated seriations of ceramics and other archaeological artefacts.<sup>3</sup> This will make it possible also to fine-tune the pottery sequences resulting from the regional survey.

The vast size of the LoNAP study area has led to the development of a mixed extensive and – in selected areas – intensive survey strategy, based on motor vehicle survey combined with pedestrian field-walking.<sup>4</sup> Intensive off-site survey along transects radiating from the region's major sites and the systematic and intensive survey of a selected area covering 100 km<sup>2</sup> centred on the Gir-e Gomel site in the fertile Navkur Plain have been used with the aim of detecting small, low-mounded sites and non-mounded concentrations of surface material not identified through satellite imagery

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<sup>1</sup> Professor, University of Udine.

<sup>2</sup> Morandi Bonacossi 2016; Morandi Bonacossi 2018a; Morandi Bonacossi 2018b; Morandi Bonacossi & Iamoni 2015.

<sup>3</sup> Morandi Bonacossi *et al.* 2018.

<sup>4</sup> Morandi Bonacossi & Iamoni 2015; Morandi Bonacossi 2018a.

analysis or field survey and to explore more thoroughly ancient land use (soil and water exploitation) and communications (hollow ways).<sup>5</sup>

Archaeological field survey work was preceded by the systematic examination of available cartographic sources and the analysis and interpretation of satellite imagery, mainly declassified Corona photographs (especially Missions 1039, 1102, 1104 of 1967 and 1107 of 1969), in order to identify potential archaeological sites, ancient infrastructures and other archaeological features.<sup>6</sup> Site mapping and collection were based on the identification of settlement-site boundaries by means of three parameters: the presence of organic anthrosols, concentrations of archaeological finds, and mounding.<sup>7</sup> A handheld Global Positioning System receiver and a Geographic Information System (ArcGIS 10.3) spatial database were used to record all surface ceramic collections, which were sampled through complete area coverage and using collection areas determined on the basis of site topography. During the survey, only diagnostic sherds and small finds were collected. The dating of these was based upon a ceramic typology generated by Wilkinson and Tucker for the Iraqi ‘North Jazira Survey’<sup>8</sup> and later revised and integrated by Ur.<sup>9</sup> This typology is continuously updated with new region-specific types by the Eastern Habur Archaeological Survey,<sup>10</sup> LoNAP, the Upper Greater Zab Archaeological Reconnaissance<sup>11</sup> and the Erbil Plain Archaeological Survey projects<sup>12</sup> so as to develop a pottery typology that can effectively characterize regional ceramic identities and variability.<sup>13</sup>

During seven field seasons from 2012 to 2018, LoNAP identified 1087 archaeological sites: among these are the high mound of Amyan and the cluster of smaller archaeological sites surrounding it. This site complex was repeatedly surveyed during the 2012 and 2016 field seasons.

### ***The Amyan Archaeological Complex***

The Amyan archaeological complex is a cluster of at least ten sites located within a maximum radius of approximately 600 m from the Amyan mound,<sup>14</sup> which, with its high mound and lower town and an approximate surface area of 14 ha, represents the centre of this shifting settlement complex (Fig. 2). The Amyan site group, which covers an aggregated settled surface area of about 44 ha, resulted from the progressive clustering into a larger complex of multiple small sites inhabited since the prehistoric and protohistoric periods<sup>15</sup> and distributed along the N and S banks of a main wadi and at its confluence with a minor tributary. Amyan is characterized by a long and uninterrupted urban occupation lasting at least from the third to the mid-first

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<sup>5</sup> Simi 2019.

<sup>6</sup> For more details, see Morandi Bonacossi & Iamoni 2015.

<sup>7</sup> Menze & Ur 2012.

<sup>8</sup> Wilkinson & Tucker 1995.

<sup>9</sup> Ur 2010, appendix B.

<sup>10</sup> Pfälzner & Sconzo 2015; 2016.

<sup>11</sup> Kolinski 2017; 2018.

<sup>12</sup> Ur *et al.* 2013; Ur & Osborne 2016; Ur *et al.* in press.

<sup>13</sup> Gavagnin *et al.* 2016.

<sup>14</sup> LoNAP nos. 29-31, 571-575, 577 and 943.

<sup>15</sup> This phenomenon has also been observed in other zones in the LoNAP study area (e.g. at the Jerahiye cluster: Morandi Bonacossi & Iamoni 2015; Conati *et al.* 2019) and elsewhere in Iraqi Kurdistan, such as the site clusters of Muqable in the Selevani Plain (Puljiz & Qasim 2018), Bab-w-Kur in the Rania Plain (Skuldbol & Colantoni 2016), and Quri Begh in the Erbil Plain (Ur *et al.* in press).

millennia BC, which was preceded by a lengthy settlement of the area during the Neolithic and Chalcolithic.

The first occupation recorded in the region by LoNAP started during the Early Pottery Neolithic, when two small circular sites to the N of Amyan, nos. 30 and 31, were sparsely settled (Fig. 3a). Both sites are low-mounded and cover areas of 3.50 and 1.80 ha respectively. A few Hassuna ceramic diagnostics were collected from their surfaces.

The following Halaf and Northern Ubaid periods show a contraction of the settlement to the low mound 31, where scattered ceramic material dating to these periods was found (Fig. 3b-c). The Late Chalcolithic 1-2 marks the beginning of the occupation of the Amyan mound. Pottery sherds dating to this period were retrieved from the W flank of the *tell* (Fig. 4a). It is possible that the later overburden has obscured a more extensive occupation of the Amyan main mound. Site 31 continued to be settled in this period. The Late Chalcolithic 3-5 shows a continuation of settlement both at Amyan (mound and lower town) and site 31, although only scanty ceramic diagnostics were recovered (Fig. 4b).

With the beginning of the Early Bronze Age, the shifting circular settlement pattern characterizing the Amyan site complex becomes more evident. The small site 31 was abandoned during the Ninevite 5 period, whilst a new low-mounded site 572 was sparsely settled for the first time (3.7 ha surface area; Fig. 4c). In spite of the massive overburden obscuring the early settlement phases located in the basal layers of the long-lived Amyan mound, the surface scatter of Ninevite 5 diagnostics suggests that the entire high mound was occupied in this period.

Surface pottery assemblages do not allow subdivision of the ceramic chronology of the mid to late 3<sup>rd</sup> millennium BC. This period, as evidenced by the LoNAP pottery collections gathered at the Amyan archaeological complex, is treated as a single temporal unit spanning from the end of the Ninevite 5 to the end of the 3<sup>rd</sup> millennium BC. The mid-late 3<sup>rd</sup> millennium marks the phase of full urbanization of Amyan, which appears to have been surrounded by a cluster of six smaller archaeological sites covering an aggregate surface area of approximately 28 ha (Fig. 5a). The pottery distribution indicates that the entire site of Amyan – occupying an area of 14 ha with its mound and lower town – was inhabited during this period.

High-density ceramic concentrations have also been recorded at sites 30, 571 and 943, located respectively to the N, E and S of Amyan. Particularly interesting is the low-mounded, approximately 10 ha site 571, unfortunately now covered by modern houses, where a large number of mid to late 3<sup>rd</sup> millennium diagnostics (77 fragments) were found, in part due to intense bulldozer trenching activity that has damaged the mound. Large quantities of ceramics dating to this period were also recovered from the surfaces of sites 30 (3.5 ha surface area; 53 fragments) and the tiny site 943 (0.7 ha surface area; 30 fragments). On the other hand, much more limited quantities of pottery were collected at sites 572 (3.7 ha surface area), 574 (4.7 ha surface area) and 575 (1.7 ha surface area).

The full occupation of Amyan, the extension of settlement activity to seven of the ten sites forming the Amyan archaeological complex and the dramatic increase in the overall surface area from approximately 4 ha in the previous Ninevite 5 period to about 28 ha, show that during the mid to late 3<sup>rd</sup> millennium the site of Amyan became a small-sized urban centre surrounded by a cluster of smaller satellite settlements, at least one of which was of considerable size (571).

The results of the LoNAP regional survey reveal that Amyan was the largest site in the SE part of the Navkur Plain to the E of the river Al Khazir and can be considered as a 'central place' of local importance on a route linking Early Bronze Age Erbil (Urbilum) and the other Erbil Plain urban centres, such as Baqrta, with the N plains of the Zagros Piedmont.

The late 3<sup>rd</sup> millennium occupation pattern of the Amyan cluster remained stable also during the following Middle Bronze Age, which was the period of the settlement complex's greatest expansion. Eight sites were occupied during the first half of the 2<sup>nd</sup> millennium BC (Fig. 5b). The Amyan high mound and lower town continued to be the centre of the settlement complex and were encircled by a cluster of seven smaller satellite sites (30, 31, 571, 573, 574, 577, 943). During this phase, the complex reached an overall surface area of about 39 ha, thus marking a further increase with respect to the mid to late 3<sup>rd</sup> millennium and indeed the maximum extension reached by the Amyan archaeological complex during its entire history.

The surface record from the Amyan settlement cluster describes a development trend that has already been documented by means of survey and excavation at the nearby site of Gir-e Gomel, in the centre of the Navkur Plain (Fig. 1). Here, a small Late Chalcolithic and a slightly larger Ninevite 5 site developed into a fully grown 35-ha urban site during the later 3<sup>rd</sup> millennium and retained its extension and urban character during the Middle Bronze Age.<sup>16</sup> The transition from the Middle to the Late Bronze Age marks a period of drastic reduction of the Amyan settlement complex, from 39 to 14 ha approximately (Fig. 5c). In the Mitanni period, the high Amyan mound with its 3.5 ha surface area was settled, whilst the lower town shows only low-intensity occupation traces.<sup>17</sup> Sites 572, 574 and 575 were sparsely settled.

In accordance with the general settlement trend recorded by the LoNAP survey in the region – showing a strong recovery of settlement activity during the Middle Assyrian period<sup>18</sup> – this phase might represent a new growth period of the Amyan complex, possibly marked by the occupation of the entire Amyan site and two satellite settlements (571 and 574; Fig. 6a). However, the limited amount of pottery found suggests a rather weak occupation of the Amyan settlement complex. A more vigorous development trend has been recorded for the Neo-Assyrian period, when, besides the entire Amyan site with its high mound and lower town, four satellites were inhabited (Fig. 6b). Sites 30 and 572 have provided evidence of dense occupation, while 31 and 573 have each yielded only one Neo-Assyrian diagnostic. Amyan was the largest site in the SE part of the Navkur Plain to the E of the river Al Khazir and part of the close-knit Neo-Assyrian regional settlement pattern based upon a dense network of numerous rural villages and small isolated farmsteads scattered throughout the landscape behind Khorsabad and Nineveh.<sup>19</sup>

The Post-Assyrian period is characterized by a dramatic decrease in the overall settled area from approximately 24 ha in the previous period to just 3.5 ha of the Amyan high mound, with the abandonment of all the satellite sites surrounding it (Fig. 6c). This desertion of the Amyan settlement complex persisted during the Hellenistic period and was partially interrupted only in the Parthian period, when a rather weak settlement

<sup>16</sup> Morandi Bonacossi *et al.* 2018. A similar pattern has been observed in this region by the German-Kurdish project excavating the site of Bassetki in the Selevani Plain W of Duhok: Pfälzner & Qasim 2018.

<sup>17</sup> Only four Mitanni diagnostics were recovered from the lower town.

<sup>18</sup> Morandi Bonacossi 2018a; Morandi Bonacossi & Iamoni 2015.

<sup>19</sup> Morandi Bonacossi 2018a; Morandi Bonacossi 2018b; Morandi Bonacossi & Iamoni 2015.

of Amyan (high mound and a feeble occupation in the lower town) and sites 31, 573 and 577 has been recorded, accounting for an aggregate surface area of about 9 ha (Fig. 7a).

The Sasanian period saw a further total abandonment of the Amyan archaeological complex, while very weak settlement activity is recorded for the Early Islamic period in Amyan and sites 573 and 577 (Fig. 7b), as well as for the Middle Islamic period in Amyan and sites 31 and 577 (Fig. 7c). The Amyan settlement cluster lay abandoned in the Late Islamic epoch.

### ***Final Considerations***

The Amyan archaeological complex is an interesting example of a circular site-cluster resulting from the long-term aggregation of shifting settlements that started to grow together around a central site from the Pottery Neolithic and Chalcolithic periods onwards. The settlement history of the Amyan complex reflects the general occupation and development trends that have already been defined on a regional scale by LoNAP and other regional survey projects in the area and confirmed by excavation at sites such as Bassetki and Gomel. A handful of small rural settlements began to coalesce during late prehistoric and protohistoric times at the confluence of two wadis in a very fertile and well-watered agricultural plain. During the Late Chalcolithic and the beginning of the Early Bronze Age, Amyan, one of the sites of the settlement cluster, grew into a local pre-urban centre. The mid to late 3<sup>rd</sup> millennium marks the full urbanization of the settlement cluster, when for the first time the mound and lower town of Amyan were entirely settled, reaching an overall size of 14 ha, and were surrounded by an increasing number of satellite villages. This settlement pattern persisted throughout the end of the Middle Bronze Age, entering a crisis during the Mitanni period and changing during the following Middle and Neo-Assyrian periods, when a landscape dotted with numerous rural settlements and few small-sized centres (including Amyan itself) took shape. The following periods, from the Post-Assyrian to the Islamic epoch, mark a long season of weak occupation or settlement crisis of the Amyan settlement complex.

The onset of archaeological excavations at Amyan will offer an excellent opportunity to test, by means of excavation, the above-described occupation history of this interesting settlement complex – and to investigate, against a regional background sketched out by surveys and the few archaeological excavations conducted in this area, the cultural processes shaping the pre-urban and urban settlement cluster that dominated the SE part of the rich Navkur Plain during the Early and Middle Bronze Ages.

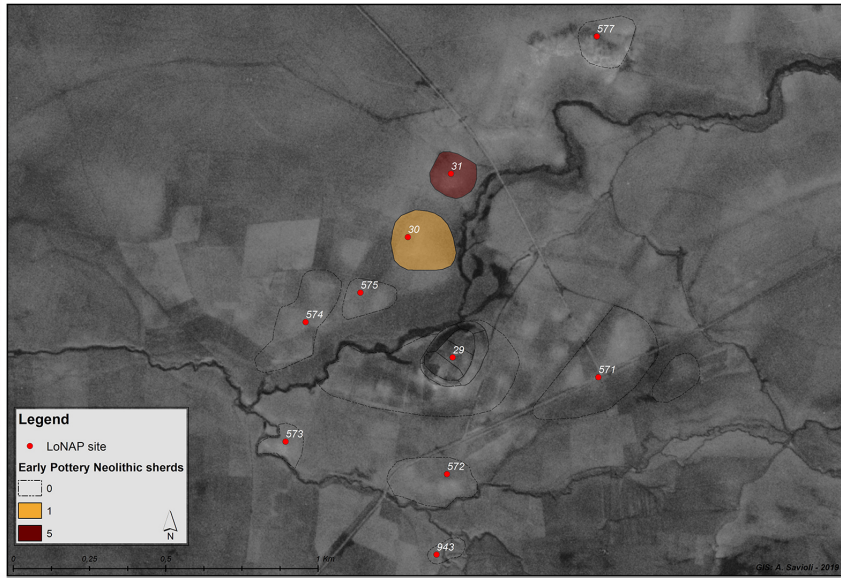
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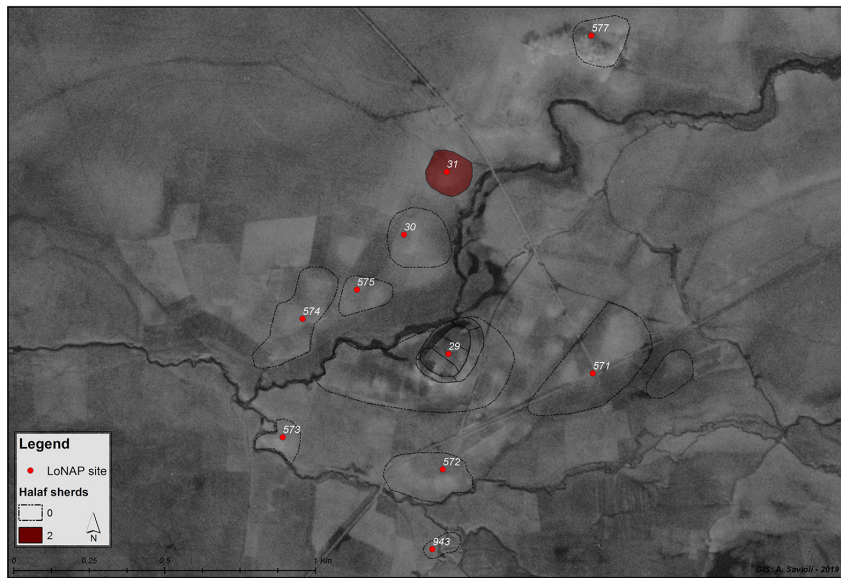
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a



b



c

FIG. 3: The Amyan archaeological complex during a) the Early Pottery Neolithic, b) the Halaf and c) Northern Ubaid periods

