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EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Corso di Dottorato di ricerca

in Scienze dell'Antichità

ciclo XXX

Tesi di Ricerca

in cotutela con Eberhard Karls Universität Tübingen

The Tell Gomel Archaeological Survey

Surface research and off-site investigations in the heart of the Navkur Plain, Iraqi Kurdistan

Vol. I

SSD: L-OR/05

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Acknowledgement

A Ph.D. Thesis is the accomplishment of a long and challenging journey, one that I could not have finished without the care and advice of many people in my life.

First and foremost, I express my deepest gratitude to my supervisor Prof. Daniele Morandi Bonacossi for his guidance, support and patience. Prof. Morandi Bonacossi, as director of the Land of Nineveh Archeological Project, gave me the opportunity to join the project and allowed me to carry out autonomously the intensive survey in the area of Tell Gomel, his constant support and help were fundamental for the accomplishment of the fieldwork and of this dissertation.

My stay in Tübingen in the last years of my Ph.D. helped me to truly improve my research and my academic skills, for this reason I am extremely grateful to my second supervisor Prof. Peter Pfälzner, who gave me the opportunity to do a joint Ph.D. thesis and to get involved in the activities of the IANES in Tübingen. His advice, motivation and support were of great value for my research.

I would like also to thank Prof. Jason Ur for his encouragement, advice, and for sharing with me the U2 images in his possession.

I have also been immensely lucky for having had the chance to collaborate with many other excellent scholars and human beings within the Land of Nineveh Archaeological Project. Without their precious help it would not be possible to conduct this research. Many people have helped me in the survey activities, in particular, I would like to express my gratitude to Sengar Tayyb, Giancarlo Garna, Margherita Dallai, Laura Zanazzo and Riccardo Menis. The first chronological subdivision of the material collected on the field would not have been possible without the help and expertise of Marco Iamoni, Katia Gavagnin, Costanza Coppini, Rocco Palermo, Daniele Moscone, Cecilia Conati, Valentina Vezzoli e Cristina Tonghini. With deep gratitude I want also to thank Alberto Savioli who introduce me to remote sensing and GIS analysis and Luigi Turri who helped me in countless occasions.

I have also to thank Andrea Zerboni, Prof. Fulvia Tambone and Floriana Bedussi to carry out the P analysis in Milano and for the fruitful discussions about soil manuring and P concentration.

I have also to thank all my friends in Tübingen and in Italy who supported me during the dissertation writing process. In particular, my sincere thanks go to Paola Sconzo for her insightful comments and discussion, for reviewing many of my thesis chapters in the making, but also for her continuous encouragement and support in overcoming numerous difficulties I have been facing through my research.

Raffaella, Costanza, Nahid end Elisa are also to be thanked for their help in digitising the pottery drawings presented in the thesis catalogues.

During my first year of the Ph.D. I organised a crowdfunding campaign and I would like to thank all the donors that sustained me.

Last but not least, I would like to thank Oliver, who, with his love, support and patience during the long and stressful writing period have done more than words can say. My heartfelt gratitude and love go to my family, my parents Iosi and Umberto and my sister Nicoletta. They are the reason to my strength and tenacity.

LIST OF ABBREVIATIONS

AD	*anno domini*
asl	above sea level
BC	before Christ
BP	before present
c.	*circa*, approximately
cm	centimeter(s)
dm	decimeter(s)
e.g.	*exempli gratia*, for example
EHAS	Eastern Ḫabur Archaeological Survey
EPAS	Erbil Plain Archaological Survey
esp.	especially
et al.	*et alii*, and others
etc.	*et cetera*, and so forth
fig(s).	figure(s)
GIS	Geographic lnformation System
GPS	Global Positioning System
Ha	hectare
i.e.	*id est*, that is
kg	kilogram(s)
km	kilometre(s)
LoNAP	Land of Nineveh Archaeological Project
m	meter(s)
mm	millimetre(s)
NJP	North Jazira Project
n(n).	number(s)
P	period
pers. comm.	personal communications
pl(s).	plate(s)
SRTM	Shuttle Radar Topography Mission
sq.	square
TBS	Tell Beydar Survey
TBSS	Tell Brak Suburban Survey
TERP	Tigris-Euphrates Reconnaissance Project
TGAS	Tell Gomel Archaeological Survey
THS	Tell Hamoukar Survey
UGZAR	Upper Great Zab Archaeological Reconnaissance
UTM	Universal Transverse Mercator
WCT	Working Ceramic Typology

1.
INTRODUCTION

The Tell Gomel Archaeological Survey (TGAS) is an intensive survey project carried out in the Navkur Plain (Duhok Governorates, Iraqi Kurdistan) in 2015 and 2016. Its geographical focus is the area around the prominent site of Tell Gomel, in the heart of one of the most fertile plains of Upper Mesopotamia.

TGAS has its origins in the wider 'Land of Nineveh Archaeological Project' (LoNAP) which has been conducted since 2012 by the University of Udine and which is directed by Prof. Morandi Bonacossi. LoNAP is a multidisciplinary project with the aim of studying the formation and the transformation of the cultural and natural landscapes of a central region of Northern Mesopotamia located in the hinterland of the Assyrian capital of Nineveh[1]. The project's research goals are also related to the preservation and the promotion of the rich cultural heritage of the region of Duhok (Iraqi Kurdistan).

The Land of Nineveh is itself one of four international archaeological projects that focus on the area of north-eastern Iraqi Kurdistan, called the Assyrian Landscape Research Group (fig. 1.1). The four projects involved are LoNAP, the "Erbil Plain Archaeological Survey" (EPAS) conducted by Prof. J. Ur of Harvard University, the Upper Greater Zab Archaeological Reconnaissence (UGZAR) led by Prof. R. Koliński of the University of Poznań and the Eastern Habur Archaeological Survey directed by Prof. P. Pfälzner and Dr. P. Sconzo of Tübingen University[2].

The aim of this informal cooperation initiative is to share a similar fieldwork methodology and periodization in order to easily exchange data and results between the cooperating projects.

[1] For an overview of the preliminary results of the project see: Morandi Bonacossi 2012-2013, 2016, 2018a and 2018b; Morandi Bonacossi and Iamoni 2015; Gavagnin *et al.* 2016.
[2] For a preliminary overview of the other projects see: Pfälzner and Sconzo 2015 and 2016; Ur et al. 2013; Koliński 2018.

Fig, 1.1 – The Assyrian Landscape Research Group (© UGZAR).

In this framework, the Land of Nineveh Archaeological Project investigates an area of 3000 km^2 in a region embracing large parts of the governorates of Ninawa and Duhok. Due to the vast size of the region, LoNAP decided to adopt a strategy based on a combination of motor-vehicle and pedestrian field survey of the sites previously identified as possible settlements through remote-sensing analysis (Morandi Bonacossi and Iamoni 2015)[3]. Therefore, until summer 2015 when TGAS project started, no small-scale intensive survey had been carried out in the Navkur Plain, notwithstanding its importance – as shown by the large number of sites already identified by the extensive survey in this area (Morandi Bonacossi and Iamoni 2015). Furthermore, LoNAP is not only a landscape archaeology project, since the survey is also combined with the archaeological excavation of the largest site of the entire region, Tell Gomel (Morandi Bonacossi *et al.* in press).

Tell Gomel is located on the River Gomel near the modern town of Kalakchi. The site features an elevated upper town (about 40 m above the surrounding plain) that dominates an extensive lower

[3] In 2016, the LoNAP applied also an intensive and off-site approach on targeted areas through the investigation of several 1 km-long transects radiating from the major sites of the region.

town. The site presents a continuous settlement sequence from the Late Neolithic to the Ottoman period and due to its large size and position in the centre of the plain, it must have played an important role in this region – presumably as its political and economic centre.

Gomel possibly corresponds with the Assyrian Gammagara mentioned in the Jerwan B Inscription of Sennacherib[4]. Furthermore, Sir Aurel Stein in his Limes Report (1938-1939, published in 1985) proposed that the battlefield of Gaugamela took place in the plain surrounding Tell Gomel.

Due to the interest on the site of Tell Gomel for starting an excavation project in the region, and due to the fact that now it is widely recognized that no ancient site, especially a large "urban" site, can be really understood without considering its hinterland (Wilkinson 2003: 100; Ur 2010: 1), LoNAP decided to start an intensive full-coverage survey project within the extensive survey.

On the base of these preconditions, the limits of TGAS area have been (arbitrarily) defined as a square centred on Tell Gomel, that extends south of the Erbil-Dohuk road, between the Jebel Maqloub and the Bardarash region to the South and the River Al-Khazir to the East. It measures 10 km on each side, and therefore covers a total area of 100 km^2.

Fig. 1.2 – The location of the Tell Gomel Archaeological Survey area within the LoNAP licensed area.

[4] Reade and Anderson 2013: 74; Fales and Del Fabbro 2014; Morandi Bonacossi *et al.* in press.

The main goals of TGAS project were:

- the systematic and intensive survey of this area, already investigated with an extensive strategy, in order to establish the presence of new sites not recognized through the remotely-sensed imagery analysis or the extensive survey;

- the investigation of settlement development in the Navkur Plain from the prehistory to the modern epoch;

- the study of ancient land-use (soil and water exploitation) and the route network (hollow ways), through the intensive fieldwalking survey of transects in the off-site areas;

- the comparison of the data collected during the intensive and extensive survey, to evaluate whether the results of a non-intensive examination might skew our understanding of settlement distribution and dating.

The organisation of the thesis

The thesis is subdivided in two volumes. The first volume presents the methodology, results and conclusions of the project, while the second volume contains the catalogues of the intensive survey of Tell Gomel, the site's survey and the off-site field scatters collection, and three Appendixes.

The first volume is organised as follow: after this short introduction, Chapter 2 describes the survey methodology, comprising the fieldwork activities and the pottery recording; Chapter 3 presents the physical environment of the Navkur Plain to have a clear depiction of the natural landscape of the area; Chapter 4 illustrates the results of the sites investigation, including a detailed presentation of the spatial data collected and a critical comparison of the intensive and extensive surveys results; a detailed description of the results of the off-site study is presented in Chapter 5; Chapter 6 focuses instead on the development of the settlement pattern and land use, from the Pre-Pottery Neolithic to the Post-Assyrian period[5]; finally, Chapter 7 synthesizes the results of the TGAS project.

The first volume also contains three appendixes: Appendix A offers a selection of maps to better localize each single site within TGAS area; Appendix B presents a list of the ceramic types, by type

[5] Due to the time limitation of the author's PhD programme, the author had to interrupt the study of the TGAS settlement development excluding the processes following the Post-Assyrian period.

number and period, used by the project; Appendix C illustrates the results of the soil analysis carried out on a selection of samples collected during fieldwork.

The second volume is organised in three large parts: Part 1 contains the catalogue of the intensive survey of Tell Gomel; Part 2 presents a detailed catalogue of the sites surveyed by TGAS; Part 3 shows the number and types of diagnostics field scatters collected.

The first two parts provide for each site: satellite images, photos, basic site information (i.e. coordinates, estimated extension, etc.), a short description, a precise quantification per period of the pottery recovered, the frequencies of pottery types and a selection of diagnostic sherds collected on the site surfaces (with descriptions and drawings). The third part presents the information regarding the field scatters diagnostic sherds collected during the transects field-walking. For each transect the diagnostic sherds collected are presented with descriptions and drawings.

2.
LANDSCAPE ARCHAEOLOGY AND SURVEY METHODOLOGY

2.1 The Development of Landscape Archaeology in Upper Mesopotamia

Landscape archaeology and field surveys evolved in Mesopotamia according to two different trajectories related to the different political and natural environments of the two large regions of Upper and Lower Mesopotamia (Wilkinson 2000a: 230-232).

In Upper Mesopotamia, during the early pioneer phase (between 1920s to 1950s) of surveys, the region was for the first time explored with unsystematic ground visits, i.e. by von Oppenheim and Mallowan, and from the air, i.e. by Poidebard and Van Liere (Wilkinson 2000a: 232; Ur 2010: 40).

The first modern surveys in northern Mesopotamia started with the extensive survey of Lloyd (1938), Reade (1968), Kirkbride (1974) and Ibrahim (1986) in North Iraq. In the Upper Khabur Basin, the Jaghjagh Survey of Fielden (1981) and the survey of the area east of the Jaghjagh (Meijer 1986) represent the first systematic research in the area. In the same period, the middle and lower Khabur were also systematically surveyed (Monchambert 1984a, 1984b; Röllig and Kühne 1983; Morandi Bonacossi 1996). In south-eastern Turkey, the extensive survey of Algaze was carried out along the Upper Tigris basin (Algaze 1989; Algaze *et al.* 1991; 2012).

After this first wave of extensive territorial reconnaissance[1], more intensive surveys started in the hinterland of preeminent and excavated sites such as at Leilan (Stein and Wattenmaker 2003), Beydar (Ur and Wilkinson 2008), Brak (Ur *et al.* 2011) and Hamoukar (Ur 2010). In the meantime, other larger surveys were also carried out in the Iraqi Jazirah (NJP, extended on a large territory but not extensive in its approach, Wilkinson and Tucker 1995) and in the NW Khabur basin (Lyonnet 2000).

The 2003 Anglo-American invasion brought a huge humanitarian crisis in all Iraq, however starting from 2008 the number of violent terroristic attacks declined[2]. As consequence of the better safety conditions and of the suspension of all the archaeological project in the nearby Syria (due to the civil

[1] A complete list of all the surveys carried out in Iraq Syria and Southeast Turkey (until 2000) is published in Wilkinson 2000a: 224, Tab. I.
[2] Global Terrorism Database: https://www.start.umd.edu/ (last access: 29/05/2019).

war started in 2011), international scholars started new projects in the safer and more stable Iraqi Kurdistan (Ur 2017b; Kopanias *et al.* 2015).

The new political conditions of the region gave new life to the landscape archaeology of Upper Mesopotamia. Many of the new projects that brought the archaeological "Renaissance" of the Kurdistan region of Iraq are regional archaeological surveys. Since 2012, 14 survey projects (fig. 2.1.2) have been carried out in the Governorates of Duhok, Erbil and Sulaymaniyah, covering almost completely the entire surface of the KRG territory (Ur 2017b; Kopanias *et al.* 2015).

This new set of surveys is based on an extensive approach to the terrritory suitable to investigate and understand wide regions. These surveys rely heavily on satellite images interpretation and, although they were able to quickly assess the archaeological potential of those previously unknown regions, they are also likely to miss, as common with a low intensity approach, small sites but also large pre-historic sites which, in alluvial plains, can be concealed by river sediments and/or later overburden. To prevent this result, several modern surveys in the near east use field walking transects along wadis and other water-streams or radiating from preeminent archaeological sites. On the contrary, north-south or east-west fieldwalking transects are never used systematically, mainly because they are time-consuming.

The only intensive survey carried out so far in northern Iraq is the Tell Gomel Archaeological Survey (TGAS). TGAS survey has the aim to contrast the opinion that an intensive survey merely spot many more small, which erroneusly tend to be considered irrelevant. TGAS results are indeed able to show how small sites are crucial in the depiction of the cyclical settlement nucleation and dispersal phenomena (Chapter 6). Furthermore, TGAS results show how an intensive survey can change the interpretation - in terms of settlment dynamics and chronological phasing – of the data already obtained by an extensive survey (Chapter 4.5).

Fig. 2.1.1 – Upper Mesopotamia Surveys until 2011 (Ur 2010: fig. 4.1)

Fig. 2.1.2 – In green, new survey projects carried out in the Kurdistan Region since 2012.

2.2 Site investigation methodology

Survey Limits

The limits of TGAS survey area have been (arbitrarily) defined as a 100 km^2 square centred on the site of Tell Gomel. The area is located in the heart of the Navkur Plain and it extends south of the Erbil-Duhok road, between the Jebel Maqloub and the Bardarash region to the South and the River Al-Khazir to the East (fig. 2.2.1).

Fig. 2.2.1 – TGAS project's limits.

The area is mostly completely flat, the only part gently hilly is the southwestern corner of TGAS region. The surface is mainly covered by cereal or vegetable fields (following a crop rotation), with only few small villages and two small towns (Chirra and Kalakchi) occupying a very small part of TGAS area (fig. 2.2.2).

The area is divided in two almost identical portions by the river Gomel. The closest bridge is on the Erbil-Dohuk road, outside TGAS area. Fortunately, during summer, when we carried out our field seasons, the river was always completely dry along the TGAS area and it was possible to cross it with

the car at different locations. Only three paved roads cross TGAS area, but unfortunately only in a very limited manner. The first, the Erbil-Dohuk road, runs on the north-eastern limit of TGAS area, a second one connects Chirra with Kalakchi and a third one links Mahad with Gir Faqir and continues south until Drishan. The only other way to travel with the car within TGAS area was through dirt roads.

The area is also crossed by several wadis which most of the time are deep and filled with high weed and low water. They represent a problem especially during the field-walking through the predetermined transects, since, in many cases, the crossing operation were very time consuming.

Fig. 2.2.2 – Modern villages and towns in TGAS area.

Archaeological Site and Landscape Feature Definitions

In this research, the term "site" is not synonymous with "settlement". Indeed, a well, a structure, a burial or a hoard are considered sites. Essentially a site is a **delimited place** in which evidence of past human activity is preserved (Renfrew & Bahn 1994: 42). In case of lack of any evident limit, the evidence of past human activities that mark the territories are defined landscape archaeological features (Wilkinon 2003: 44). The field scatters, the canals and the hollow ways are considered landscape features (Wilkinson 2003: 67-67, tab. 4.4).

A continuum of artefacts and other evidences is distributed on the ground surface of the Navkur Plain, as a sort of carpet of archaeological data, and one of the major field goals was to attempt to interpret these evidences. One of the most controversial problems regards the possibility to filter out the indication of settlement sites from what is generally called "background noise" (see Chapter 5 for more information regarding the field scatters).

On the field, these criteria were used to define the presence and the limits of a site, in order to ease identification (Wilkinson 2003: 48):

- Mounding: this is the easiest characteristic to establish. In the Near East, mounding is generally considered the first feature of an archaeological site; the mounding derives from the superimposing layers of long and sedentary human occupation.

- Soil colour: the greyish colour of the soil derived from the ashes contained in the occupation deposits (anthrosols[3]) is a typical attribute of an archaeological site.

- Artefacts (type, quantity and size): the presence of quern, baked brick and door socket fragments is also a good clue to identify a site, as well as a remarkable quantity of mid-large sized pottery fragments.

These three features did not necessarily occur simultaneously, but it is the presence of the combination of these characteristics that lead to the identification of an archaeological site.

These three elements were also used to define the limit of the site, in fact, ideally, the abrupt disappearance of the three features marks the site limits. To determine the boundaries of the site, a single surveyor was walking along the hypothetical perimeter of the site, recording a track with the

[3] Menze and Ur: 2012.

GPS, trying to determine where mounding, soil colour and artefact distribution were noticeably changing. In different occasions, especially in case of scarce visibility, we determined the limits of the site through the help of the satellite images.

The Satellite Imagery Interpretation

The fieldwork was preceded by the analysis and interpretation of the available cartographic material and the remotely-sensed images already in possession of LoNAP. A large group of satellite and aerial images were available for TGAS area: U2, CORONA, HEXAGON, Landsat, Orbview-3 and DigitalGlobe.

The images that have produced more information are the declassified CORONA satellite images[4]. In particular for the area of Tell Gomel we have photos from three missions: the 1039, the 1104 and 1107 (respectively launched in February 1967, in August 1968 and in July 1969). Especially the images collected during the 1039 mission led to the identification of new archaeological sites, most of them very small and almost flat, not yet detected by the LoNAP project.

Besides CORONA images, the newly acquired U2 images[5], which have a better resolution and are slightly older than the CORONA images (Hammer and Ur 2019), provided new interesting data (new settlement identification, new site features, canal traces). This is especially true for the site of Tell Gomel, since the U2 images (mission 1554, 29 January 1960) provided new information regarding the shape and dimension of the ancient settlement (see Chapter 4.1).

The fieldwork

The fieldwork was carried out by four surveyors. On the field, the small team used a handheld GPS receiver[6] to record both the material collected and the ground observations. All these data sets were included into a Geographic Information System (GIS) spatial database[7].

TGAS team adopted two different strategies to investigate the site of Tell Gomel and the other sites located within the TGAS area.

[4] Regarding Corona use in Near East landscape archaeology: Philip et al. 2002; Ur 2003, 2010, 2013a and 2013b.
[5] I would like to thank Professor J. Ur who shared with me the U2 images in his possession.
[6] A Garmin Oregon was used in the field.
[7] ArcGIS 10.2 was used as GIS software.

In Tell Gomel, a 25 x 25 m grid was positioned over the site. Each surveyor collected data from a single square walking back and forth counting the number of fragments visible on the surface and collecting only the diagnostic ones. With this strategy, we almost examined every square meter of Tell Gomel surface. The houses of Gomel modern village obscured some areas of the tell, but generally it was possible to collect data also within the areas belonging to the houses of the modern village (gardens, orchards, etc.). The north-eastern sector remains not investigated due to the presence of straw, bushes and trees. Overall, we examined a total of 496 squares (fig. 2.2.3).

Regarding the survey of the other sites, the materials were mostly collected using a strategy of complete coverage throughout collection areas (1 ha in average) arranged on the basis of topography. The corners and the significant points on the boundaries of each unit were visibly marked and their positions recorded via GPS; only the diagnostic sherds have been collected[8].

Fig. 2.2.3 – The intensive survey in Tell Gomel.

[8] Many Near Eastern surveys have already employed these methods: Ball, Tucker and Wilkinson 1989; Lyonnet 2000; Wilkinson and Tucker 1995; Wilkinson 2000c; Ur 2010.

2.3 Visibility, Obtrusiveness and Accessibility

Visibility

Visibility is a fundamental characteristic of the environment in which a survey takes place and it will determine the surface investigation results. Visibility in Upper Mesopotamia plains is on average good, because they are largely cultivated with cereals or vegetables and they offer wide portions of fields free of threes or bushes. Especially at the end of the summer, after the harvest, the visibility is suitable for surface investigation.

Thanks to crop rotation it was possible to have a good surface visibility on almost all TGAS area. In fact, in case of bad site visibility during the 2015 survey, the site was revisited under more favourable conditions in 2016. In most of the cases, the fields initially cultivated in 2015 with cereals, usually with a consequent low visibility of the site surface due to the presence of stubble in the harvested fields, were later cultivated with vegetables in 2016 and *viceversa*.

Unfortunately, in some cases, the visibility conditions of the site surface were completely null. This is the case for the occupation of the site by modern houses (i.e. site 90 - Zinawa Miri), by the debris of old houses destroyed by the Iraqi Army during the Anfal campaign (i.e. site 103 - Gir Faqir) or by a modern cemetery (i.e. site 175).

Obtrusiveness

The low obtrusiveness of some particular type of sites in the Navkur Plain considerably affects their detection during the survey. In particular the pre-/proto-historic and nomadic/non-permanent occupation sites are quite problematic to identify due to some of their characteristics and the taphonomic processes affecting the plain.

The prehistoric sites are generally flat or low mounded and, in many cases, they are not even detectable by the satellite image analysis and they are identifiable only through the pedestrian and intensive survey. Many of them are not detectable at all because they are deeply buried under meters of later human occupation layers or under meters of natural alluvial deposit. The location of these sites is sometimes identified only thanks to a “window” in the natural or anthropic sedimentation covering them. This is the case of the fortuitous Pre-Pottery Neolithic site (site 951) identified, hidden under two meters of alluvial deposit, thanks to the excavation of a large water basin in the middle of the alluvial plain. Other “windows” were created by natural erosion by the River Gomel of some tells located on its banks. In these cases, the eroded tells offered, on the river side, an almost complete

view of the archaeological stratification, revealing also the earliest occupation phases of the site (a good example is the site of Jesi Kal, Crosa Lenz 2014).

Regarding the identification of nomadic and non-permanent occupation sites, the issue is even more complicated. We know about a nomadic presence in the Navkur Plain only thanks to the large number of cairns (non-associated with settlements) identified by the LoNAP team along the Zagros piedmont and the northern piedmont of the Jebel Maqloub (Morandi Bonacossi in press). No nomadic or non-permanet occupation site was identified in all TGAS area. Presumably, besides the low obtrusiveness of this type of site, due to the lack of mudbrick architecture and of a consistent number of artefacts, the taphonomic processes that affected the Navkur Plain for millennia completely erased or obliterated the evidence needed for a certain identification of this type of site. The Navkur Plain is a "landscape of destruction" and it suffered a too strong human attrition to permit the survival of the ephemeral traces of non-sedentary occupation (Morandi Bonacossi in press; Wilkinson 2003: 42-43).

On the other hand, the high obtrusiveness of other types of sites, namely the high mounded sites of the Bronze Age, made them easily identifiable through the analysis of the satellite images due to their topographic prominence on the almost flat plain.

Accessibility

Several tells are nowadays partially occupied by modern houses built on the top of mound. In some occasions, the house enclosure wall enclose the complete site (i.e. site 91, site 232 – Gir Sobashi, site 353 - Barasia). However, the hospitality and kindness of the inhabitants of the Navkur Plain permitted us to enter and survey, basically in all cases, the archaeological site.

Similarly, regarding especially the off-site activities, almost all the transects crossed private cultivated lands. Also in this case, the farmers were always ready to let us pass and survey through their fields.

2.4 Off-site survey methodology

In the off-site area, while walking along predetermined transects, team members counted the number of pottery sherds visible on the surface with a tally counter and collected only diagnostic artefacts. Every hundred metres the team stopped, and the data and ground observations were recorded. These transects were covered always by four surveyors, including the writer, positioned at a distance of 25 m from each other.

Due to the variable visibility conditions (fig. 2.4.2), 10 x 10 m collection units were positioned along the transects at a hundred metre intervals. These sample units were selected according to the surface visibility and ground conditions and were covered by only one surveyor walking back and forth, trying to maintain the same light conditions[9] (fig. 2.4.3 and 2.4.4). The placement of field scatter sample units was chosen with the aim of maintaining a homogeneous high visibility condition so that the data collected could be easily comparable, but as a result of this choice some areas remained uninvestigated.

In nearly four months of intensive survey (2015 and 2016 campaigns), we completed 58 transects, in order to cover an area of 25 km^2 (Fig. 2.4.1). The aim was to investigate a quarter of the entire TGAS area reaching an almost complete coverage. In only two campaigns, we surveyed a total of 1183 squares of 100x100 m and recorded data from 632 sample units (10x 10 m). Unfortunately, several areas remained not investigated due to the thick straw layer covering the field surface. This occurred especially in the south-western sector.

[9] Similar sampling techniques have already been used in several North Mesopotamian surveys: Wilkinson and Tucker 1995; Ur, Karsgaard and Oates 2011; and Ur 2010.

Fig. 2.4.1 - The transects in TGAS area.

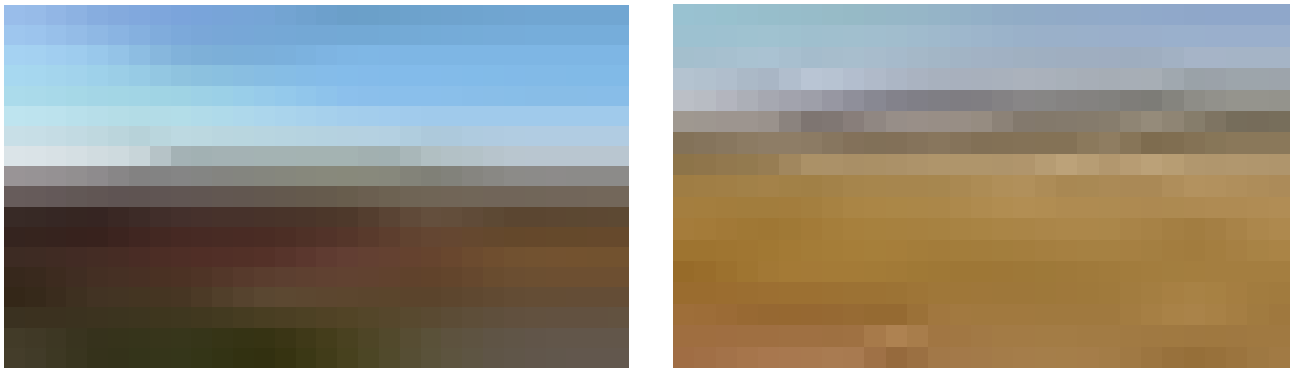


Fig. 2.4.2 – Fields with high visibility (left) and low visibility (right).

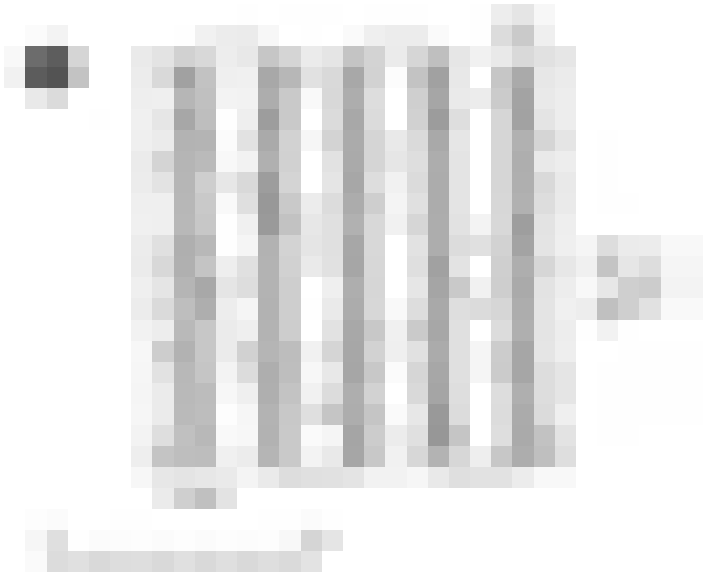


Fig. 2.4.3 - Sample Units. After Ur 2010.