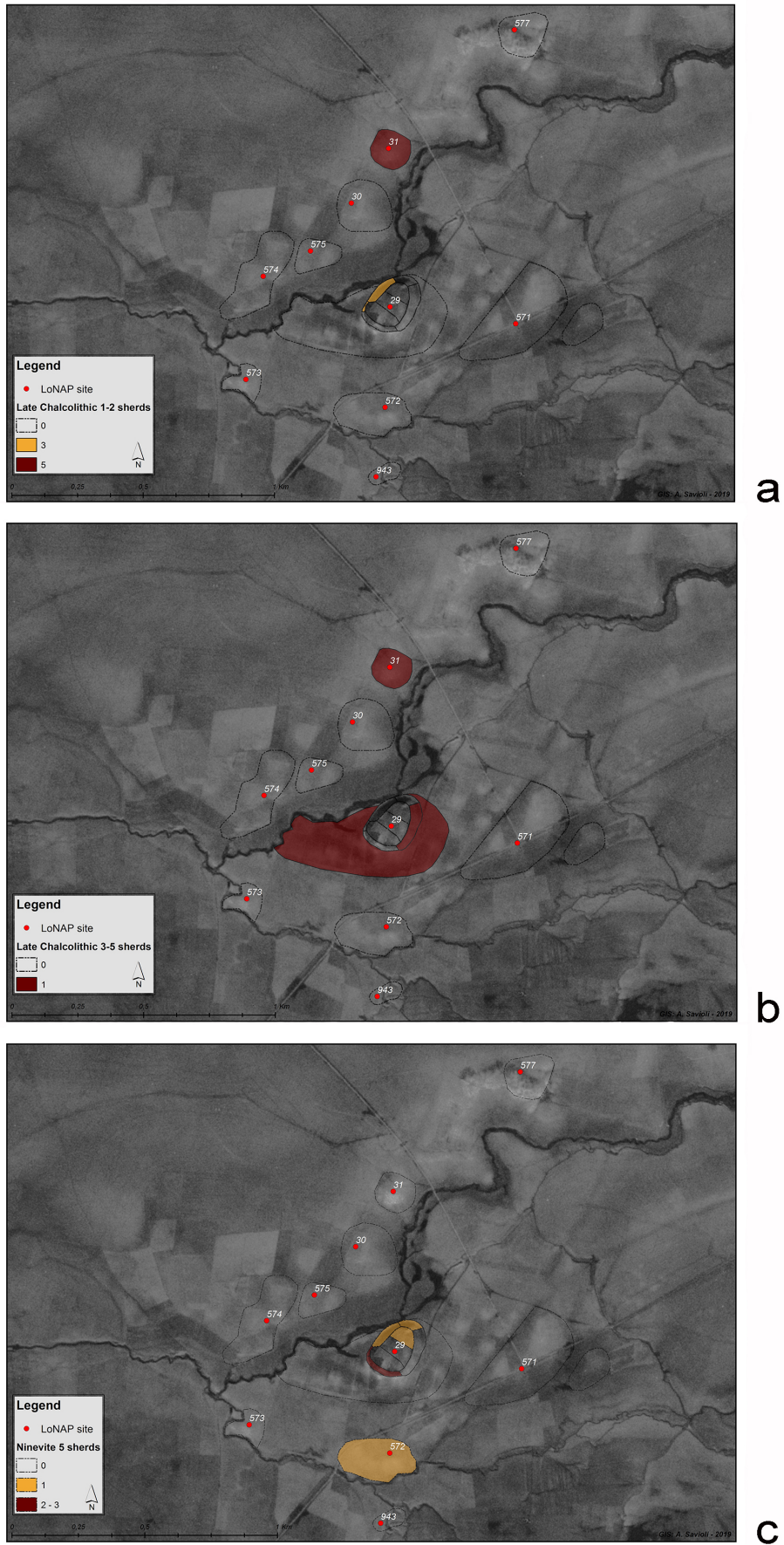


FIG. 4: The Amyan archaeological complex during a) the Late Chalcolithic 1-2, b) the Late Chalcolithic 3-5 and c) the Ninevite 5 period

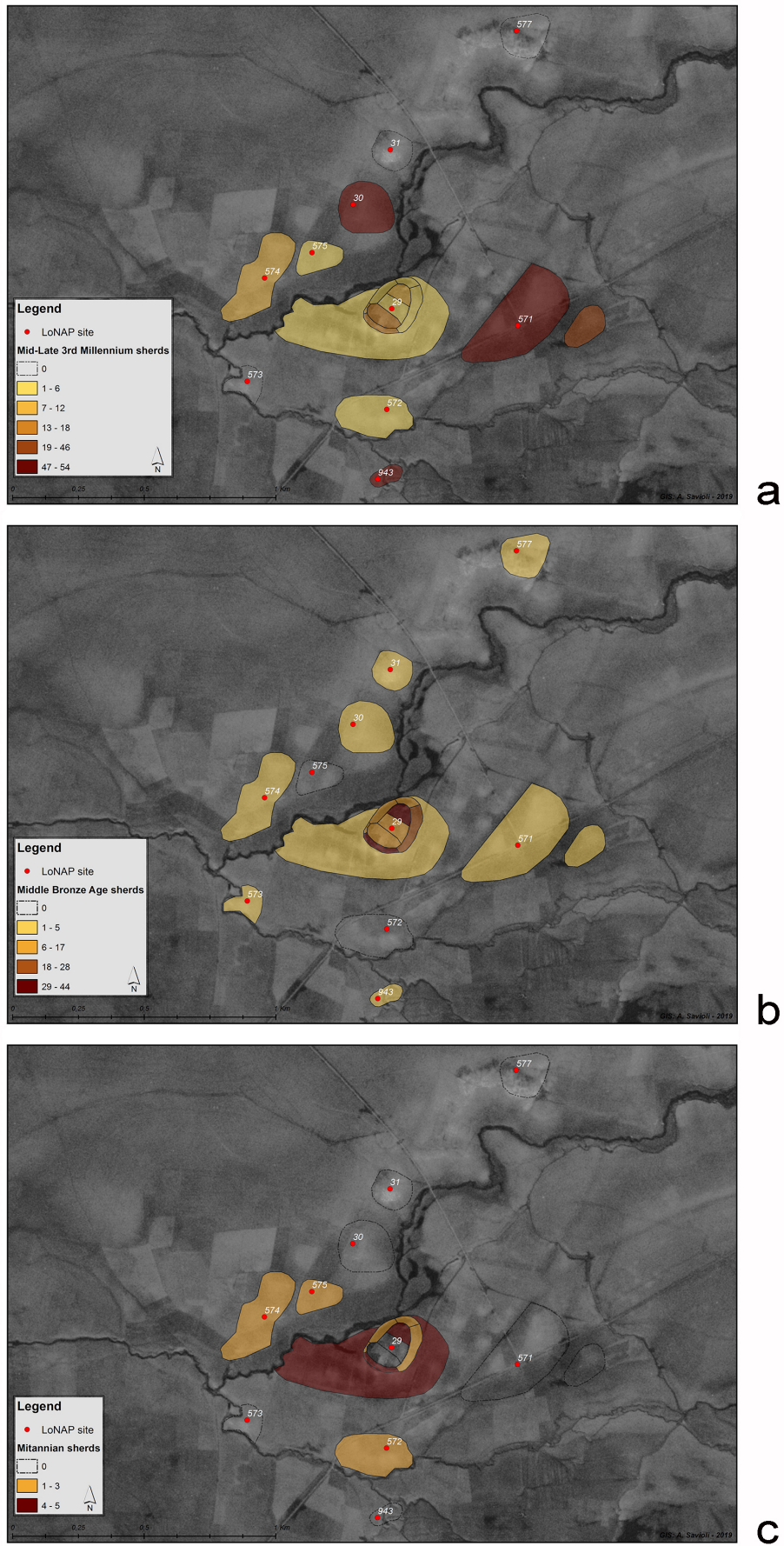


FIG. 5: The Amyan archaeological complex during a) the mid to late 3<sup>rd</sup> millennium, b) the Middle Bronze Age and c) the Mitanni period

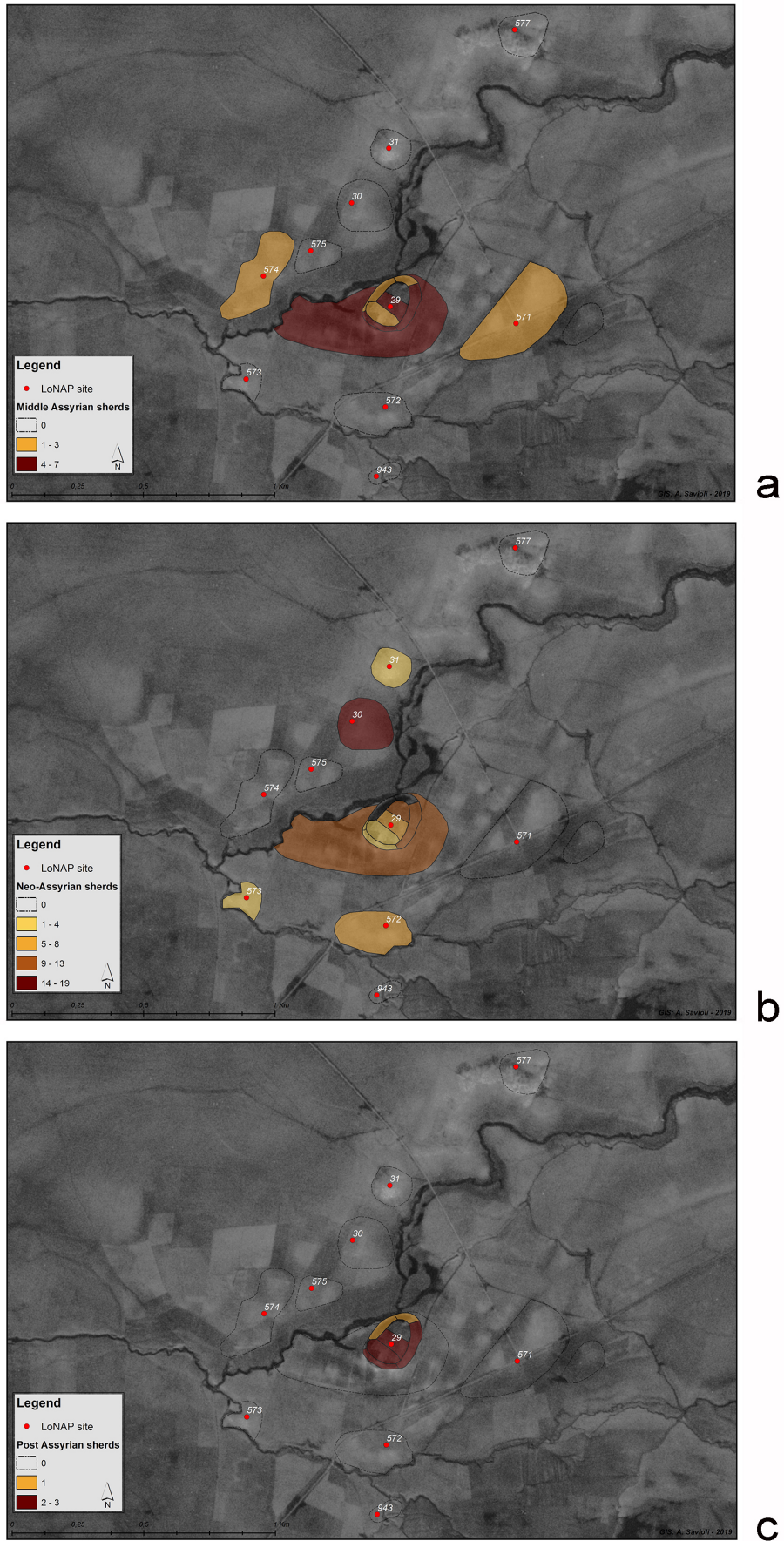
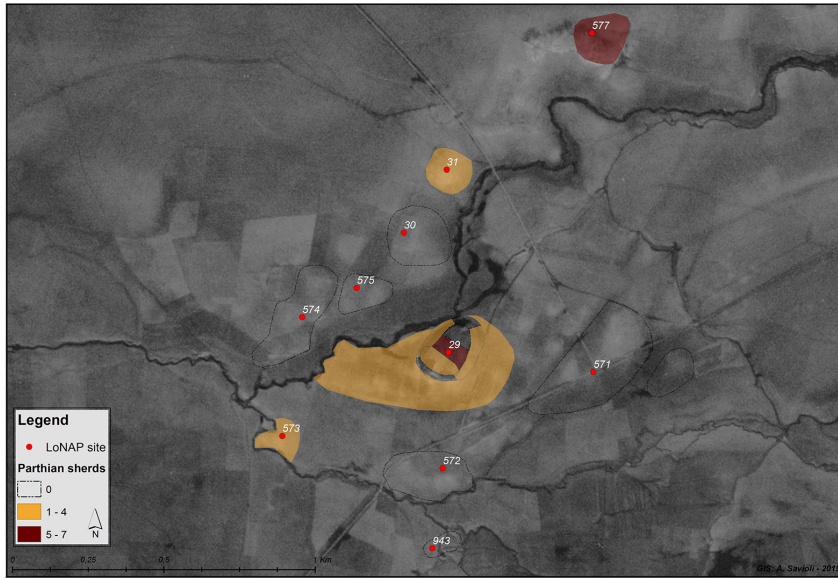
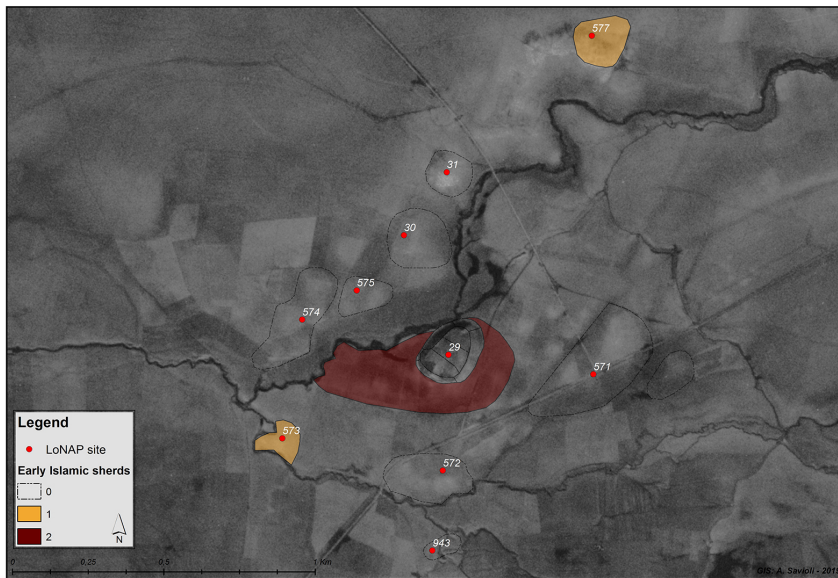


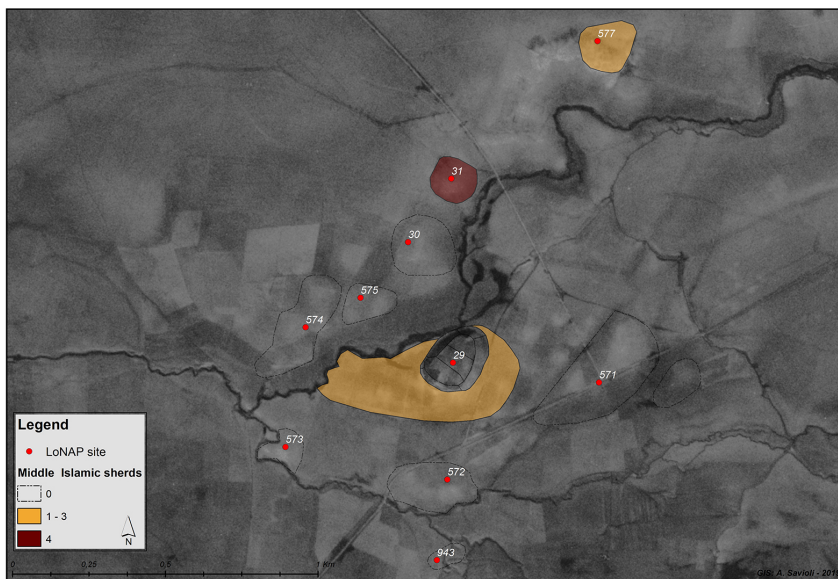
FIG. 6: The Amyan archaeological complex during a) the Middle Assyrian period, b) the Neo-Assyrian period and c) the Post-Assyrian period



a



b



c

FIG. 7: The Amyan archaeological complex during a) the Parthian period, b) the Early Islamic period and c) the Middle Islamic period

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## FIRST RECONNAISSANCE AND TOPOGRAPHICAL SURVEY OF THE HIGH MOUND

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*Barbara COUTURAUD<sup>1</sup>*

*Soizik BECHETOILLE<sup>2</sup>*

The reconnaissance and survey of the site of Amyan – numbered 54 in the Archaeological Atlas of Iraq<sup>3</sup> –, were carried out from April 7 to April 11, with one day of interruption on April 10 due to rain. The team comprised Soizik BECHETOILLE (architect, IFPO-Amman), Barbara COUTURAUD (archaeologist, IFPO-Erbil) and Omar SHAREF (archaeologist, Directorate of Antiquities-Akre). This mission was undertaken before the first excavation campaign, scheduled between May 19 and June 16, thus allowing its preparation.

This first mission, as part of the research program of the Archaeological Mission of Amyan, had three main objectives:

- 1 / a first evaluation of the topography of the high mound;
- 2 / the establishment of a topographical plan with contour lines;
- 3 / the establishment of topographical points of reference.

### ***First Evaluation of the Topography of the High Mound***

The work done during this campaign was mainly focussed on the high mound (Fig. 1). This ovoid mound, roughly oriented SW-NE, measures approximately 3.5 ha. The highest point (#E) is about 26 metres above the plain; according to the inhabitants of the modern village, there could be a Sasanian cemetery located there. It has also been reported that there were battles between peshmergas and Saddam Hussein's army in 2003; the peshmergas would have been posted on this highest point of the high mound, which also explains the trench clearly visible on the satellite images: a narrow passageway dug on the W and S edges of the high mound (Fig. 1). Traces of these battles are also visible through two areas damaged with craters, clearly visible on the surface of the mound. The largest crater, however, is reported to be a pit dug for illegal excavations, during the 1970s, 13 m deep. The high mound has also been dug at the base of the N slope, for a garbage dump, and at the base of the E slope, during the

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<sup>2</sup> Architect and researcher, IFPO-Amman.

<sup>3</sup> Salman 1976.

1970s, which the inhabitants dug in order to make mud-bricks for the houses of the village.

The slope of the mound on its W side is very steep, perhaps due to the presence of the river Kurabak which might have eroded the high mound on this side. On the other hand, the slope of the mound on the N, S and E sides is acclivous and shows multiple 'platforms' (Fig. 3 & 4).

The presence of these platforms can be explained by three working hypotheses, hypotheses that archaeological excavations will help to solve<sup>4</sup>. The first hypothesis is that they result from terracing works. Indeed, it was possible to notice, in two areas of the mound, large mud-brick structures more than a meter high, which could correspond to these terraces (Fig. 5). They are located in the lower part of the slope. The second hypothesis is that they correspond to a rampart. The last hypothesis is linked to a differentiated occupation of the mound through time.

This first assessment of the site and these observations helped to finalize the choice of area to explore during the first excavation campaign, Area A, a step-trench on the E slope of the high mound, oriented E-W, close to the modern school. This trench was meant to provide an overview of the various occupations of the high mound, and also be the starting point for potential work in extension. One such extension may investigate a collapsed area on the flank of the mound. This collapse, probably due to the heavy rains of this winter, has revealed, in the section, a large pavement of baked bricks, visible along at least 5 m in the section. A photogrammetric survey of this section was carried out during the campaign, in order to document in the unlikely case of another collapse next winter. The observed sherds fallen from this area (and therefore from the level of the pavement?) seem to date from the beginning of the 2<sup>nd</sup> millennium. This will have to be confirmed by the archaeological excavations. It should be noted that, though this pavement is now located on the edge of the high mound, it was originally located further inside the mound. Indeed, this area of the mound has been excavated by inhabitants, who took earth for the construction of their houses during the 1980s and 1990s. Consequently, a large part of the high mound (where the school is now located) has now disappeared.

Finally, concerning the topography of Amyan, it should be mentioned here that the declassified images of the Corona program have also yielded interesting information.<sup>5</sup> Three pictures are available on Amyan, photographed in August 1968 and August 1969, when the village did not exist (Fig. 2). Interestingly, it shows that the village was partly established on the remains of a square settlement, located in the SW side of the high mound. Further archaeological investigations will help in dating this lower settlement and in understanding its peculiar shape.

### ***Establishment of a Topographical Plan***

From the images obtained by the flight over the site with a drone,<sup>6</sup> it was possible to establish a topographical plan, i.e. a georeferenced document presenting contour lines and altitudes, allowing a digital elevation model of the whole site to be created. A succession of station points was also established along a path concentrated in the S

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<sup>4</sup> According to some scholars, those platforms are the result of a surface scrapping of the mound, a potential source of clay; Reade & Anderson, 73.

<sup>5</sup> <https://corona.cast.uark.edu/atlas>

<sup>6</sup> Images kindly given by the LoNAP.

part of the high mound, in order to obtain contour lines. Due to time constraints, it was not possible to establish close curves. However, we did obtain an initial profile of the high mound (Fig. 6). This first survey, concentrated around the high point of the mound, clearly shows several 'platforms' around it. An exception has to be noted in this homogeneous layout: a lower zone near the modern craters.

### ***Establishment of Topographical Points of Reference***

Several points of reference have been settled, which will allow the localization of future soundings on the entire surface of the high mound and its close surroundings. They are of two types: points established on a solid base, which are not destined to be removed or to move; and random and temporary points, in the form of metal stakes.

The reference points are as follows:

#A = red cross on the roof of the school

#B = red cross on the roof of the cistern

#C = stake on the highest point of the high mound

#D = stake implanted on the NE corner of the garden wall of a dwelling

#E = upper right corner of the door of a dwelling

#F = upper right corner of a football cage on a wasteland, when looking N

These six points mainly focus on the S part of the high mound, since the first excavation campaign will take place in this area.

### ***Preparation of the Future Topographical Survey (2020)***

The results acquired during this initial campaign were of great help for the first excavation campaign. The establishment of reference points will help to create a first polygon in the S part of the high mound. It will be then necessary to enlarge this polygon to the N and then to set up a system of orthonormal reference in order to position each structure and each archaeological element excavated on a plan.

However, a second topographical survey is necessary to complete the work done this year on the site.

#### ***1/ Strengthening the Location of Reference Points***

The six points of reference set on the site were in the form of stakes in the ground and of painting. In order to preserve them during the next years of work, it is necessary to establish them in a sustainable way by means of specific nails used during surveys, or stakes planted in cement. The second option may be preferable because of the thick vegetation during the spring that makes them difficult to find.

It will also be necessary to multiply the reference points around the site, particularly in the N part and around the satellite sites.

#### ***2/ Establishment of a Fine Grid***

A first axis oriented N-S has been created. Nevertheless, it will be necessary to establish, from this axis, a precise and fine grid which will have several objectives: to



locate the archaeological soundings and all excavated structures and to obtain a tighter contour line plan.

### *3/ Widening the Survey Area to the Lower City*

The next excavation campaigns will focus on the lower town, where the modern village is located. Some areas remain accessible and archaeological soundings can be made. However, beforehand, it will be necessary to survey the modern village, and also to establish topographical points of reference there. We hope, at that time, to have geodetic points of reference issued from the cadastre, which would also make it possible to refine and specify the data acquired this year.

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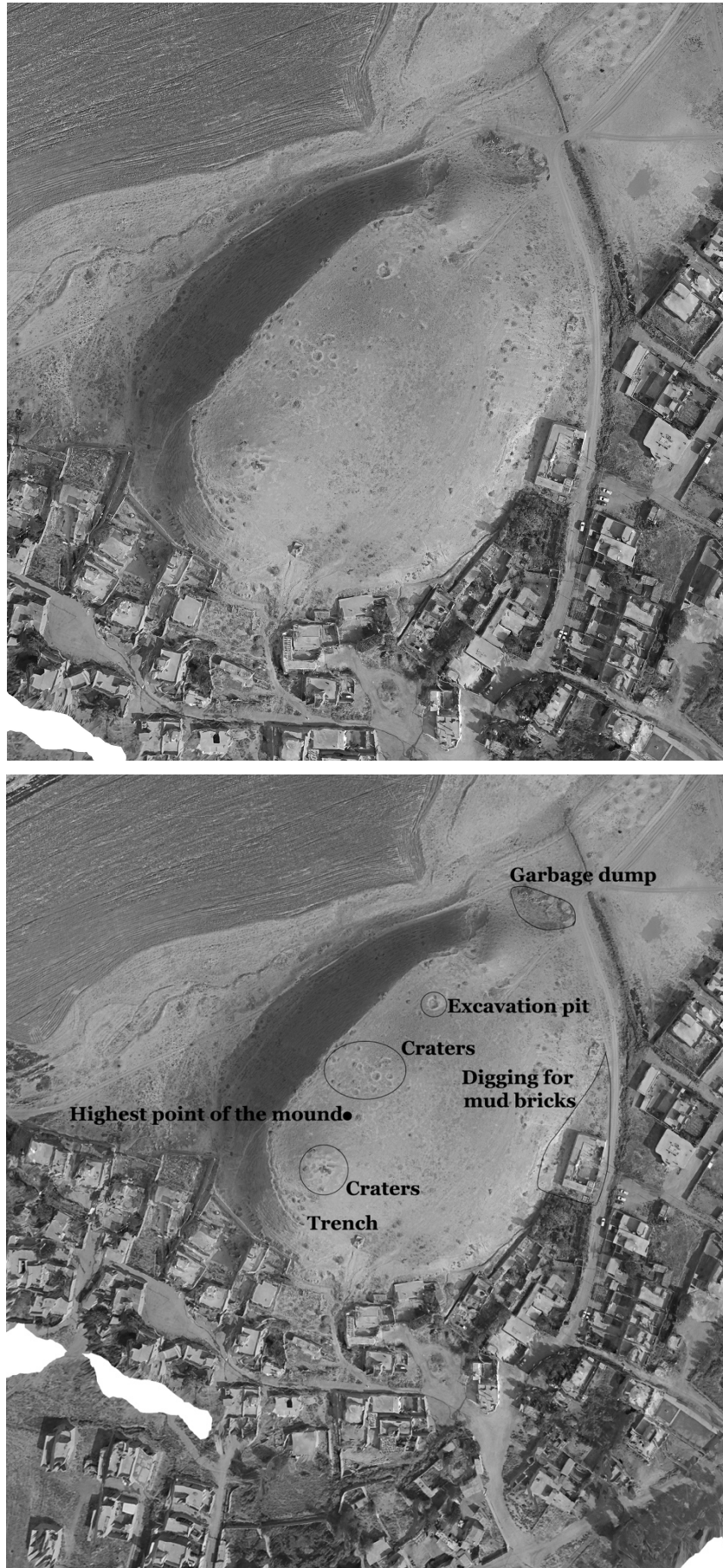


FIG. 1: Orthophotograph of the high mound (MAA)

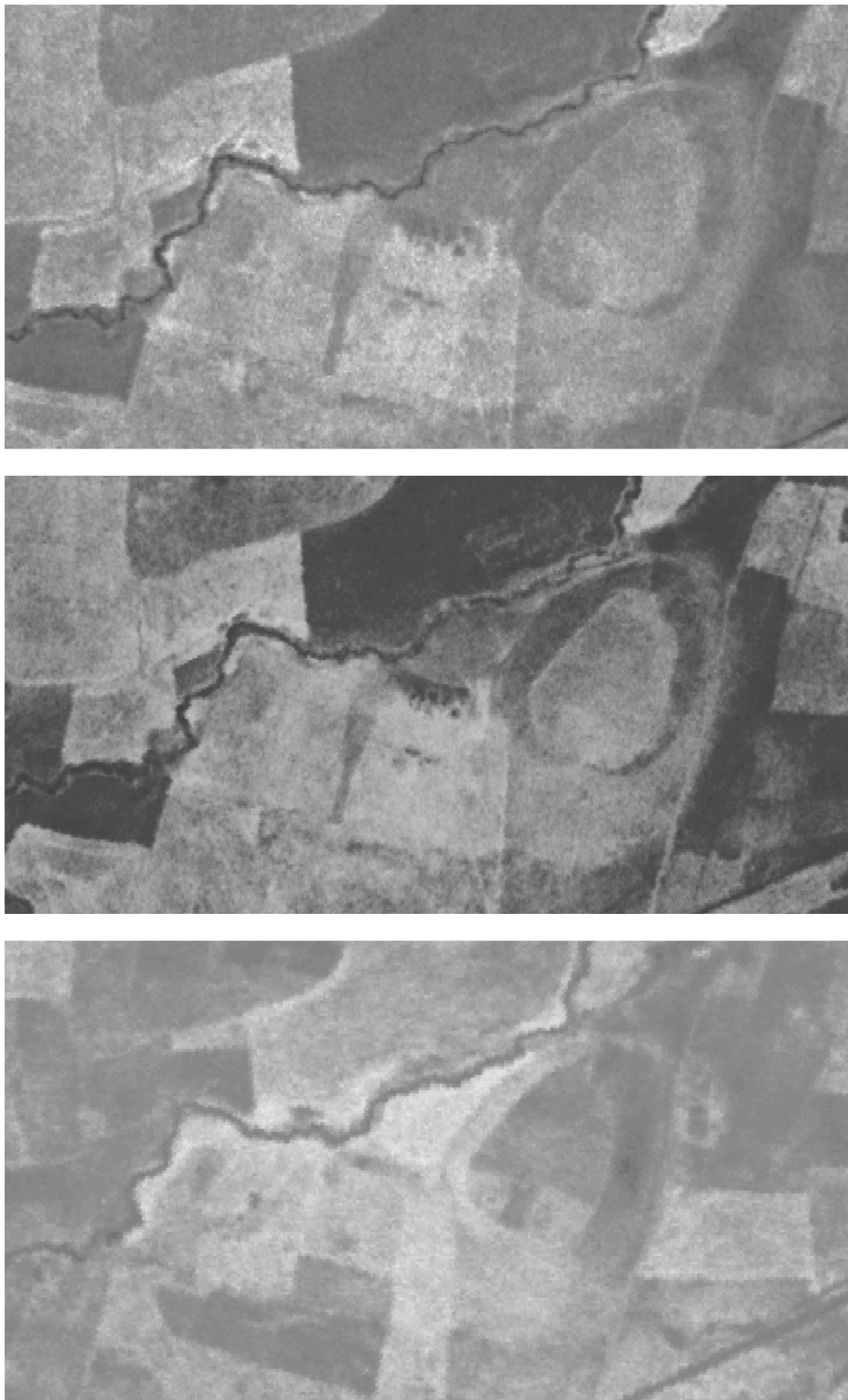


FIG. 2: Corona images of the site taken on the 16/08/1968 for the first two, 03/08/1969 for the third one (after <https://corona.cast.uark.edu/atlas>)



FIG. 3: The site of Amyan, looking S: the W slope is steep, the E one acclivous;  
the Jebel Maqlub in the background (MAA)



FIG. 4: The site of Amyan, looking E: the platforms from the highest point to the S (right) until N (left)  
(MAA)



FIG. 5: Mud-brick structure appearing on the SW slope (MAA)



FIG. 6: NW-SE profile of the high mound (MAA)

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## SOUNDING A1

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Sounding A1 was opened on May 21 and closed on June 12. It is located at the top of the step trench, where a rectangle 10 m long and 3 m wide was laid out. Because of the short duration of the campaign, it was only possible to work on 15 m<sup>2</sup>. Hence, the lower half of the sounding remains unexcavated.

The highest part of the step trench is located in this sounding, in the SW corner at an elevation of 358.30 m. The lowest elevation reached in sounding A1 is 355.56 m in the SE corner, at the end of the campaign (Fig. 1).

The main goal of this sounding was to establish a stratigraphic phasing and to find material *in situ* in order to understand the dating of the layers. In total, 25 stratigraphic units were recorded in the sounding, and 30 objects, most of them being terracotta slag.

### Description

The first layer corresponds to the surface (**1000**). The layer beneath is an erosion wash (**1001**). It is the layer in which most of the objects were found, such as a clay nail (AM19-A1-1001-02) (Fig. 10), a token (AM19-A1-1001-05) and an unfinished clay lamp (AM19-A1-1001-04) (Fig. 9); of course, none of these can be considered as good dating evidence. Animal bones (AM19-A1-1001-01) and a piece of slag (AM19-A1-1001-03) were also found.

The first clear level is a layer (**1003a**) resting above a pavement made of broken, reused *tabuk* (**1003b**, top 357.28 m). It is 218 cm long and 90 cm wide (Fig. 2 & 3). This pavement is associated with a wall, clearly distinguishable by its light colour and its hardness (**1004**); it could be a *pise* wall since no clear bricks were recognizable. The highest elevation of the wall is at 357.73 m and its lowest at 357.15 m. It is 210 cm long and 50 cm wide. Inside it were found some animal bones (AM19-A1-1004-01) and a piece of slag (AM19-A1-1004-02). S of the wall is a layer in which bigger sherds were found (**1009**). A stone tool, perhaps a crusher (AM19-A1-1009-01), and a flint flake (AM19-A1-1009-02) were also found. On the other side of the wall 1004 was a layer in

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which there was a small alignment of mud-brick next to the W section (**1013**, top 357.04 m, bottom 357.17 m). S of this alignment, in the SW corner, some pebbles with some ash were found, which looked like a fireplace. The pavement 1003b might be associated with a layer in which two pieces of *tabuk* going to the N of the sounding were found (**1007**, top 357.27 m) (Fig. 2 & 3). The function of these two pieces of *tabuk* remains unknown.

These pieces of *tabuk* and the layer 1007 rest on a perfectly straight alignment of eight stones (**1008**, top 357.03 m / 357.14 m) (Fig. 4 & 5). They were first interpreted as a step for the pavement 1003b but they actually go under it, which disproved the hypothesis. Some animal bones were found in this layer (AM19-A1-1008-01). Associated with the stones 1008 was a layer of a very loose sediment (**1011** in the S and **1012** in the N). A grinding stone was found (AM19-A1-1012-01), animal bones (AM19-A1-1011-01) and a piece of slag (AM19-A1-1011-02), which may indicate a potter's workshop nearby.

Another wall was found in the sounding (**1010**, top 356.86 m, bottom 356.07 m). It is a wide wall (1.50 m wide and 3 m long at least, within the whole width of the sounding) made of very low quality mud-bricks (Fig. 6 & 7). On top of this wall were six stones almost perfectly aligned, which could not be explained (**1005**, top 356.49 m / 356.54 m). Some animal bones were found in the wall 1010 (AM19-A1-1010-01). This wall was damaged by a modern pit with several layers of plastic (**1002** & **1006**) (Fig. 7). Inside the pit a small fragment of plaster (AM19-A1-1002-01) and animal bones were found (AM19-A1-1002-02). At the end of the excavation, the pit had not been totally emptied. It is at least 1.20 m deep (top 356.94 m, bottom reached 355.68 m).

Associated with the wall 1010 is a very compact layer (**1016**). It is the first layer going under the wall 1004 and the layers associated with it, 1011, 1012 and 1013. Animal bones were found there (AM19-A1-1016-01). A pit full of ash (**1017**) with a piece of slag (AM19-A1-1017-01) was also found N of this layer, under the place where the grinding stone was discovered. The layer 1016 rests on a layer with a heterogeneous and compact consistence, which corresponds to the floor (**1020** & **1022** = **1023**, top 356.65 m / 356.67 m). Animal bones were found there (AM19-A1-1020-01) and a piece of slag (AM19-A1-1020-02). A circle of pebbles was also found in the middle of the locus (Fig. 6). There was no ash, but just a brick at the centre of the circle. It lay next to another installation, composed of five bricks next to each other. It appears like a sixth brick was missing. The purpose of these two installations, apparently working together, remains unknown but they probably functioned as floor installations. The ensemble of bricks might be some sort of fire place. It could also be the remains of a courtyard pavement. This layer also contained a piece of flint (AM19-A1-1022-01), two pierced stones (AM19-A1-1023-02) and animal bones (AM19-A1-1022-02, AM19-A1-1023-01).

All the layers and structures mentioned above were located in the W part of the sounding, the wall 1010 creating a sort of separation. To the E of wall 1010 there was a sort of channel (**1014**, top 356.52 m) containing plastic and animal bones (AM19-A1-1014-01). E of this channel was the erosion wash (**1015**). In it was an installation that can be compared to a little drainage system (**1018**, top 356.59) (Fig. 7). In its fill (**1021**, top 356.41 m) were some small bones (AM19-A1-1021-01). Some earth was located around, in the hole dug in the wall 1010 (**1019**).

After removing wall 1010, a more or less uniform layer was uncovered (**1024**). The earth in 1024 was very light with little pieces of burned ceramics and maybe of coal (Fig. 8). The same kind of earth was also found in sector A2 and sector A3. There were



more animal bones than expected (AM19-A1-1024-01). There was also a piece of slag (AM19-A1-1024-02). Going down, dark joints of what could be lighter bricks (more orange than brown) were found (**1025**), just as in sounding A2. A piece of slag (AM19-A1-1025-01) and animal bones (AM19-A1-1025-02) were found. The aim was to level the whole sounding to look for other joints and possible bricks but only very compact earth was found, with brick-earth texture, whiter than the rest of the area. This layer could correspond to a levelling of the area.

### Interpretations and Conclusions

A first group of layers and structures can be isolated, which are disturbances:

- 1002 and 1006, modern pit filled with plastic and ashes;
- 1014, channel filled with plastic;
- 1001, 1015 and 1019, erosion washes;
- 1005, a group of stones on top of the wall 1010, which could be later;
- 1018 and 1021, “drainage system” in the erosion wash 1019.

Then comes **PHASE 1**, linked to the wall 1004:

- 1003b, the first stone pavement with its extension to the N, 1007;
- 1003a, 1009 and 1013, the layers associated to the wall;
- 1008, the second stone pavement found under 1003, with its associated layers 1011 and 1012.

**PHASE 2** is linked to the wall 1010, the second wall excavated in the sounding:

- 1016, a fill layer, and its pit of ash 1017;
- 1020, 1022 and 1023, corresponding to a floor;
- 1024 and 1025, which are very particular layers because of the number of animal bones found there and also the little pieces of coal and burned ceramics, like what has been found in the soundings A2 and A3.