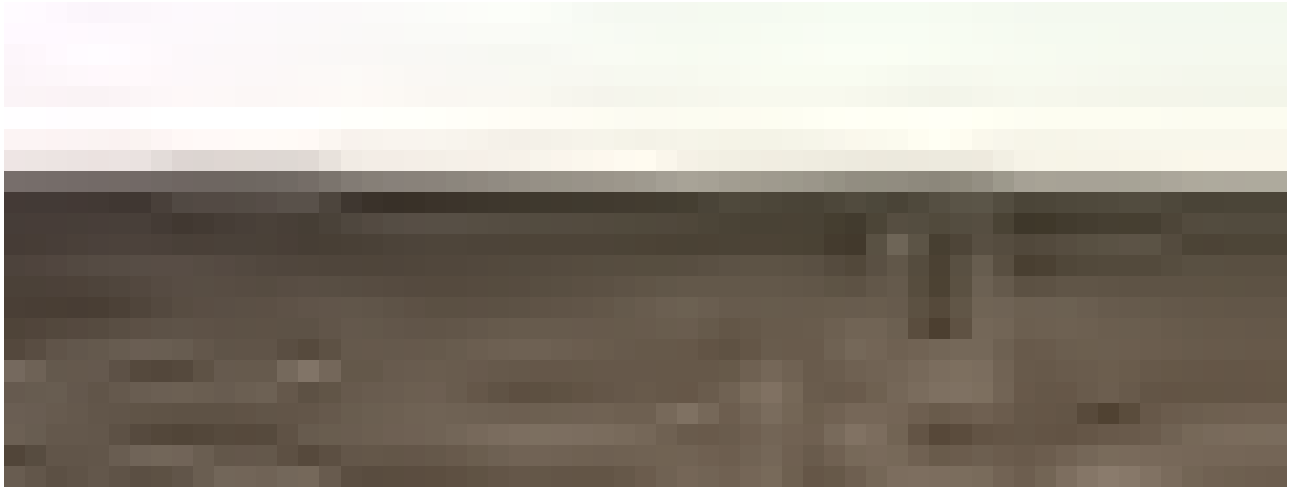


Fig. 2.4.4- M. Dallai counting and collecting sherds in a sample unit.

2.5 Pottery recording methodology

The determination of the occupation periods attested in the surveyed sites was based upon the preliminary study of diagnostic sherds (rims, bases, decorated body sherds) that were referred to a ceramic typology worked out by Wilkinson and Tucker within the Iraqi 'North Jazira Survey' (1995) and later integrated by Ur for the Tell Hamoukar Survey. The members of the ALRG agreed upon the use of this common typology in order to obtain a homogeneous dating for the sites from these surveys.

The goal of this joint dating procedure was to obtain fully comparable dating for the sites from the different surveys. At present, this typology represents only a basis, but slowly with the integration of new data coming from the new excavations in the area it will be possible to refine and improve this working typology. This is very important because a more reliable typological reference sequences, will enable us to better identify the surface finds gathered during survey work and consequently refine the dating of surveyed sites and thus producing more reliable distribution maps.

TGAS used the 7th edition of the WCT (2013, see Appendix B), the last edition available and already updated and improved by the ALRG members.

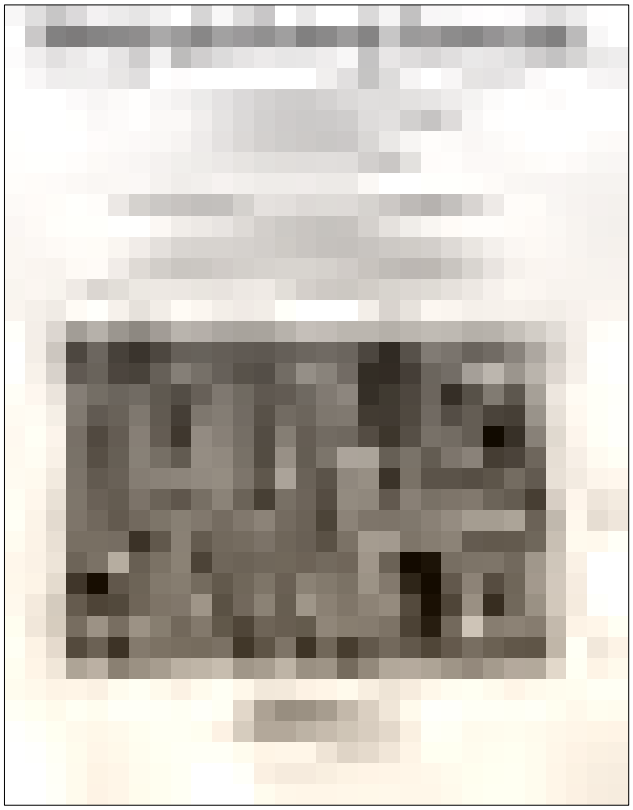


Fig 2.5.1 – The Working Ceramic Typology (2013 7th ed.)

2.6 The Soil Sampling Campaign and Phosphorus analysis

Phosphorus (P) in surface and buried soil horizons is a good anthropogenic marker and its variability could be investigated in a wide range of natural and archaeological settings. P concentration in soils is a good proxy for manuring activities and to reconstruct the limits of an archaeological site (for an overview see Guttman *et al.* 2005; Holliday and Gartner 2007).

For this reason, a campaign of soil sampling was carried out in 2016 with the aim of obtaining new data related to the manuring activities in the region surrounding the site of Tell Gomel and to gain a better understanding of the site's limits.

Samples were taken at intervals of 25 m, 100 m and 200 m from squares where we had already recorded the number of fragments visible on the surface during the fieldwalking survey. We collected samples from two transects running perpendicular to Tell Gomel (west-east) and in specific spots characterized by different sherd densities visible on the surface (due to the presence of different types of archaeological features such as sites, field scatters areas, recent formation areas, etc.), and from the area close to the estimated limits of Tell Gomel (fig. 2.6.1 and 2.6.2).

A total of 102 samples were collected at the depth of 50 cm below the surface with the help of a hand drill. From each sample spot, we collected a soil sample of around 40 gr.

The samples were analysed by F. Tambone and F. Bedussi of the Università di Milano (Department of Agricultural and Environmental Sciences - Production, Landscape, Agroenergy), and total P content was determined, and a P speciation process was also carried out.

Total P contents were determined by inductively coupled plasma mass spectrometry (Varian, Fort Collins, USA). Standard samples (National Institute of Standards and Technology, Gaithersburg, MD, USA) and blanks were run with all samples to ensure precision in the analyses. P detection was preceded by acid digestion (EPA, 1998) of the soil samples.

Regarding P speciation, this procedure assesses the phosphorus solubility in soil and involves sequential extraction with NaHCO3, NaOH, and HCl. Phosphorus extracted in NaHCO3 is considered readily soluble, while that extracted in NaOH (assumed to be associated with amorphous iron/aluminum and organic matter) and HCl (assumed to be calcium phosphates) is considered poorly soluble.

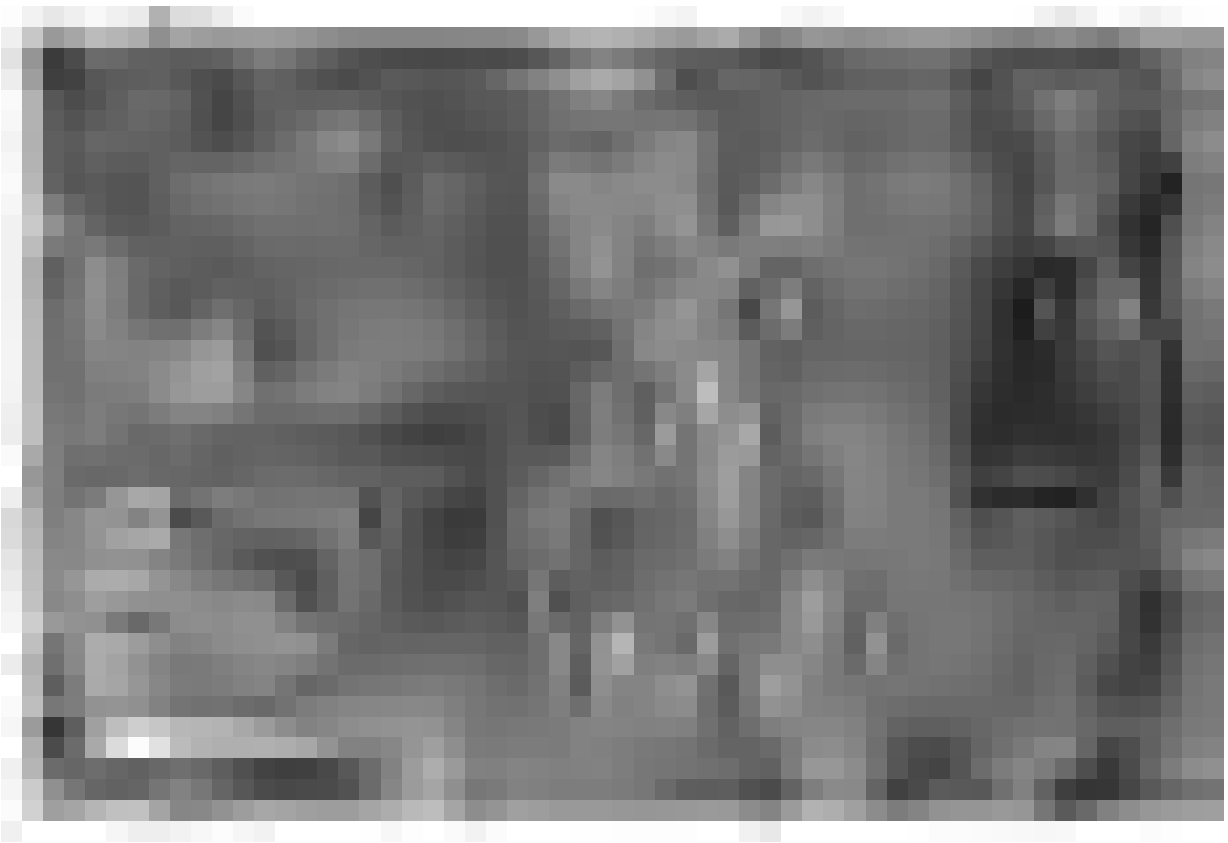


Fig. 2.6.1 – Soil sampling in the transects area.

Fig. 2.6.2 – Soil sampling at Tell Gomel.

3.
THE NAVKUR PLAIN

3.1 Geomorphology and environment

Geology and Geomorphology

The Navkur Plain (namely Plain of Mud in local Kurdish), also called Bardarash Plain or Aqre Plain, is a 30-kilometre wide and roughly triangular plain, characterized by fertile soils and extremely rich in surface and ground water (fig. 3.1.1-3). It is crossed by the River Al-Khazir, a major tributary of the Greater Zab, and the minor Nardush and Gomel rivers that join the Al-Khazir at the southern end of Navkur Plain, ca. 7 km west from the modern city of Bardarash. Numerous wadis feed the main watercourses.
The Navkur Plain is located at the Unstable Shelf of the Outer Plain of the Nubio-Arabian Platform and the foothill of the Zagros in the Mosul high subzone (Low Fold Zone, Buday and Jassim, 1987). The plain covers an area of 1070 km2, overlaying a vast syncline that extends between the first western Zagros range (to the north) and the Jebel Maqloub, the Jebel Bashiqa and the Bardarash Mountain (to the south). The major part of the plain is located between an altitude of 321 and 563 msl (Jassas *et al*. 2015a: 35).

The alluvial plain covers an area of ca. 380 km^2 and it is located at the eastern margin of the Low Folded Zone (fig. 3.1.4). The alluvial plain is characterized by gravel deposits and loam-clay slope deposits dating to the Pleistocene; gravel outcrops in the upper part of the plain. The Plain is also characterized by carbonatic and terrigenous sedimentary rocks dating from the Upper Palaeocene to the Lower Miocene, while the hilly area features marine siltstone and argillite dating to Medium (Fat'ha formation) and Late (Injana formation) Miocene. The Miocene deposits are covered in the eastern part by the Pliocene formation of Bakhtiari. In the northern mountains area also marlstones, sandstones and conglomerates are attested (Crosa Lenz 2014; Geology map of Iraq 1986).

As evident from the satellite images of the area, the rivers and streams that cross the plain present sinuous paleochannels and abandoned meanders. The watercourses must have changed their shapes

and hydric regime in a recent epoch since many tells were heavily eroded by the transformation of the Gomel riverbed. Specifically, the Gomel river changed its morphology from a sinuous-meandering type to a straight-braided type (Crosa Lenz 2014: p. 35). The study of the paleohydrography of the area permits to observe the existence in the past of a higher flow rate in the drainage network of the plain, decreased due to the process of aridification of the region[1].

Fig. 3.1.1 - The Navkur Plain (Sources: Esri, Digital Globe)

[1] The same phenomenon was recognized also in Syria: see Cremaschi et al. 2003. An aridification trend from at least ~950 C.E. is recorded in different proxy coming from all the Near East, for an overview see Flohr *et al.* 2017: 1532.

Fig. 3.1.2 - Tell Gomel in summer (above, August 2013) and during winter (below, February 2015).

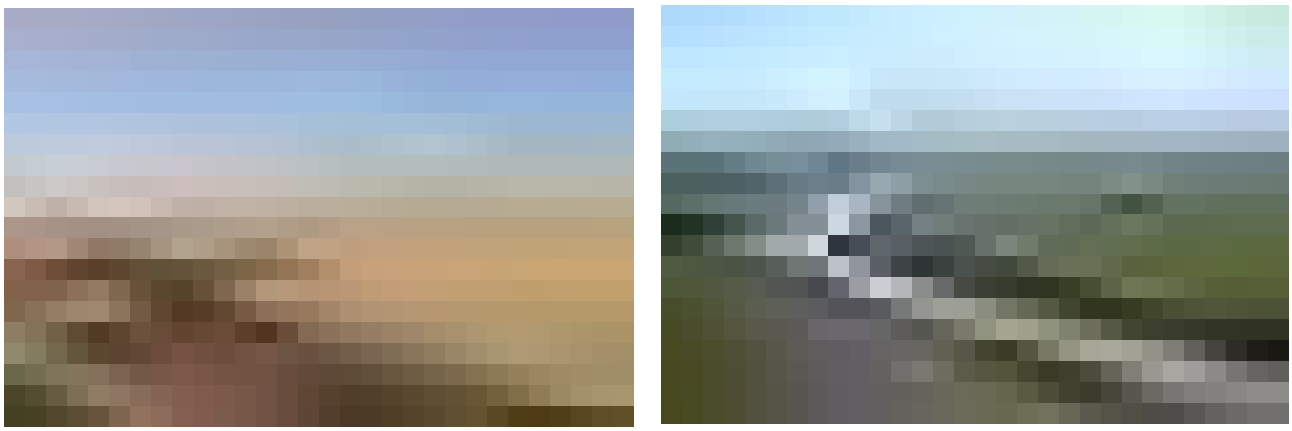


Fig. 3.1.3 – The Navkur Plain and the River Gomel in summer (left, August 2013) and in winter (right, February 2015).

Fig. 3.1.4 – Geological Map and Cross-Sectional views of the Navkur Plain (after Jassas and Merkel 2015)

Modern vegetation and land use

The foothills of the North-West Iraqi Kurdistan are producing, under rainfed conditions, one-third of Iraq's cereal production. Winter wheat and barley are seeded in autumn (September-November) and reaped in the late spring (May-June, see FAO 2009: p. 21).

Until few decades ago, groundwater was mainly used for domestic purpose. However, due to the agricultural development, the trend has been to use the groundwater for sprinkler irrigation. To sustain the rapid agricultural development, experienced by the whole Iraqi Kurdistan, more than 250 government wells, and an indefinite number of private bores, have been drilled in the Navkur in the last decade. Therefore, presently, irrigation in the plain is mainly coming from bore (Jassas et al 2015a; 2015b).

The major part of the plain is cultivated (fig. 3.1.5), nowadays major crops include wheat and barley, however, in the past (19th-20th centuries A.D), the most important product was rice. Today, also a large variety of vegetables is cultivated during the summer (Jassas et al. 2015b: 144).

In the mountainous areas surrounding the plain, olive, fig, grape, as well as other fruits and nuts orchards irrigated by springs are present in the valley bottoms. The mountains are also characterized by forests and scrublands (Jassas et al. 2015b: 146).

The use of chemical fertilizers is not widespread, but its use is increasing, tough still in very small amounts, especially in the production of rice and vegetables, but almost none in the cultivation of wheat and barley. Besides, limited use is made of weedkillers and pesticides[2].

Sheeps are the main livestock specie, however, beef cattle are also present on a smaller scale. Poultry production occurs near the small town of Chirra.

The urban land cover, comprehending villages, towns and cities, is really limited due to the small population and the lack of infrastructure (Jassas et al. 2015b: 147), offering the perfect arena for archaeological investigations (fig. 3.1.5).

[2] Information collected during farmers interviews (August 2017).

Fig. 3.1.5 - Land use land cover (LULC) map of the Al-Khazir Gomel basin.
(Jassas et al. 2015b: 146, fig. 3)

3.2 Climate

Modern Climate

The region presents a hot dry-summer climate often referred to as "Mediterranean" (Csa type according to Köppen and Geiger classification, Köppen and Geiger 1954). The rainy season is from November to April and the average annual rainfall in Bardarash is 643 mm (fig. 3.2.2). There is a difference of 123 mm between the average rainfall during the driest (June) and the rainiest (February) months.

The average temperature is 19.6 °C. In July, the hottest month of the year, the average temperature is 32.8 °C. The summer climate is controlled by a low-pressure system that has its centre in desert-arid

zones in the Persian Gulf. In January, which is the coldest month of the year, the average temperature is 6.9 °C. During the year, the average temperature can vary of 25.9 °C[3] (fig. 3.2.1).

The annual average relative humidity is ca. 46% and the winds, which are mostly dry, are mainly coming from north-west, with an average speed of 1.54 m/s (Jassas et al 2015b: 144).

Ancient Climate and Environment

We know very little about the palaeoenvironmental of the Navkur Plain and also of the broader Dohuk Region, since no paleoenvironment studies have been completed in this area yet4. However, we have information available coming from the '50s excavations in Jarmo and Karim Shahir, in the region of Chemchamal (Braidwood and Howe 1960; Braidwood *et al.* 1983), from the studies carried out by H.E. Wright in the western Zagros, namely in the province of Erbil (Wright 1961a; 1961b; 1980; 1983), and a bunch of new data has recently come from the south-eastern edge of Iraqi Kurdistan, precisely from the Suleymanye Governorate[5]. Furthermore, we have information coming from the lake cores of Lake Van in Turkey[6], and Lakes Zeribar[7] and Mirabad[8] in Iran. All this information helps us to understand the Pleistocene and Holocene climate changes in the Iraqi Kurdistan and to estimate their impact on the development of any human settlement.

To summarize the current environmental proxies' data available, it is possible to identify a period of aridity during the Pleistocene with a regional flora consisting basically of steppic vegetation marked by the predominant presence of Chenopods and Artemisia (Altaweel *et al.* 2012).

With the beginning of the Holocene, the temperatures and precipitations started to grow with a switch to a Mediterranean climate (Wright 1983). As consequence of this climate change, the region experienced a transformation in the fluvial activity and in the vegetation with the growing of oak, pistachio and grasses (also cereals) and the expansion of the woodlands (Altaweel *et al.* 2012).

From the middle to late Holocene, a crucial moment in the human settlement transformation, a main shift from a wetter phase to a dryer one occurred. It is dated to the latter part of the Holocene, although the region continued to be suitable for rainfed farming (Marsh *et al.* 2018).

[3] The climatic data are acquired from the climatic records of the meteorological station of Bardarash and they are freely accessible at www.Climate-Data.org.
[4] The LoNAP and UZGAR projects are at the moment still carrying out paleoenvironment studies.
[5] Multiproxy record from Gejkar Cave speleothem: Flohr *et al.* 2017; Speleothems and phytoliths: Marsh *et al.* 2018.
[6] Van Zeist and Woldring 1978; Landmann *et al.* 1996.
[7] Van Zeist and Wright 1963; Stevens et al. 2001; Snyder *et al.* 2001.
[8] Van Zeist 1966.

Though we can have a general idea of the paleoenvironment in the region, new samplings and analysis are needed to better understand the peculiar transformations of the Navkur Plain during the Pleistocene and Holocene. In particular, it will be important to recognize and distinguish from the one hand, the role of the human impact (deforestation, grazing and farming) and from the other, the role of natural climate change, in the transformation of the environment of the Plain.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Med Temp. (C°)	6.9	8.6	11.9	17.1	23.4	29	32.8	32.4	28.1	21.6	14.5	8.7
Min Temp. (C°)	1.8	3.2	6.1	10.5	15.8	20.2	23.8	23.1	18.6	13.1	8.2	3.4
Max Temp. (C°)	12	14	17.8	23.7	31.1	37.9	41.9	41.7	37.6	30.1	20.9	14
Rainfall mm	118	123	115	84	28	0	0	0	1	16	66	92

Fig. 3.2.1 – Temperatures and rainfall in Bardarash (© Climate-Data.org)

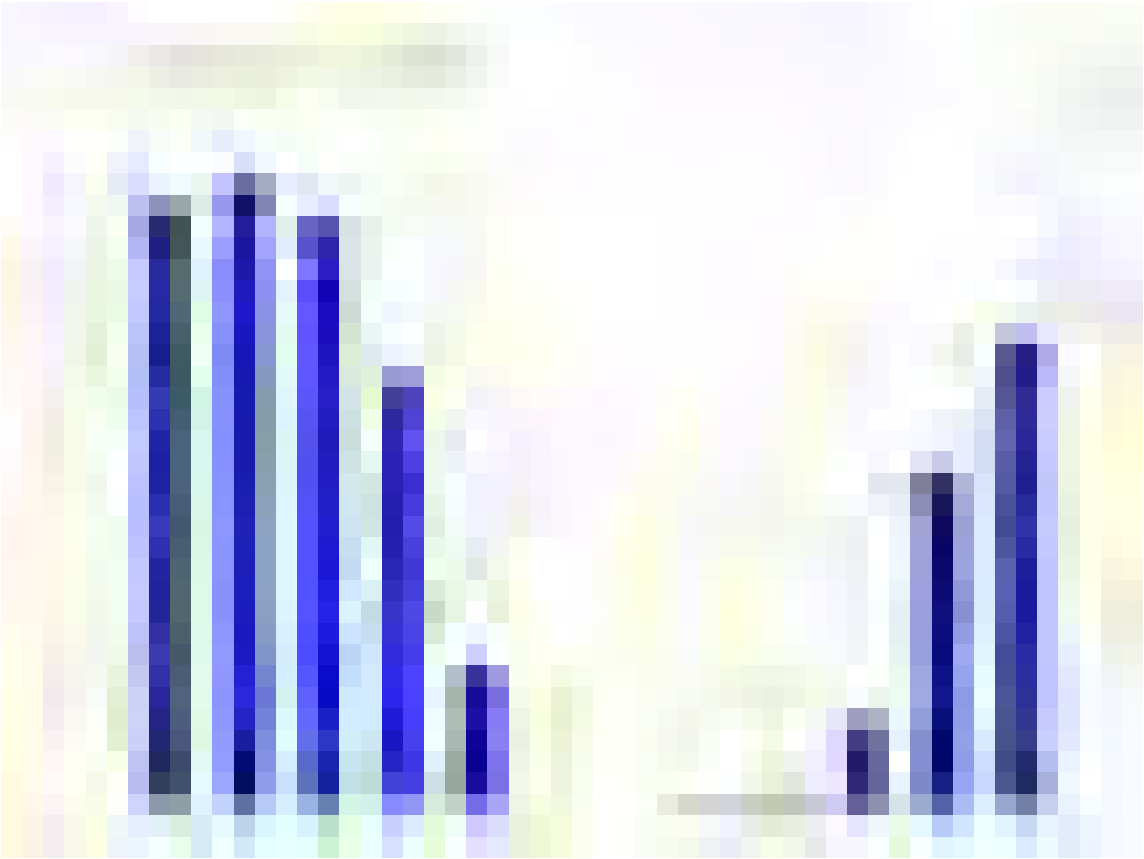
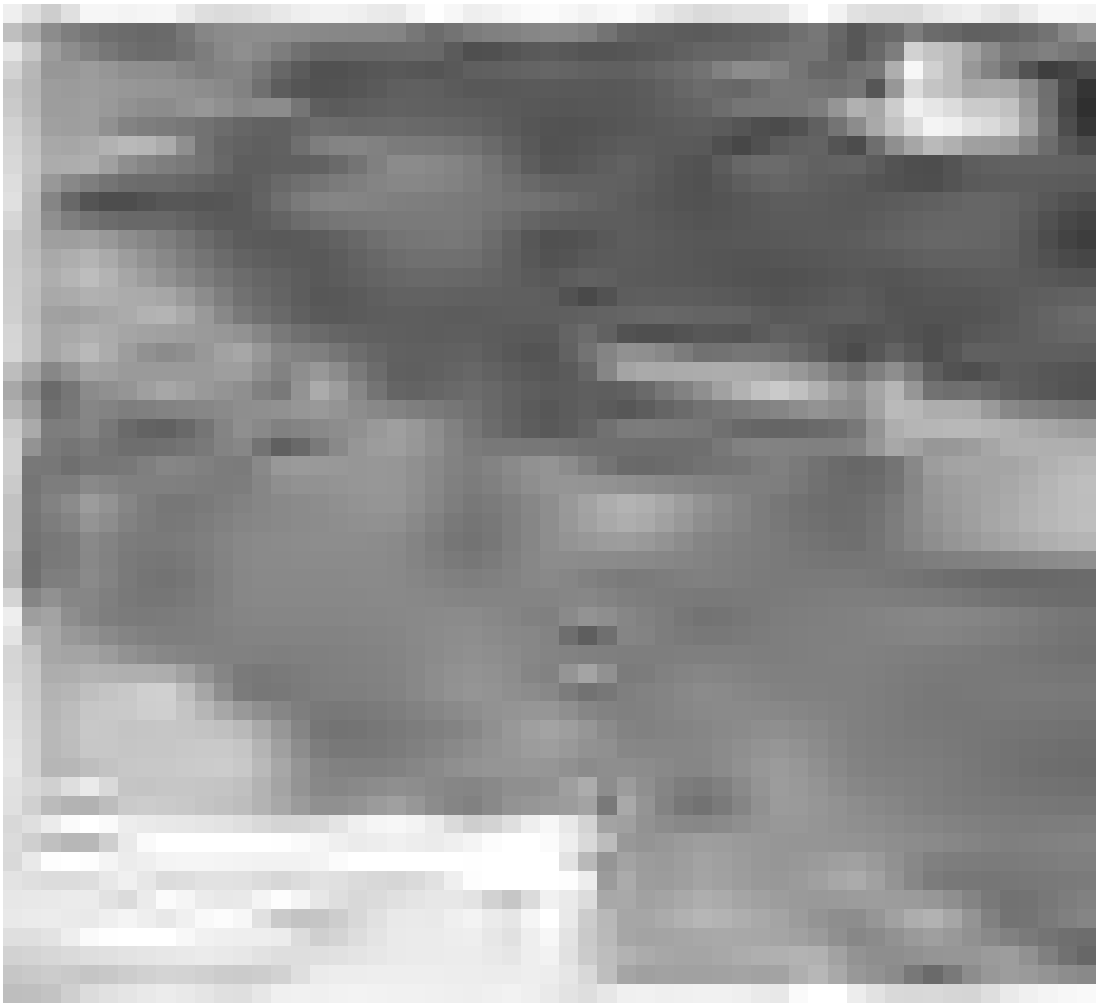


Fig. 3.2.2. – Chart of Bardarash rainfall and annual relatives temperatures.

(© Climate-Data.org)

3.3 Soils

The Navkur Plain is a piedmont plain in front of the Zagros foothills and it is characterised by deep and fertile agricultural alkaline and not saline soils (fig. 3.3.1), namely “Brown Soils (Deep Phase)”, developed on alluvial sediments, with average depths varying between 2 and 4 m (Buringh 1960: 218-222, type 35). In the presence of elevated rainfall, these soils can produce high yields (Buringh 1960: 78).



Soil Key	Soil Type
32	Lithosolic Soils in Lime Stone
33	Brown Soils, Medium and Shallow Phase over Bakhtiary Gravel
34,1	Do, over Gypsum, Eroded Phase
35	Brown Soils, Deep Phase
36	Chestnut Soils, Shallow, Stony and Sloping Phases
38	Rough Broken and Stony Land
39	Rough Mountainous Land

Fig. 3.3.1 – Soil map of Northern Iraq (© Simone Mühl, based on Buringh 1960, folding chart)

3.4 Water resources[9]

The plain is extremely rich in surface and ground water (fig. 3.4.1). The River Khazir has braided channels and it is ca. 70 km long. Its channels present an average width of ca. 600 m and a maximum width of ca. 950 m near the modern town of Chirra. The River Gomel is ca. 80 km long and has an average width of 50 m and a maximum width of ca. 110 m.

The ephemeral streams and the seasonal rivers are often flooded quickly after heavy rain, since they run down from wide catchment areas in the northern mountains (Yacoub et al. 2012: 12). The direction of the groundwater flow is from north and north-east towards south and south-west (Al-Jiburi and Al-Basrawi 2012).