It is quite possible that phase 2 corresponds to a building that functioned with the wall excavated in the A2 sounding. Future excavations will reveal if this was the case or not. Phase 1 is a more recent phase, with two levels represented by the pavements, maybe a squatter occupation considering the poor quality of the wall and the pavement, made with used fragments of *tabuk* (Fig. 1).

### List of Stratigraphic Units

SU	Description	Items found
<b>1000</b>	Surface layer	
<b>1001</b>	Sub-surface layer, erosion wash	AM19-A1-1001-01: bones (fauna) AM19-A1-1001-02: clay nail AM19-A1-1001-03: slag AM19-A1-1001-04: clay lamp

		AM19-A1-1001-05: token
<b>1002</b>	First layer of a modern pit	AM19-A1-1002-01: plaster AM19-A1-1002-02: bones (fauna)
<b>1003a</b>	Fill layer above the <i>tabuk</i> pavement	
<b>1003b</b>	<i>Tabuk</i> pavement	
<b>1004</b>	Wall ( <i>pise?</i> ), 210 cm long, 50 cm wide	AM19-A1-1004-01: bones (fauna) AM19-A1-1004-02: slag
<b>1005</b>	5 aligned stones on top of wall 1010	
<b>1006</b>	Lower layers of the modern pit	
<b>1007</b>	Two <i>tabuk</i> N of the pavement 1003 and its associated layer	
<b>1008</b>	Second pavement (?) of 8 aligned stones under pavement 1003	AM19-A1-1008-01: bones (fauna)
<b>1009</b>	Layer S of wall 1004	AM19-A1-1009-01: stone tool AM19-A1-1009-02: flint flake
<b>1010</b>	Mud-brick wall, 1.50 m wide, 3 m long	AM19-A1-1010-01: bones (fauna)
<b>1011</b>	Layer S of pavement 1008	AM19-A1-1011-01: bones (fauna) AM19-A1-1011-02: slag
<b>1012</b>	Layer N of pavement 1008	AM19-A1-1012-01: grinding stone
<b>1013</b>	Layer N of wall 1004 with a <i>tabuk</i> assemblage and a fireplace	
<b>1014</b>	Modern channel, E of wall 1010	AM19-A1-1014-01: bones (fauna)
<b>1015</b>	Erosion wash, E of 1014	
<b>1016</b>	Fill layer	AM19-A1-1016-01: bones (fauna)
<b>1017</b>	Pit with ash and a piece of slag in 1016	AM19-A1-1017-01: slag
<b>1018</b>	Modern grave (?) for a little animal (?)	
<b>1019</b>	Earth between 1018 and wall 1010	
<b>1020</b>	Floor (=1022 and 1023)	AM19-A1-1020-01: bones (fauna) AM19-A1-1020-02: slag
<b>1021</b>	Fill of 1018	AM19-A1-1021-01: bones (fauna)
<b>1022</b>	Floor (=1020 and 1023)	AM19-A1-1022-01: stone tool (?) AM19-A1-1022-02: bones (fauna)

<b>1023</b>	Floor (=1020 and 1022)	AM19-A1-1023-01: bones (fauna) AM19-A1-1023-02: 2 pierced stones
<b>1024</b>	Layer under wall 1010, lighter and with little pieces of burned ceramics	AM19-A1-1024-01: bones (fauna) AM19-A1-1024-02: slag
<b>1025</b>	Dark possible joints inside 1024	AM19-A1-1025-01: slag AM19-A1-1025-02: bones (fauna)

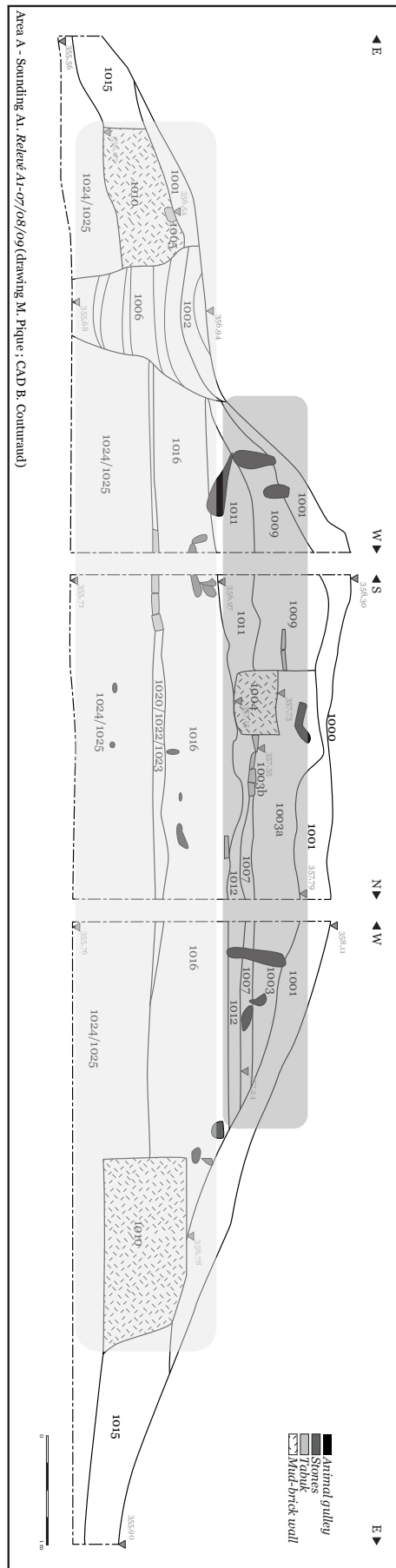


FIG. 1: S, W and N sections of the sounding A1 and the phases 1 (dark grey) and 2 (light grey) (MAA)

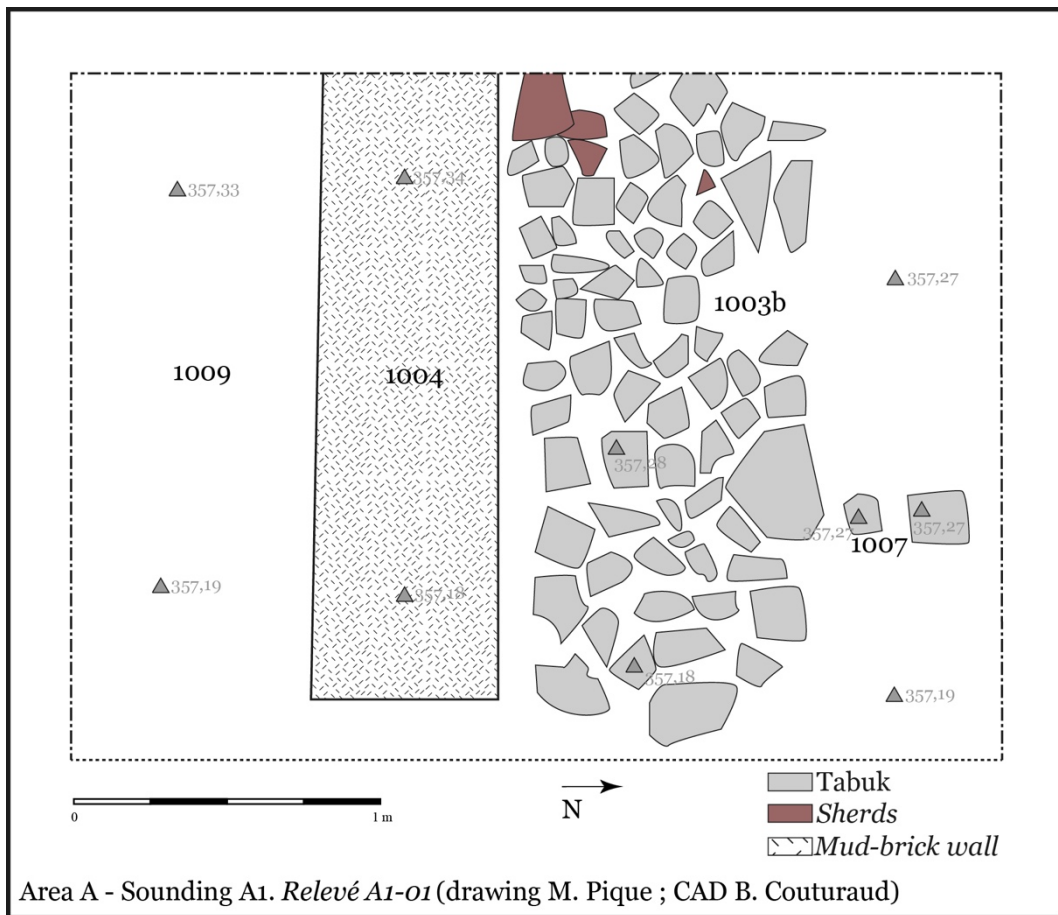


FIG. 2: Phase 1: pavement floor 1003b (MAA)



FIG. 3: Pavement 1003b and wall 1004; wall 1010 and pit 1006 can be seen further E (MAA)

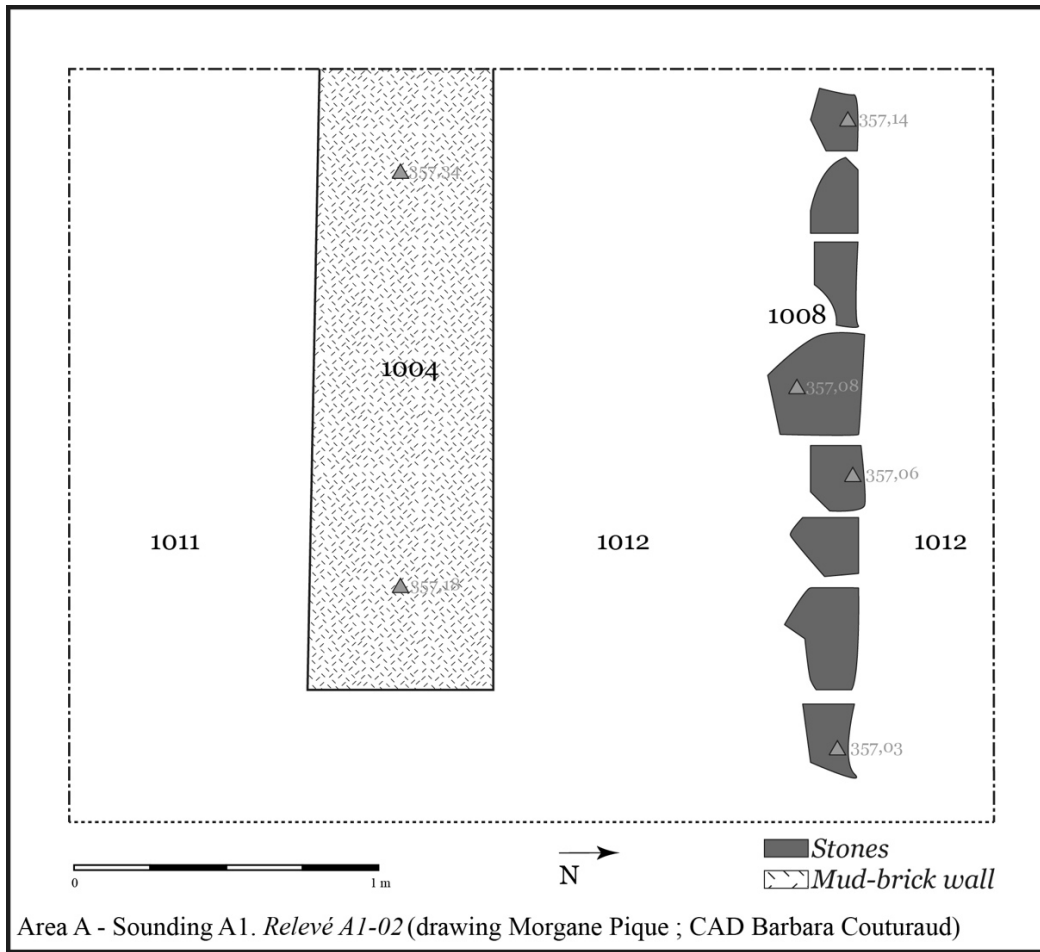


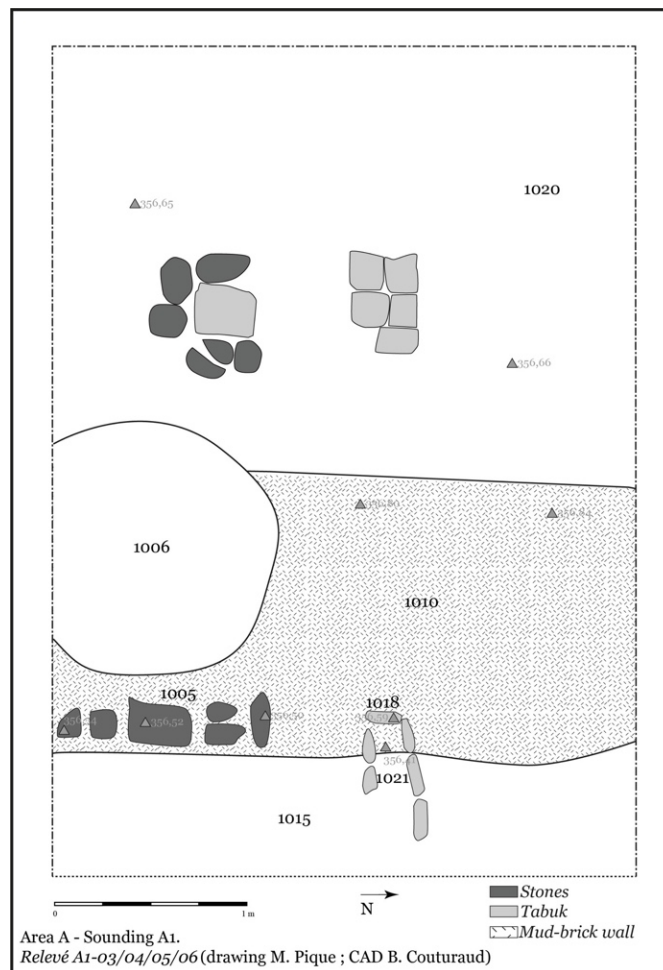
FIG. 4: Phase 1: alignment of stones 1008 (MAA)



FIG. 5: alignment of stones 1008 parallel to the wall 1004 (MAA)



FIG. 6: Floor 1020, with the two installations (circle of pebbles in the S and *tabuk* in the N) and wall 1010 on the left (MAA)



Area A - Sounding A1.  
 Relevé A1-03/04/05/06 (drawing M. Pique ; CAD B. Coutraud)

FIG. 7: Phase 2: wall 1010 and floor 1020 with its two installations (circle of pebbles and *tabuk*) (MAA)



FIG. 8: Layer 1024 on the last day of the campaign (MAA)



FIG. 9: Fragment of an unfinished clay lamp (AM19-A1-1001-04) (MAA)





FIG. 10: Fragment of a clay nail (AM19-A1-1001-02) (MAA)

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## SOUNDING A2

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*Laurent COLONNA D'ISTRIA<sup>1</sup>*

Sounding A2 is located in the middle of the step trench, between A1 (at the top of the trench) and A3 (at the base of the trench). After setting up the excavation limits on May 21, the excavation began on May 22 and was completed on June 12.

Sounding A2 is a large rectangle of 10 m long along the slope and 3 m wide. The slope is fairly even over the entire area at around 25 degrees. The E baulk, which constitutes the lower limit of the sounding, is at 347.77 m above sea level and the highest point of the sounding, on the W baulk, is at 353.72 m / 353.75 m (Fig. 1).

### **Description**

Due to the slope, four artificial steps were set up, from the upper part (W) until down to the baulk between A2 and A3 (E) (Fig. 1). Some of these artificial steps were established based on the remains discovered (Fig. 3).

The setting up of the upper two artificial steps in the slope, each 2 m wide, revealed several layers following the slope corresponding to eroded or washed-out structures on the top, one under the other: first, the surface (**1200**), then a layer resulting from the erosion of mud-brick structures (**1201**), a more compact layer with broken mud-bricks (**1202 / 1205**), a rather compact clayey-silt layer (**1203**) in which there were eroded mud-bricks (**1204**, elev. 352.35 m). In each of these layers, animal bones were collected (AM19-A2-1201-03; AM19-A2-1202-01; AM19-A2-1203-01), as well as potsherds (no complete form) and pieces of slag (AM19-A2-1200-01; AM19-A2-1201-02) (Fig. 7). It has to be noted that there were concretions on some of the potsherds. In layer 1201, a fragmentary clay nail was collected (AM19-A2-1201-01, elev. 353.07 m) (Fig. 9). This nail has a slightly rounded circular head and an incomplete body. This object, that could be the remains of a wall peg, discovered in a washout layer on the slope, suggests a monumental building at the top of the high mound, the date of which is unknown. Two objects from layer 1203 are noteworthy: an iron blade or spearhead (?) fragment (AM19-A2-1203-03) and two fragments of clay scrapers (AM19-A2-1201-04 and AM19-A2-1203-04).

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A 1 m-wide sounding in the artificial steps 1 and 2 has shown that under the layer 1203, silty clay layers were still deposited along a slope to the E (**1210** & **1211**, bottom 350.51 m). 1210 and 1211 are composed of wet soil with inclusion of coal. The gap between 1210 and 1211 in the sounding is marked by a layer of ash with some crushed potsherds visible in the W section of the sounding (**1214**, top 351.33 m) but it does not continue on the S side of the excavation. Just as layers 1201, 1202 and 1203, layers 1210 and 1211 are characterized by the presence of potsherds, pieces of slag (AM19-A2-1211-01), animal bones (AM19-A2-1210-01) and one object, a spherical polished stone, maybe a stone sling ball or a weight (AM19-A2-1210-02).

Layers 1202, 1203, 1210 and 1211 follow the slope and are stopped by a wall, oriented N-S across the entire width of the area, which was discovered during the establishment of the artificial step 3 (**1207**, **1206** in the S section, step 3) (Fig. 5). With the setting up of the artificial steps 3 and 4, it was possible to excavate the wall 1207 across its entire width: its E and W faces are very clear (Fig. 3). This wall 1207 was buried under the most recent erosion layer 1201. Because of the erosion of the slope, the wall is unevenly preserved in elevation, but it was possible to identify its base in the artificial step 4 (elevation of the first mud-brick layer at 348.33 m). This wall is 3.60 m wide. Its highest point was in the W edge of the artificial step 3 at 350.95 m (at the S edge of the trench). It is then preserved to a height of 2.62 m. It is oriented N-S, slightly off-axis to the E. It was built with square mud-bricks (36 x 36 x 12 cm) and half-bricks (18 x 36 x 12 cm) (Fig. 2). The joints between the mud-bricks are very neat and measure about 4 cm (Fig. 4). The dimensions of the square mud-bricks correspond to 2/3 of an Assyrian cubit.<sup>2</sup> And during the 2<sup>nd</sup> and 1<sup>st</sup> millennia BC, the most common dimension for square mud-bricks was 2/3 of a cubit, especially for the Neo-Assyrian period.<sup>3</sup> As this wall is located perpendicularly to the slope and preserved according to the slope, it was possible to highlight different parts of courses to better understand the pattern of the bricks. On the W side (step 3), the best-preserved layer of bricks (top 350.42 m) consists of half-bricks on the exterior facing of the wall (stretcher bond pattern), followed by a row of square bricks, then a row of half-bricks (elev. 350.42 m). In the N part of the artificial step 3, on the wall facing, it has been noted that the upper course consists of square bricks (top 350.58 m). On the same step, it was also possible to identify four rows of half-bricks (top 350.24 m) below a layer of square bricks. The use of half-brick rows thus creates an alternation of vertical joints, probably in order to ensure that the building is stable. The excavation thus made it possible to partially identify the pattern of the wall (Fig. 6).