From the Topographic Wetness Index map (fig. 3.4.2), which shows the presence of available surface water on the ground, it is possible to realise how the Navkur Plain is potentially much richer in soil moisture and water accessibility than any other area in the entire 'Assyrian Triangle' (Morandi Bonacossi 2018b).

The Navkur Plain was and still is an intensively cultivated area thanks to the presence of abundant ground water and of many springs, that are sustained by the aquifers located in the mountainous area (Morandi Bonacossi 2018b).The depth of the groundwater is ca. 20-40 m. To reach the water table, the farmers are excavating large and deep trenches with excavators and bulldozers, producing interesting windows in the geological stratification of the plain. Unfortunately, some of the trenches have cut and partially destroyed some flat or low mounded archaeological sites.

The abundance of water available on the surface and under the ground offers the ideal conditions for high productivity agriculture in modern days as well as in the past.

[9] For an overview of water exploit in the region, especially for the Neo-Assyrian period see: Morandi Bonacossi 2018b.

Fig. 3.4.1 - Natural hydrography map of the 'Assyrian Triangle' and potentially cultivable land in a dry-farming system. Relief map and analysis based on ASTER GDEM (Global Digital Elevation Model) V2. (Map Alessandro Perego, Morandi Bonacossi 2018b)

Fig. 3.4.2 - Topographic Wetness Index map of the 'Assyrian Triangle'. Relief map and analysis based on ASTER GDEM (Global Digital Elevation Model) V2. (Map Alessandro Perego, Morandi Bonacossi 2018b)

3.5 Conclusions

The Navkur Plain is located far north of the so called "zone of uncertainty", the belt of marginal cultivation where the frequency of crop failure increases (Wilkinson 2003: zone 1b), and it is part of the stable rain-fed zone of Upper Mesopotamia (fig. 3.5.1).

Being outside of the "zone of uncertainty", means that cereals can be predictably and extensively cultivated using a rain-fed system even during lower rainfall years. This confidence is strengthened in presence of deep fertile soils and abundant water. The combination of favourable climate, soil and hydrology makes the Navkur Plain a region with high reliable agricultural productivity (Morandi Bonacossi 2018b).

As evidenced of it, during the five survey seasons conducted by the Land of Nineveh Archaeological Project, the greatest density of sites identified in the entire licensed survey area is concentrated in the Navkur Plain. It is therefore not surprising that also the largest archaeological site in the entire region, Tell Gomel, is situated in this plain.

Fig 3.5.1 – Upper Mesopotamia showing approximate rainfall Isohyets (in mm per annum) in relation to the limit of rain-fed cultivation. (from Wilkinson 2004: fig. 2.1 p. 14, modified from TAVO Map A X 4)

The Plain, as described in this chapter, was clearly a favourable region for human settlement during the millennia, for this reason, it was, for instance, densely settled from the prehistory onwards or it was the "breadbasket" of the Assyrians (Morandi Bonacossi 2018a; Morandi Bonacossi and Iamoni 2015) in the first half of the 1st Millennium B.C.

However, also other factors made the Navkur Plain a fortunate place where to settle. The Plain is positioned in a trade and communication itinerary from south to north through the route which passes along the foothills of the Zagros Mountains, from the Erbil plain and its urban centres to the Upper Tigris Region, and from east to west from the Urmia region, in the Iranian highlands, to the Tigris Valley. The Plain was also a protected area, indeed it was not directly open towards Mesopotamia, it is in fact delimited but also isolated by the surrounding hills and mountains. This isolation can be hypothesized to be the reason of the absence in the entire plain of any large tell which could be comparable in size to the Jazirah or Southern Mesopotamian "mega-sites".

4.
THE SITES INVESTIGATION RESULTS

4.1 Tell Gomel

Introduction

Tell Gomel is the major settlement of the entire Navkur Plain and it is positioned at its centre on the left bank of the Gomel River ca. 2 km west of the modern town of Kalakchi.

The site features a large and elevated lower town, a small and high upper town (c. 34 m above the surrounding plain and 38 m above the riverbed) and an impressive long exposed section created by the river erosion (figs. 4.1.1-3).

The archaeological site is today partially occupied by the modern village of Gomel (or Jomel). Around 45 houses are nowadays built over the Lower Town (fig. 4.1.4). The houses are all very recent since the modern village started to be reinhabited only at the beginning of the 2000. In the CORONA and U2 images, it is possible to recognize the houses of a small village at the northern foot of the Upper Town. According to the modern villagers, the population left their houses in the '80^{s} of the last century looking for safer conditions in the mountainous area of Atrush.

The High Mound is located slightly North from the centre of the Lower Town, and it is also partially eroded on its western side. The High Mound presents a flat surface on its top, very steep slopes and it rises ca. 22 m above the level of the Lower Town. The mounded area covers ca. 1 ha. The height of the Lower Town varies between 17 and 6 m above the plain. The Lower Town gently slopes in the North and in the South, while the slope is very steep at its eastern limit. On the eastern edge of the site, four squared pits (up to 40x40 m) were excavated by the modern inhabitants of Gomel to collect water, which were generally created in correspondence to deep gullies that can be related to natural drainages of the Lower Town, to areas of mudbrick extractions or to possible ancient city gates. The southern part of the Lower Town was used as the village cemetery since the past century.

Fig. 4.1.1 – Tell Gomel from North-East.

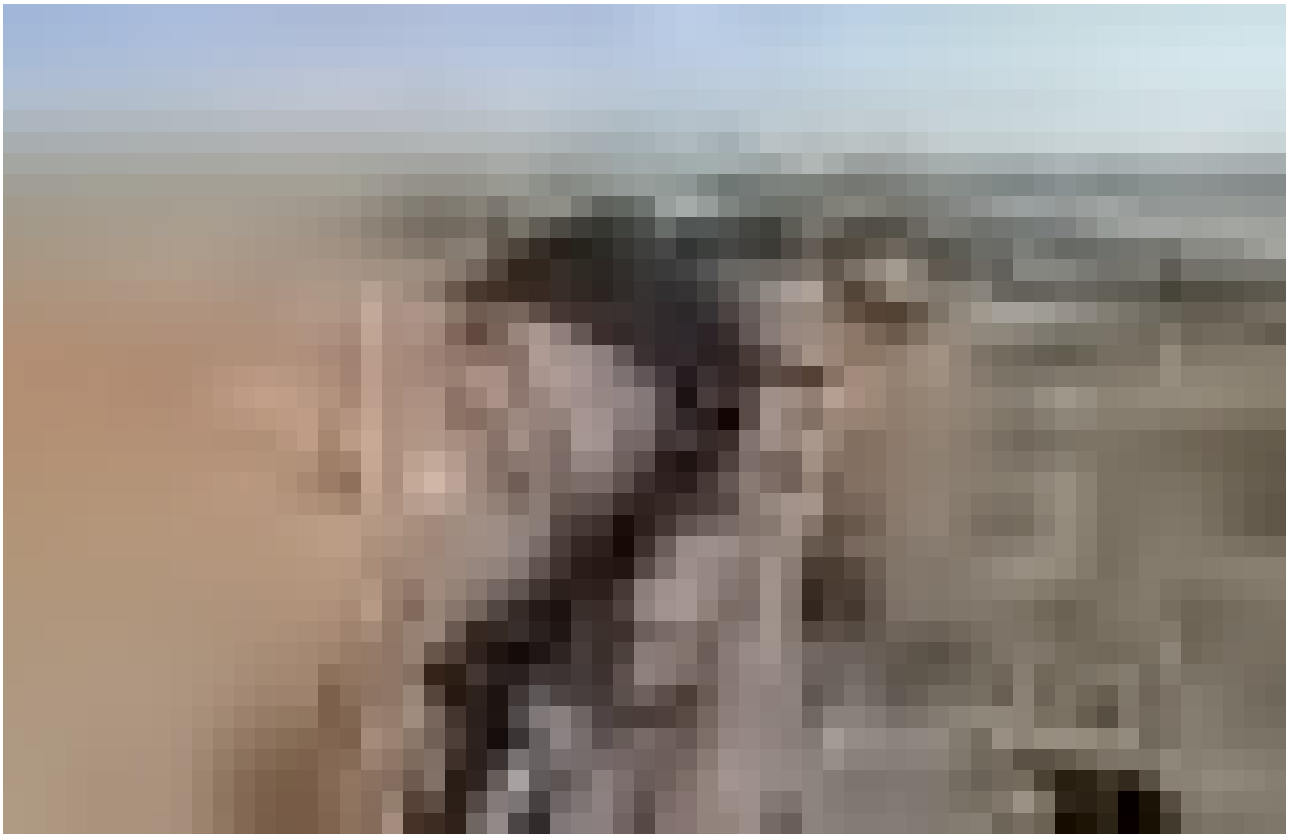


Fig. 4.1.2 – Aerial view of Tell Gomel from South.

4.1.3 - Topographical map of the site (@LoNAP archive)

Fig. 4.1.4 – Orthophoto of Tell Gomel (Spring 2016, © LoNAP Archive)

Site limits and dimensions

Defining the limits of the site and the actual dimensions of the ancient settlement was not an easy task. One of the main reasons is due to the severe erosion of the mound in its western part. Another difficulty is connected to the morphology of the site: in fact, the steep slopes of the Lower Town represent physical boundaries easy to determine on the field and on the satellite images.

The latter point brought LoNAP team to outline the limits of Tell Gomel, during their survey in 2012, on the base of the perimeter of the Lower Town. As results, the site dimensions were defined as 15 ha.

Fortunately, in 2016, TGAS team was able to acquire the recently declassified U2 images (courtesy of J. Ur). The U2 image of Tell Gomel revealed the presence of a large area of light coloured and highly reflective soils called anthrosols[1], a "halo", outside the limits of the Lower Town (fig. 4.1.5). Therefore, TGAS team carried out an intensive survey of the site during the summer of 2016, including this interesting area detected in the U2 images with the aim of understanding the nature of this "halo". The intensive survey (fig. 4.1.6) revealed the presence of a large number of pottery fragments and other archaeological findings (fragments of mudbricks and fragments of basalt objects as grinders) and a discoloration of the soil, also well visible in the field, outside the Lower Town (especially East). In the South, these elements where not spread far from the slope base [2], while in the North, the modern houses and the gravel, which was used almost all over the surfaces between them, made the survey of this area quite complicated. Despite the scarce visibility on the northern edge of the site it was possible to determine the presence of high concentrations of pottery in the few areas where there was less disturbance.

Furthermore, a soil sampling campaign was also carried out in order to have more data regarding the P concentration and soil composition in these areas outside the Lower Town. The analysis of the soil samples, showed a high concentration of P (fig. 4.1.7, see also Appendix C for the single precise values) in the "halo" visible in the U2 image. The speciation of P also revealed the high percentage of P organic in the samples, that can be put in relation with a strong anthropic impact on the soils.

The combination of the results from the intensive survey with the results of the P analysis confirms the interpretation of the "halo" as of anthropic nature. These evidences suggest the presence of an

[1] Such types of anomalies in aerial and satellite images are connected with an anthropic nature of the soil, see Menze and Ur 2012, Savioli forthcoming.

[2] This information is important because it help us to exclude that the "halo" is formed by the eroded deposit coming from the mounded area.

Outer Town, possibly occupied in the past by domestic buildings, orchards and gardens. A geomagnetic prospection could be useful to further understand the character of this area.

As result of the intensive survey, we were able to identify and determine the limits of a ca. 12 ha Outer Town, a ca. 15 ha Lower Town and ca. 1 ha Upper Town, for a total area preserved of ca. 28 ha.

As we already mentioned, the site was severely damaged by the river. The Gomel River channel experienced a lateral migration towards east, traces of the older alveus of the river are visible on the CORONA 1039 image (fig. 4.1.8). We established that almost one third has been destroyed by river erosion; the original area of Tell Gomel thus probably exceeded 35 ha in the past. The discovery of a MBA building in the bed of the river ca. 50 m west from the eroded section of the southern lower town, sustains this hypothesis (Morandi Bonacossi *et al.* in press).

Fig. 4.1.5 – Tell Gomel in a CORONA (A) and in a U2 (B, courtesy of J. Ur).

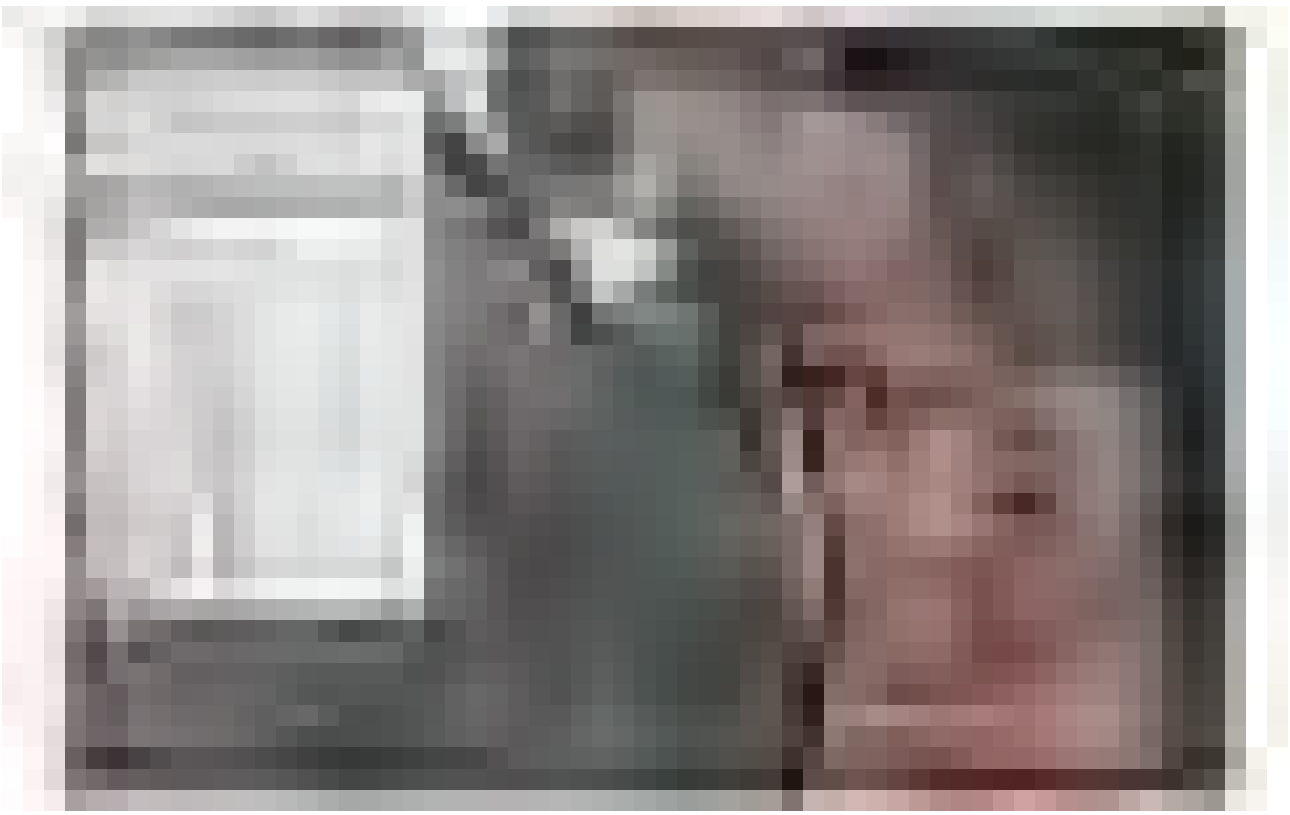


Fig. 4.1.6 – Pottery fragments density recorded throughout the intensive survey at Tell Gomel.

Fig. 4.1.7 – Detecting Tell Gomel limits through P analysis.

Fig. 4.1.8 – Evidences of the lateral migration (towards east) of the Gomel River channel.

Tell Gomel development through history

The surveys (both extensive and intensive) were able to recognize the existence of a continuous settlement sequence ranging from the Late Chalcolithic to the Ottoman period. However, the site could have possibly been occupied already in the Ubaid period since Frankfort published an Ubaid stamp seal found at Tell Gomel in the '30s, now preserved in the Oriental Institute Museum of Chicago (Frankfort 1935: 29–31, fig. 31). Few erratic sherds collected during the excavations in Tell Gomel[3] seem to confirm the presence of a hidden Ubaid settlement under the later occupation deposits.

The site might corresponds to the Middle Bronze Age town of Nurrugum[4], to the Assyrian Gammagara mentioned in the Jerwan B Inscription of Sennacherib[5] and to the much more famous Gaugamela. Indeed, already Sir Aurel Stein in his Limes Report (1938-1939, published in 1985[6]) proposed that the battle of Gaugamela took place in the plain surrounding Tell Gomel[7]. At the moment, the Gaugamela Project which is led by M. Marciak of the Jagiellonian University in Kraków (Poland), in cooperation with LoNAP, has the aim to locate, through a multidisciplinary and innovative approach, the exact location of the famous battle.

The site has been chosen by LoNAP for carrying out archaeological excavations. A preliminary exploration (a single sounding) was carried out in the southern Lower Town during the 2012 and 2013 campaigns, while more extended excavations were carried out in 2017 and 2018.

Three sectors were involved in the excavation activities[8]: Operation 1 (2017-2018) that extended the area of the sounding in the southern Lower Town (2012-2013); Operation 2 (2018) at the eastern edge of the Lower Town; Operation 3 (2018) at the base of the tell section in the west above the modern bed of the river.

Operation 1 encompasses a long-term funerary area of the mound. Several sub-recent tombs were brought to light, cutting an ephemeral and sporadic occupation phase dated to the Parthian period. Two large buildings related to handicraft and domestic activities and dated to the Hellenistic period were also excavated. Below this phase, the excavators identified some unique Neo-Assyrian incineration graves and an underlying MBA period cemetery with multiple burials in vaulted baked-brick graves, some of which unfortunately looted due to their position on the eroded section of the

[3] Iamoni pers. comm.
[4] Morandi Bonacossi *et al.* in press.
[5] Reade and Anderson 2013: 75–76; Fales and Del Fabbro 2014: 80-81.
[6] Kennedy and Gregory 1985.
[7] Streck 1910: 861–62; Marsden 1964: 20; Herzfeld 1968: 228; Seibert 1972: 127–30, 282–283; Schachermeyr 1973: 268, 270; Lane Fox 1986: 228–43; Bernard 1990: 520; Reade and Anderson 2013: 76–77.
[8] A preliminary report of the excavations will be soon published: Morandi Bonacossi *et al.* forthcoming.

lower town. Furthermore, a mid-late third-millennium graveyard was also identified at the bottom of the trench and the richness of the grave goods seems to suggest the presence of a local elite.

Operation 2 was opened in the area that was characterized by a large excavated water pond in the zone of a possible city gate identifiable on the satellite images (see above). The excavations revealed the evidence of Parthian occupation (open spaces with domestic function) and Neo-Assyrian occupation, during which the area was used for metal-working activities. To the late Middle Bronze Age (MB II) belongs a large building, which was most probably a residence, in which a representation area and a food preparation area were found.

Operation 3 is located at the foot of the eroded mound and it is a narrow and deep step trench. The excavation identified the presence of a mid-late 3rd Millennium mudbrick structure, buried under several layers of fluvial sediments and mixed archaeological deposits (results of the erosion of the mound). Under the structure, a phase dated to the very end of the Late Chalcolithic was recognized. Subsequently, a series of well-preserved kilns dated to the Late Chalcolithic 1-2 was brought to light.

The intensive survey in Tell Gomel permitted to better define the processes of expansion and contraction of the settlement throughout its occupation history[9]. The data collected shows that the bulk of the site was probably created during the Late Chalcolithic period when the site was already quite large, as it extended for ca. 13 ha. The subsequent phase of the Ninevite V period is represented by less than 20 sherds, but from their distribution it seems that the site contracted into a smaller occupied area of ca. 8 ha, in the south-eastern part of the Lower Town. Defining the dimensions of the settlement for the Late Chalcolithic and Ninevite V period is quite difficult due to the massive occupation of the site during the mid-late 3rd Millennium BC and the first half of the 2nd Millennium BC. In fact, between the second half of the EBA and the MBA, Tell Gomel experienced a fast urban growth during which the site reached its maximum expansion. The long settlement sequence and the high density of occupation are attested by the 1.235 diagnostics fragments collected for both periods. During these two phases, the preserved settlement occupation is estimated to ca. 23-24 ha.

After the MBA, with the Mitanni period a contraction of the site dimensions and settlement density can be witnessed, a process that will continue until the Post-Assyrian period. A revival in the settlement seems to occur during the Parthian Period, while the final peak in settlement dimensions and density, comparable with the late EBA and MBA, will appear only during the Early Islamic epoch.

[9] For more information regarding the results of the intensive survey in Tell Gomel and for the maps representing a sort of "biography" of the site, see Vol.II, chapter 1.

4.2 The Archaeological Sites in TGAS Area

TGAS field campaigns led to the identification of 63 new archaeological sites, which should be added to the previous 49 archaeological sites already identified in the TGAS area by the LoNAP team in the 2012 and 2013 seasons. The newly identified 63 sites are classified as habitation sites. Thus, among the 112 archaeological sites spotted in the area investigated by TGAS, 109 of them can be classified as settlement sites and only 3 as non-habitation sites[10]. Unfortunately, two sites[11] didn't yield a single diagnostic fragment, but due to their characteristics were classified as settlement sites.

The sites in the region are threatened especially by agriculture and by settlement and infrastructure development. Clear traces of illicit excavation activities were recorded in Tell Gomel, but they seem to be not very recent. In particular, a large and long tunnel was excavated in the middle of the eroded section of Tell Gomel at ca. 10 m. above the riverbed. Furthermore, at least 3 of the mudbrick tombs excavated in Operation 1 were looted in modern times.

4.3 Site Dimensions and Typology

According to the morphology of the site, the settlements in the TGAS area were classified in the following categories (see Table 4.3.1):

1) High mounded sites (mound's height > 4 m);
2) High mounded sites (mound's height > 4 m) with an extended lower town;
3) Low mounded sites (mound's height between 1 and 4 m);
4) Flat sites (no mound or mound's height < 1 m);
5) Others.

Only two sites (710 and 759) belong to the "Others" category and they are both settled hilltops.

Each type of site was analysed to better understand their specific characteristics and peculiarities (see Table 4.3.2 and Chart 4.3.1). The most numerous are the low mounded sites (48 sites) that occupied an aggregate area of 93,2 ha. The flat sites are also very frequent (35 sites) and since they are generally smaller, with an average dimension of 1,5 ha, occupied a total aggregate area of 52,45 ha. The high

[10] Site 255, Site 268, Site 269 (see the Sites Catalogue).
[11] Site 178 (completely buried under the modern city of Kalakchi, but well visible on the CORONA and U2 images) and Site 836 (presenting all the characteristics of a settlement for concentration of undiagnostic sherds on the surface, presence of mudbricks fragment, colour of the soil). For more information see the Sites Catalogue.

mounded sites are few (only 16 sites), amounting to less than half the number of flat sites and to only one third of the low mounded sites. They have slightly bigger dimensions (2,34 ha on average) and they comprise a total aggregate area of 37,5 ha. The largest sites are the high mounded sites with an extended Lower City (9,75 ha on average), they are only six and they covered an aggregate area of 58,5 ha. If we consider the data presented here, the result is that 2,48% of the total TGAS area is occupied by archaeological sites.

There is also a correlation between the typology of the site and the periods of occupation of the settlement (see Chart 4.3.2). For instance, the low mounded sites are strongly predominant for the Middle Bronze Age, the Neo-Assyrian and Parthian periods. Flat sites are never predominant, but they appear in high percentage in the EPN, the Ubaid, the Late Chalcolithic 3-5, the Ninevite V and the mid-late 3rd Millennium periods. On the other side, the number of high mounded sites and high mounded sites with an extended Lower City starts to increase only from the Late Chalcolithic 1-2 period (with a drop in the Ninevite V period).

Site Number	Total Ha	Flat	Low Mound	High Mound	High Mound with Lower Town	Others
40	28				x	
60	3,7		x			
89	6				x	
90	1,5 (?)			x		
91	2			x		
92	12 (?)	x				
93	2		x			
94	2,5			x		
95	2			x		
96	2		x			
103	10 (?)		x			
104	3,5			x		
105	4				x	
106	10				x	
128	4,4			x		
129	1		x			
130	0,7		x			
174	0,8		x			
175	2		x			
176	4,5				x	
177	2,5-4			x		
178	10 (?)	x				
179	2,3			x		
185	3			x		
186	6				x	
187	3,5			x		
232	1			x		
335	4		x			
338	0,8			x		
339	2,9		x			
340	2		x			
353	1,4		x			
354	0,5			x		
423	1,8		x			
424	0,8		x			
480	3			x		
481	5,7		x			
482	4,7			x		
483	0,8	x				
484	2,2		x			
485	2		x			
486	2,8		x			
487	4,2		x			
488	3,5		x			
489	0,5	x				
560	0,3		x			
562	2,6		x			
567	0,6		x			
586	3,3	x				
587	0,75	x				
597	2.8	x				
600	1,3		x			
604	6,6	x				
656	1,4	x				
666	3,4		x			
705	0,6		x			
708	1,3		x			
709	2,7		x			
710	1,6 (?)					x
713	0,6	x				
715	0,8	x				
719	4	x				
722	8,7	x				
726	1,6		x			

Site Number	Total Ha	Flat	Low Mound	High Mound	High Mound with Lower Town	Others
730	1,9	x				
731	3,5	x				
732	0,8		x			
733	1,3	x				
736	2		x			
741	3,3	x				
742	5,9		x			
751	2	x				
759	4,3			x		
763	0,4		x			
764	2,6		x			
769	1	x				
771	1,2		x			
777	1,2	x				
789	3		x			
791	2,5		x			
792	2,4		x			
793	2	x				
796	1,3	x				
801	0,8	x				
802	0,3	x				
803	0,5	x				
811	1		x			
818	0,8		x			
828	4,3 (?)					x
836	0,7	x				
838	4,5		x			
839	1,5		x			
847	0,6	x				
851	0,2	x				
853	0,3		x			
856	1,5	x				
864	0,4	x				
874	1	x				
877	0,9	x				
882	0,4	x				
884	0,3		x			
927	0,4		x			
944	0,1	x				
952	0,1	x				
953	1,7		x			
955	0,8		x			
974	1,2		x			

Table 4.3.1 – TGAS site's dimensions and types.

Site Type	Number of sites	Total Settled Ha	Average dimension
Flat	35	52,45	1,5
Low Mound	48	93,2	1,94
High Mound	16	37,5	2,34
High Mound with Lower City	6	58,5	9,75
Other	2	5,9	-
Total	107	247,55	-

Table 4.3.2 – Number of sites and aggregate ha per each site type.

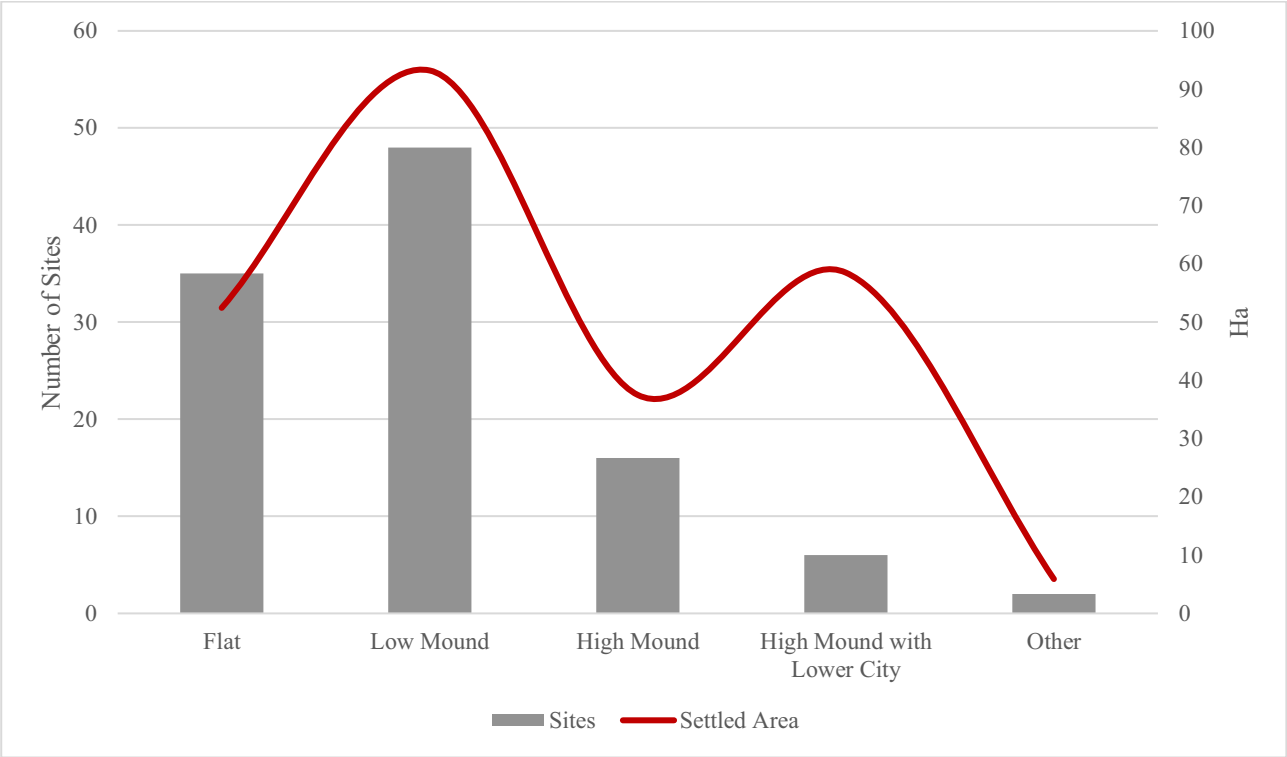


Chart 4.3.1 - Number of sites and aggregate ha per each site type.

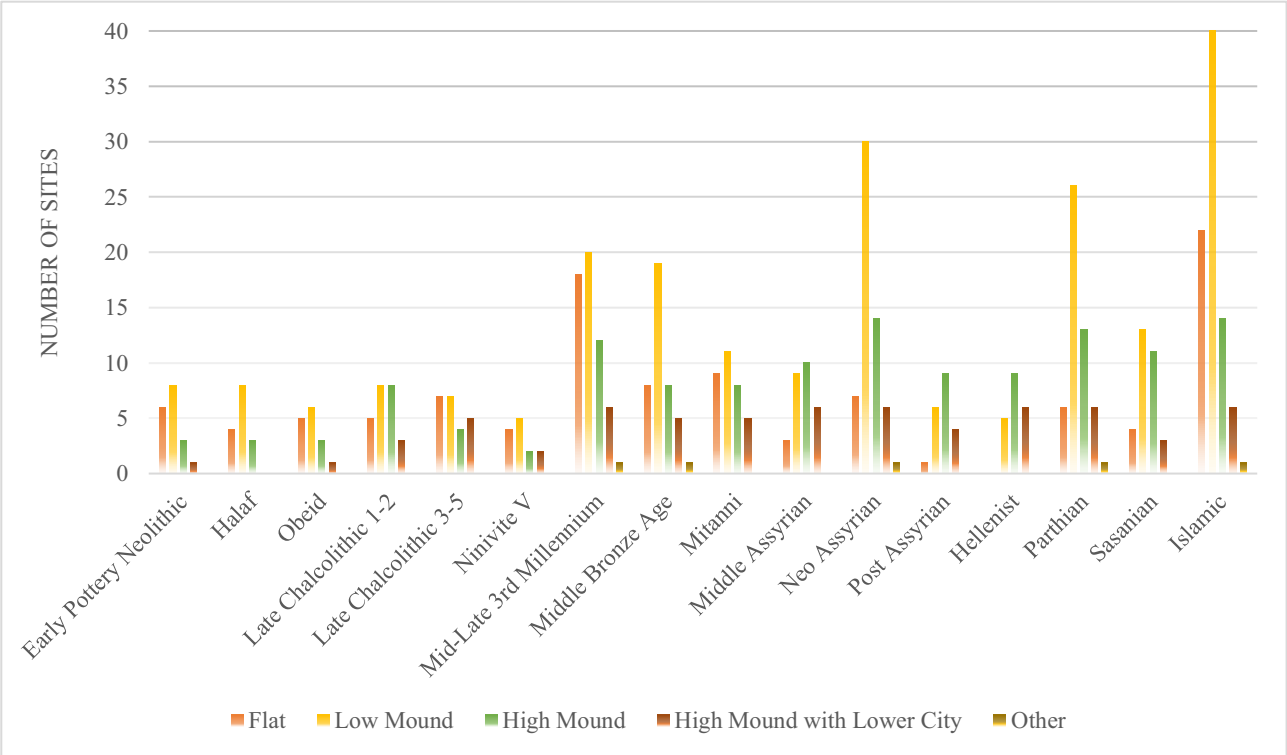


Chart 4.3.2 – Site type for each period.

4.4 General Distribution Pattern and Settlement Development

The general site distribution shows how the hydrography strongly affected the settlements in the plain (figs. 4.4.1-2). The sites are mainly located along the Gomel River or along secondary wadis and watercourses. In particular, the banks of the Gomel River were especially attractive for ancient settlers as 53 sites (ca. 47%) are located in a strip ca. 2 km wide along the course of the Gomel River.

There are only six high mounded sites with an extended Lower Town in TGAS area. The sites are distributed in the central-eastern part of TGAS region. Sites 89 and 40 are located along the course of the Gomel River at a distance of ca. 5 km between each other, sites 186 and 176 are also at a distance of ca. 5 km from each other along the course of the Nardush River. Sites 105 and 106 are instead close to each other and they are located on the two banks of a wadi that is tributary to the Gomel River. They are also located ca. 4 km South of Tell Gomel. The even distribution of these prominent sites reflects a subdivision of the agricultural lands in the plain. The six high mounded sites with an extended Lower Town are multiperiod site almost always occupied contemporarily throughout the millennia. This settlement organisation is related to the need of having large catchment areas of around 2-2,5 km rays to sustain the population of the bigger centres.

The results of the extensive and intensive surveys have revealed a complex and multi-layered landscape, with a long and continuous occupation history.

The study of the data collected permitted to recognize a scattered occupation of the area during the prehistoric and protohistoric times (Table 4.4.1and Chart 4.4.1). The Early Pottery Neolithic counts only 18 sites for a total aggregate area of 25,8 ha. The small villages where scattered in the plain and they represented the first traces of sedentarism in the Plain. The subsequent Halaf period counted only 15 sites and a total settled area of 22,3 ha. The Halaf settlements show a strong continuity with the previous ones having a continuity of 71%. The settlement pattern is consequently not changing at the time and the archaeological landscape was still characterized by small villages dispersed in the plain. During the Ubaid period as well, the continuity with the previous settlement pattern is strong, only 6% of the sites were new foundations. The Ubaid period counts 17 sites with a total aggregate area of 28,7 ha.

The first strong increase in the settlement number took place in the Late Chalcolithic. During the Late Chalcolithic 1-2, the number of settlements rose to reach the number of 26 sites and also the dimensions of the settlements started to grow. This period is also characterized by 45% of new foundations that revealed the demographic explosion experienced by the plain. During this phase, the bulk of many high mounded sites was created, and a two-tier hierarchy appears in the settlement

pattern. This is due mainly to the establishment of Tell Gomel as central nexus of the plain. With the Late Chalcolithic 3-5, the settlement pattern seems to not change remarkably, the number of sites occupied in this period is 23 and the total aggregate area was of 46,1 ha. The period is characterized by a strong continuity in the occupation of the settlements with 77% of site's occupation continuity. Furthermore, the settlement hierarchy did not change and Tell Gomel was still a large settlement surrounded by small villages.

A drastic transformation must have occurred during the transition from the 4th to the 3rd millennium BC, but unfortunately, on the basis of the survey results, it is not easy to have a whole picture of the alteration in the settlement development. A severe demographic drop is recorded, in light of the fact that the settlement number decreased to only 13 sites and a total aggregate area shrank to 28,2 ha.

Only during the mid-late 3rd Millennium the plain experienced the emergence of a dense rural landscape, with several new small-sized villages scattered throughout the territory (57 sites, total aggregate area of 118,9 ha). At the same moment, in this period the Navkur Plain underwent a first form of urbanization with the unprecedented growth of the site of Tell Gomel.

The Middle Bronze Age shows a strong continuity in the settlement occupation. The number of sites slightly decreased to 41 and the total aggregate area reduced to 108 ha. The size of the settlement didn't vary noticeably and also the settlement pattern seemed to remain unchanged.

In the second half of the 2nd millennium BC, the settlement pattern showed a shift: the number of settlements decreased (33 in the Mitanni, 28 in the Middle Assyrian), but the average size seems to grow slightly. The number of dispersed villages in the plain diminished and the settlements seem to focus on the main centres (the high mounded tells). The percentages of new foundations in the Mitanni and Middle Assyrian periods is very low: 9% and 7% respectively.

During the Neo-Assyrian period, a complete brand-new settlement pattern was established in the Navkur Plain. The territory was occupied by a dense rural settlement pattern characterised by a large number (59) of small hamlets or farmsteads dispersed in the plain. Tell Gomel was still at the time a node in the plain, but the size of the settlement was not comparable with the one reached during the mid-late 3rd millennium or the Middle Bronze Age.

After the collapse of the Assyrian Empire, during the period defined as Post-Assyrian, there is clear evidence of settlement reduction. The period counts only 18 sites and a total aggregate area of 43,2 ha. The settlements show the highest continuity registered in TGAS area (90%) and no new foundations were recorded.

In the subsequent Hellenistic period, there isn't a true recovery of the human settlement in the plain. Only 21 sites were identified for a total aggregate area of 54,9 ha. The Hellenistic settlements are located on previously occupied sites, new foundations are not recorded and settlement continuity with the previous phase is recognized in 53% of the sites.

During the Parthian period, a revival in the settlement of the plain is recorded, 52 Parthian settlements were identified for a total aggregate area of 122,8 ha. The Sasanian period shows again a reduction in the number of sites in the region with only 32 sites and a total aggregate area of 78,6 ha.

With the Early Islamic period, the number of sites rises to 35 with a total aggregate area of 109,2 ha. The settlement patter did not change in the subsequent Middle Islamic period with an increase of of only 2 sites in the number of settlement (37), also the total aggregate area seems to be almost unchanged with 113,2 ha. Contrarily, the Late Islamic period shows an abrupt reduction in settlement number and total aggregate area. The number of sites is halved, the settlements are smaller in average and the total occupied area is reduced to only 42,2 ha.

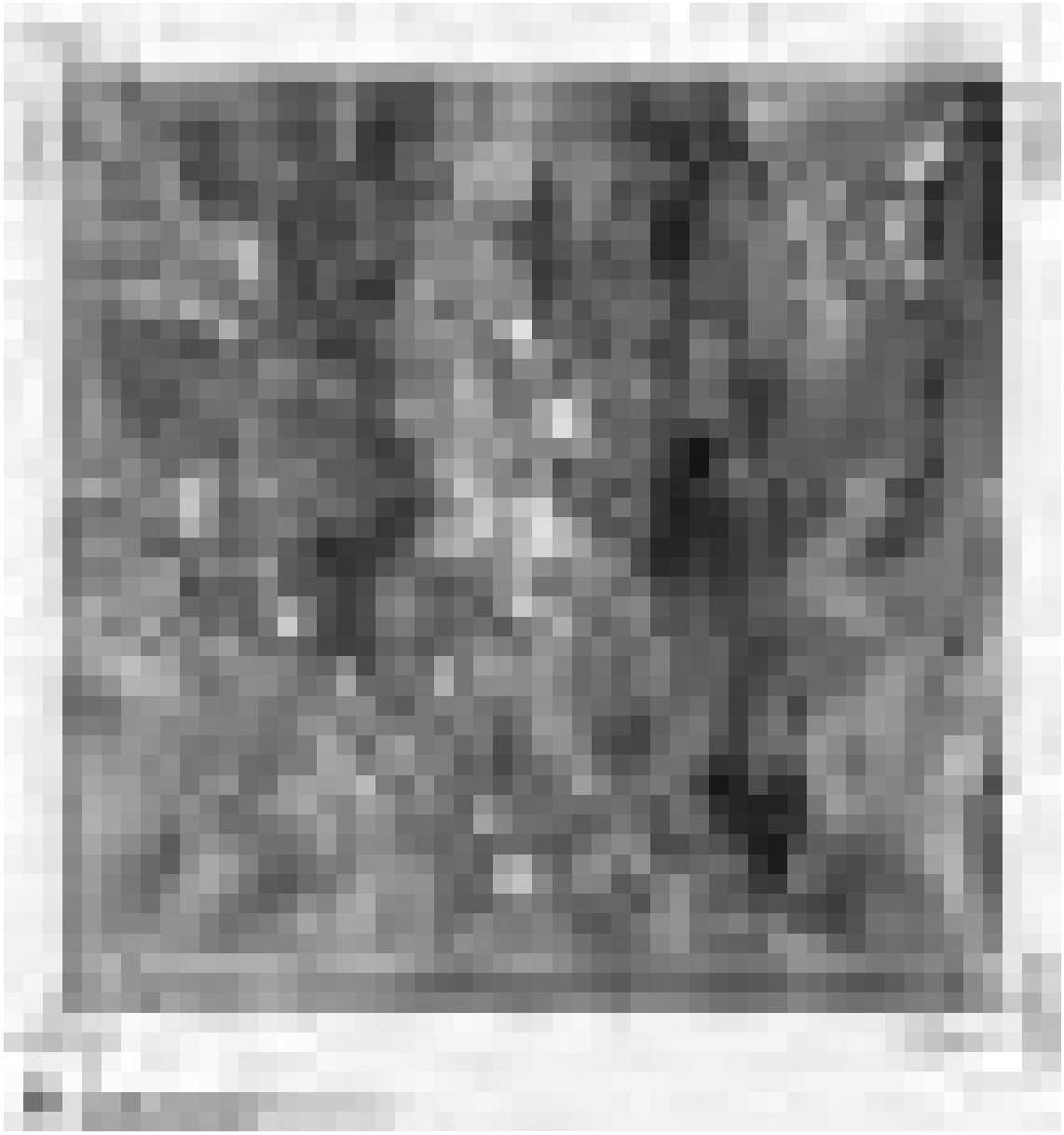


Fig. 4.4.1 – General distribution pattern of the archaeological sites in TGAS area (Corona 1039).

Fig. 4.4.2 - General distribution pattern of the archaeological sites in TGAS area with wadi, rivers and modern villages.

Period	Number of Sites	Site/ Km^2	Total Sherds	Number of Sites and Occupation			Total Settled Area (Ha)
				Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	
Early Pottery Neolithic	18	0,18	227	5 (5,1 ha)	6 (10,3 ha)	6 (10,4 ha)	25,8
Halaf	15	0,15	87	2 (3 ha)	6 (9,7 ha)	7 (9,6 ha)	22,3
Obeid	17	0,17	95	3 (10,7 ha)	8 (8,8 ha)	6 (9,2 ha)	28,7
Late Chalcolithic 1-2	26	0,26	143	3 (17,3 ha)	10 (17,3 ha)	13 (20,8 ha)	52
Late Chalcolithic 3-5	23	0,23	145	4 (18,4 ha)	8 (12,1)	11 (15,6)	46,1
Ninivite V	13	0,13	93	3 (9,3 ha)	4 (7,3 ha)	5 (11,6)	28,2
Mid-Late 3rd Millennium	57	0,57	1351	21 (75,7 ha)	15 (19,4)	21 (23,8)	118,9
Middle Bronze Age	41	0,41	1315	16 (82,3 ha)	14 (13,4 ha)	11 (12,3 ha)	108
Mitanni	33	0,33	431	9 (45,3 ha)	10 (19 ha)	14 (24,2)	88,5
Middle Assyrian	28	0,28	371	9 (51,5 ha)	11 (19,7 ha)	8 (14,6 ha)	85,8
Neo Assyrian	59	0,59	1332	30 (101,2 ha)	18 (44,9 ha)	11 (20,6 ha)	166,7
Post Assyrian	18	0,18	70	1 (15 ha)	9 (15,4 ha)	8 (12,8 ha)	43,2
Hellenistic	21	0,21	273	7 (33,1)	6 (11,2 ha)	8 (10,6 ha)	54,9
Parthian	52	0,52	754	11 (55,3 ha)	25 (37,7 ha)	16 (29,8 ha)	122,8
Sasanian	32	0,32	179	3 (19,6 ha)	19 (38,9 ha)	10 (20,1 ha)	78,6
Early Islamic	35	0,35	547	9 (51,5 ha)	10 (20,6 ha)	16 (37,1 ha)	109,2
Middle Islamic	37	0,37	477	5 (41,3 ha)	17 (47,5 ha)	15 (24,4 ha)	113,2
Late Islamic	18	0,18	58	3 (4,4 ha)	2 (6,7 ha)	13 (31,1 ha)	42,2

Table 4.4.1 – Development of settlements in TGAS area (number of sites, settlement density and aggregate occupation area for each period).

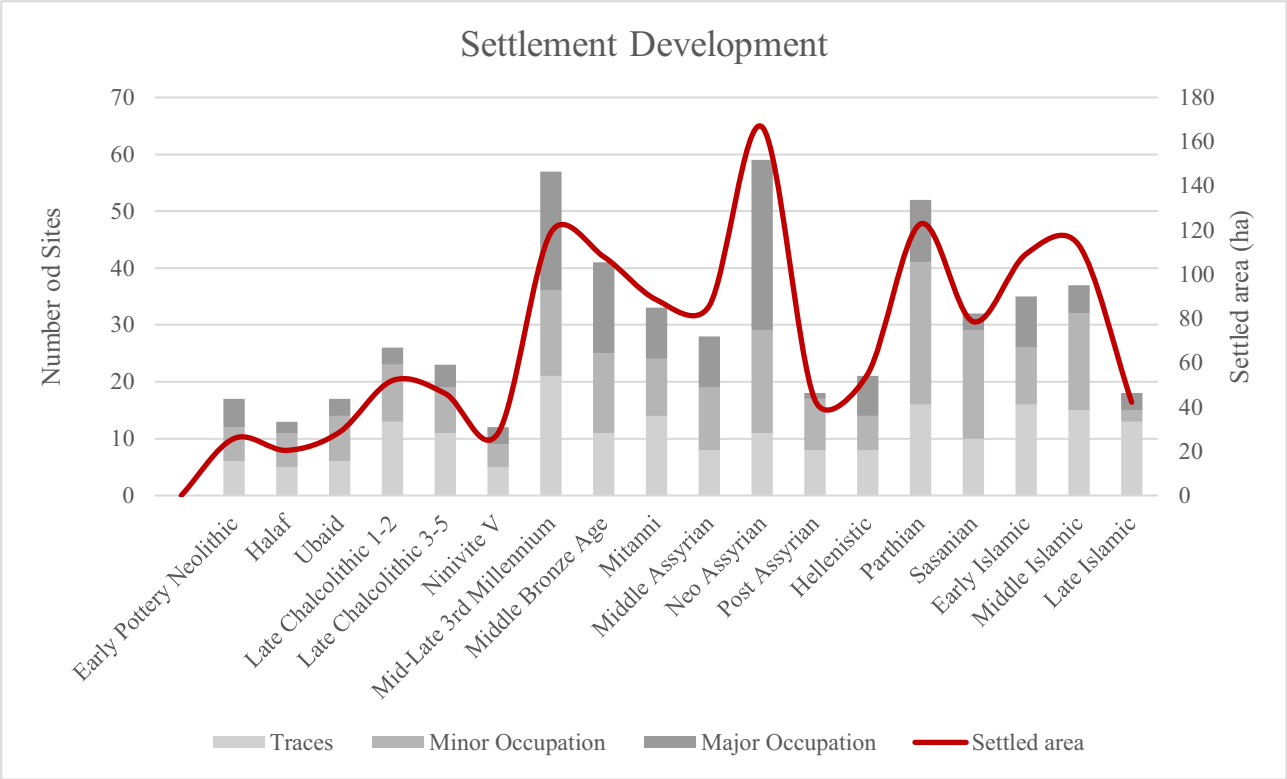


Chart 4.4.1 – Settlement development (sites number and aggregate settled area) through time.

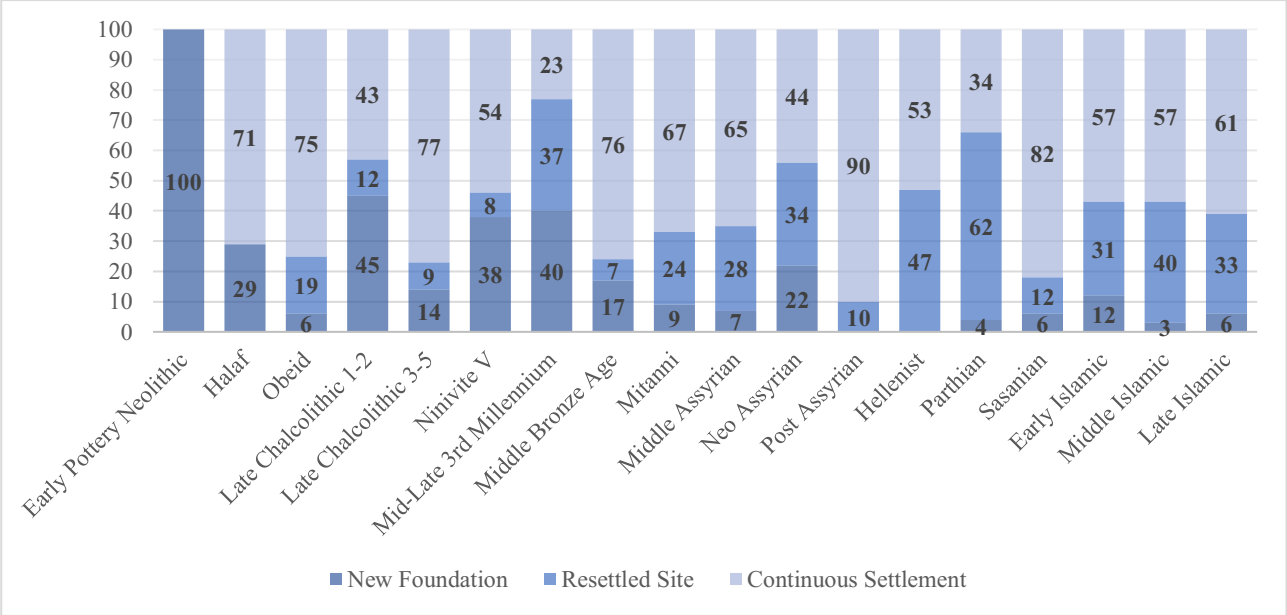


Chart 4.4.2 – Settlement continuity in TGAS area.

4.5 Extensive vs. Intensive in site's recovery rate

The TGAS project represents a unique occasion in near eastern landscape archaeology to confront the results of an extensive and an intensive survey on the same territory. During the 2012 and 2013 campaigns LoNAP detected, in what later became TGAS area, 49 archaeological sites. The TGAS surveyed again the 49 sites already identified by LoNAP and also recognized 63 new sites previously undetected by the extensive survey.

The total number of sites in TGAS Area is 112. The very high site density of 1,12 sites/km^2 brings the Tell Gomel Archaeological Survey at the first place, after the Erbil Plain Archaeological Survey, in site recovery rates among the other Mesopotamian surveys (fig. 4.5.1).

Fig. 4.5.1 - Comparative site densities/recovery rates for Mesopotamian surveys, courtesy of J. Ur (based on Adams 1965, 1981, Adams and Nissen 1972, Gibson 1972, Wright 1981, Monchambert 1984, Wilkinson 1990, Wilkinson and Tucker 1995, Eidem and Warburton 1996, Geyer and Monchambert 2003, Ur 2010, Menze and Ur 2012, Ur et al. 2013, Morandi Bonacossi and Iamoni 2015)

The 63 new sites discovered by the intensive survey could be divided into four different types: high-mounded sites, low-mounded sites, flat sites and hill-top settlements. Quite surprisingly, the majority of the sites detected through the intensification of the survey methodology were low-mounded sites and not very small flat sites, as we were previously expecting. This striking outcome shows how an

intensive investigation could not only record additional flat sites but also small mounded sites that were unnoticed during the previous surveys. This is even more interesting because the area under investigation is a plain and not a hilly landscape which is rather difficult to investigate on the base of the sole remote sensing analysis.

Number of sites detected by the extensive and the intensive surveys			
Int. Transect Area		**Ext. Transect Area**	
LoNAP	**TGAS**	**LoNAP**	**TGAS**
17	30	32	33

Table 4.5.1 - Number of sites detected by the extensive and the intensive surveys inside and outside the transects area.

The majority of the settlements were identified (Chart 4.5.1) by the remote sensing (62%), a large group was identified by the transects fieldwalking (24 %), a small number was located by means of interviewing local people (5 %) while the others were discovered by chance walking or driving from a site to another (9 %).

From these results, it seems that the identification of sites through satellite image analysis in the Navkur Plain is not as efficient as in the Jazira region. If for instance, we take in consideration the THS, according to J. Ur, all the sites identified during the survey were detected in the CORONA satellite images (Ur 2010: 60). The neighbouring projects UGZAR (Koliński 2016) and EHAS (Pfälzner and Sconzo 2015; 2016) are recording similar, even more pronounced, the limited effectiveness of the satellite images in detecting all the archaeological sites in their regions. These areas are hilly or even mountainous which negatively effects the recovery rate through remote sensing. Much more surprising is obtaining such limited recovery rate (62 %) in a plain such as the Navkur. This data might be the result of multiple factors such as high soil moisture, site burial under the alluvial deposits and bad quality of the satellite images.

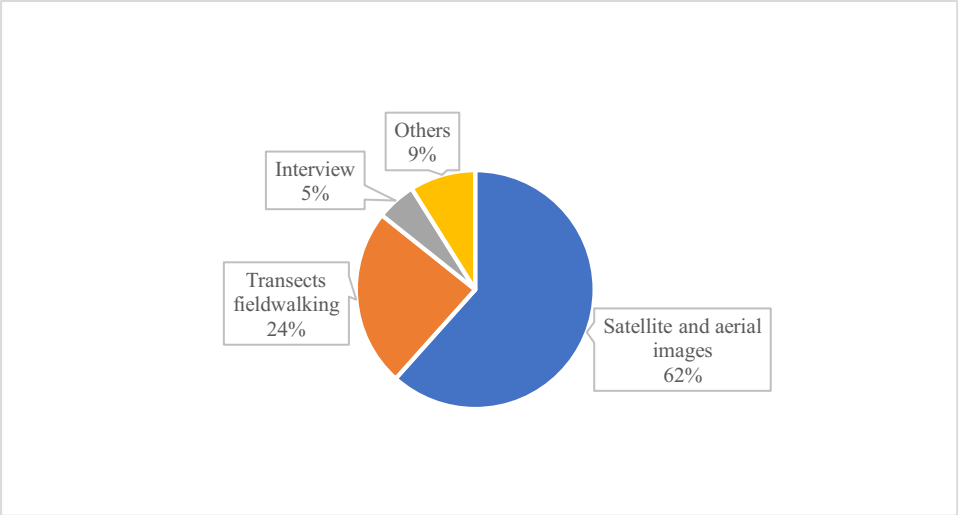


Chart 4.5.1 – Sites identification methods.

The intensification of the survey did not simply bring to the identification of new sites, it even changed the interpretation of settlement distribution and dating.

The graph below (Chart 4.5.2) shows the results, in terms of identified sites per chronological period, from the LoNAP survey, TGAS survey and the combination of the two. The most impressive result regards the prehistoric and protohistoric epochs. In fact, the LoNAP team recorded 4 Pre-Halaf sites and only 1 Halaf site in the region later studied by TGAS project. On the contrary, TGAS team documented a much larger number of sites for both periods (18 and 15 respectively). This change in the data collected is due not only to the discovery of new sites but also to the recording of phases that were not previously observed in sites already extensively investigated by LoNAP. This was possible with a much more intensive strategy in the investigation of the site, subdivided in much smaller collection areas and surveyed devoting much more time on every single area.

Another group of sites identified through field walking is the very small flat or low mounded 3rd millennium settlements. The recording of these sites is very critical because it permitted to reconstruct a landscape that was dominated by the new urban site of Tell Gomel but also that was also characterized not by a nucleation towards it but by the dispersal of a large number of very small sites (hamlets? farmsteads?) around it[12].

[12] See Chapter 6.8.

Regarding the other phases, in the majority of the cases, the survey intensification seems simply to have increased the number of sites for each epoch, almost without modifying the general trends documented by the extensive survey.

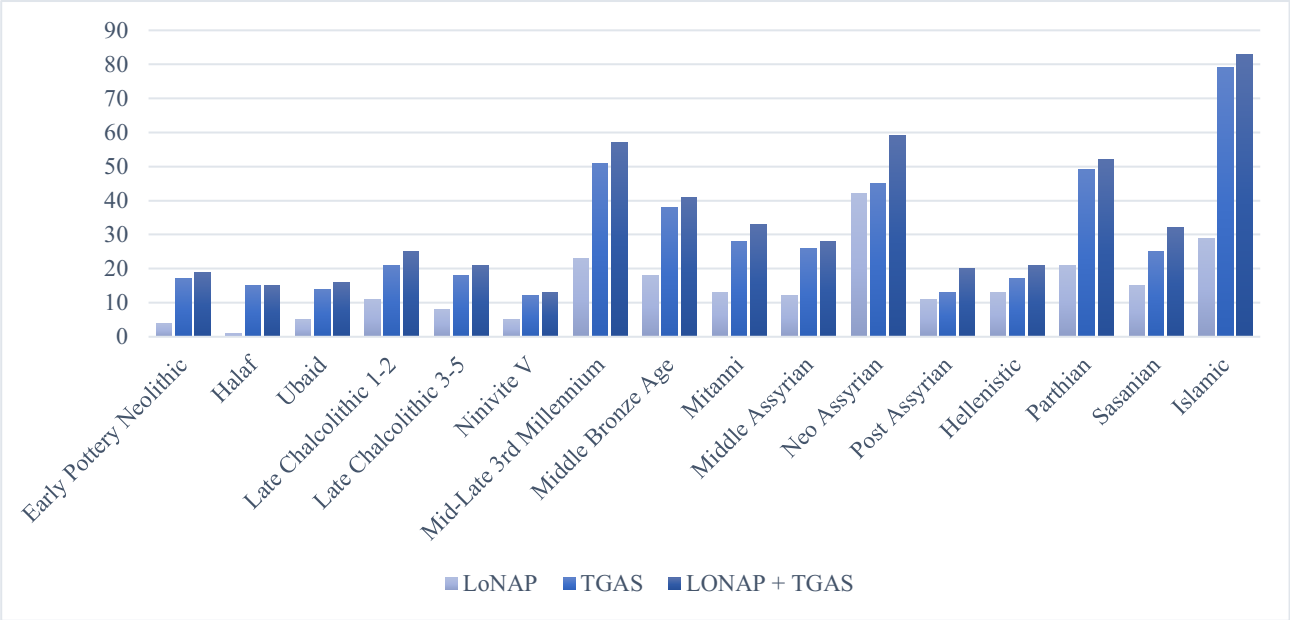


Chart 4.5.2 – Number of identified sites for each period.