Finally, in the artificial step 4b, on the E side of the wall 1207, the excavation exposed the lowest layer of bricks, i.e. the wall foundations. It seems that there might have been a foundation trench (**1215**) on the E facade of the wall, which would have cut into a compact mass of mud-bricks, though less compact than those of wall 1207 (**1209** in the N part, top 348.48 m / 348.94 m, and **1213** in the S part, top 348.40 m / 348.83 m = **1208**). This mass seems to be composed of bricks of poor quality. Some animal bones (AM19-A2-1208-01) and pieces of slag (AM19-A2-1208-02) were found in it.

The partial excavation of the E baulk of the sounding allowed soundings A2 and A3 to be linked. Though no visible or legible structures were uncovered, links were made through the erosion wash (**1212**, corresponding to 1201 in A2, and 1400 in A3) and

<sup>2</sup> 53-54 cm according to Powell 1987-1990, 474.

<sup>3</sup> Sauvage 1998, pl. 34, 42 and 51.

the compact mass beneath the wall that was also excavated in sounding A3. Animal bones were found in the erosion wash (AM19-A2-1212-02) and a long object, roughly square in section, perhaps the bottom part of a clay nail (AM19-A2-1212-01) (Fig. 8).

### Interpretations and Conclusions

Wall 1207 could be an enclosure wall or a rampart of the upper city. The foundation trench on the E facade remains hypothetical, since it was discovered on the last day of the excavations. If it is indeed a foundation trench, then this wall would be intrusive in a mass composed of lower quality mud-bricks (1213, and see sounding A3), but further investigations are needed to determine the link between the wall and the mass more accurately.

Due to the height of the wall 1207 at the W edge of the sounding (2.62 m), it is possible that the erosion layers 1203, 1210 and 1211 stopped by the wall 1207 cover a floor associated with this rampart 1207 that has not been excavated yet.

### List of Stratigraphic Units

SU	Description	Items found
<b>1200</b>	Surface	AM19-A2-1200-01: slag
<b>1201</b>	Heterogeneous erosion layer of structures at the top	AM19-A2-1201-01: clay nail AM19-A2-1201-02: pieces of slag AM19-A2-1201-03: bones (fauna) AM19-A2-1201-04: clay scraper
<b>1202</b>	Compact erosion layer of structures at the top, under 1201, W of wall 1207 and against it (= 1205 in the artificial step 1)	AM19-A2-1202-01: bones (fauna)
<b>1203</b>	More compact and wet layer, under 1202, W of wall 1207 and against it	AM19-A2-1203-01: bones (fauna) AM19-A2-1203-03: iron blade AM19-A2-1203-04: clay scraper
<b>1204</b>	Mud-bricks eroded in 1203, visible in the W section	
<b>1205</b>	= 1202	
<b>1206</b>	= 1207	
<b>1207</b>	Wall, 3.60 m wide, at least 3 m long and 2.62 m high (= 1206 in the S section, artificial step 3)	
<b>1208</b>	Compact mass of fallen mud-bricks, E of wall 1207 (artificial step 4)	AM19-A2-1208-01: bones (fauna) AM19-A2-1208-02: pieces of slag
<b>1209</b>	Compact mass of fallen mud-bricks, poor quality, E of wall 1207, visible in the N section (artificial step 4)	
<b>1210</b>	Washout layer, wet, under 1203	AM19-A2-1210-01: bones (fauna) AM19-A2-1210-02: round stone

<b>1211</b>	Washout layer, wet, under 1210	AM19-A2-1211-01: slag
<b>1212</b>	Erosion layer in the baulk between A2 and A3 (= 1201)	AM19-A2-1212-01: clay nail AM19-A2-1212-02: bones (fauna)
<b>1213</b>	Compact mass of fallen mud-brick, poor quality, E of wall 1207, visible in the S section (artificial step 4)	
<b>1214</b>	Layer of ash between 1210 and 1211, only visible in the W section	
<b>1215</b>	Possible foundation trench on the E facade of the wall 1207	

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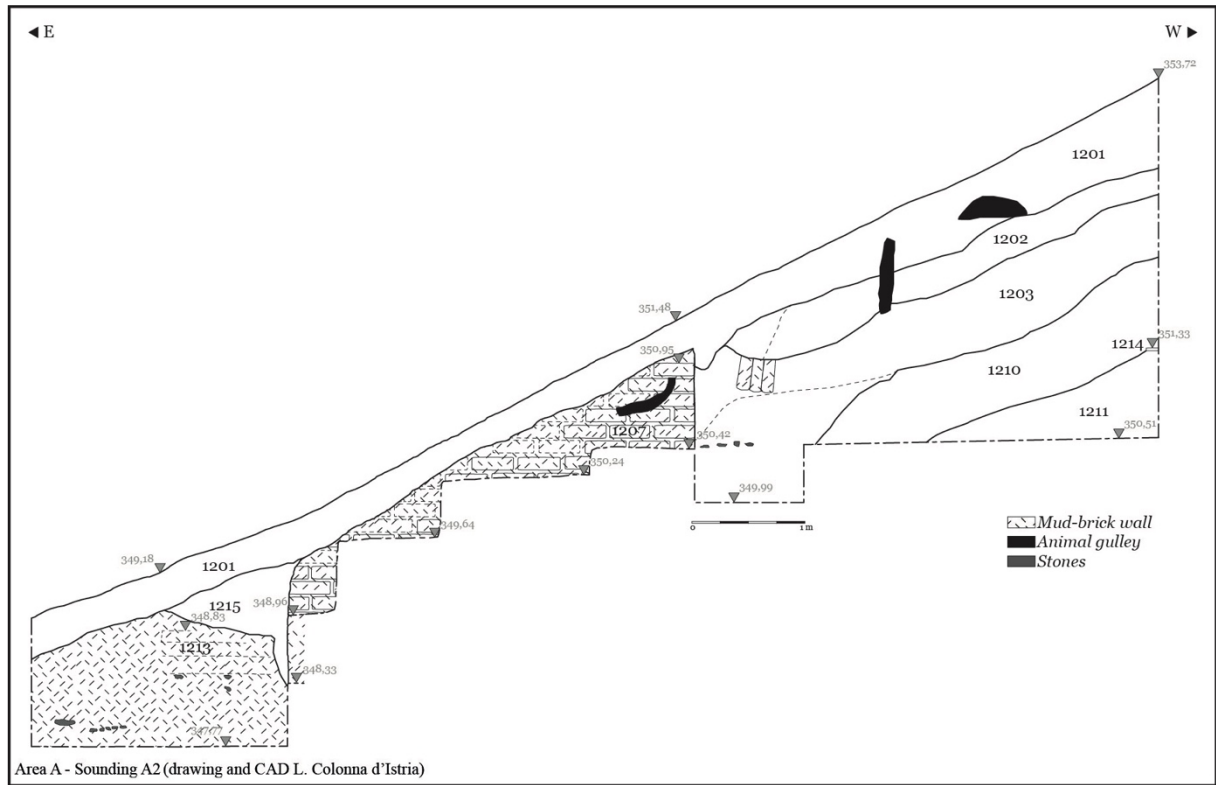


FIG. 1: S section of sounding A2 (MAA)



FIG. 2: Bricks appearing while excavating wall 1207 (MAA)

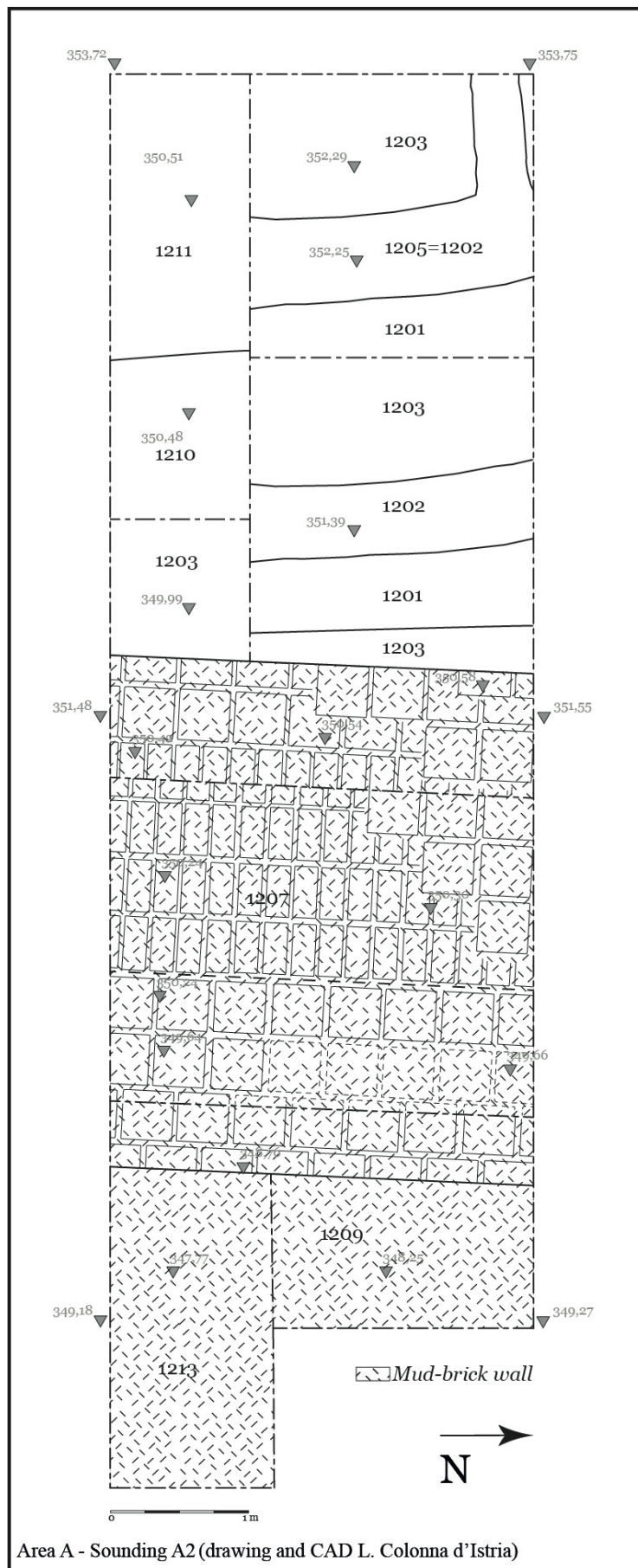


FIG. 3: plan of the sounding (MAA)





FIG. 4: Wall 1207 between steps 3a and 4 (MAA)



FIG. 5: Wall 1207 showing its full height, view to SW (MAA)

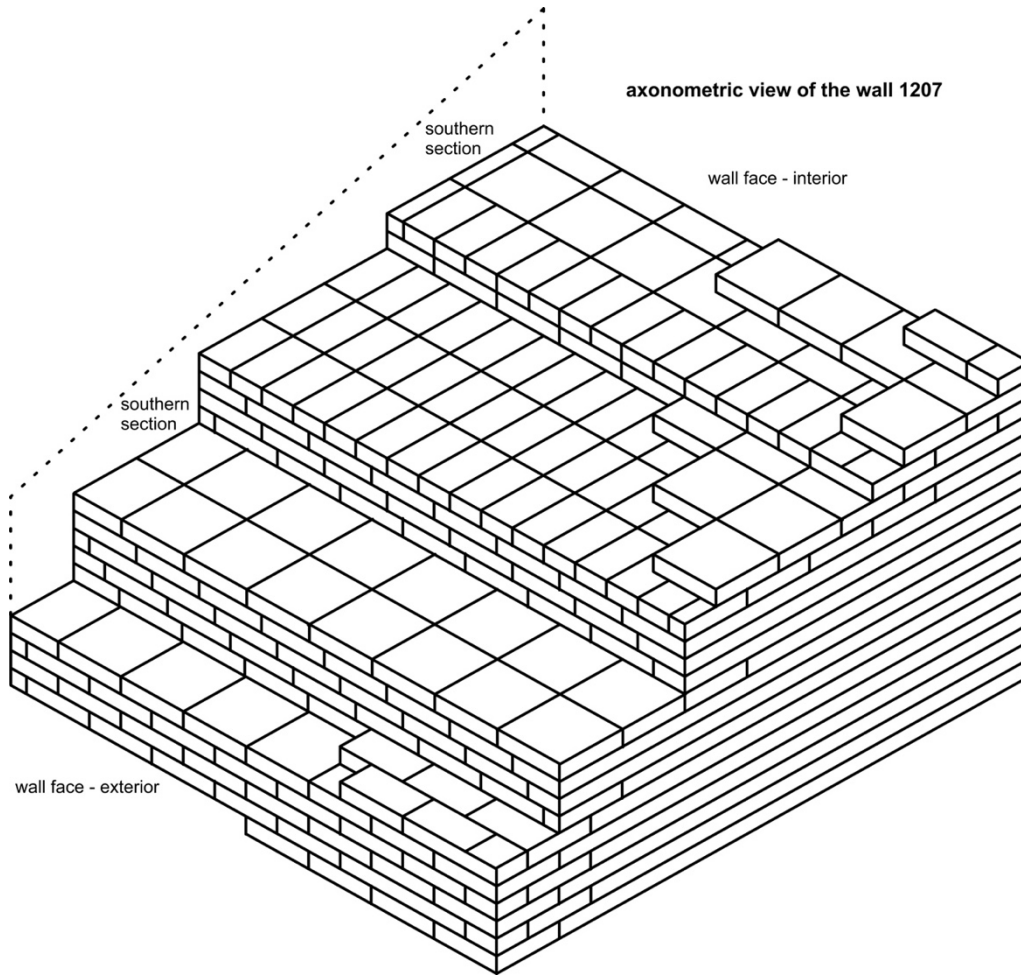


FIG. 6: Preliminary axonometric view of wall 1207 (MAA)



FIG. 7: Pieces of terracotta slag (AM19-A2-1201-02) (MAA)



FIG. 8: Possible bottom part of a clay nail (AM19-A2-1212-01), rectangular in section (MAA)



FIG. 9: Upper part of a clay nail (AM19-A2-1201-01), round in section (MAA)

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## SOUNDING A3

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*Barbara COUTURAUD<sup>1</sup>*

Sounding A3 is located at the bottom of the step trench (Fig. 5). Like the other soundings, it is 10 m long down the slope, and 3 m wide. The difference in elevation between the highest point (348.42 m above sea level) and the lowest (345.03 m) is 3.39 m (without taking into account the baulk between A2 and A3). The slope is relatively regular and flattens out in the lower part of the sounding. In order to allow a better progression of the work, five artificial steps were made, numbered from the top to the bottom. Just as in the other soundings of the step-trench, the aim was to define the nature and the dating of the layers on this side of the high mound.

### Description

On all the sounding is a surface layer (numbered differently on each artificial step: **1400, 1404, 1406, 1409, 1410, 1411**). Dark grey and relatively dense, it is characterized by gravels, pieces of broken mud-bricks, and heavily eroded sherds. Animal bones were found (AM19-A3-1400-01, AM19-A3-1409-01, AM19-A3-1410-02, AM19-A3-1411-01), as well as pieces of slag (AM19-A3-1404-02, AM19-A3-1406-01, AM19-A3-1409-03). Some objects were found: two small animal figurines (AM19-A3-1400-02 and AM19-A3-1410-01) (Fig. 9), the first one being burnt; a small piece of flint (AM19-A3-1404-01), a fragment of a stone that could be a grinding stone (AM19-A3-1409-04), and a stone tool, perhaps a pestle (AM19-A3-1411-02).

Just beneath the surface erosion layer is an important structure (**1405**, top ca. 348.20 m) (Fig. 1). Roughly oriented N-S, it is composed of square bricks, 40 x 40 cm. Those bricks are characterized by their poor state of conservation and their shape, rarely square or rectangular in the section, but mostly ovoid (Fig. 2). It also has to be noted that their consistence is very heterogeneous, and they are very friable due to the gravel, small stones and sherds found in them and in the joints. The joints themselves can be up to 10 cm thick, both horizontally and vertically. It looks as if no attention was paid to these bricks, which constitute the outer face of this mass. This can be explained in two ways: first, the size of this very massive structure means less care could be taken over the bricks. Second, it is probable that this structure was

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<sup>1</sup> Researcher, IFPO-Erbil.

partially or fully buried – no foundation trench has been found. Hence, the most important point would be its mass more than the care given to its outer surfaces. Also a slight gradient, from N to S, and a slight change of orientation, from one course to another should be noted (Fig. 3). In the core of this structure, the bricks are much better-preserved, though some areas present no joints at all (**1412**, top 346.70 m, bottom 345.90 m). This latter can be explained in two ways: either there are layers of earth between the rows of bricks, or the bricks are so densely packed that it was impossible to define them. The sediment of this layer is more or less homogeneous, with tiny pieces of burnt ceramic material, like that found in A1 and A2. It has to be noted that within this layer, a nail with a square section was found (AM19-A3-1412-01) (Fig. 7); it might match up with the upper part of the nail found in sounding A2 (AM19-A2-1212-01). Below this possible layer of earth are more bricks, most probably still belonging to the same structure (**1413**, top 345.90 m, bottom 345.28 m) (Fig. 6). The base of this structure might have been reached, on an almost horizontal level, filled with gravel and small stones (**1414**, elev. 345.37 m). Underneath is a layer of the same earth, which has barely been excavated since it is more or less the level where the excavation stopped (**1415**, bottom 345.28 m). Unfortunately, due to time constraints, the full width of this mass has not been determined, but within the limits of the sounding, the minimum width excavated is almost 4 m, for a height of ca. 3 m (Fig. 3).

Inside this structure, within the surface layers, a few objects were found: an iron arrowhead (AM19-A3-1405-01) (Fig. 8), a piece of flint blade (AM19-A3-1405-04), a fragment of stone weight (AM19-A3-1405-05), a possible stone tool (AM19-A3-1405-06), some pieces of slag (AM19-A3-1405-02) and animal bones (AM19-A3-1405-03).