5.
THE OFF-SITE AREA

5.1 Field Scatters

Introduction

In Near Eastern Archaeology, we are traditionally used to picture sites as synonymous with mounds and to imagine these tells floating in the landscape with a void in the archaeological record between them. Instead, a continuum of artefacts and other evidences is distributed on the ground surface as a sort of carpet of archaeological data, and one of TGAS goals was to recognize, record and interpret this evidence.

The very small and battered pottery fragments that are dispersed in the landscape between sites are called "field scatters". They were recognized for the first time in Western Europe and then studied in association with sites of different chronological periods as for instance the Islamic Iranian coast or the Classical Greece (for an overview see Bintliff and Snodgrass 1988; Wilkinson 1989; Alcock *et al.* 1994; Ur 2010).

Below, the different explanations given to the formation of field scatters are summarized:

1) The first is, as defined by Bintliff and Snodgrass, "a feature of archaeological folklore", in other words, the results of a combination of chance events (Bintliff and Snodgrass 1988: 507).

2) In the second hypothesis, the off-site scatters represent non-habitation activity areas (such as storage sheds, field buildings and other similar non-permanent occupation sites);

3) The third model relates the presence of field scatters on the surface of modern field with natural transport and post-depositional activities. In this interpretation the pottery fragments were removed from their context, the site, by rain, wind and human activity, especially ploughing, and then they were overspread in the area between sites (see Alcock et al. 1994 for a good review of the evidences).

4) Pastoral or nomadic ephemeral occupation is another proposed explanation to the phenomenon. In fact, campsites may have been disarticulated and then homogenized in the fields by ploughing activities (Ur 2010: 74).

Although all these factors may have contributed, in a very limited manner, to the creation of field scatters, they could not explain the density and uniform distribution of these fragments in off-site areas.

Although controversial, a last model seems to be at present the most accepted. According to this model, scholars argue that rubbish (including small fragments of pottery) was dumped in the field as fertilizer. The so-called “manuring hypothesis” was sustained in near eastern archaeology by Tony Wilkinson (1982 1988, 1989, 1990, 1994) who was the first who attempted to verify this theory in our field of studies. The scholar linked the explosion of urbanization in third Millennium North Mesopotamia with the development of intensive agriculture. Specifically, the practice of manuring was related to necessity of crop improvement.

Until now, although the so-called "manuring hypothesis" is not universally accepted by scholars (see comments of Oates, Weiss and Courty in Wilkinson 1994 and Alcock *et al.* 1994), no other interpretation has yet been proposed.

Number and Distribution

During the fieldwork campaign we registered data from counting the number of pottery fragments on the field surface while walking through 58 transects and from 632 sample units distributed around the site of Tell Gomel.

TGAS team decided to count also the fragments while walking along the transects (with the help of a tally counter) in order to gain a clearer perception of the persistence and continuity of the field scatters. Fig. 5.1.1 shows the distribution of the fragments registered while walking through the transects. There is a clear continuity in the dispersion of these sherds, and not only around sites but also in areas not close to any archaeological sites.

As expected, the sherds are densest in the proximity of T. Gomel and they slowly decrease moving away from the site with only a peak around 1300 meters from Tell Gomel. This is due to the presence of several settlements at this distance (fig. 5.1.1).

Fig. 5.1.2 presents instead the results obtained from the data recorded in the 10 x 10 m sample units. We chose to use a double strategy to record field scatters, because with the first approach (counting while walking through a transect) we were able to register the remarkable continuity of the sherds in the fields surrounding Tell Gomel, while with the use of the sample units we were able to have easily comparable data with other surveys using the same technique.

The quantity of the fragments in the TGAS area, although consistent, is much lower than those provided by other surveys in neighbouring regions. Indeed, the mean in Tell Gomel area is 6 sherds per 100 m^2 versus an average of 30 sherds per 100 m^2 of other Northern Mesopotamia surveys, such as the NJP (average of 20-39 sherds per 100 m^2, Wilkinson and Tucker 1995: 20-22) or THS (average of 38 sherds per 100 m^2, Ur 2010: 68-69). Only few areas yielded more than 30 fragments, while most of the sample units yielded only up to 10 fragments. The sample units marked with white crosses represent those that have not yielded even a single ceramic fragment**.** Differently, in the NJP and THS almost all the sample units yielded at least one pottery sherd (Wilkinson and Tucker 1995; Ur 2010). Therefore, TGAS data differs from a quantitative point of view from the data collected in the other Northern Mesopotamia surveys.

Two reasons can explain this quantitative difference in field scatter density between different regions. On the one hand, this difference can be put in relation with the environmental conditions: the wind erosion in more arid regions can remove the soil and bring to light the fragments, thus leading to a higher visibility of the fragments. On the contrary, in more humid areas, a higher rainfall can lead to the burial of the surface materials (Wilkinson 1982; Bintliff and Snodgrass 1988; Ur 2010). For instance, the sherds halo of a site in England may be less than a fragment in 100 m^2, while the field scatters densities around a site in Oman can reach 2000 fragments per 100 m^2 (Bintliff and Snodgrass 1988: 510, fig. 2).

On the other hand, a lower density of fragments could correspond to a lower necessity of systematic manuring and intensive agriculture. In the mid-late 3rd millennium BC, Tell Gomel is definitively smaller than Tell al-Hawa and Tell Hamoukar (see Chapter 6.8). It certainly had to sustain a smaller population and, consequently, the site's inhabitants had presumably a less impelling necessity of intensive agriculture.

Fig. 5.1.1 –Field scatters distribution along transects (1 dot = 1 sherd).

Fig. 5.1.2 – Sherds distribution per 100 m^2 sample units.

Dating

The dating of the pottery sherds collected in the off-site area is very difficult due to the state of preservation of the fragments. In fact, they are often very small, battered and abraded. The information regarding the diagnostic sherds collected are available in the "Transects Catalogue" (Vol. II, Part 3).

TGAS collected c. 800 diagnostic fragments in the off-site area. When diagnostic types can be recognized among the collected sherds (Chart 5.1.1), they appear to date mainly to the mid-late 3rd millennium BC period (22%), to the early 2nd millennium BC period or Middle Bronze Age (14 %) and to the large period generally defined as "Islamic" (21 %). The high percentage of Islamic sherds is due to the fact that the designation "Islamic" comprises Early, Middle and Late Islamic period sherds[1].

A similar trend was recorded in the North Jazira Project (Wilkinson ant Tucker 1995: 22-23) and in the Tell Hamoukar Archaeological Survey (Ur 2010: 73), where the majority of the field scatters dates to the second half of the 3rd Millennium BC.

It is interesting to notice the low percentage of the Neo-Assyrian sherds (Chart 5.1.1). The Neo-Assyrian period represents indeed the peak in the occupation of the plain regarding the number of site and total aggregate area (see Chapeter 6.12). This occurrence is explainable only by the different agricultural exploitation strategies employed during this period. In fact, during the Neo-Assyrian period (at least from the reign of Sennacherib onward), part of the area was probably partially irrigated thanks to the Assyrian canal system (Chapter 6.12) and consequently it did not need an enhancement of the soils productivity through manuring. This explains the lack of Neo-Assyrian sherds among the diagnostic field scatters despite the peak in occupation during this period.

[1] Unfortunately, it was not possible to differentiate among the three periods due to the very low state of preservation of the sherds.

Chart 5.1.1 – The dating of the field scatters.

The Phosphorus Analysis Results

Recent works regarding manuring in antiquity are focused on the chemical analysis that could be useful to determine the presence of ancient manure in the field, also in relation with the pottery sherds on the surface. The analysis of phosphate concentration is currently used in Europe successfully with this intent (Guttman *et al.* 2005; Leonardi *et al.* 1999; Egli *et al.* 2013).

The only P analysis carried out with this intent in the Near East where performed on some samples coming from the Kurban Höyük Survey in south-eastern Anatolia, but the results were unfortunately not very compelling (Wilkinson 1990: 76-78).

Considering the TGAS area, the results of the examination show that the total P concentration in the soil is greater in proximity to Tell Gomel and slowly decreases moving away from the site, with some peaks caused by the presence of smaller archaeological sites (fig. 5.1.3). Even if there is not a direct proportion, the same trend is visible in the percentage of organic P concentration and in the field scatters distribution presented above (fig. 5.1.2).

Considering the results coming from the speciation of P, we have information regarding the percentage of P inorganic (HCl) and P organic ($NaHCO_3$) for each sample. The P inorganic is related

to the natural composition of the soil, while instead P organic can be connected to an anthropogenic enrichment of phosphorus in soils.

This phosphorus addition is likely to come from human waste and debris, as it is also confirmed by the presence of the field scatters that are traditionally considered the tangible and material remains of past manuring activities.

Observing fig. 5.1.4, we can notice how the P organic ($NaHCO_3$) varies widely in different areas. What is more interesting is that in the area of new geological formation corresponding exactly to the first sample on the west of the River Gomel, immediately in front of Tell Gomel, the P organic represents the lowest value among all the samples.

This is particularly significant because the sample was taken in an area recently created by the alluvial deposit of the river shifting east. Even if, unfortunately, it is still not clear when the River Gomel shifted east and slowly eroded the site of Tell Gomel, this must have happened after the Middle Bronze Age since a MBA building (belonging to Tell Gomel MBA city) was excavated by LoNAP in the middle of the modern bed of the river (Morandi Bonacossi *et al.* in press). This new formation area was completely devoided of field scatters and the total P and the percentage of P organic are the lowest among all the samples. This is a good evidence of the anthropogenic addition of P in the ancient fields surrounding Tell Gomel and its association to field scatters.

To conclude, phosphorus (total, organic and inorganic) analysis results shed new light on the relationship between the occurrence of field scatters on the extant land surface and ancient manuring activities, highlighting areas in which manuring activities took place, and in combination with the field scatters supporting the “manuring hypothesis”.

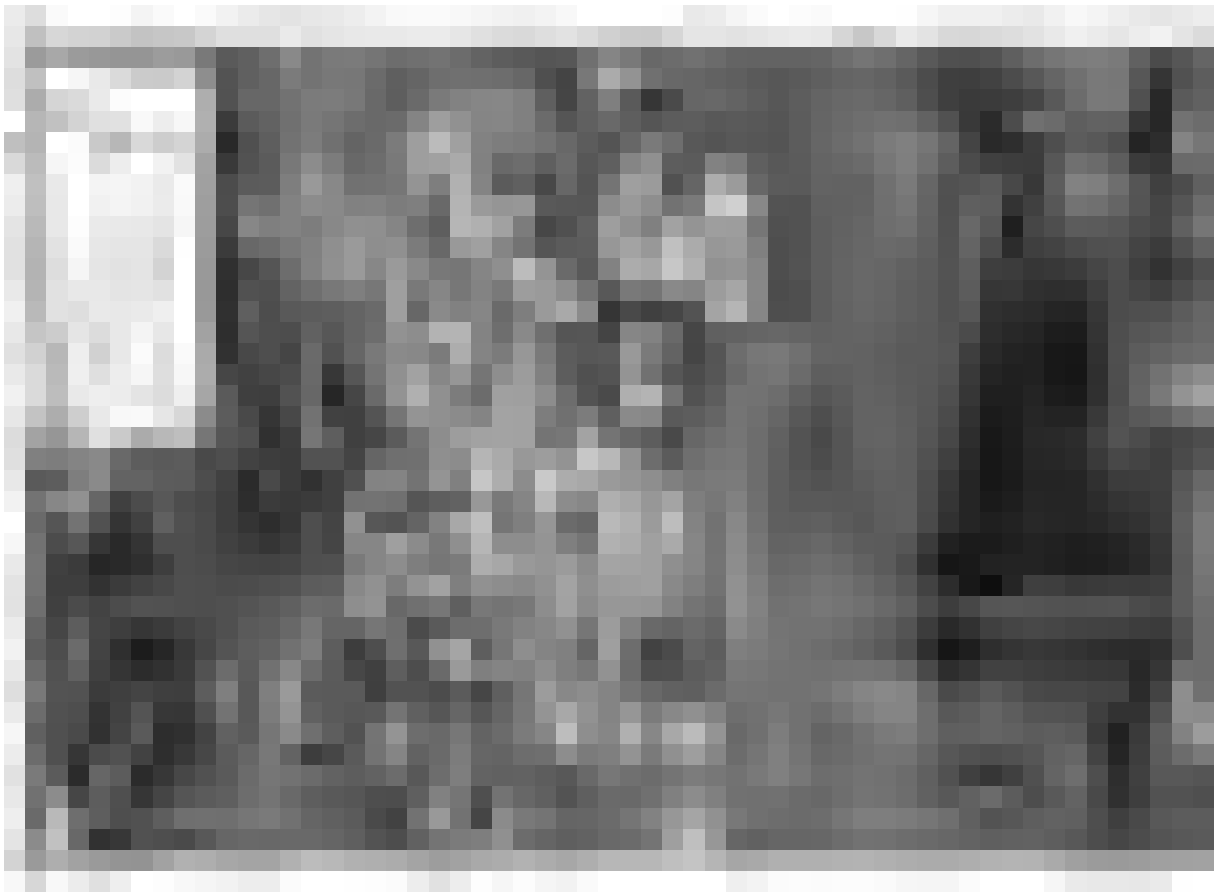


Fig. 5.1.3 - Total P concentration in soil samples from the fields around Tell Gomel.

Fig. 5.1.4 - P organic ($NaHCO_3$) and P inorganic (HCl) concentration in soil samples from the fields around Tell Gomel.

Conclusions

The off-site evidence collected by TGAS shows how, even in a landscape characterized by a semi-rural settlement pattern, with an urban centre of the mid-late third millennium and the MBA of medium dimensions (not comparable to the huge centres of North Jazirah, like Tell Hamoukar or Tell al-Hawa), an almost continuous sherds carpet is attested.
The dating of the field scatters is the strongest evidence to sustain the manuring hypotheses. In fact, the field scatters date to the periods of maximum expansion of Tell Gomel, exactly when the demographic pressure required a higher crop production. Furthermore, the results coming from the soil analysis seem to confirm an anthropogenic addition of phosphorus in the field.

The combination of data coming from collected field scatters and soil sample analysis seem to suggest that even in the Gomel area, albeit on a smaller scale, manuring was practiced in the second part of the EBA and in the MBA.

However, off-site surface pottery densities are still not regularly recorded in near eastern field surveys and until now it is difficult to recognize a consistent pattern outside the North Jazirah region, hence new data sets are necessary to gain a proper interregional perspective.

5.2 Hollow Ways

Introduction

The hollow ways are linear hollow features visible in satellite images, aerial photographs and in some case also from the earth surface, generally radiating from ancient mounded settlements or connecting sites or even regions in inter-site and long-distance networks.

Hollow ways have been studied and mapped in the Syrian and Iraqi Jazirah since the 1950's (Van Liere and Lauffray 1954-1955, Wilkinson 1993, Wilkinson and Tucker 1995, Ur 2003 and 2010). In particular, the systematic mapping of the hollow ways in the Upper Khabur basin carried out by J. Ur (Ur 2010: 110-146, maps 2 and 3) allowed to identify 6,531 hollow way fragments in an area of 17,140 km^2. The study permitted to reconstruct, especially thank to the use of declassified satellite images (CORONA and KH-7) a complex pattern of hollow way networks throughout all the basin.

The hollow ways were also recognized and studied in other areas of the Ancient Near East as in the Assyrian heartland (Altaweel 2008; Mühl 2013) and more recently in northwestern Syria and southwestern Iran (Casana 2013).

At the beginning of the Jazirah landscape studies, these linear features were interpreted as ancient (or subrecent/modern, see Weiss and Courty 1994) paths[2] or canals[3], but now their interpretation as ancient tracks[4] is almost universally accepted. Due to their depression in the surrounding field system, the hollow ways become in some cases hydrologically active, channelling runoff rainfall (Ur 2010: 80; Wilkinson and Tucker 1995: 26) or excess irrigation water (as for instance is still happening with one of the hollow ways radiating from Tell Gomel, figs. 5.2.6-7), but they are not interpreted as canals since they are often connecting sites, or even regions, and they are crossing watersheds (Wilkinson and Tucker 1995: 25).

Another evidence supporting the interpretation of these features as ancient routes is that the hollow ways in some cases lead to ancient city gateways, as in the fortunate cases of Hatra (Altaweel 2008: 65, fig. 14), Tell Beydar (Ur and Wilkinson 2008: 310, fig. 5), Tell Hamoukar (Ur 2010), Tell Rifa'at (Casana 2013: 262, fig. 5) or Tell Mardikh (Casana 2013: 262, fig. 6).

Hollow Ways in LoNAP and TGAS areas

The hollow ways were detected on the satellite images[5], surveyed and the profile of many of them measured by the LoNAP team during the 2017 campaign. As result of this campaign ca. 200 segments of hollow ways were recognized by ground truthing in the LoNAP area. On the base of their morphology and state of preservation the hollow ways detected in the LoNAP area were subdivided in broad, narrow, subrecent, uncertain and reconstructed. Most of them were identified in the western part of the survey region, in the hilly or rolling plain areas of Duhok, Faideh and Badre.

In the Navkur Plain, instead, only seven hollow ways were detected. If we compared this number to the ones coming from the hollow ways study of North Syrian Jazirah, a strong difference can be noted (Ur 2003: 110, table 1). If, for instance, we considered the hollow ways detected around Tell Beydar (24), Tell Brak (48) or Tell Hamoukar (33), the five hollow ways radiating from Tell Gomel seem really few (fig. 5.2.1).

Such scarcity of hollow ways detected must be due to different factors. The first factor can be related to the characteristics of the Navkur Plain soils that are much more humid than in any other area of

[2] Already Van Liere and Lauffray interpreted these linear features as traces of ancient routes (1954-1955: 145-146).

[3] It was proposed by McClellan, Grayson and Ogleby (McClellan *et al.* 2000) that the linear hollow were channels for collecting water but this hypothesis was rejected, see Ur and Wilkinson 2008 and Wilkinson *et al.* 2014.

[4] They cannot be defined as roads since they are the unintentionally constructed outcomes of human and animal movements and not formal and planned constructions (Ur 2010: 76).

[5] The CORONA declassified images confirmed also in LoNAP region to be the more useful images for the detection of these feature with the remote sensing analysis (especially the 1039 mission images of the 28th February 1967). The U2 aerial images, instead, did not reveal very clearly the presence of these features in the Navkur Plain.

the LoNAP region or North Jazirah. The hollow ways appear as dark linear features on the satellite images because their compacted surface buried under the modern fields limits the passage of moisture (Ur 2003: 106). Therefore, the identification of hollow ways in the satellite images of such moist landscape is much more difficult. Second, the Navkur Plain was in the past as today highly cultivated and such fragile landscape features have been severely damaged by the agricultural activities. Third, the Navkur Plain is an alluvial plain and the alluvial sedimentation contributed to hide the traces of these ancient features.

Similarly, the absence of these features, recorded by Ur's study of the Upper Khabur basin, to the north of the Hamoukar-Leilan corridor was also explained by a combination of environmental and historical processes, specifically high rainfall and continuous agricultural occupation (Ur 2010: 135).

In the CORONA images of the Erbil Plain, hundreds of these linear features are recognizable and the EPAS team counted 851 of them for a total length of 323.6 km (Ur *et al.* 2013: 108-109). Even if these numbers seem enormous if compared with the one from the Navkur Plain, the density of hollow ways in the Erbil Plain is less than a quarter of the density recorded in the Upper Khabur Basin (Ur *et al.* 2013: 109). Furthermore, the hollow ways of the Erbil Plain are recognizable only outside the area of canals and *karez* irrigation, revealing the devastating effects of irrigation on them (Ur *et al.* 2013: 109). This element should be considered also looking at the Navkur Plain, since a very complex system of canals was identified here (see Chapter 5.3). The massive irrigation carried out in the plain for centuries could have also contributed to the disappearance of the hollow way traces in the Navkur Plain.

Remote Sensing and Ground Observations and Measurements

The hollow ways around Tell Gomel, and more in general all the hollow ways identified in the Navkur Plain, belong to the broad type, with the exception of a single one of the narrow type radiating out from Tell Gomel. The features recorded inside the TGAS area were numbered from one to five (HW1, HW2, etc…) and three of them had also the profile measured with a total station (fig. 5.2.1). The pattern is radial which is a common pattern in all Upper Mesopotamia (Ur 2010: 133).

The length of the features visible on the CORONA images vary from 532 m of the shortest to 2.304 m of the longest fragment preserved (Hw1= 1222 m; Hw2= 1209 m; Hw3= 532 m; Hw4= 2304 m; Hw5= 1265 m). The wideness of the dark features on the CORONA varies from 15 to 30 m ca., even within the same hollow way. The width of Hw3 (on the base of the satellite images) is smaller compared to the others and it was therefore defined as a "narrow hollow way". The distinction between broad and narrow hollow ways was firstly proposed by Van Liere and Luffray (1954-1955)

and then the same classification was adopted by other scholars (Wilkinson 1993, Wilkinson and Tucker 1995, Wilkinson 2003, Ur 2003 and 2010). The difference between the two types is connected with the process that brought to their formation, with the location and preservation, and with their chronology (Ur 2010: 82).

On the ground, the hollow ways are difficult to detect and measure. The surveyors visited on the ground the hollow ways detected on the satellite images and covered them through fieldwalking with the help of a handheld GPS. In fact, without the guidance of the GPS it would be quite difficult to recognize the presence of the hollow ways in the plain[6]. The profiles of Hw1 and Hw5 were possible to be distinguished on the ground (figs. 5.2.2 and 5), while along Hw2 and Hw3 the terrain was almost completely flat and it was not possible to observe any depression (figs. 5.2.3-4). Hw4 was instead very interesting to visit since fortunately, at the time of our arrival, the hollow way was channelling the runoff waters from the irrigated fields along it (figs. 5.2.6-7).

The profiles of Hw1, Hw4 and Hw5 were recorded with the total station in order to measure on the ground the width of the features and to draw their profiles (figs. 5.2.9-11). The depth of these features on the ground ranges from 30 to 70 cm and the width ranges from 60 to 90 m[7]. These measures fit well with the data coming from the NJP (Wilkinson and Tucker 1995: 24) and from THS (Ur 2010: 82).

Dating TGAS Hollow Ways

The dating of these features is quite complicated. Usually hollow ways are dated on the base of the occupation of the sites that they are connecting or from which they spread out. This associational dating has been in use for decades and the method was been generally confirmed from the intensive systematic surveys of North Jazirah (Wilkinson 1993, Ur 2003, Ur and Wilkinson 2008). However, this type of dating must always be cautious since due to their depressed profile the hollow ways tend to transform into a completely different landscape feature, collecting surface runoff (as already explained above), and consequently attracting the foundation of new settlement along them. The phenomenon is well documented in Hamoukar area (Ur 2010: 85).

Hw1 spreads out from Tell Gomel in the direction of Tell Chirra (site 185), Hw2 can be tentatively connected with the site of Gir Sobashi (site 179), while Hw4 seems to connect Tell Gomel to Tell

[6] Differently, in other areas of LoNAP, the hollow ways were easily recognizable by naked eye (Morandi Bonacossi and Savioli pers. comm.).

7 The determination of the exact measures of the hollow ways is almost impossible to achieve, furthermore also an estimated measurement is quite subjective as already stressed by J. Ur (Ur 2010: 82).

Sheikh Ibrahim (site 176). Hw3 and Hw5 radiate respectively towards East and South-East but it is not clear if in the direction of a specific site. Tell Chirra, Gir Sobashi and Tell Sheikh Ibrahim are all multiperiod sites and for this reason it is difficult to try to date the TGAS hollow ways through associational dating.

On the other side, these hollow ways are not really connecting sites, instead the radial pattern seems to fade out on the satellite images and on the ground in the fields around Tell Gomel, up to a maximum distance of 2,3 km from Tell Gomel.

The hollow ways in LoNAP region, that follow the same radial pattern, radiate out from high mounded and multiperiod sites with an occupation since the Late Chalcolithic period. The pattern seems to suggest that the network was on some degree already established during the 4th millennium BC as also attested in the Jazirah (Ur *et al.* 2007; Wilkinson *et al.* 2010).

The radial pattern is very common in all Upper Mesopotamia (Ur 2010: 133), it derives from the movement, back and forth, of humans and animals from the site to the fields and pasture lands surrounding it (Wilkinson 1993, 2003; Ur 2003, 2009 and 2010). This pattern, in association with the presence of the "broad" hollow ways, is proved to be strongly connected with nucleated settlements, dry farming agriculture and stable land use and pastoral strategies (Casana 2013).

In the case of Tell Gomel, the intensification of the agriculture around the site and the maximum growth of the settlement dimensions are documented between the Mid-Late 3rd millennium BC and the first half of the 2nd millennium BC (see Chapter 5.1 for the field scatters and Chapter 6.8 and 6.9 for the development of the site in Periods 7 and 8). For these reasons, it is plausible that the formation of the hollow ways took place in this timespan of several centuries.

Another evidence that can support this dating is related to the association of the hollow ways with the potential city gates of the site (fig. 5.2.8). These characteristics depressions on the eastern limits of the lower town of Tell Gomel are tentatively interpreted as massive gateways and the intensive survey results indicates a possible dating of the structures to the Mid-Late 3rd millennium BC and the first half of the 2nd millennium BC. Especially Hw2 seems to be connected with a possible northestern gate, while the others do not have such evident relation.

To conclude, the hollow ways radiating from Tell Gomel confirm how in the Navkur Plain i is perfectly replicated (even if in a smaller scale) the subsistence model identified in the North Syrian and Iraqi Jazirah of a nucleate settlement (Tell Gomel) sustained by an agro-pastoral economy.

Fig. 5.2.1 – Hollow ways and measured profiles in TGAS area.

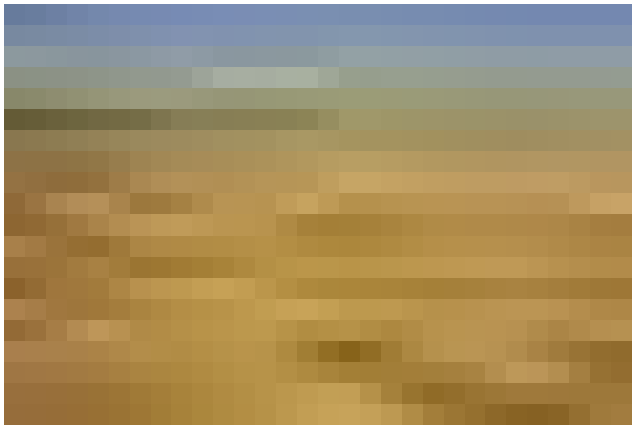


Fig. 5.2.2 – Tell Gomel from HW 1.

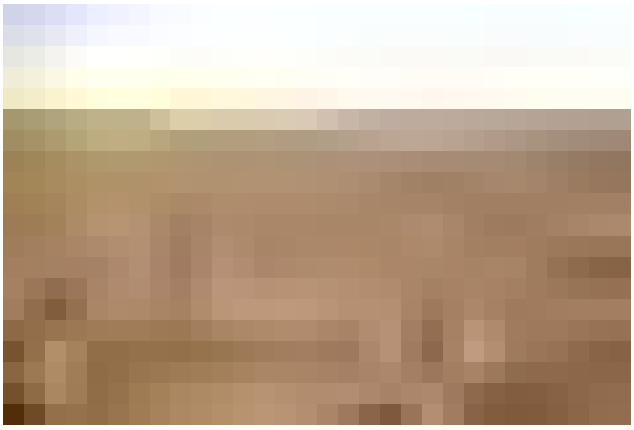


Fig. 5.2.3 – Facing East from HW 2.

Fig. 5.2.4 –Facing East from HW 3.

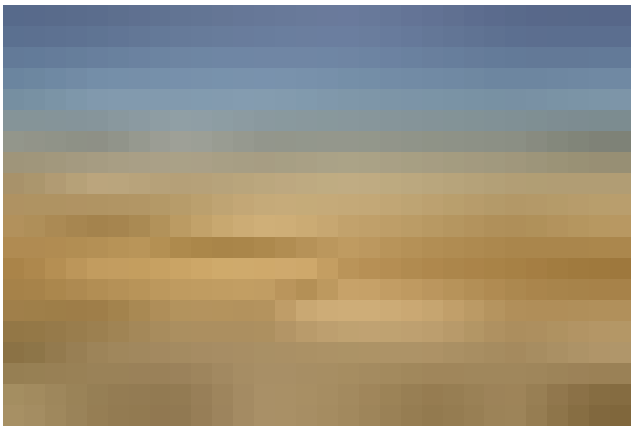


Fig. 5.2.5 – Facing Tell Gomel from HW 5.

Fig. 5.2.6 – Facing Tell Gomel from HW 4.

Fig. 5.2.7– Facing Tell Sheikh Ibrahim from HW4.

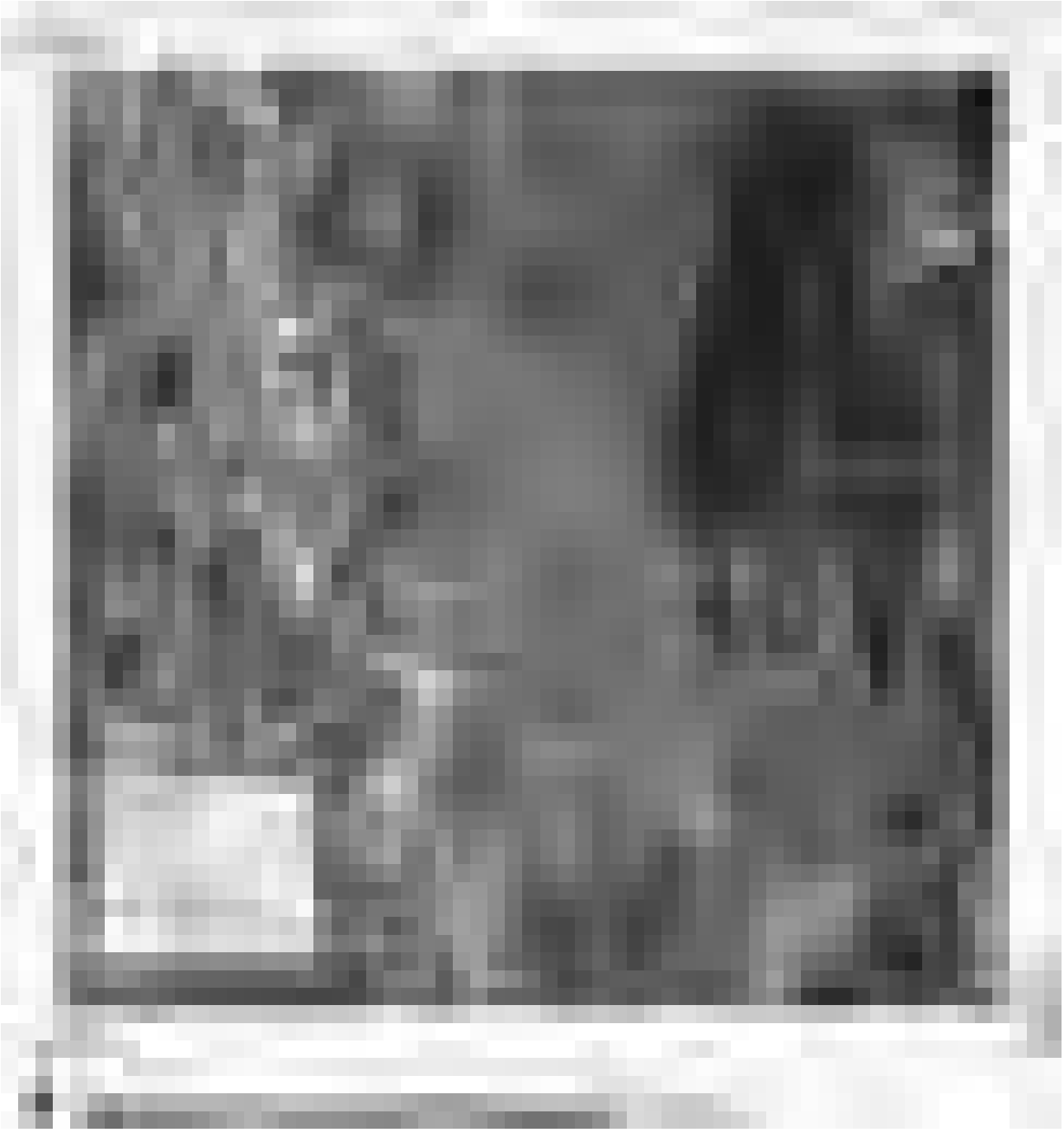


Fig. 5.2.8 – Hollow ways radiating from Tell Gomel and their relation with the estimated site limits and possible ancient city gates (in blue).

Fig. 5.2.9 – HW1 profile. Y axis: elevation (m). X axis: distance (m). (Drawing and computer graphics A. Savioli).

Fig. 5.2.10 – HW4 profile. Y axis: elevation (m). X axis: distance (m). (Drawing and computer graphics A. Savioli).

Fig. 5.2.11 – HW5 profile. Y axis: elevation (m). X axis: distance (m). (Drawing and computer graphics A. Savioli).

5.3 Other Off-Site Features

Canals

Waterworks, canals, and irrigation features in Northern Mesopotamia are much less known than in the Southern alluvium. The sole exception is the monumental canal systems designed and realized by the Assyrian Empire, focus of several recent archaeological studies (Ur 2005 and 2017; Altaweel 2008; Ur and Reade 2015; Morandi Bonacossi 2016, 2018a and 2018b).

The Navkur Plain was only partially affected by such engineering work and there is no evidence of irrigation canals dated to the Neo-Assyrian period in the TGAS area (see Chapter 6.12).

However, a dense and complex irrigation system was identified thanks to the thorough analysis of the U2 aerial images that covered the Navkur Plain (mission 1554, 29 Jan 1960). These images, which predate the majority of the shots of the CORONA program, prove to be excellent[8] for the detection of the multi-layered irrigation network that crosses the plain. Their analysis thus enabled me to recognize a very complex system of primary and secondary canals associated to both ancient sites and modern villages. The most impressive system is recognizable along the Nardush River, where dozens of well-preserved canals seem to cross or overlap with traces of earlier ones (Figs. 5.3.1-3).

Dating these features is very difficult. On the basis of our (quite inadequate) current knowledge about artificial irrigation in North Mesopotamia (that is also basically limited to the Khabur Basin area, see Ur 2010: 88, to the Assyrian capitals hinterland, see Altaweel 2008 and Mühl 2013, and only more recently to Iraqi Kurdistan as well, see below), we can argue that these canals should not predate the Late Bronze/Iron Age. In fact, even if it is ascertained that irrigation technology in Southern Mesopotamia is very old (for a review see Wilkinson 2003), with evidence of the development of artificial waterworks in the sixth millennium at Choga Mami (in the Diyala region, Oates and Oates 1976), we are lacking any similar evidence for Upper Mesopotamia.

Upper Mesopotamia is indeed characterized by a rain fed agriculture and the development of irrigation systems was not essential for crop production. Therefore, it seems, from the archaeological evidence collected so far, that until the creation of the Middle-Assyrian canal systems sustaining the new capital of Kar-Tukulti-Ninurta (Altaweel 2008: 75-76; Mühl 2015: 55), no other systematic irrigation network was in use.[9]

[8] On the contrary they are considerably less useful for detecting hollow ways, see Chapter 5.2.

[9] Regarding the controversial Middle Assyrian origins of the Khabur irrigation system see Morandi Bonacossi 1996: 95-100, Kühne 2012 and 2018: 150. On early to late 2nd millennium BC textual sources concerning canals in Upper Mesopotamia see Kühne 2018: 140, Masetti-Rouault 2018: 25-29, MacGinnis 2018: 41. Another controversial hypothesis

Regarding the dating of the canal system in the Navkur Plain, on one hand, many of the canals visible in the U2 images seem to be quite well-preserved and, in some cases, still in use (figg. 5.3.1-3 A), often carrying water to private gardens or rice fields (Figs. 5.3.1-3 D) associated with villages settled in the 1960s. This evidence is only recorded by the remote-sensing analysis, since nowadays the urban growth of the many villages completely erased these features. From these data we can only observe that irrigation must have played an important role at least in the past century.

However, on the other hand, from the aerial images is also possible to recognize parts of and supposedly earlier canal system (Figs. 5.3.1-4 B), which in turn is much more poorly preserved and therefore more difficult to reconstruct. Trying to date the canals on the base of the settlements associated with them is not possible for two main reasons: first, many settlements have a multi-period occupation; second, the canals traces are fragmentary, and their full extent is rarely clear. Another point to keep in mind is also that the canals were probably used for a long period of time and even partially integrated in later canal networks.

Collected data, however, show that many of the associated sites has yielded, primarily, evidence of Sasanian and Islamic occupation. From these cautious premises, it is tentatively possible to attribute part of these complex waterwork system to the Sasanian-Early Islamic period. This hypothesis derives mainly by the resemblance of some rectangular features present in the Navkur Plain (fig. 5.3.5) with the Sasanian fortified sites recently identified in the Mughan Steppe, in Northwestern Iran (Alizadeh and Ur 2007, Alizadeh 2014). These sites share the following features (Alizadeh and Ur 2007: 152-153): 1) they appear on the satellite/aerial images as a rectangular protruding feature with a concavity at the centre; 2) their dimensions ranges from 30x30 to 60x60 m; 3) they are always associated with a settlement site characterized by a mottled appearance; 4) they are located in close association with canals.

In the Mughan Steppe, these sites are interpreted as possible modest estate, comprising a small fortified building, lands and irrigation infrastructures, belonging to landed minor nobles and valuable for the exploitation of marginal agricultural lands (Alizadeh and Ur 2007: 154).

Other marginal areas, like for instance the Deh Luran plains in southwestern Iran, experienced an intensive agricultural exploitation (through a massive construction of canals) between the Sasanian and the Early Islamic period (Wilkinson 2003: 93-97)[10].

concerning the dating and interpretation of canal system recognized in the Middle Euphrates region is well reviewed in Bagg 2012: 270-272.

[10] Even if I was not able to find any reference to square enclosure structures, I detected several of them on CORONA satellite images of the plain.

In the eastern Middle-Tigris region similar structures, defined as "Quadratisch befestigte Anlagen", were identified on the satellite images by Simone Mühl (2013: 43-46). At least 14 rectangular structures were identified in the Makhmur and Al-Ta'min Plains, but their dating is still controversial. Some[11] of these structures are similar for shape, dimensions and other very peculiar characteristics (like closeness to mottled appearance sites or to waterwork network as canals or qanats) to the structures identified in the Navkur Plain. These structures are tentatively ascribed by Mühl to the Early Islamic period (Mühl 2013: 46), but unfortunately a ground visit is needed to confirm this hypothesis.

Other similar structures are easily identifiable in the CORONA images of Erbil and Selevani Plains. They were also found in Upper Mesopotamia as in the THS region, where they are connected with a Sasanian/Early Islamic settlement and canals (THS18, Ur 2010: 180, fig. A.8). The NJP also recorded 22 of such peculiar structures[12] and collected artefacts from the surface of five of them (Wilkinson and Tucker 1995: 188, fig. 46). Throughout the surface materials from these five sites it is possible to date them to the Sasanian/Early Islamic period (Wilkinson and Tucker 1995: 70).

In the Navkur Plain, these rectangular features are not preserved nowadays, and they are only identifiable through the remote-sensing analysis. Furthermore, unfortunately, not a single sherd was ever found on their surfaces, but the settlements associated with them have generally proven to be occupied in the Sasanian or in the Islamic periods.

The Sasanian and the Early Islamic periods in the LoNAP region are characterized by a dense and stable occupation featuring several small settlements scattered in the landscape and the appearance of the drop-tower gristmills, another water technology that represents a prominent characteristic of the LoNAP archaeological landscape[13].

Due to the central relevance of agriculture in the Sasanian economy, the empire carried out several reforms between the late 5th and the early 6th centuries in order to increase the development of a wide hydraulic transformation of the landscape with the aim of extending its control on the fertile plains of Mesopotamia, Khuzestan and Mughan (Adams 2006; Wilkinson and Rayne 2010; Alizadeh and Ur 2007; Wilkinson *et al.* 2012).

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[11] Other structures, much larger in size and different in shapes are possibly Neo-Assyrian fortresses or military structures, like for instance Tell Ibrahim Bays (Mühl 2013: 43-44).

[12] In the NJP, small square enclosures are interpreted as fortlets, but they are dated to the Sasanian/Early Islamic periods and not to the Roman epoch (as hypothesized in the past, see Poidebard 1934, Kennedy and Riley 1990) since not a single sherd of Parthian/Roman pottery was recognized in the few collected cases (Wilkinson and Tucker 1995: 70). For a review of the evidence see Palermo 2019:145-147.

[13] Also in the Deh Luran plains, the drop-tower gristmills represented a key archaeological feature of the landscape (Wilkinson 2003: 94).

Recently other projects in Iraqi Kurdistan, namely the Sharizor Survey Project (SSP) and EPAS, recorded the presence of multiple canal features in the Sharizor and Erbil Plains, also in these cases, sometimes very difficult to date (Mühl 2018; Ur *et al.* 2013; Ur 2018).

On the base of the comparison with canals from the Eastern Tigris region and on the base of the results of the paleoenvironmental and geoarchaeological investigations that indicate an increased aridity starting at some point after the Achemenid Period[14], the waterwork network identified in the Eastern Part of the Sharizor region is tentatively ascribed to the Sasanian and Islamic Periods (Mühl 2018: 130-131).

In the Erbil Plain, at least three large canal systems can be tentatively dated to the Neo-Assyrian Period (Ur 2018: 66-72), but besides the quite large and massive Assyrian canal systems, a very complex system of *karez* and connected relict surface canals is still under investigation (Ur *et al.* 2013: 107-109). The *karez* seems to be completely absent in the Navkur Plain, but it is clear that this technology was used to irrigate the Erbil Plain at least from the Medieval Period onwards (Ur *et al.* 2013: 107).

On this base, it is possible to propose that the Navkur (but possibly also the Erbil and the Sharizor Plains) was subjected to the Sasanian policy of expansion of the irrigation infrastructures and of exploitation of marginal lands.

However, further investigations, extending also outside TGAS area in the entire Navkur, will be necessary to reconstruct and understand the complex system of canal features showed by the newly acquired U2 images.

[14] New data from phytolith analyses (from Sharizor Plain) suggest the occurrence of an aridification process starting at "some point" after the Achemenid period (Marsh *et al.* 2018), furthermore the Gejkar Cave speleothem analyses also show a long- term aridification trend starting around or before 950 BC (Flohr *et al.* 2017).

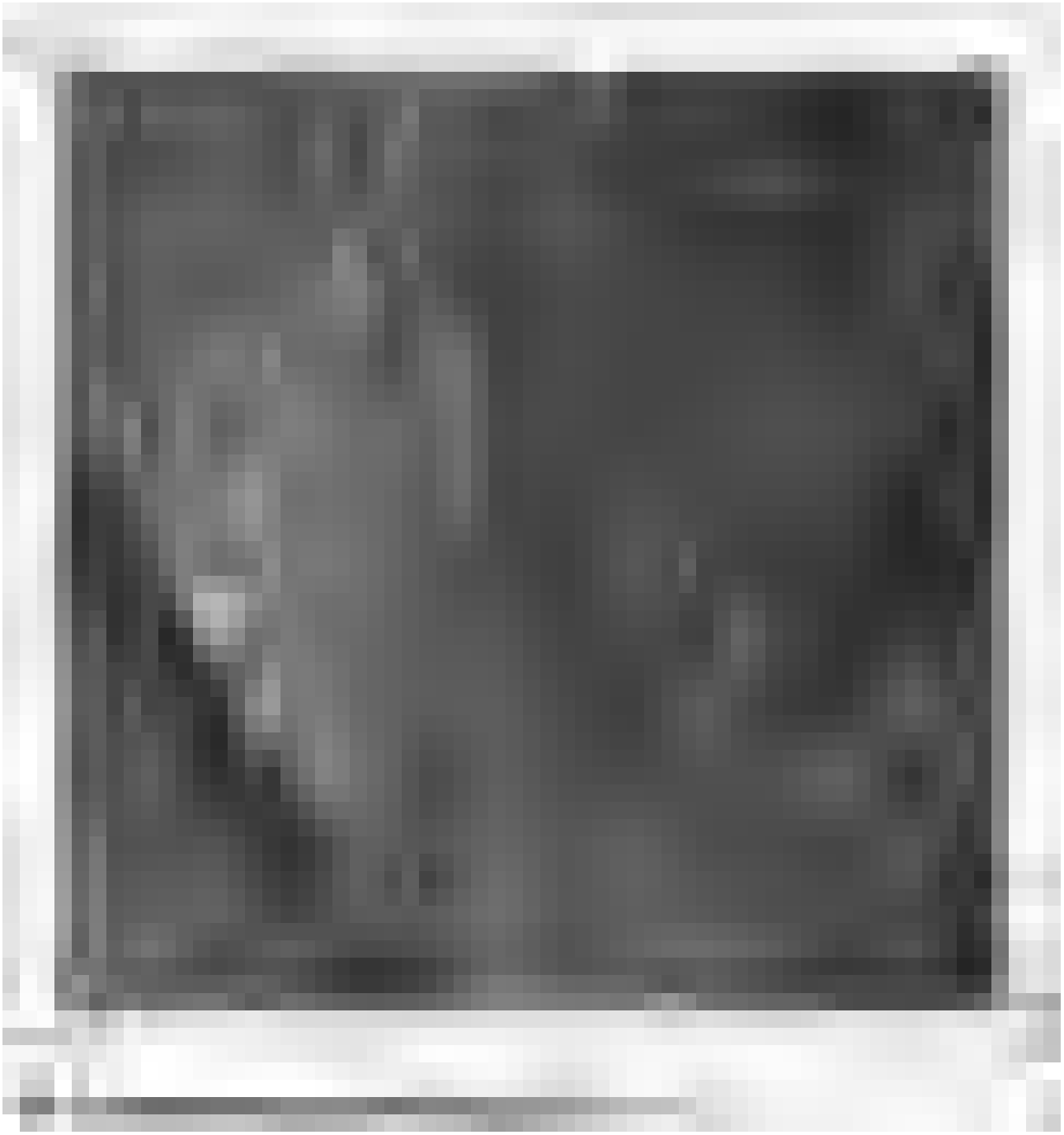

Fig. 5.3.1 – Canals and traces of irrigations in Chirra's area: A, subrecent canals; B, older canals; C.a, subrecent traces of irrigation; C.b, older traces of irrigation; D, rice cultivation (?). (U2 Mission 1554 - 29 Jan 1960, courtesy J. Ur)

Fig. 5.3.2 – Canals and traces of irrigations in Gir Sobashi's area: A, subrecent canal; B, older canal; C traces of irrigation; D, rice cultivation (?). (U2 Mission 1554 - 29 Jan 1960, courtesy J. Ur)

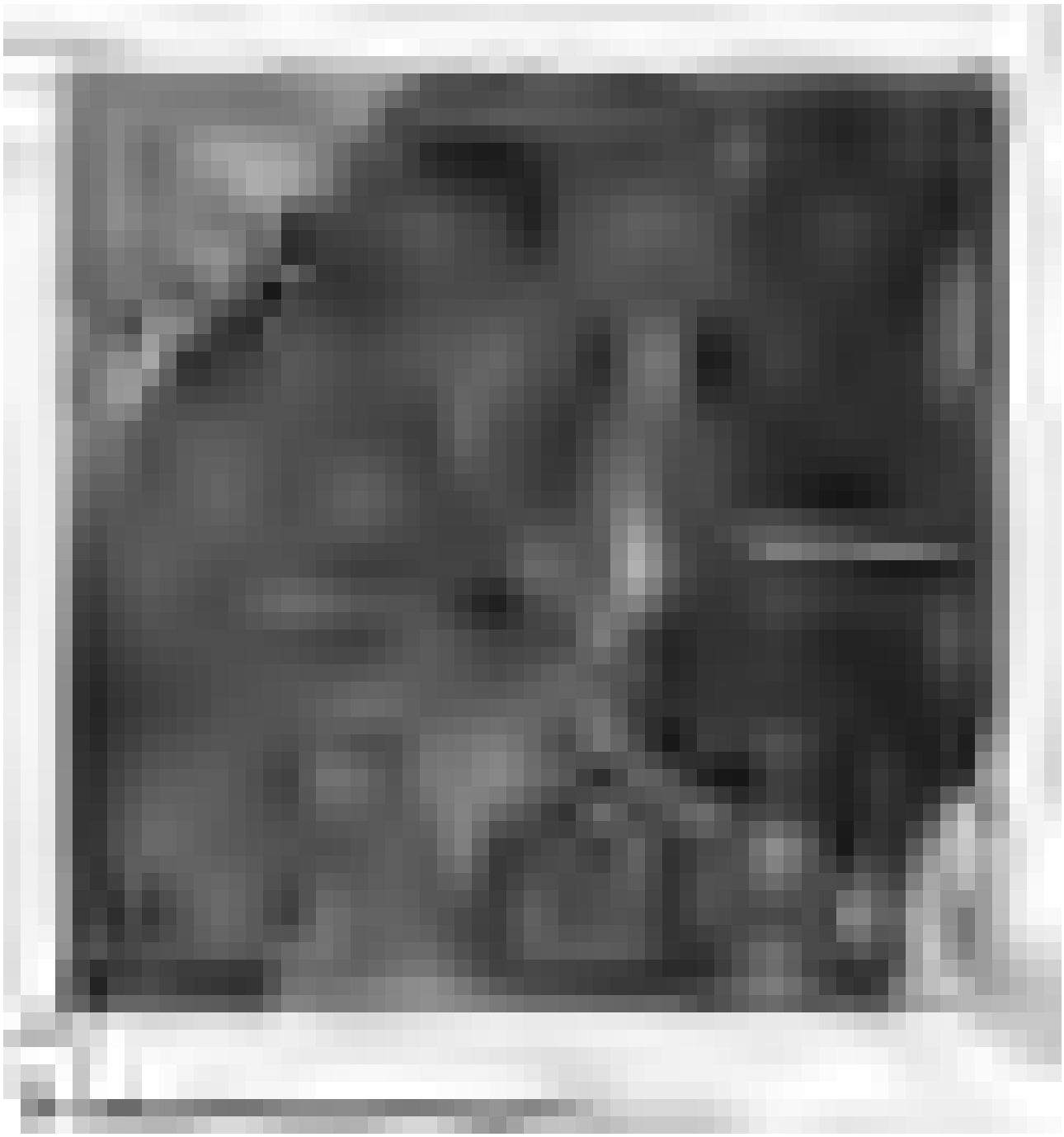

Fig. 5.3.3 – Canals and traces of irrigations in Kalakchi's area: A, subrecent canals; B, older canals; C traces of irrigation; D, rice cultivation (?)

(U2 Mission 1554 - 29 Jan 1960, courtesy J. Ur).

Fig. 5.3.4 – Canals and traces of irrigations in Gomel's area: A, subrecent canals; B, older canals; C.a, subrecent traces of irrigation; C.b, older traces of irrigation.). (U2 Mission 1554 - 29 Jan 1960, courtesy J. Ur)

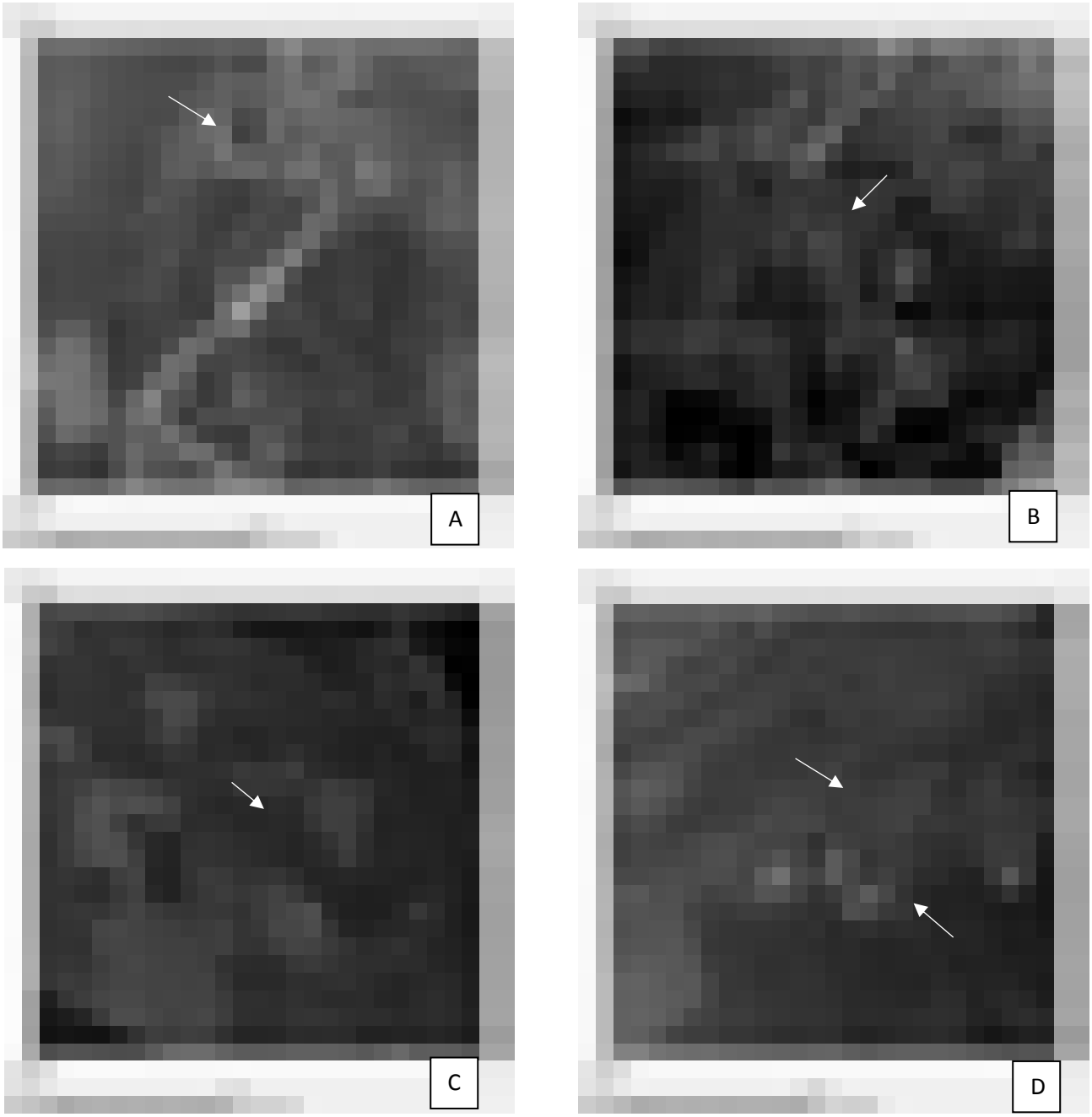

Fig. 5.3.5 – Rectangular evidence associated with mottled settlements and irrigation features in the Navkur Plain. (U2 Mission 1554 - 29 Jan 1960, courtesy J. Ur)

Other archaeological features

Unfortunately, no other off-site features were detected in TGAS area. No wells or waterholes were identified during the survey, as well as any agricultural installations or funerary cairns fields.

The Navkur Plain, as already widely stressed, is a landscape of destruction, where the intensive agricultural activities allowed the preservation of only a small part of the complex palimpsest of landscape features associated with TGAS archaeological sites.

6.

THE DEVELOPMENT OF SETTLEMENT PATTERN

The Pre- and Proto-historic periods

Chronology and comparisons

Before dealing with the Pre and Proto- historic periods, it is crucial to address some of the issues connected with the evidence available for a large time-span embracing from the 7th to the 4th millennia BC.

For the chronology, we used the one proposed in Bernbeck and Nieuwenhuyse 2013 (fig. 1.3) for the Late Neolithic period and the one proposed in Stein 2012 (129, table 1) for the Chalcolithic period.

To date, especially for these periods, one of the biggest problems related to the periodization used by the ALRG concerns the fact that it is necessarily coarse. This is due to the survey evidence type and the, yet, limited information we have about this previously almost unexplored region. Evidently, the use of these too coarse chronological periods has as an outcome the inability to properly engage with the problems of contemporaneity (Iamoni 2016: 60) and continuity of the settlement, and this is especially true for the Late Neolithic and the beginning of the Chalcolithic period when the sites were possibly occupied only for few generations or even only seasonally.

The site visibility is another important issue that has to be taken in consideration[1], pre-historic and proto-historic sites are much more easily buried under the alluvial deposits or obscured by overimposed layers of later occupation phases. The results present below represent very likely only a partial reconstruction of the true settlement distribution in the Navkur Plain. The alluvial deposits probably covered a certain quantity of the small prehistoric settlements and a good example it will be presented below. Many of the sites we were able to detect were located through the field walking activities that were carried out on an area of 25 km^2 ($^1/_4$ of the total TGAS area). Tell Gomel itself does not present any sherds belonging to phases preceding the Late Chalcolithic period, however, it

[1] For a more detailed overview regarding site visibility, see Chapter 2.3.

might be possible that a small prehistoric settlement lies, buried under 40 m of later occupation deposit.

Unfortunately, the data produced by the over 14 survey projects carried out in the pasts 5-6 years in the whole Kurdistan region were not available for the purpose of this dissertation. Only few reports were published, and they present only preliminary results and many of them do not even deal with the pre and proto-historic periods[2]. For this reason, the settlement dynamics for these periods in the region are still widely unknown.

6.1 Pre-Pottery Neolithic

One Pre-Pottery Neolithic site only was discovered in the Navkur Plain by the TGAS team. The site was located thanks to a local farmer who, after an interview, told us that just few days before, in a near orchard, the farmers found abundant archaeological findings. **Site 951** is located in the alluvial plain of the River Gomel at ca. 2,5 km south of the site of Tell Gomel and only 1 km west from the River Gomel (fig. 6.1.1). The site was brought to light, by chance, as a result of a large and deep basin excavation to collect water for the orchard. It was buried under circa 1,5-2 m of alluvial deposit and, unfortunately, it was almost completely destroyed by the excavation activities. Once we arrived, we were only able to collect materials from the basin sides and bottom. It was not possible to understand the limits of the site, but it was possible to observe the presence of animal bones, plaster remains and several stones of different dimensions. Also, a large collection of obsidian and flint tools were collected, not a single pottery sherd was found. A preliminary study on these materials, carried out by Prof. C. Conati and D. Moscone, suggests that site **951** might be tentatively ascribed to a later phase of PPN. Four obsidian artefacts were selected for characterization analysis[3]. They all come from Nemrut Dağı sources, located in Eastern Turkey, close to Lake Van. Approximately 200 km South-East of the site, in Jarmo, Nemrut sources are the most represented (Matthews 2000: 45; see also Renfrew *et al.* 1966).