On top of this structure are two small ones, that look like two little walls with respectively three and two courses of bricks, but they could well be the upper courses of the wall, damaged by two pits (**1402**, top 348.52 m, bottom 348.15 m, and **1407**, top 348.44 m, bottom 348.52 m). Those two structures are indeed very damaged (Fig. 4). In 1402, animal bones were found (AM19-A3-1402-01). On one side, the earth is pretty powdery and reddish (**1401**), and a small animal was found in it, with the bones still connected (AM19-A3-1401-01), and some pieces of slag (AM19-A3-1401-02). Some pieces of *tabuk* were also found. On the N side, the sediment is also powdery, but more yellowish (**1408**).

Finally, one disturbance has to be mentioned, a modern garbage pit containing plastic and layers of ash, dating to the 1990s (**1403**) (Fig. 3).

### Interpretations and Conclusions

The fact that the structure 1405 seems to be so poorly made confirms that not only the most important thing is its mass, but it was also probably intended to be a substructure. It seems then possible that it worked with the wall excavated in the A2 sounding: if it was a rampart, then 1405 would be the glacis, if a wall, probably a terrace. Future excavations will help clarify the link between the wall and this mass of bricks.

### List of Stratigraphic Units

SU	Description	Items found
<b>1400</b>	Surface layer	AM19-A3-1400-01: bones (fauna) AM19-A3-1400-02: animal figurine

<b>1401</b>	Layer located N of wall 1402	AM19-A3-1401-01: bones (fauna)
<b>1402</b>	Possible wall, very damaged	AM19-A3-1402-01: bones (fauna) AM19-A3-1401-02: pieces of slag
<b>1403</b>	Garbage pit, modern	
<b>1404</b>	Erosion layer	AM19-A3-1404-01: flint flake (?) AM19-A3-1404-02: pieces of slag
<b>1405</b>	Structure of mud-bricks	AM19-A3-1405-01: arrowhead AM19-A3-1405-02: pieces of slag AM19-A3-1405-03: bones (fauna) AM19-A3-1405-04: flint blade AM19-A3-1405-05: stone weight AM19-A3-1405-06: stone tool
<b>1406</b>	Erosion layer	AM19-A3-1406-01: pieces of slag
<b>1407</b>	Possible wall, very damaged	
<b>1408</b>	Layer located S of wall 1402	
<b>1409</b>	Erosion layer	AM19-A3-1409-01: bones (fauna) AM19-A3-1409-04: grinding stone (?) AM19-A3-1409-03: pieces of slag
<b>1410</b>	Erosion layer	AM19-A3-1410-01: animal figurine AM19-A3-1410-02: bones (fauna)
<b>1411</b>	Erosion layer	AM19-A3-1411-01: bones (fauna) AM19-A3-1411-02: stone tool
<b>1412</b>	Earth within the mud-brick structure, possibly courses of bricks which joints were not visible during the excavation	AM19-A3-1412-01: clay nail
<b>1413</b>	Mud-bricks inside the structure 1405, below 1412	
<b>1414</b>	Thin layer of gravel, possibly the base of the structure 1405	
<b>1415</b>	Earth below 1414	

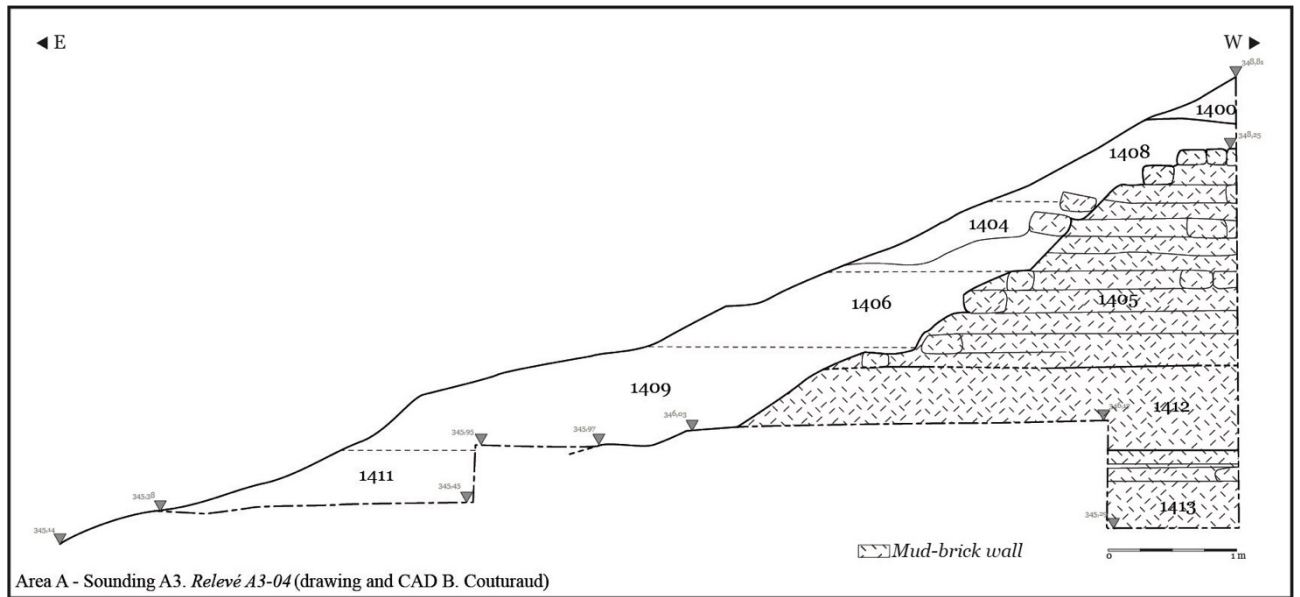


FIG. 1: S section of the sounding A3 (MAA)



FIG. 2: Badly preserved bricks appearing in 1405 during excavating (MAA)

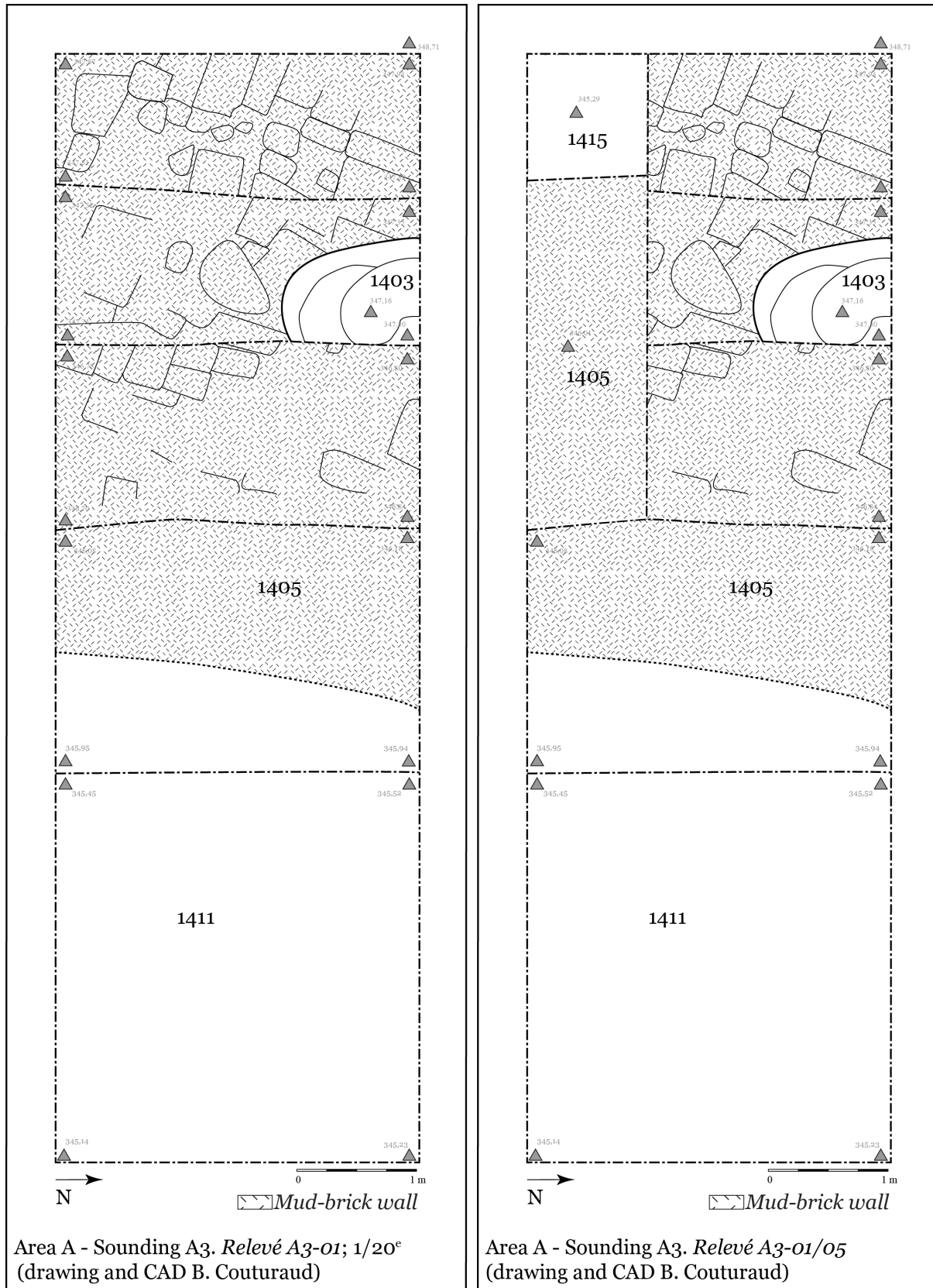


FIG. 3: Plan of sounding A3 (MAA)



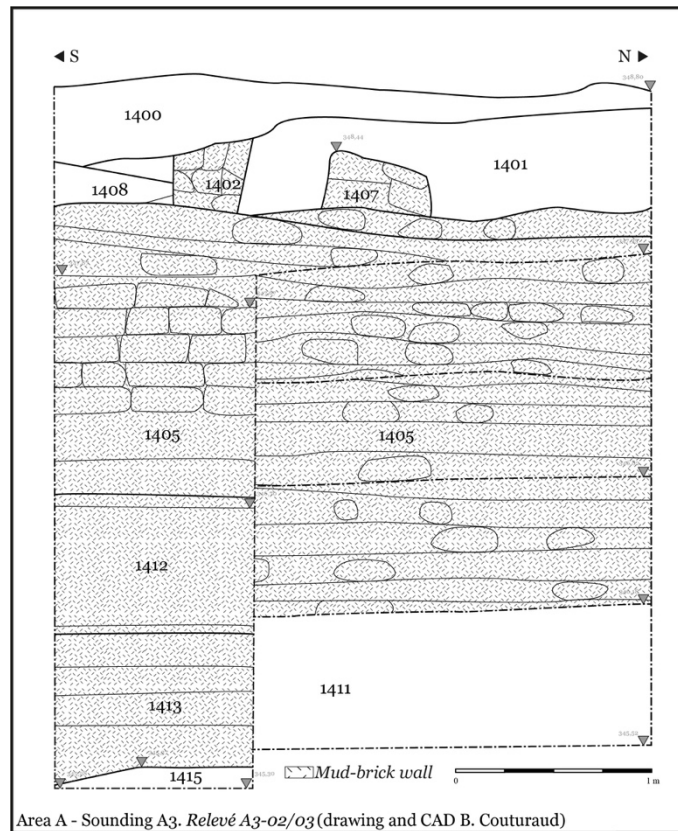
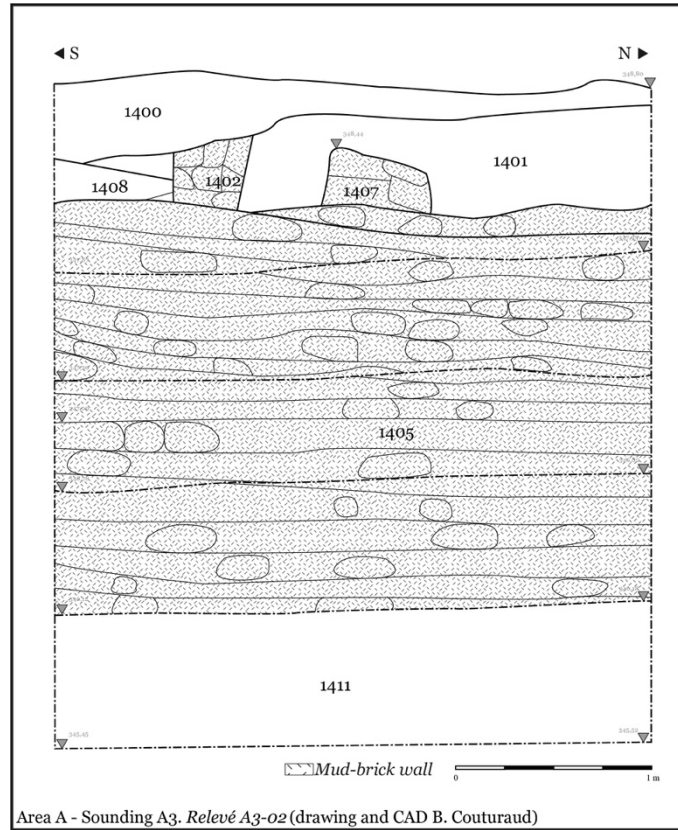


FIG. 4: W section of the sounding (MAA)



FIG. 5: Sounding A3 at the end of the excavation (MAA)



FIG. 6: Compact mud-bricks in the core of the structure 1405 (= 1413) (MAA)



FIG. 7: Upper part of a clay nail (AM19-A3-1412-01) (MAA)



FIG. 8: Iron arrowhead (AM19-A3-1405-01) (MAA)



FIG. 9: Animal figurine (AM19-A3-1410-01) (MAA)

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## THE POTTERY

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Taos BABOUR<sup>1</sup>

The pottery from soundings A1, A2 and A3 was processed in parallel with the excavations, from May 21 to June 11. Due to the nature of the architectural remains excavated in the step trench of Area A, the pottery comes primarily from secondary, even tertiary contexts. This material is, however, totally new and provides a first overview of pottery productions at the site of Amyan. Relative dating also allows the occupation history of the site to be glimpsed, and to determine a *terminus post quem* for the constructions excavated on the E slope of the site.

### **Sherd Processing**

All the sherds from a single stratigraphic unit (SU) were washed, sorted, reassembled and quantified. This process was done quite roughly, according to the quality and the texture of the fabric, and the presence of specific surface treatments or decorations. It will be possible to improve this methodology for the next campaigns.

The total number of sherds (NR), the number of diagnostic sherds (Dia) and the minimum number of individuals (NMI) were quantified according to different scales (SU, sounding, area, site) (Fig. 1). Diagnostic sherds are those that can be classified, either because their form gives an indication about the shape of the vessel, or because they bear easily recognizable technical traits of production, such as a specific surface treatment or a decoration. Diagnostic sherds are those kept for registration and study. Their number, however, is different from the minimum number of individuals, which refers to the smallest possible number of vessels in a ceramic assemblage. This minimum number of individuals is based on the number of the most common morphological elements among the diagnostics of each assemblage (and later, within each technical and typological group) in order to estimate how many vessels are present in it. This method of counting is particularly interesting when applied to an already well-classified collection coming from primary contexts.

After quantification, although all the diagnostic sherds were kept for study, because of the limited time available, only 22% of them could be recorded. Priority was given to sherds from stratigraphic units considered to be the most interesting by the excavators,

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to the dimensionally best-preserved forms, and to diagnostic elements (specific forms or decorations) that seemed important for the typo-chronology. For each recorded sherd, a descriptive sheet was created in a dedicated database, to which the drawing and the photographs of the sherd, as well as a photograph of the section under the microscope (x20, x50) are attached.

### Quantification

A total of 9010 sherds were excavated in Area A. 40% of these sherds come from sounding A2 (n = 3622), 35% from sounding A3 (n = 3185) and 25% from sounding A1 (n = 2203) (Fig. 1).

According to the sorting done in the field for the quantification, the majority of the sherds belong to medium-fine wares, which are mainly mineral tempered (Fig. 2 & 3). Most of these sherds are plain (84%) and a few are decorated (5%). Other groups were distinguished by the fineness and hardness of the fabric, in which no inclusions are visible to the naked eye, such as fine wares (6%). Cooking-pot wares (4%) are characterized by a fabric with coarse mineral inclusions and, in some case, a polished or burnished surface. Finally, coarse ceramics are characterized by a fabric with coarse organic or chaff of temper, but these are relatively rare (1%). These different groups appear in similar proportions in the three soundings A1, A2 and A3 (Fig. 4). A diversity of matrix textures, as well as colours, forms and quantity of inclusions was, however, noticed within each group and a finer classification is in process.

Almost exclusively part of the medium-fine wares, decorated sherds represent 5% of the pottery assemblages. A total of nine different decoration techniques have been identified (Fig. 5 & 6). Of these, painted decorations are the most common, especially painted stripes (6.4%, Fig. 6.4). This type was distinguished from finer painted lines (Fig. 6.3), which, however, have been identified on only two sherds (0.02%). The painted geometric decorations, seen only on body sherds, represent only 0.3% of the assemblages (Fig. 6.1-2). Incised (Fig. 6.7) and patterned (Fig. 6.8) decorations represent respectively 1% and 0.5% of the assemblage. There were also two glazed sherds (less than 0.1%, Fig. 6.9), 6 sherds with a white slip (0.1%), and one sherd with a red slip (0.01%). Most of these rare decorated sherds come from sounding A2, where the widest variety of decoration was recovered (Fig. 7). The glazed sherds, which may date to the Late Bronze Age period,<sup>2</sup> were found associated with the second pavement (1008) of sounding A1, within phase A.

There is otherwise no difference in the distribution of decoration types among assemblages from the three soundings. Painted stripes and painted geometric decorations, incised and patterned decorations appeared in similar proportion (Fig. 7).

### Preliminary Considerations

The 338 recorded sherds form the beginning of a classification of technical groups and their respective morphological facies. This will allow Amyan's pottery assemblage to be placed in the historical context of the region by comparison with productions already known at other neighbour sites. While a more precise analysis has now to be performed, some significant elements can already be presented here.

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<sup>2</sup> Moorey 1994, 159-162.

Fine wares (145 diagnostic sherds) include a number of bowls out-turned rim fragments (Fig. 8.1-4). Thinned outer pinched rims from cups or goblets with convex walls are also common (Fig. 8.6-7). There were also several sherds of carinated bowls (fig. 8.5). These types come, for instance, from layers 1024 and 1025, which are the deepest excavated in sounding A1. According to the comparison with pottery from Nimrud<sup>3</sup> and Nineveh,<sup>4</sup> these types are common in the Neo- and Post-Assyrian assemblages of the region.