Pre-Pottery Neolithic sites are usually characterized by small tools and debitage and are therefore more arduous to identify. The almost completely absence of this period sites in the TGAS survey might be related to the geomorphology of the Navkur Plain rather than to our limited ability to detect

[2] Only exceptions for the Neolithic are the EHAS (Pfälzner and Sconzo 2015; 2016), the SSP (Mühl and Niewenhuyse 2016; Niewenhuyse *et al.* 2016) and, of course the LoNAP (Morandi Bonacossi and Iamoni 2015; Gavagnin *et al.* 2016.
[3] Non-destructive wavelength dispersive X-Ray Fluorescence (WD-XRF) technique in combination with SEM-EDS analysis have been applied. The analysis were carried out at the Politecnico "Aldo Moro" of Bari (IT) by Prof. P. Acquafredda, Dr. M. Pallara and Dr. I.M. Muntoni (MIBACT).

prehistoric sites. Site **951** indeed attests how a complete site can fully disappear under 2 m of later alluvial deposits.

Another interesting characteristic of site **95**1 is its central position in an alluvial plain. Many scholars argue that fertile plains were devoid of sedentary settlements which were instead located in the hilly or rolling landscape, likely at the intersection of the high piedmonts and the lowlands. The interpretation of this occurrence relates to the idea that these early sedentary settlements developed in this strategic position in order to easily exploit a wider range of natural environments and resources (Nissen 1988: 19; Rosenberg *et al.* 1998; Peasnall 2004; Algaze *et al.* 2012: 12). Further evidence to sustain this theory comes from the location in the east and west of Iraqi Tigris basin of sites like Qermez Dere (Watkins *et al.* 1989), Maghzaliya (Bader 1989), Nemrik (Kozlowski 2002), Mel'faat (Dittemore 1983), Zawi Chemi Shanidar (Solecki 1981), Karim Shahir (Howe 1983), as well as by in the Turkish Upper Tigris basin as at Çayönü, Hallam Çemi, Demirköy and others (Rosenberg and Erim-Özdoğan 2011). No Pre-Pottery Neolithic sites were found by the NJP (Wilkinson and Tucker 1995: 37) or the TERP survey (Algaze *et al.* 2012: 12) but also by EHAS project (Pfälzner and Sconzo 2015; 2016), UGZAR (Kolinski 2018) and EHAS (Ur *et al.* 2013). Neverthless, in the same LoNAP survey, site 951 represents the only PPN site identified in an alluvial plain.

However, such accidental discovery of a buried PPN site in a plain sheds new light on a possible revision of the old settlement pattern model for the Early Neolithic. It can be assumed that the absence of known PPN sites on the alluvial plains of Upper Mesopotamia is due to the taphonomic processes that affected the prehistoric landscape and not to the subsistence strategy of the first sedentary communities.

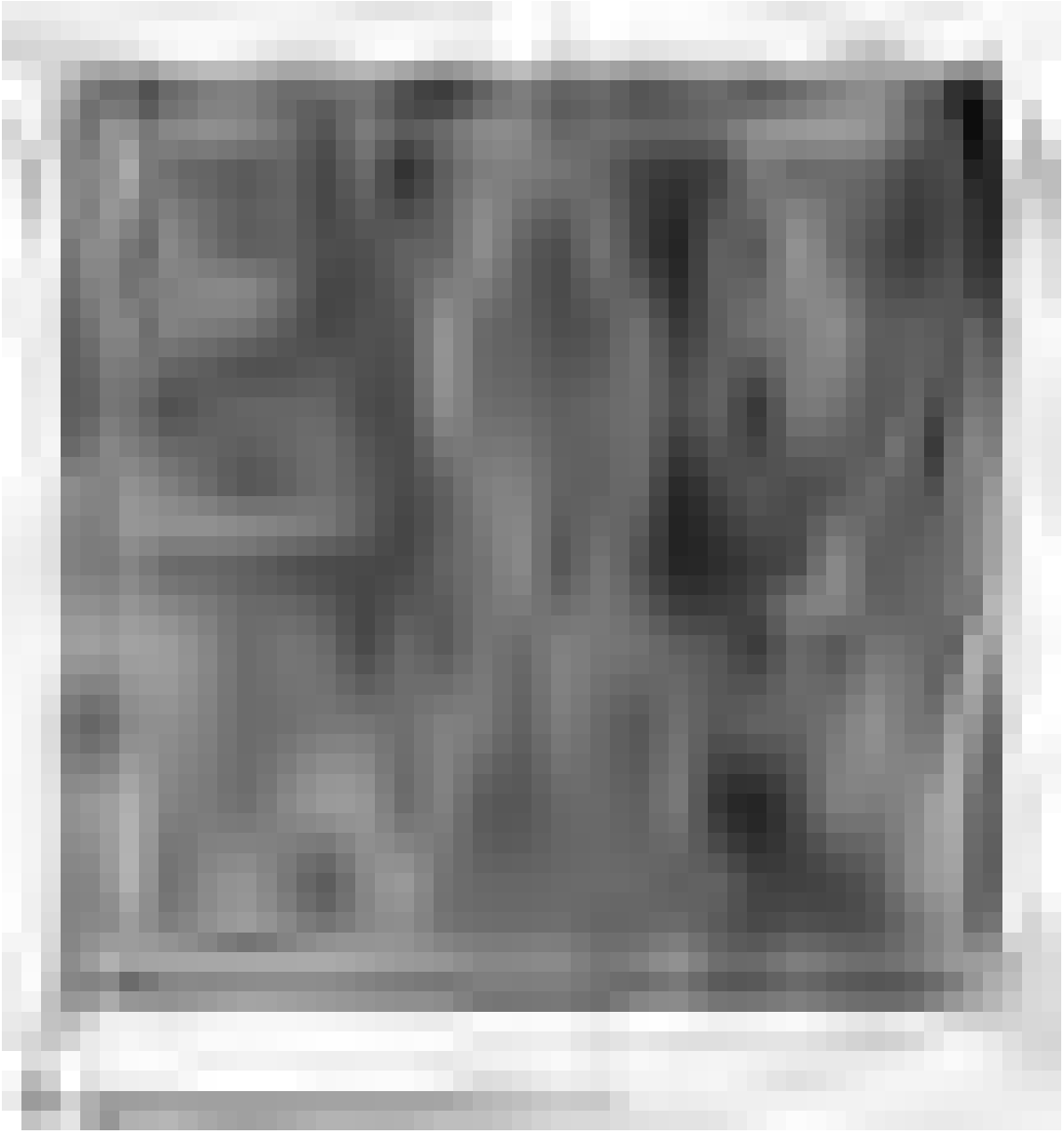

Fig. 6.1.1 – The location of site 951

6.2 Early Pottery Neolithic

On the basis of our limited knowledge of the features of the first part of the Late Neolithic (7000-5900 BC) in this region material culture, we decided to include in this Early Pottery Neolithic macro-period what is known as Pre- and Proto-Hassuna, "Umm Dabaghiya-Sotto phase[4]", and the Hassuna/Samarra period[5].

Pottery

For the Early Pottery Neolithic period, we were able to recognize 224 diagnostic sherds, the pottery finds parallels in the near excavated sites of Karabeh Shattani (McAdam 1995), Nineveh (Gut 1995) and Hassuna (Lloyd and Safar 1945), as well as in the survey of the Iraqi and Syrian Jazira (e.g. see Wilkinson and Tucker 1995; Nieuwenhuyse and Wilkinson 2008; Ur 2010), in the Upper Tigris region (Algaze *et al.* 2012), and in the new and very close EHAS project (Pfälzner and Sconzo 2016). Few sites seem to have very coarse, chaff tempered sherds with reduced core that can potentially be ascribed to the Proto-Hassuna period (6700-6300 BC), but due to their very small size it is really difficult to determine it.

On the contrary, the assemblage contains a full range of the most common Hassuna types. The most frequent type attested is the so called "Samarran Incised Ware" in the WCT and it corresponds to type T1/5 (fig. 6.2.1). The type name is misleading because it seems to relate to the Samarran culture, while the type, that originates from the NJP[6], include the more common Hassuna incised ware. In TGAS case, it was used to indicate the sherds with the classical Hassuna incised linear decoration. The most common decorative pattern is the one with closely spaced incised triangles (fig. 6.2.1, TGAS708.15.1.67) that is widely attested in the region (Shemshara, Mortensen 1970: p. 83, fig. 71.d and p. 85, fig. 75.a-d; Hassuna, Lloyd and Safar 1945: figs. 4 and 15;); Regarding T1/6 the "Samarran Stabbed Ware", not a single sherd of this tradition was recovered during the survey (Shemshara, Mortensen 1970: p. 97, fig. 85; Hassuna, Lloyd *et al.* 1945: fig. 18 nn. 14, 17 and 18).

The second most represented type is the "Painted Ware" (type T1/1, fig. 6.2.1). This type is also well attested everywhere in Upper Mesopotamia (Shemshara, Mortensen 1970: p. 78, fig. 65; Hassuna, Lloyd *et al.* 1945: figs. 2, 11 and 12). A further common type for this period is the so-called "Husking tray" (T1/2, fig. 6.2.1), a shallow ovoid shape characterised by a flat bottom with deep grooves or

[4] Umm Dabghiya: Kirkbride 1972; Sotto: Bader 1993.
[5] Regarding the absolute chronology we follow the Late Neolithic Chronology for Upper Mesopotamia proposed in Bernebeck and Nieuwenhuyse 2013: p. 27, table 1.1
[6] Type 125A, Hassuna Incised Ware, Wilkinson and Tucker 1995: 109.

finger impressions (Shemshara, Mortensen 1970: p. 111, fig. 99 and p. 112, fig. 101; Hassuna, Lloyd *et al.* 1945: fig. 3 nn. 8-10; Umm Dabaghiyah, Kirkbride 1973: Pl. X.c; Sabi Abyad, Niuewenhuyse 2007: Pls.15 and 16). Few sherds from the so called "Samarran Painted Ware" (type T1/7) were collected, they were included in this group on the base of the fine ware, dark-purple paint and characteristic motifs of the Samarran tradition (Shemshara, Mortesen 1970: pp. 86-88, figs: 76-78; Hassuna, Lloyd *et al.* 1945: fig. 1). The "Red Burnished Ware" (type T1/3) was not recognized in TGAS EPN assemblage (Hassuna, Lloyd *et al.* 1945: Pl. XIV n. 1).

Among the untyped sherds (T1/0), it is possible to find a large variety of common plain shapes, such as deep bowls with squared rim, plates with flaring rim, small-medium jars with flaring rim or slack profiled. These common plain shapes find comparison in many excavated Hassuna sites in Northern Iraq such us Hassuna (Lloyd and Safar 1945: fig. 6), Shemshara (Mortesen 1970: pp. 73-74, figg. 61-62, pp. 100-102, figs. 88-89). The sherds colour ranges from pale brown to pale yellow, the temper can be chaff or mineral with small to medium calcite inclusions, the surfaces are usually smoothed or burnished.

PERIOD 1 – Pottery Types	
T1/0	125
T1/1	30
T1/2	20
T1/4	1
T1/5	33
T1/7	9

Table 6.2.1 – Number of sherds for each type.

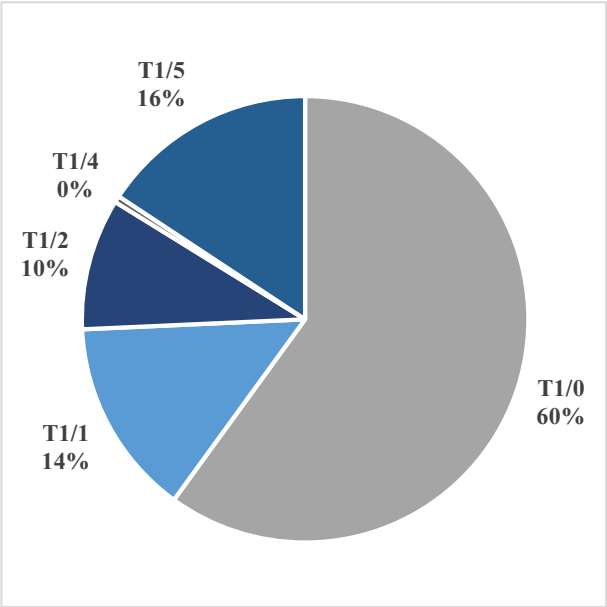

Chart 6.2.1 – Types attested for Period 1.

Fig. 6.2.1 - Early Pottery Neolithic Period Types.

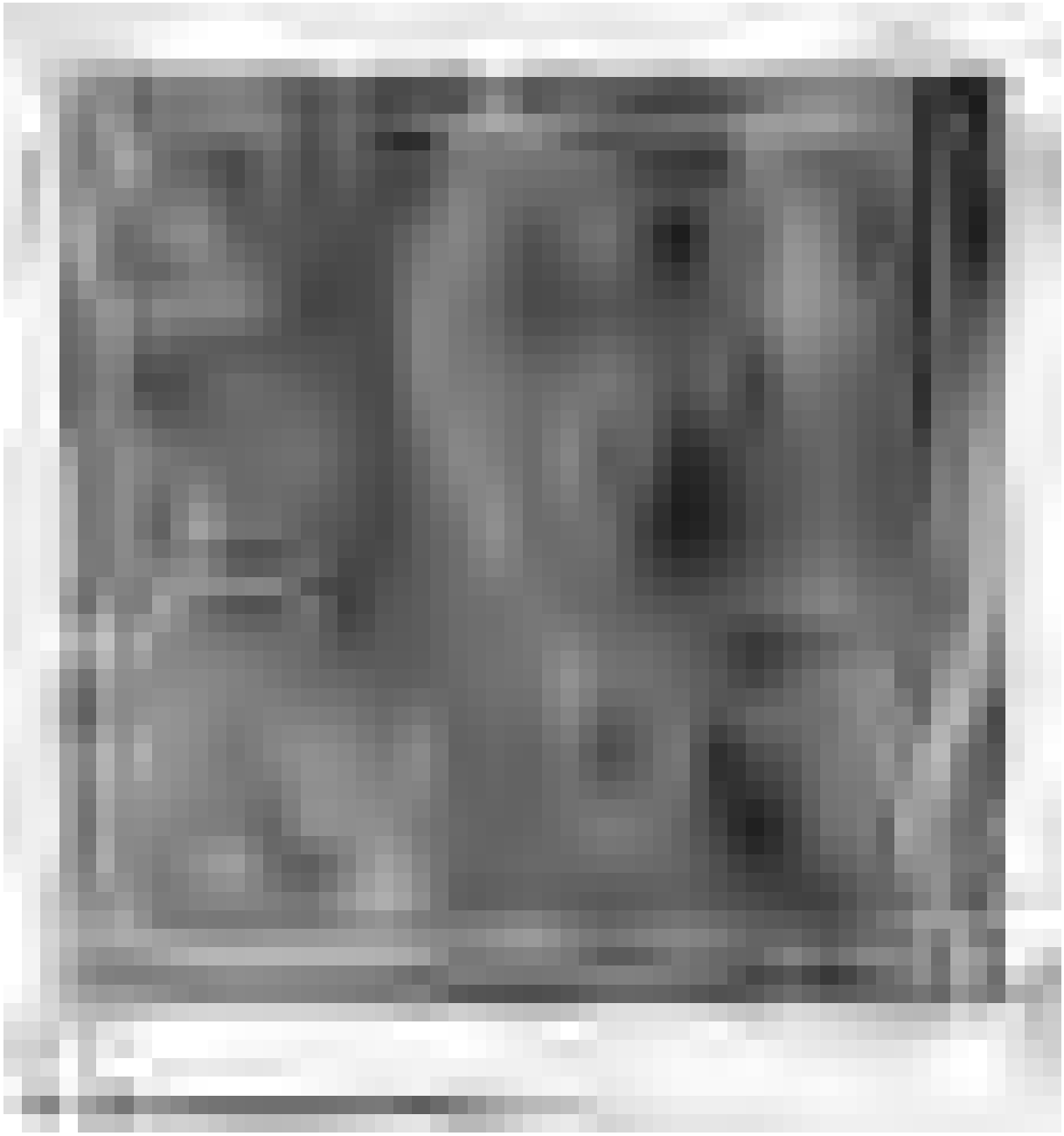

Fig. 6.2.2 - Early Pottery Neolithic Settlement Development in TGAS area.

Settlements and settlement pattern

For the Early Pottery Neolithic, TGAS survey was able to detect 17 sites (0,17 site/km^2) with an aggregate area of 25,8 ha. Regarding the continuity in the subsequent phase, 9 EPN sites are occupied also in the subsequent Halaf period.

Most of the sites of the Early Pottery Neolithic period are low mounded sites, followed by flat sites (Chart 6.2.2). There are some flat sites with only traces of occupation testifying the overburden of the EPN settlements even in not high mounded or multi-stratified sites. The sites are relatively small, with dimensions of 1,5 ha in average. The larger site (2,5 ha) is **105**, it is a high mound with an extended lower town occupied in several periods. They are usually close to the River Gomel or to ephemeral watercourses. Only sites **853** and **864** do not present any later occupation. **853** is particularly interesting, since it is a small mound around 2-3 m high, which must have had a long occupation in the EPN that permitted the formation of the mound.

An interesting cluster of settlements is represented by a complex of five high and low mounded sites located on a crevasse splay (a sedimentary deposit created by the break of the levees of a stream), 700 m ca. north of Tell Gomel (fig. 6.2.2). Sites **480**,**481**, **482**, **597** and **600** have strong evidence of occupations during the whole Pottery Neolithic and Chalcolithic periods with an abrupt abandonment of the area in the 3rd Millennium BC. The total aggregate area of this cluster of sites is of c. 15 ha during the Neolithic and Chalcolithic periods. Actually, the occupation of these sites, at least for the Neolithic, can be interpreted as evidence of the shifting of communities from an area to another maybe after few generations or even seasonally. The archaeological evidence suggests indeed that during the Neolithic, the villages had usually a very short life[7] at least until the Ubaid period when the communities develop a new and more stable way of settle (Ur 2017a: 18).

Comparing the results of TGAS survey with the results of other geographically close project we can notice significant differences. TERP recognized 8 sites only (Algaze *et al.* 2012: 13), and all the sites are associated with perennial streams. A similar pattern has been observed by the THS (Ur 2010: 93-94), with only 6 sites detected (0,05 site/Km^2). On the other side, in the NJP a larger number of sites was attested (40 settlement, 0,09 site/Km^2), the settlements present in this area are also attested in the plain far from any wadi, this expansion of the settlement is explained by the survey directors thanks the introduction of a new technology: the waterholes and/or wells (Wilkinson and Tucker 1995: 39). The NJP was also able to detect some of these waterholes, but unfortunately no evidence of this new technology was detected in the TGAS area. In agreement with TGAS results, the sites are generally

[7] Akkermans and Schwartz 2003: 126-131; Bernbeck and Niewenhuyse 2013.

small, not exceeding 2 ha (with some few exception). Looking at LoNAP results[8], in the large region of 3000 km^2, 59 sites can be attributed to the EPN (0,02 site/km^2). The sites are usually small, but they can reach the maximum extension of 4,1 ha, and they are distributed evenly in the plains and on a less extent on the foothills of the Zagros.

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
91	2			2			x		
105	24	2,5						x	
480	2			3			x		
481	10		5,7			x			
482	7		0,5				x		
586	2			1,6	x				
587	2			0,2	x				
600	3		1,3			x			
705	54	0,6				x			
708	68	1,3				x			
789	2			3		x			
801	5		0,8		x				
811	7		1			x			
853	11	0,3				x			
856	2			0,6	x				
864	23	0,4			x				
874	3		1		x				

Table 6.2.2 - Complete list of Early Pottery Neolithic sites.

Early Pottery Neolithic Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	5	5,1	1	3	-	1	-
Minor	6	10,3	2	3	2	-	-
Traces	6	10,4	3	1	1	-	-
Total	17	25,8	6	7	3	1	-

Table 6.2.3 – TGAS area occupation during the Early Pottery Neolithic.

[8] Considering LoNAP results as a whole for the region, so including also TGAS results.

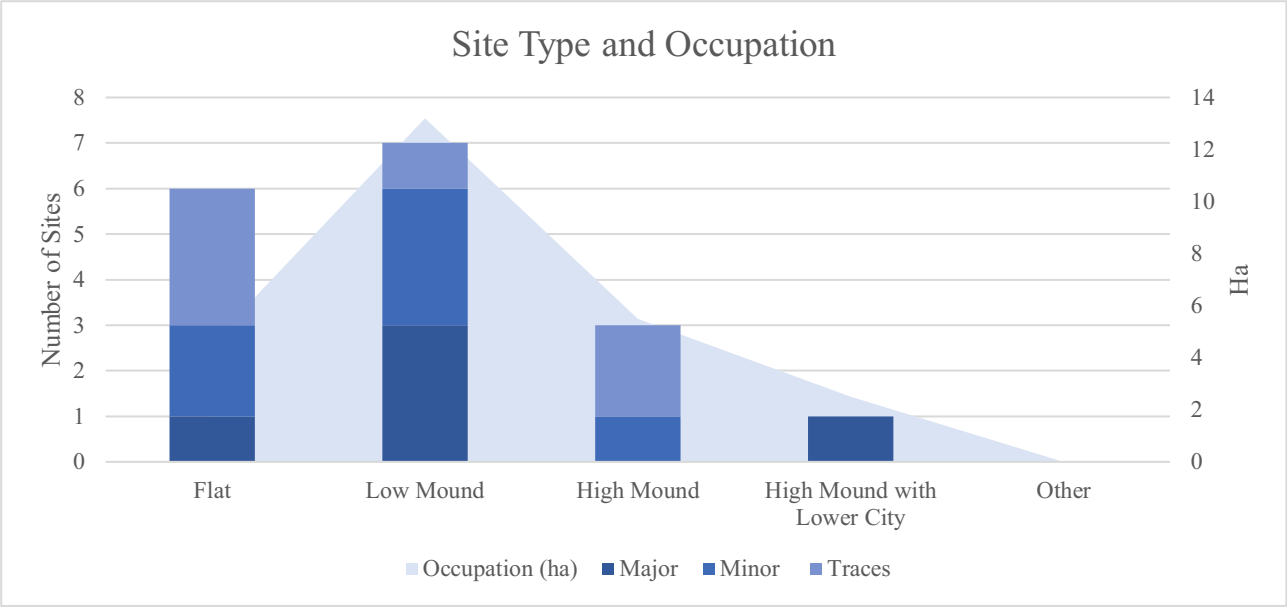

Chart 6.2.2 – Early Pottery Neolithic site types and occupation for each type (ha).

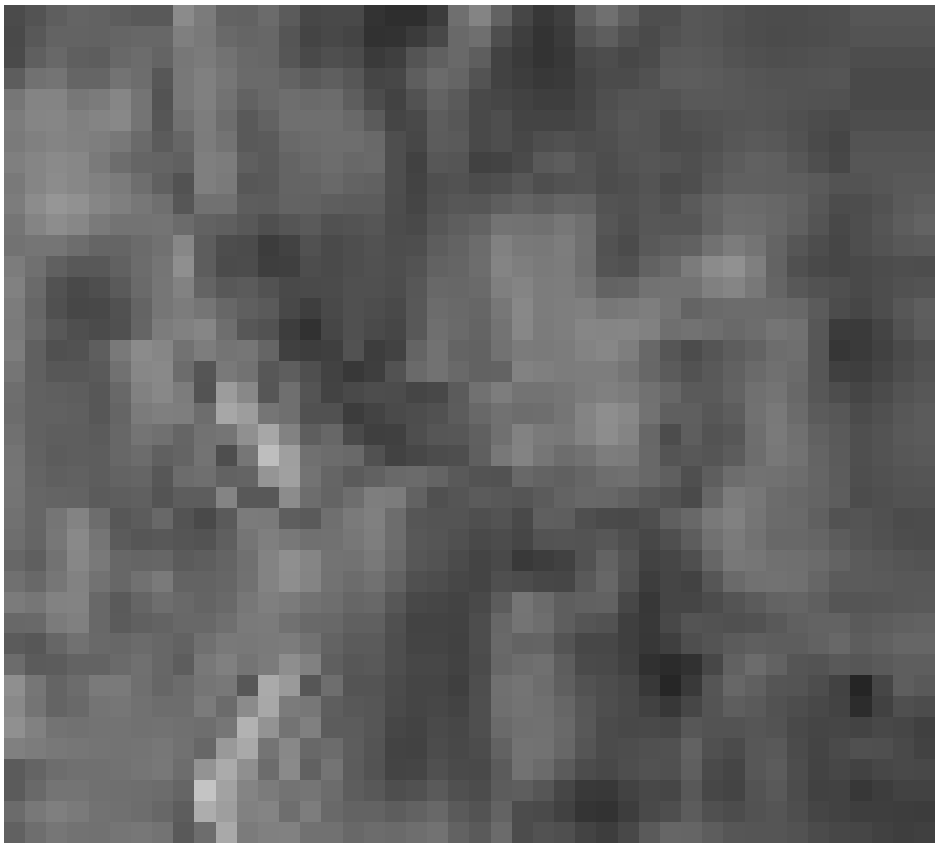

Fig. 6.2.2 – The crevasse splay north of Tell Gomel.

Interpretation

Before the start of new projects in Iraqi Kurdistan region, it was unclear if the Hassuna influence was able to penetrate beyond the limits of the Tigris immediate east bank (Matthews 2000: 81), however the results from the recent surveys in the Suleyvan, the Badre and Navkur Plain[9] are updating the Hassuna settlements distribution in Upper Mesopotamia. The new results show that Hassuna communities clearly chose, settled and exploited the fertile and plenty of water plains in the western Zagros Piedmont.

In particular, the results from TGAS offer a very interesting perspective on the EPN settlement pattern in a fertile alluvial plain. It was possible to identify such a high number of sites thanks only to the high intensity survey carried out by the project (see chapter 2.3). Many of the small flat EPN sites (almost 25%) were discovered as result of the transects field walking activities. Furthermore, a more careful and higher definition survey of the multiperiod sites helped us to identify EPN occupation buried under meters of later deposits.

[9] EHAS: Pfälzner and Sconzo 2016: 28. LoNAP: Morandi and Iamoni 2015: 20; Gavagnin *et al.* 2016: 122; Iamoni 2016:

6.3 Halaf

Pottery

We collected 87 sherds belonging to the Halaf period. The pottery types are the common Halaf types known from the near sites of Banahilk (Watson 1983), Karabeh Shattani (Watkins and Campbell 1986; Baird *et al.* 1995), Tepe Gawra (Tobler 1950), Nineveh (Gut 1995) and Arpachiyah (Campbell 2000). The sherds have pink to orange fine fabric, with occasional few and fine mineral inclusions, they are smoothed or lightly burnished and the painted decoration is usually red-brown or dark-brown. The shapes attested the most are simple bowls or bowls and small cups with flaring rims, many of the painted specimens are unfortunately body sherds. Painted pottery can be considered the distinctive marker of the period, 63 % of the pottery recovered can be ascribed to the "Halaf Painted Ware" (type T2/1). The painted motifs are usually geometric with bands, grids and dots. The remaining 37% is untyped (type T2/0), and also in this case they are common Halaf plain types. The so called "Finger-nail rusticated" (Type T2/2) was not attested in the TGAS region.

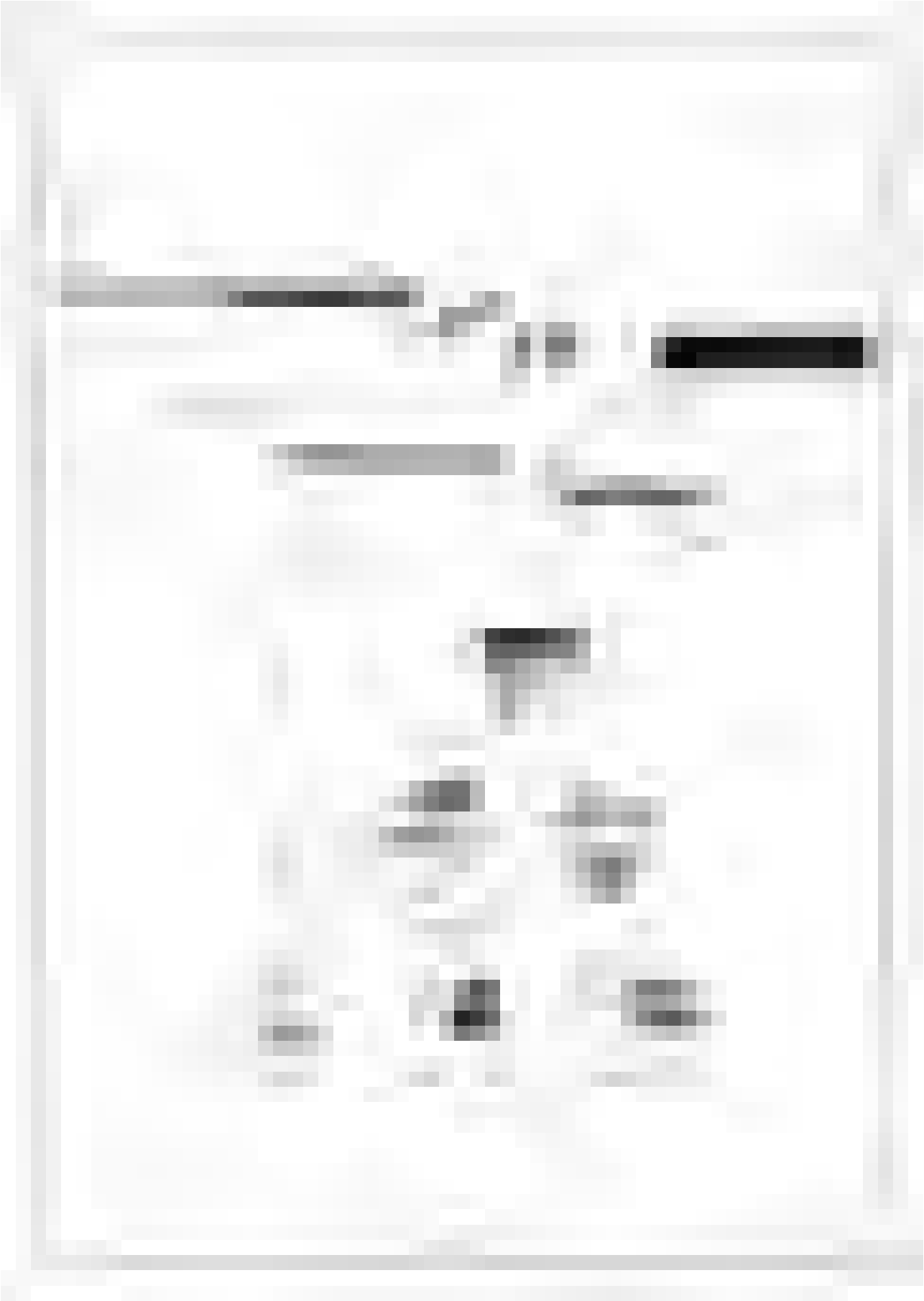

Fig. 6.3.2 - Halaf Period Pottery Types.