The medium-fine wares are characterized by mineral tempered fabrics and sometimes painted, incised or patterned decorations. Among the most frequent forms, large bowls and pots with a flat edge or angular rims are representative of Middle<sup>5</sup> and Late Bronze Age assemblages<sup>6</sup> (Fig. 9.5-6, 12-13, 15-16). Some of these vessels are provided with painted decorations, typical of productions usually labelled as 'Khabur ware' and in use from the old Babylonian to the Mitanni periods.<sup>7</sup> The edge of bowls is decorated with short, parallel diagonal stripes (Fig. 9.4-6), whereas pots and closed vessels have parallel horizontal painted stripes (Fig. 9.12) or stripes and hatched inverted triangles (Fig. 9.2-3). According to the comparison with pottery from Tell Brak<sup>8</sup> and Tell al-Rimah,<sup>9</sup> pots with flat edges and decorated ribbed bands on the body could date back to the Old-Babylonian period (Fig. 9.1). Complete vessels with analogous decoration were recently discovered at Tell Gomel, in Middle Bronze Age II graves.<sup>10</sup> Other types are later in date, such as carinated bowls (Fig. 9.7) or incised edge vessels (Fig. 9.9, 13), which are typical of Assyrian productions.<sup>11</sup>

## Conclusions

The pottery from the Amyan excavations comes mainly from erosion or fill layers, a situation which largely explains the presence of ceramics dating to different periods in most stratigraphic units excavated during this campaign in Area A. Even the deepest levels of occupation, uncovered in sounding A1, appear to have been extremely disturbed. A more detailed study of all the material recorded in this sounding will, however, allow this analysis to be verified and improved. For the time being, there is no obvious distinction between the assemblages from the three soundings and they suggest this area was occupied from the Old-Babylonian to the Neo-Assyrian period.

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<sup>3</sup> Lines 1954, pl. XXXVII.7-9; Oates 1959, pl. 37.59

<sup>4</sup> Lumsden 1999, fig. 8, 58.

<sup>5</sup> Postgate *et al.* 1997, pl. 88.1022-1023; Oates *et al.* 1997, fig. 193.297.

<sup>6</sup> Curtis & Green 1995, fig. 37.156, 49.227; Anastasio 2010, 44-45, pl. 20.5; Morandi *et al.* 2018, fig. 42.1.

<sup>7</sup> Postgate *et al.* 1997, 42 ; Oates *et al.* 1997, 63-65.

<sup>8</sup> Oates *et al.* 1997, 190.236, 193.297.

<sup>9</sup> Postgate *et al.* 1997, pl. 79.879-880.

<sup>10</sup> Morandi *et al.* 2018, fig. 26.1-3, 10.

<sup>11</sup> Lines 1954, pl. XXXVII.5; Curtis & Green 1995, fig. 37.156, 49.227.

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Sounding	Diagnostic	%	NMI	%	NR	%
A1	331	4	179	2	2203	25
A2	647	7	344	4	3622	40
A3	533	6	323	4	3185	35
<b>TOTAL</b>	1511	17	846	9	9010	100

FIG. 1: Comparative table of the number of diagnostic sherds, NMI and total number of sherds excavated (NR)

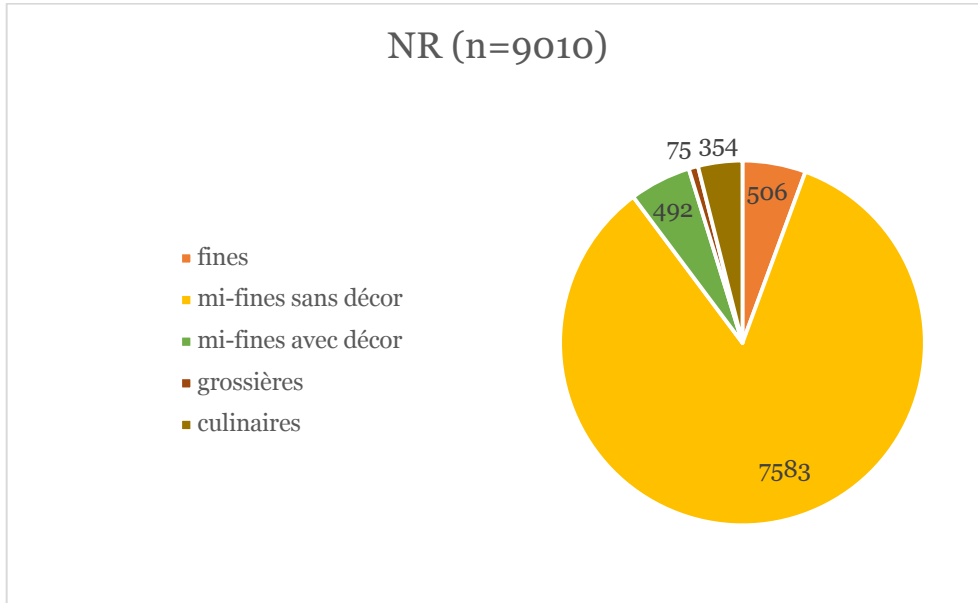


FIG. 2: Distribution of sherds within the ceramic groups established during sorting

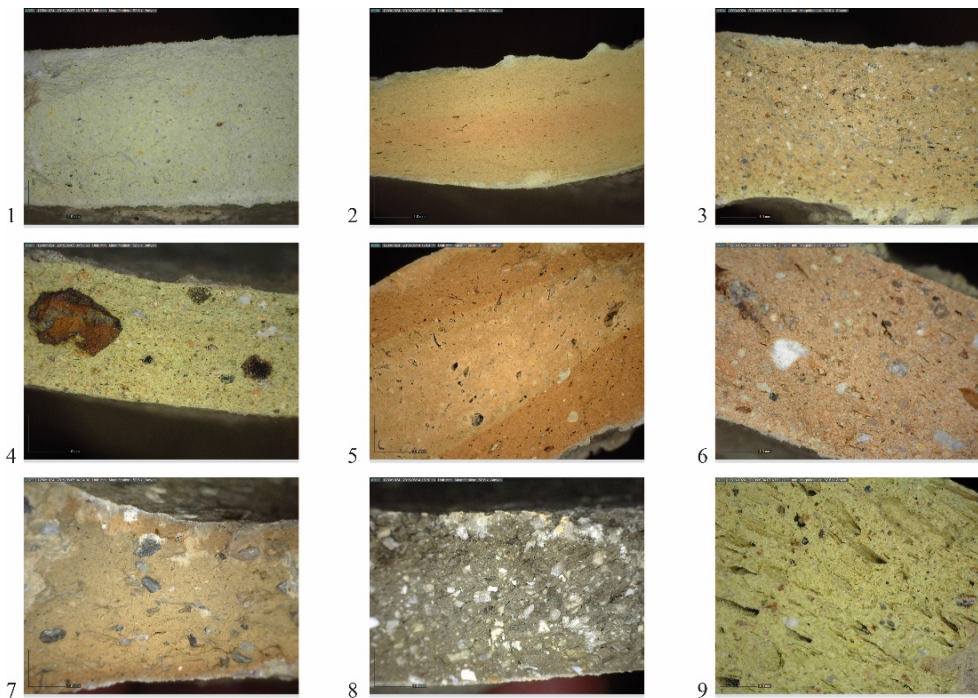


FIG. 3: Examples of fabrics: fine (1-2), medium-fine (3-6), cooking (7-8) and coarse vegetal-tempered (9) (MAA)

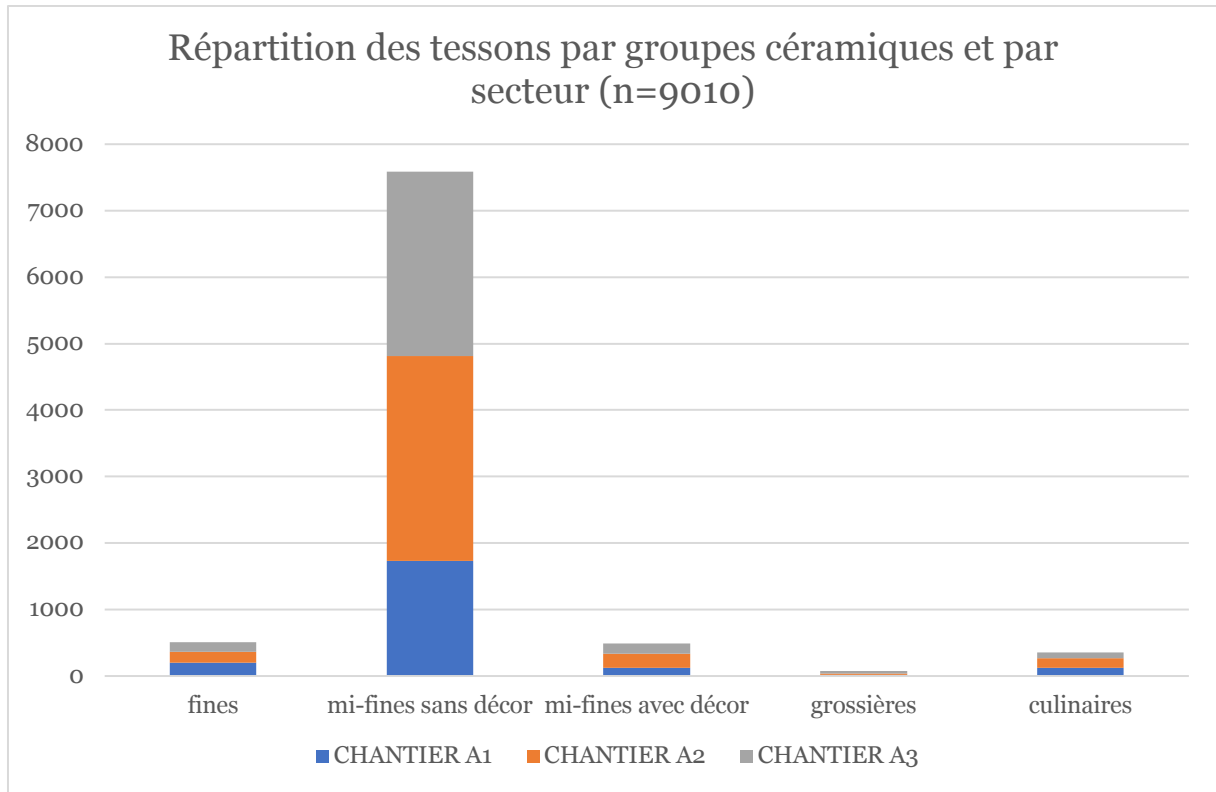


FIG. 4: Distribution of sherds by ceramic groups and by sounding

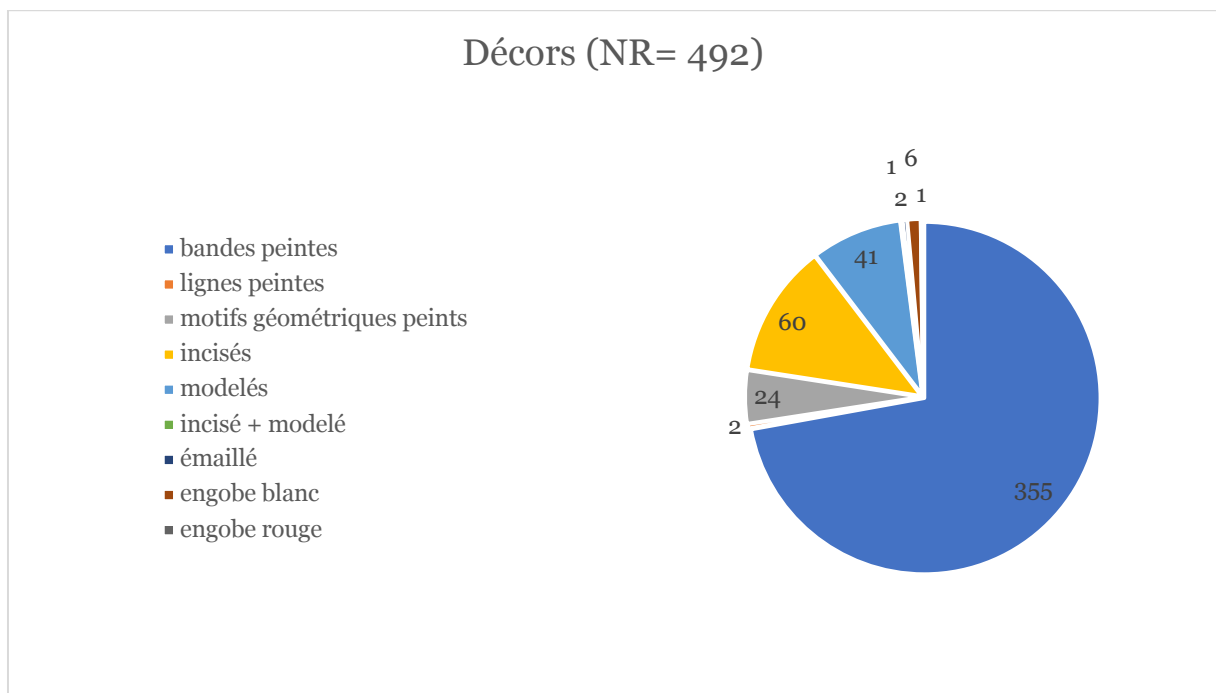


FIG. 5: Quantification of the decorations

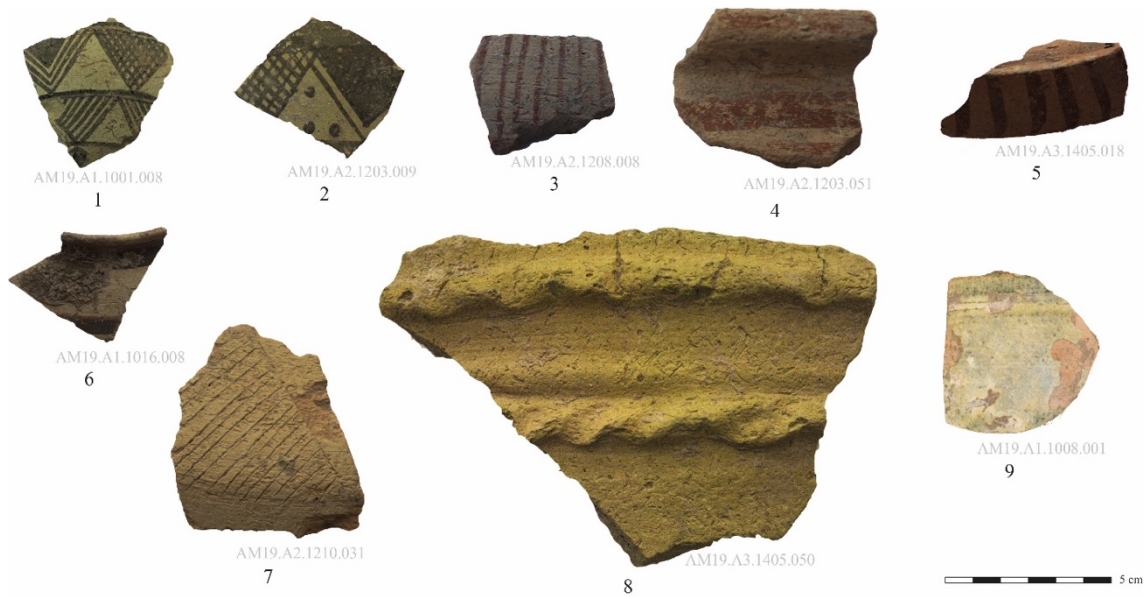


FIG. 6: Examples of decoration techniques and motifs (MAA)

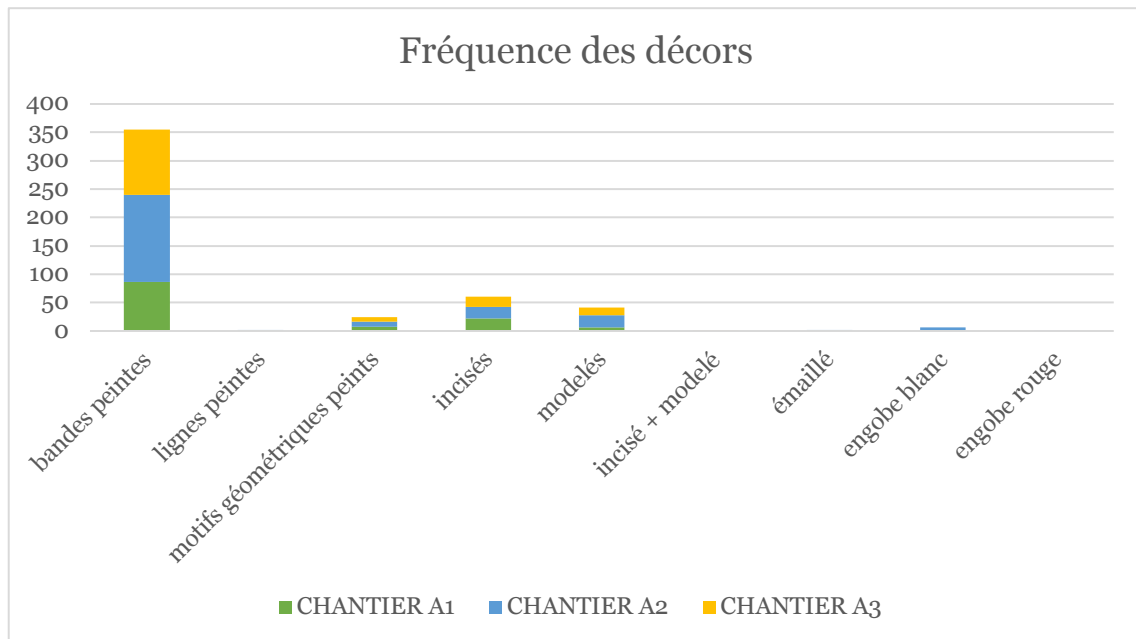


FIG. 7: Frequency of the different decorations in the three soundings (MAA)

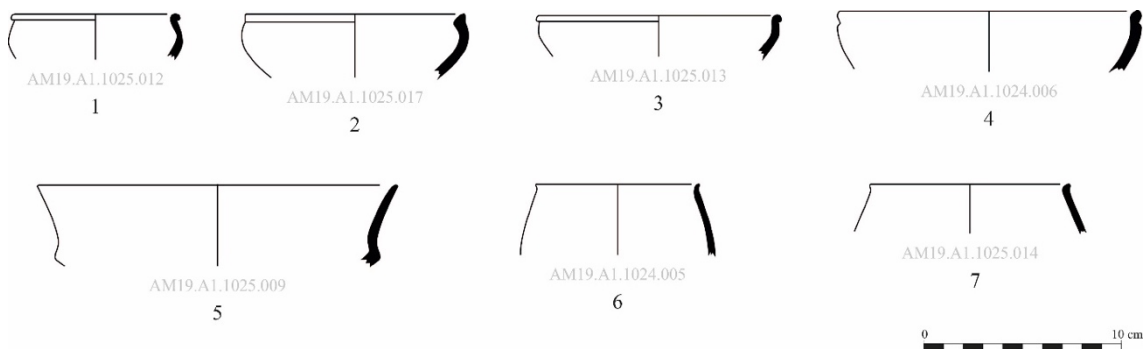


FIG. 8: Iron Age fine ware from sounding A1 (MAA)

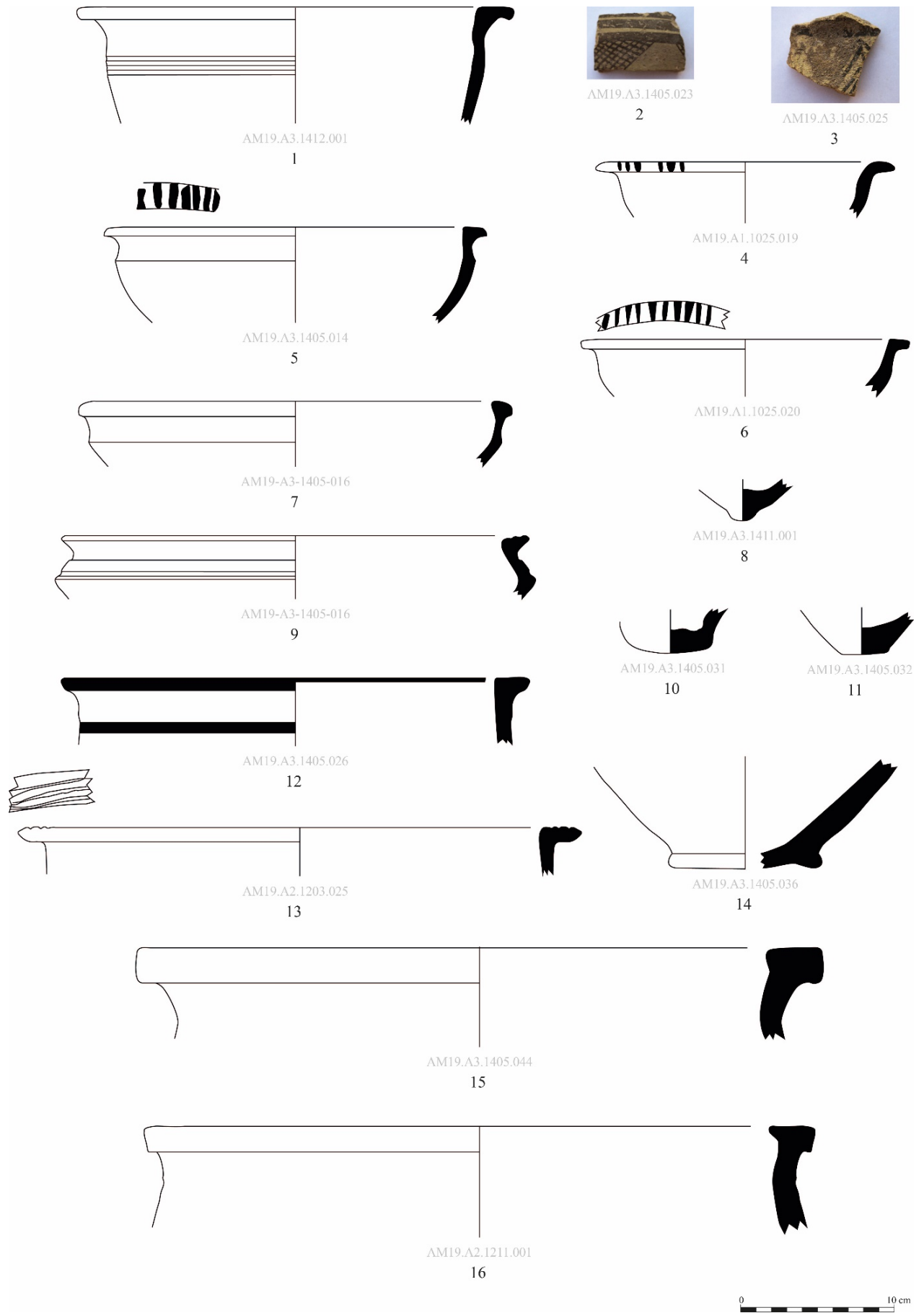


FIG. 9: Medium-fine ware specific to the Late Bronze Age and Iron Age (MAA)

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## THE ARTEFACTS

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*Barbara COUTURAUD<sup>1</sup>*

Just like the sherds, the objects discovered this year in the three soundings of Area A were mostly out of context. The dating is therefore difficult. There is a total of 40 objects, belonging to the following categories of artefacts: clay nails, clay lamps, stone tools, stone grinding equipment, stone weights, clay scrapers, metal weapons, clay figurines, metal and terracotta slag, and tokens.

### Clay Nails

Four fragments of clay nails were discovered in the three soundings opened this year in Area A, of a slightly pinkish clay. Three fragments are nail heads, the fourth could be the body. Damaged and eroded, they are distinguished by their very particular shape: two with a rectangular section, one with a round section – not inscribed – and one with a square section. Two of them could belong to the same nail.



**AM19-A1-1001-02/OBJ**




Sounding A1, SU 1001

Upper part of a clay nail. Head dimensions: L. 54 mm., H. 15 mm. Colour: beige/light pink. Body rectangular in section, 39 x 24 mm.

Fragment, H. 47 mm; L. 54 mm.


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<sup>1</sup> Researcher, IFPO-Erbil.

	<p><b>AM19-A2-1201-01/OBJ</b> Sounding A2, SU 1201</p> <p>Clay nail. Head dimensions: L. 76 mm., H. 12 mm. Colour: beige/light pink. Body round in section, Diam. 46 mm.</p> <p>Fragment, H. 127 mm; L. 76 mm.</p>
	<p><b>AM19-A2-1212-01/OBJ</b> Sounding A2, SU 1212</p> <p>Bottom part of a clay nail (?), rectangular in section. Colour: orange/light pink. Gets slightly thinner downwards. Could be the bottom part of AM19-A3-1412-01/OBJ.</p> <p>Fragment, H. 84 mm; L. 40 mm; W. 30 mm.</p>
	<p><b>AM19-A3-1412-01/OBJ</b> Sounding A3, SU 1412</p> <p>Upper part of a clay nail (?), square in section. Colour: orange/light pink. Gets slightly thinner downwards. Head dimensions: H. 8 mm. Could be the upper part of AM19-A2-1212-01/OBJ.</p> <p>Fragment, H. 83 mm; L. 42 mm; W. 41 mm.</p>






### Clay Lamps

Only one fragment of a clay lamp has been found, in sounding A1, clearly a firing failure, recovered in the sub-surface layer.

	<p><b>AM19-A1-1001-04/OBJ</b> Sounding A1, SU 1001</p> <p>Clay lamp, body, spout and annular base, greyish. Firing failure.</p> <p>Fragment, H. 50 mm; L. 110 mm; W. 6 mm.</p>
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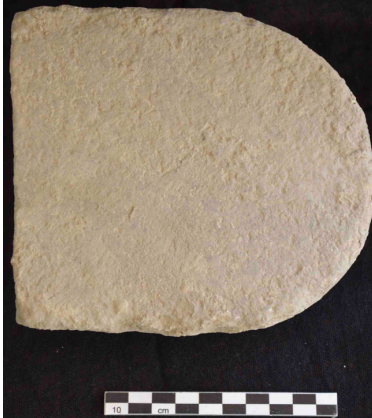


## Stone Tools

Five pieces of probable stone tools were unearthed in soundings A1 and A3, three of which are possibly flint: one is clearly a blade, the two others could be flakes.

	<p><b>AM19-A1-1009-02/OBJ</b>  Sounding A1, SU 1009  Flint flake (?), greenish, black veins.  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1022-01/OBJ</b>  Sounding A1, SU 1022  Stone tool (?), black, one side rounded, the other flat.  Fragment, H. 22 mm; L. 17 mm; W. 19 mm.</p>
	<p><b>AM19-A3-1404-01/OBJ</b>  Sounding A3, SU 1404  Flint flake (?), reddish.  Fragment, irregular dimensions.</p>
	<p><b>AM19-A3-1405-04/OBJ</b>  Sounding A3, SU 1405  Flint blade, white, denticulated, triangular in section.  Fragment, H. 36 mm; L. 25 mm; W. 9 mm.</p>
	<p><b>AM19-A3-1405-06/OBJ</b>  Sounding A3, SU 1405  Stone tool (?), black.  Fragment, irregular dimensions.</p>

## Stone Grinding Equipment




Recovered in soundings A1 and A3, five objects could be considered as ground stone tools: two of them could be grinding stones, one could be a round pestle, the last one a crusher.

	<p><b>AM19-A1-1009-01/OBJ</b> Sounding A1, SU 1009 Long tool, possibly a crusher (?), grey stone, roughly rectangular in section. Fragment, H. 104 mm; L. 38 mm; W. 20 mm.</p>
	<p><b>AM19-A1-1012-01/OBJ</b> Sounding A1, SU 1012 Grinding stone (?), grey stone, ovoid, one face convex, the other flat. Fragment, H. 150 mm; L. 136 mm; W. 51 mm.</p>
	<p><b>AM19-A3-1409-04/OBJ</b> Sounding A3, SU 1409 Grinding stone (?), volcanic stone (basalt?), ovoid, one face convex, the other flat. Fragment, H. 55 mm; L. 41 mm; W. 28 mm.</p>
	<p><b>AM19-A3-1411-02/OBJ</b> Sounding A3, SU 1411 Stone pestle (?), grey, roughly ovoid. Many mineral inclusions. Fragment, H. 58 mm; L. 69 mm.</p>





### Stone Weights

Four stone weights were discovered in the three soundings of Area A, three with a suspension hole and the other almost perfectly spherical.

	<p><b>AM19-A1-1023-02/OBJ</b>                  Sounding A1, SU 1023                  Two pierced stones (limestone?), perhaps weights. Irregular suspension holes.                  Complete, irregular dimensions.</p>
	<p><b>AM19-A2-1210-02/OBJ</b>                  Sounding A2, SU 1210                  Stone weight (?), round, no traces of use. Could also be a sling shot.                  Complete, Diam. 33 mm.</p>
	<p><b>AM19-A3-1405-05/OBJ</b>                  Sounding A3, SU 1405                  Stone weight (?), round, thin. Pierced in the upper part. Hole: Diam. 9 mm, L. 6 mm. Broken in the upper part.                  Fragment, H. 33 mm; L. 36 mm; W. 17 mm.</p>



### Clay Scrapers

Two fragments of clay scrapers were found in sounding A2, one of them archaeologically complete.

	<p><b>AM19-A2-1201-04/OBJ</b>                  Sounding A2, SU 1201                  Clay scraper.                  Fragment, H. 31 mm; L. 42 mm; W. 12 mm.</p>
	<p><b>AM19-A2-1203-04/OBJ</b>                  Sounding A2, SU 1203                  Clay Scraper, well preserved.                  Fragment, H. 28 mm; L. 37 mm; W. 10 mm.</p>

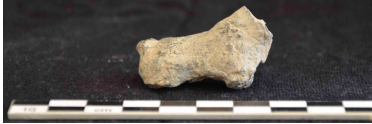

## Metal Weapons

Two fragments of metal weapons were recovered in soundings A2 and A3. Badly preserved, they probably correspond to a blade and an iron arrowhead.

	<p><b>AM19-A2-1203-03/OBJ</b> Sounding A2, SU 1203 Spearhead or javelin (?), iron (?), reddish oxidation. Fragment, H. 50 mm; L. 14 mm; W. 3 mm.</p>
	<p><b>AM19-A3-1405-01/OBJ</b> Sounding A3, SU 1405 Arrowhead, iron (?), reddish oxidation. Section in the shape of a three-branched star. Haft is round in section. Fragment, H. 57 mm; L. 10 mm.</p>





## Clay Figurines







Two fragments of animal figurines were recovered in sounding A3. Only the body is preserved.







	<p><b>AM19-A3-1400-02/OBJ</b> Sounding A3, SU 1400 Fragment of an animal clay figurine (?), black, probably submitted to fire. Fragment, H. 40 mm; L. 22 mm.</p>
	<p><b>AM19-A3-1410-01/OBJ</b> Sounding A3, SU 1410 Fragment of an animal figurine, a quadruped (probably a horse considering what appears to be a mane). Colour: beige/light pink. Head, legs and tail are missing. Fragment, H. 39 mm; L. 64 mm.</p>

## Terracotta and Metal Slag

A large number of pieces of slag were found in the three soundings of Area A. They are green, for the most part, and are mainly terracotta slag, though some may be of metal.

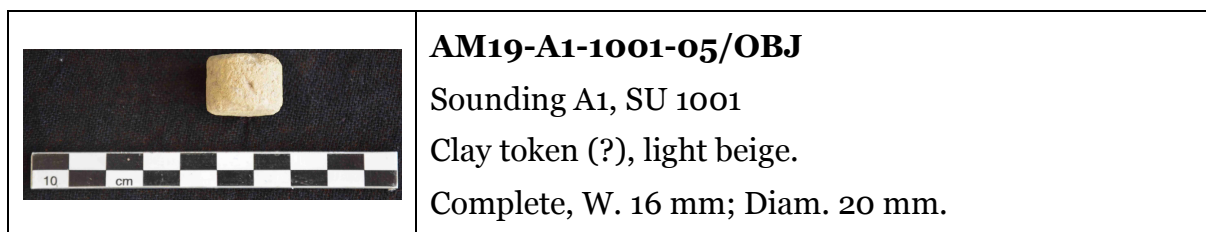
	<p><b>AM19-A1-1001-03/OBJ</b>  Sounding A1, SU 1001  Terracotta slag (?), slightly vitrified.  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1004-02/OBJ</b>  Sounding A1, SU 1004  Terracotta slag (?), light grey.  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1011-02/OBJ</b>  Sounding A1, SU 1011  Terracotta slag (?), blackish.  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1017-01/OBJ</b>  Sounding A1, SU 1017  Terracotta slag (?), light grey.  Fragment, irregular dimensions.</p>

	<p><b>AM19-A1-1020-02/OBJ</b>                  Sounding A1, SU 1020                  Terracotta slag (?), blackish.                  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1024-02/OBJ</b>                  Sounding A1, SU 1204                  Terracotta slag (?), green.                  Fragment, irregular dimensions.</p>
	<p><b>AM19-A1-1025-01/OBJ</b>                  Sounding A1, SU 1025                  Two pieces of terracotta slag (?), greenish.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A2-1200-01/OBJ</b>                  Sounding A2, SU 1200                  Terracotta slag (?), greenish, surface vitrified.                  Fragment, irregular dimensions.</p>
	<p><b>AM19-A2-1201-02/OBJ</b>                  Sounding A2, SU 1201                  Nine pieces of terracotta slag (?), mainly dark grey, some of them greenish with a vitrified surface. A lot of concretions.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A2-1208-02/OBJ</b>                  Sounding A2, SU 1208                  Three pieces of terracotta slag (?), blackish.                  Fragments, irregular dimensions.</p>

	<p><b>AM19-A2-1211-01/OBJ</b>                  Sounding A2, SU 1211                  Eight pieces of terracotta slag (?), light grey and blackish.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A3-1401-02/OBJ</b>                  Sounding A3, SU 1401                  Three pieces of terracotta slag (?), blackish.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A3-1404-02/OBJ</b>                  Sounding A3, SU 1404                  Four pieces of terracotta slag (?), light to dark grey, slightly vitrified.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A3-1405-02/OBJ</b>                  Sounding A3, SU 1405                  Ten pieces of terracotta slag (?), some of them vitrified, blackish, greenish and reddish.                  Fragments, irregular dimensions.</p>
	<p><b>AM19-A3-1406-01/OBJ</b>                  Sounding A3, SU 1406                  Metal slag (?), dark grey, very dense, some slightly orange 'dots' on the surface.                  Fragment, irregular dimensions.</p>
	<p><b>AM19-A3-1409-03/OBJ</b>                  Sounding A3, SU 1409                  Terracotta slag (?), greenish, slightly vitrified.                  Fragment, irregular dimensions.</p>

## Clay Tokens

One small clay token was found in sounding A1, in the sub-surface layer.



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## CONCLUSION AND FUTURE WORK

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Surveying work and excavations at Amyan have shown that the site was occupied almost continuously from the Neolithic to the Islamic period, and that it was most probably one of the major urban centres on the plain of Akre. It will thus be ideally suited to meet the following research objectives:

- the establishment of a complete chronological sequence of the occupation of the high mound and the lower town and a ceramic typological reference system that could serve for the whole region;
- the study of the Early Bronze Age period;
- the study of the environment of the high mound and its relationship with the other satellite sites that form the cluster of Amyan.

The first campaign mainly focused on the archaeological investigation of the high mound. Though it was not possible to get a general idea of the different levels of occupation of the main mound, the importance of the city has been confirmed, given the size of the architecture excavated. It remains now to be understood whether this massive structure (wall and glacis/terrace) runs all around the slope of the high mound or is located only on this side, which would then tend to demonstrate that the high mound would be the result of different occupations, growing not only vertically but also horizontally. The pursuit of the excavation of the building found in the sounding A1 also has to be considered, since it probably corresponds to an important administrative building, given the size of its external wall.

Many other objectives are planned for the coming years, more specifically for the next campaign:

- to complete the topographic survey undertaken this year in order to obtain an accurate topographic map of the main site and its surroundings;
- to open trenches on the top of the high mound and on its W and S slope in order to have at least three different views of the occupation of the high mound; an extension

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of the step trench in Area A is also intended, in order to complete the work in soundings A1 and A3;

- to pursue the study the material culture (artefacts and ceramics).

In the long term, other objectives are planned:

- to open excavation areas in the lower town down to virgin soil;

- to investigate the peripheral sites of Amyan for a better understanding of the settlement dynamics around the main site;

- at last, to study Amyan's environment with a team specialized in the study of ancient landscapes (geoarchaeology, geomorphology, paleoenvironment, spatial analyses and ancient landscape), in order to fully understand the paleoenvironmental dynamics of the plain in the 4<sup>th</sup>, 3<sup>rd</sup>, 2<sup>nd</sup> and 1<sup>st</sup> millennia BC, and also to understand the course of the river and what role it has played in shaping the remains of the high mound.