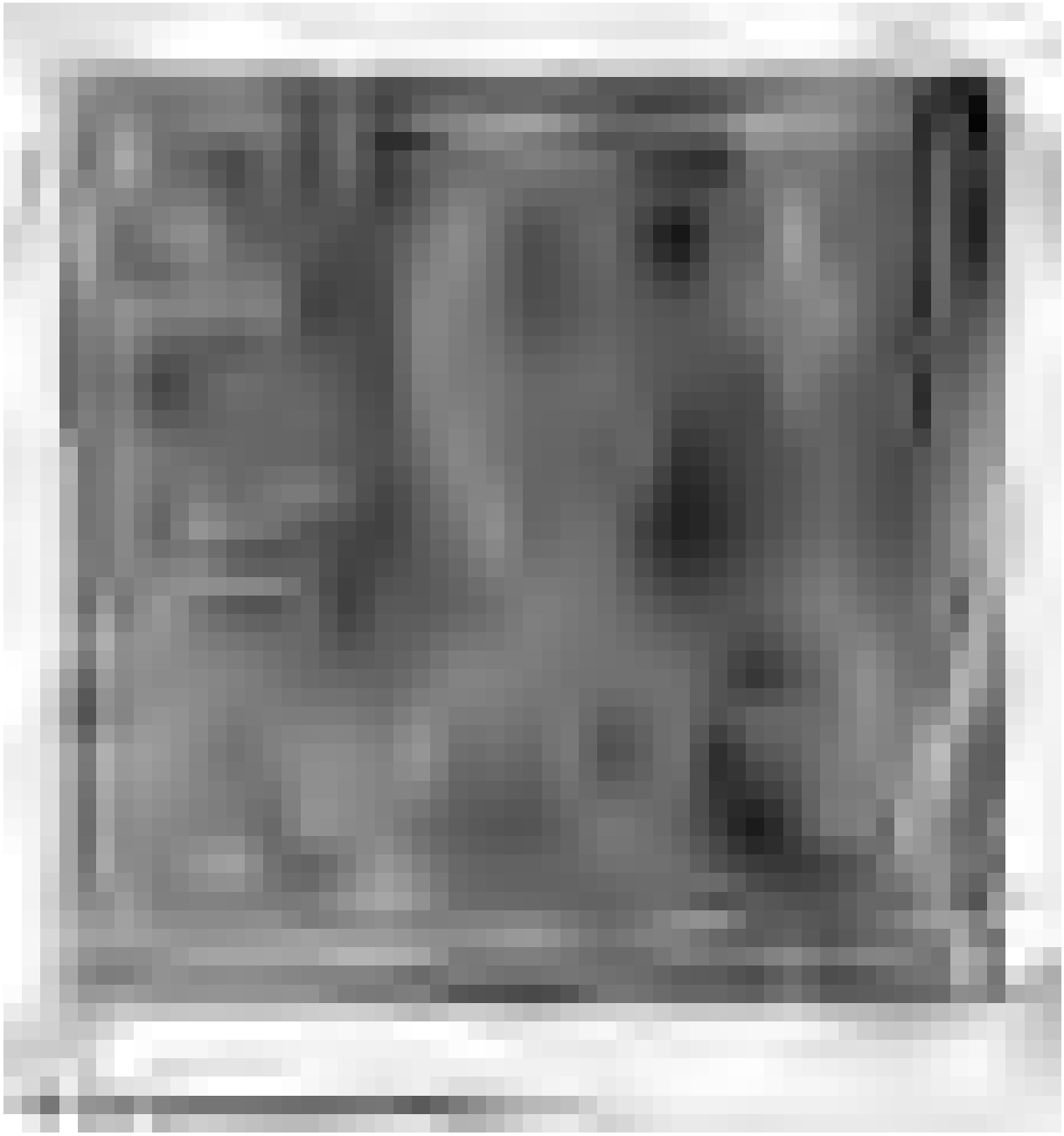

Fig. 6.3.1 - Halaf Settlement Development in TGAS area.

Settlements and settlement pattern

A total of 13 sites (0,13 site/km^2) of the Halaf period were recorded in the TGAS area. These are, for the major part, small low mounds not exceeding 3 ha. The total area settled in this period is 20,4 ha for an average site dimension of around 1,5 ha. Almost half of the sites present only 1-2 sherds testifying probably an occasional (seasonal) or short occupation of the site, two sites only present a major occupation. We can assess that, interestingly, there is a strong continuity in the settlement (71%), even if this cannot be considered as evidence of a true continuity in the settlement life (SPIEGA MEGLIO), it is indication of a deliberate choice of Halaf communities to settle in areas with at least traces of a previous settlement. Tell Gargushilan (site **91)** is a 2 ha mound with a strong Halaf occupation. It is located on the right bank of the Gomel and it is the site where we were able to collect the highest number of Halaf pottery sherds (39 fragments). Another interesting Halaf settlement is site **811** located SE of Gomel, a very small and low mounded site of 1 ha with a likely continuous occupation from the EPN to the Ubaid period but with evidence of a major occupation during the Halaf. It does not present any later occupation phases and it is the perfect candidate for soundings.

In the TERP area only 9 sites (0,02 site/km^2) were recorded for this period (Algaze *et al.* 2012: 14), in contrast to the previous one. During the Halaf period, the settlements spread also beyond the wadis (probably thanks to the exploitation of the water table through water holes or wells). In this specific region, it is also very clear the existence of a settlement continuity between the previous phase and the Halaf period (63%). In the Cizre-Silopi plain, one of the largest Halaf settlement was discovered, Tell Takyan of 10 ha, surrounded by smaller Halaf sites (under 1 ha). The latter are interpreted "as small encampments or villages (or both) subsidiary to the larger central settlement at Takyan" (Algaze *et al.* 2012: 16). The other big Halaf sites known in Upper Mesopotamia are Nisibin, Domuz Tepe, Tell Mounbatah and Tell Sawwan in the Balikh (Akkermans and Schwartz 2003: 118). These settlements are sometimes defined as "mega sites" and their nature is still debated. Some considerations about this particular pattern will be presented below.

The THS discovered 13 sites (ca. 0,1 sites/km^2) with a total settled area of 31,6 ha. The average site size is 2,43 ha and only one site, THS 24, has traces of a 6,25 ha Halaf settlement under later occupation phases. The sites are usually at the basal level of multiperiod mounds (even high mounds). There is almost no evidence (except only one) of continuity in the settlement of previous occupied sites (Ur 2010: 94). In the NJP there was no abrupt change in the distribution of the sites, they recorded 40 sites, with continuity in 34 % of them. The sites are slightly bigger than the Hassuna

period settlements (Wilkinson and Tucker 1995: 39). Regarding the LoNAP results[10], it is not possible to notice a different pattern in the distribution of the sites in respect of the preceding period, but the number of settlements is lower, only 44 sites were recorded for this period.

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
91	39	2					x		
93	1			0,4			x		
104	2			1,5			x		
339	1			2,9		x			
481	4		2,7			x			
586	1			1,6	x				
587	3		0,4		x				
597	5		2		x				
600	1			1,3		x			
726	3		0,6			x			
789	3		3			x			
811	13	1				x			
874	7		1		x				

Table 6.3.1 – Complete list of Halaf sites.

Halaf Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	2	3	-	1	1	-	-
Minor	6	9,7	3	3	-	-	-
Traces	5	7,7	1	2	2	-	-
Tot.	13	20,4	4	6	3	-	-

Table 6.3.2 - TGAS area occupation during the Halaf period.

[10] Considering LoNAP results as a whole for the region, so including also TGAS results.

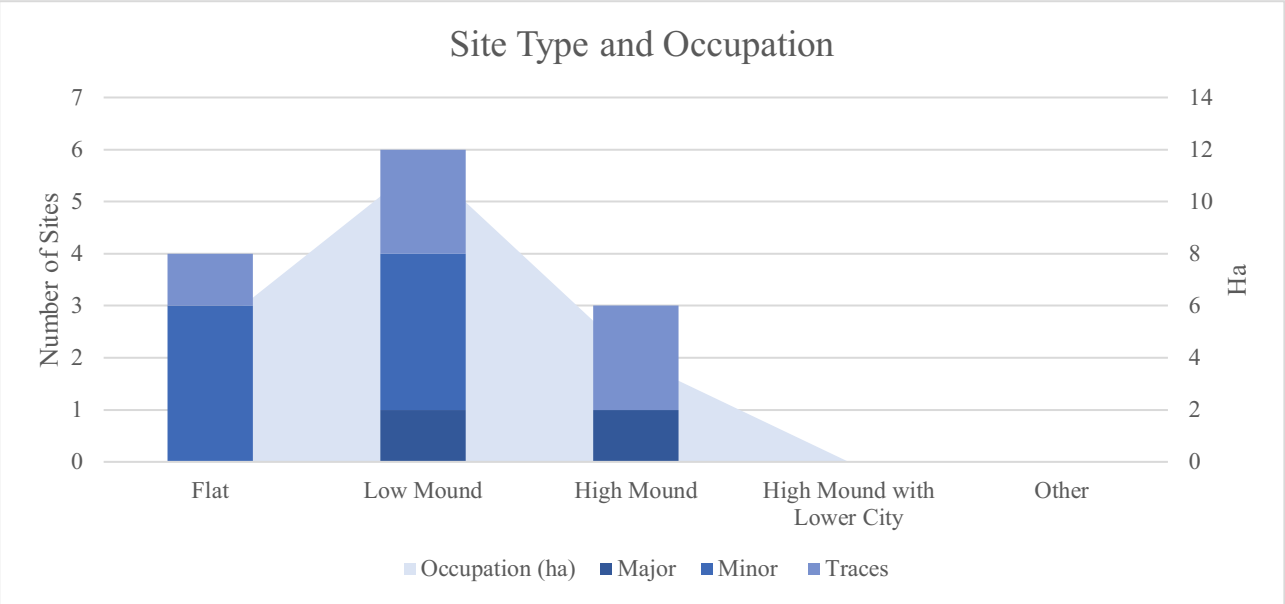

Chart 6.3.1 – Half site types and occupation for each type (ha).

Interpretation

As summarized by Nieuwenhuyse, Odaka and Mühl (2016: 258): "we now understand the Halaf cultural landscape in Upper Mesopotamia as very heterogeneous, mostly inhabited by mobile, semi-pastoralist groups that were politically organized in a non-centralized fashion".

Usually Halaf sites are small and do not exceed 3-5 ha. However, we know at least 5 larger sites or "mega sites", mentioned above, that extend over 10 ha. These settlements are far away from each other and they are considered from some scholars as regional centres, controlling a wide territory (Matthews 2000: 108). They could probably be better interpreted as the results of the continuous local shifting of the village location through the centuries of the site occupation (Akkermans 2013). Bernbeck, indeed, uses the fitting definition "multi-sited communities" for the Halaf period (Bernbeck 2008; 2013).

Generally, Halaf sites, everywhere in Mesopotamia, are considered as new foundations, they are imposed on previously unoccupied soil and when there is a continuity in the occupation from the Hassuna period, it is usually possible to notice a clear break between the two periods (e.g at Kharabeh Shattani, Watkins and Campbell 1986; or Der Hall, Killik and Black 1985). This phenomenon was explained by a period of aridification between the Hassuna and the Halaf periods (Matthews 2000) and by a significant increase of the population prompting to the exploitation of previous unoccupied or not densely occupied areas. On the other side, the Tell Sabi Abyad excavations clearly found a slow transition between the two periods with no evidence of any break (Nieuwenhuyse 2007; Akkermans 2013).

In the TGAS area the strong continuity in the occupation and settlement pattern attested in many sites offers the opportunity for further investigations to contribute to our understanding of the transition between the two periods. Some *ad hoc* soundings in sites which have shown evidence of occupation in both EPN and Halaf periods might shed light on this, until now, poorly understood phase.

6.4 Ubaid

Pottery

The TGAS team collected 100 sherds attributed to the Ubaid period. The sherds find the best comparisons with some key sites of the region as Tepe Gawra (Tobler 1950), Arpachiya (Campbell 2000) and Khirbet Hatara (Fiorina 2001). Usually the fabric is buff or yellow-green with vegetable inclusions but sometimes also with mineral temper. The most common shapes are small cups or bowls with simple rims; also in this case many of the diagnostic sherds are body-sherds. The majority of the sherds belongs to the "Ubaid Painted Ware" (type T3/1). This type contains a large range of shapes and decorations. The painted decoration is commonly dark brown or black, in many cases the decoration was fading away. The motifs used are generally geometric, with bands or wavy lines. Well attested is also the "Ubaid Corrugated Ware" (type T3/2), usually these sherds present a yellow-green fabric, a corrugated exterior and, in few cases, also a painted decoration. It was also possible to recognize few sherds of the "Ubaid Incurved Rim" (type T3/5); on the contrary the "Open Bowl with Grooved Top" and the "Ubaid Everted Rim Jar" (respectively types T3/3 and T3/4) are not attested in TGAS assemblages.

PERIOD 3 – Pottery Types	
T3/0	18
T3/1	61
T3/2	10
T3/5	4

Table 6.4.1 - Number of sherds for each type

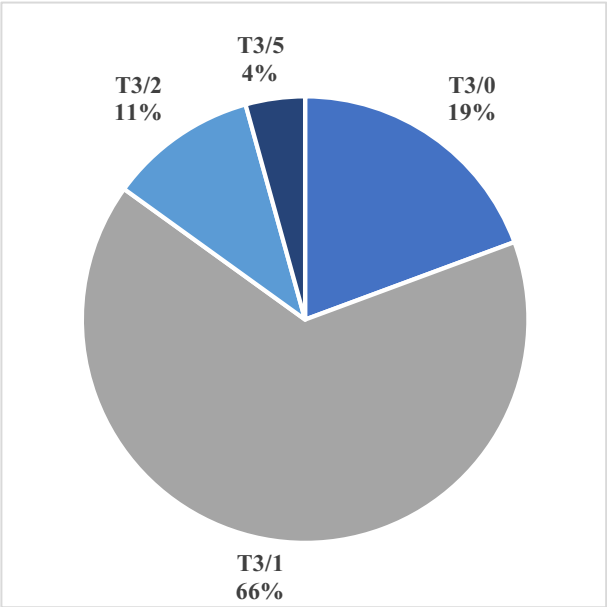

Chart 6.4.1 – Types attested for Period 3.

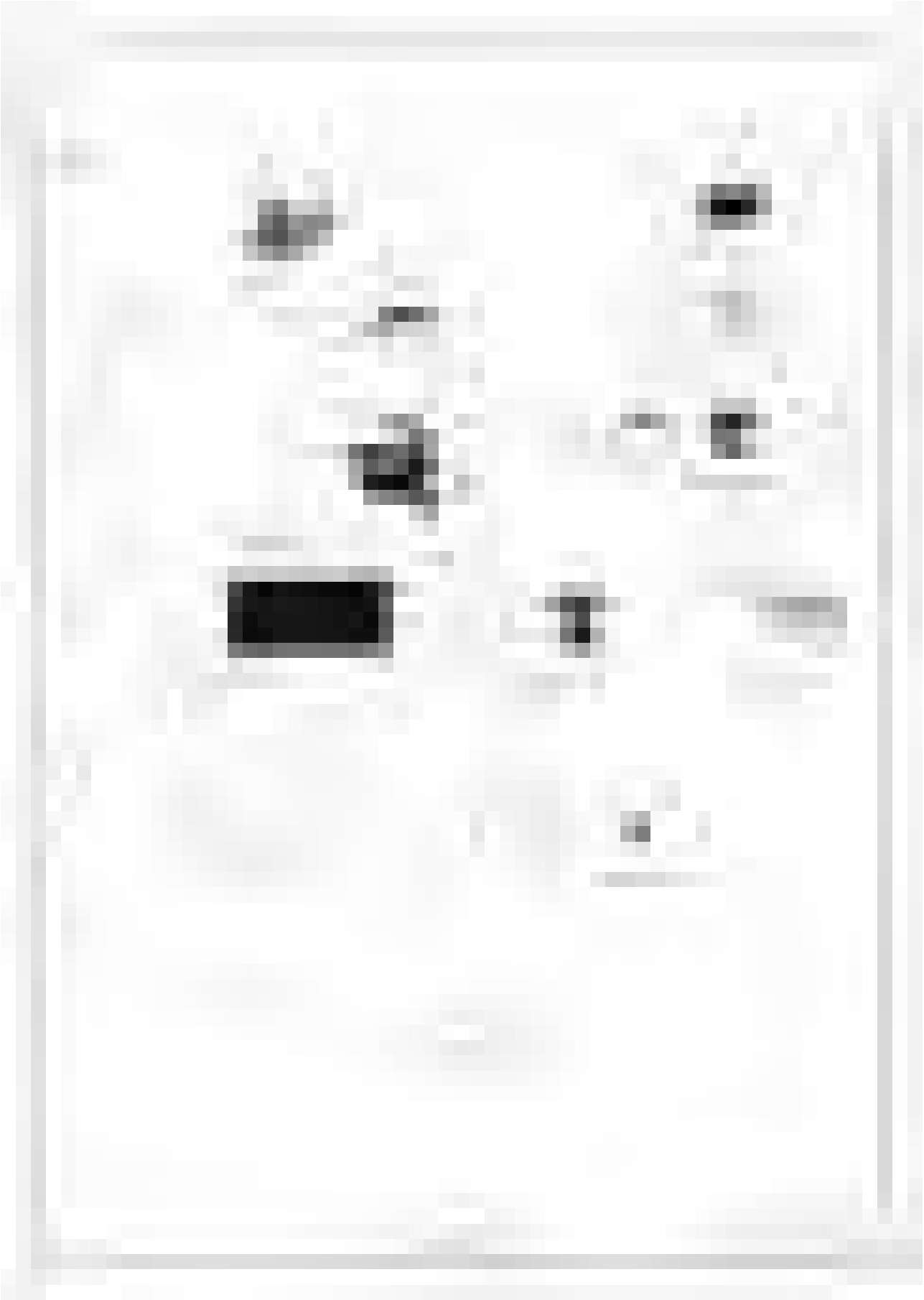

Fig. 6.4.1 – Ubaid Period Pottery Types.

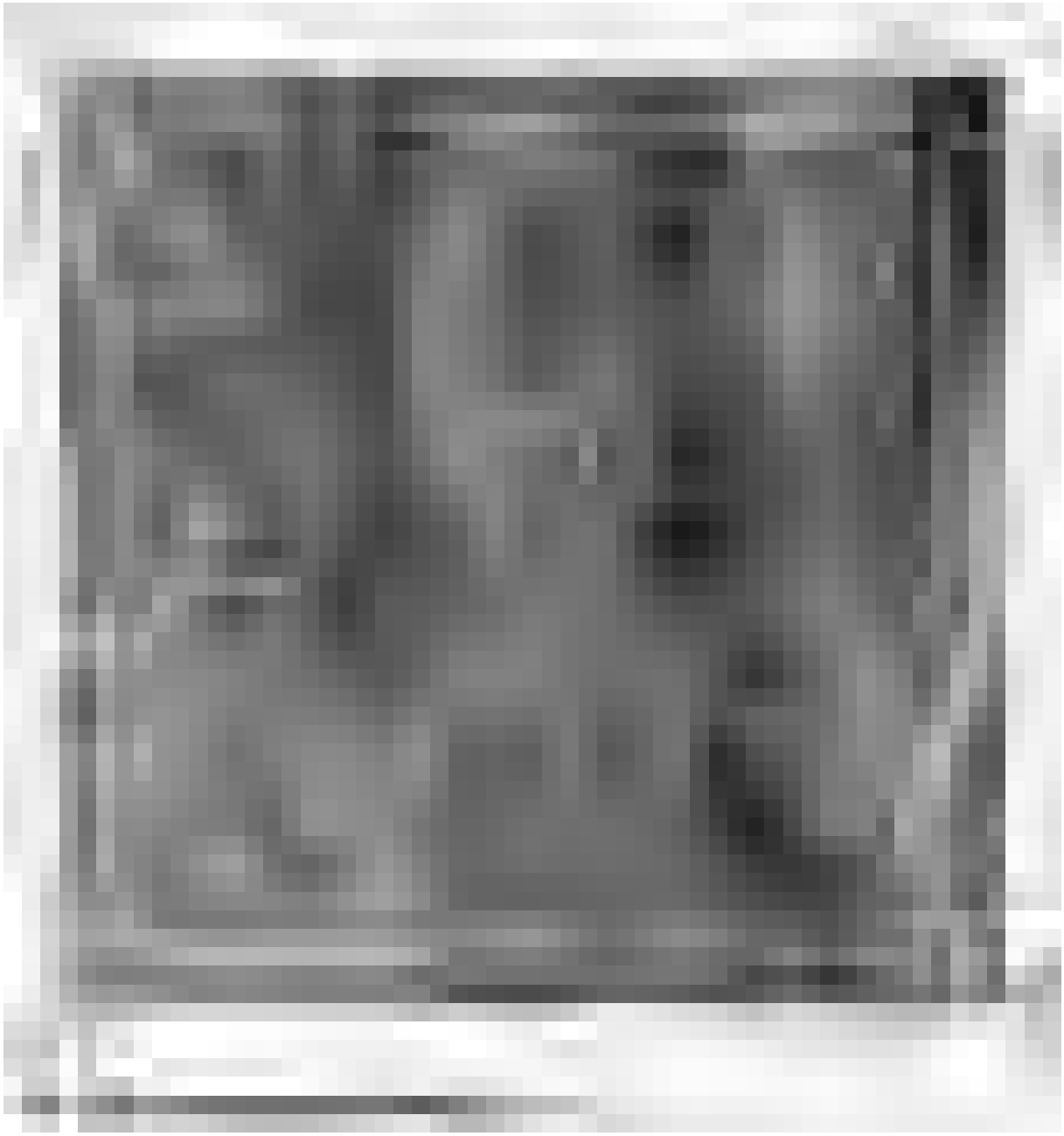

Fig. 6.4.2 - Ubaid Settlement Development in TGAS area.

Settlements and settlement pattern

There is not any extraordinary flourishing of settlement during the Ubaid period in the Navkur Plain. For this period 17 sites are recorded (versus the 13 sites recorded in the Halaf), maintaining the recovery rate of 0,17 sites/km^2. The sites show a very strong (75%) continuity with the preceding period, but also a consistent (19%) resettlement of Early Pottery Neolithic sites, and only one (6%) new foundation. This pattern represents an interesting feature of the Northern Ubaid in this region. The sites dimensions are in average 1,7 ha, however there are few sites that reach a remarkable size of 3 to 5,2 ha.

During this phase, the settlement patterns in Upper Mesopotamia are quite contrasting.

The TERP detected 20 sites for this period, they show a completely new settlement pattern, they present the same size but they double the amount of settlements in respect of the previous period and only one third presents a continuity with the Halaf period. No preeminent site was identified, the small sites are generally interpreted as self-sustaining agricultural villages (Algaze *et al.* 2012: 17).

On the contrary, in the THS region we see a strong contraction in the settlement number, passing from 13 Halaf sites to 2 Ubaid settlements (Ur 2010: 95-96), while in the Sinjar area and in the Syrian Jezirah the number of settlements did not change from the Halaf to the Ubaid period (Wilkinson and Tucker 1995: 41; Lyonnet 2000). The NJP recorded 43 sites (Wilkinson and Tucker 1995: 40), with a recovery rate of 0,09 sites/km^2 that is quite high compared to other survey results but it still almost half of the TGAS recovery rate for this period. In the Jazira also large (ca. 15-18 ha) Ubaid sites were attested (Tell Leilan, Schwartz 1988; Tell Brak, Oates 1987; Tell al-Hawa, Wilkinson and Tucker 1995:40) surrounded by smaller contemporary mounds (usually not greater than 2-3 ha), they can be interpreted as a sort of proto-urban centres (Iamoni 2016: 67; Wilkinson and Tucker 1995: 40). This pattern suggests the presence of a two-level settlement hierarchy connected with a new type of social structure and organization. However, this system is not evident in the Navkur Plain, in the Silopi Plain (Algaze *et al.* 2012: 17) and not even in the Sharizor Plain, where the number of sites almost triples from the Halaf to the Ubaid period while maintaining the same size (Mühl and Nieuwenhuyse 2016: 39-40). LoNAP data[11] shows a similar pattern with 65 sites recovered, in this case as well they were usually around 2-3 ha in size but not bigger than 5,7 ha.

[11] Considering LoNAP results as a whole for the region, so including also TGAS results.

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
91	2			2			x		
93	1			1		x			
104	4		1,5				x		
105	2			1				x	
185	1			3			x		
481	12	5,2				x			
482	15	3,5					x		
586	1			1,6	x				
587	7		0,5		x				
587	13	2			x				
600	8		1,3			x			
705	2			0,6		x			
708	5		1,3			x			
726	7		1,6			x			
811	3		1			x			
856	4		0,6		x				
874	8		1		x				

Table 6.4.2 - Complete list of Ubaid sites.

Obeid Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	3	10,7	1	1	1	-	-
Minor	8	8,8	3	4	1	-	-
Traces	6	9,2	1	2	2	1	-
Tot.	17	28,7	5	7	4	1	-

Table 6.4.3 - TGAS area occupation during the Ubaid period.

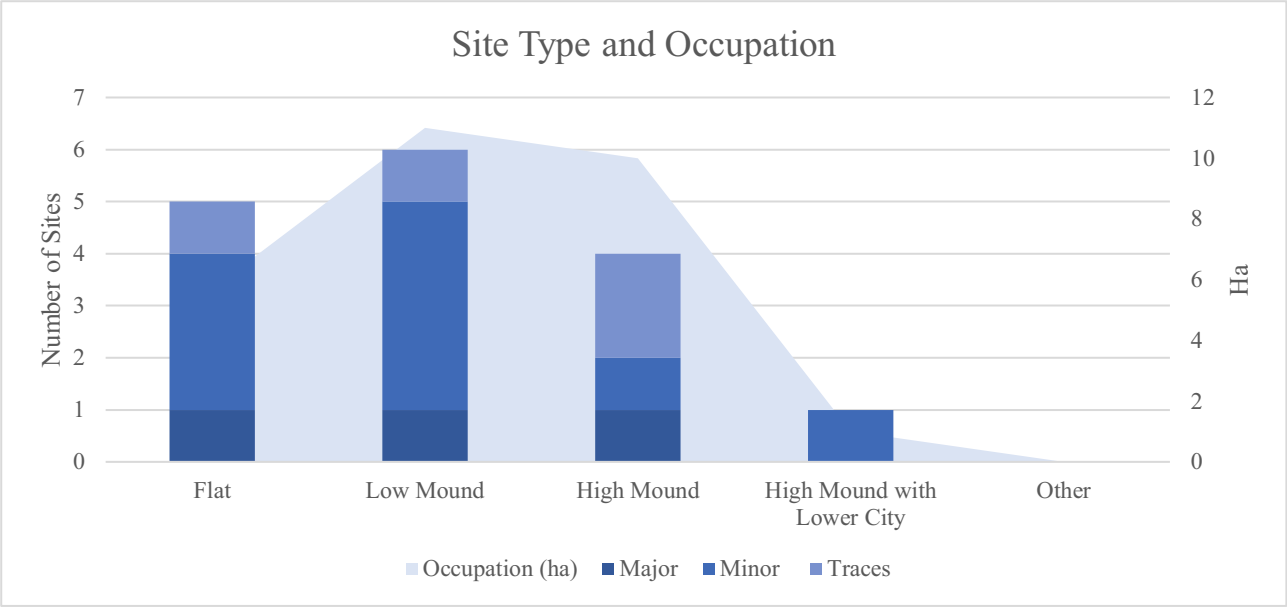

Chart 6.4.2 – Ubaid site types and occupation for each type (ha).

Interpretation

The survey results draw attention to the continuity from the Halaf to the Ubaid period. This transition is now the focus of many studies, even if the data available are still scarce, which leaves the origin of the Ubaid tradition in the north still poorly understood (Iamoni 2016: 127; Nieuwenhuyse and Wilkinson 2008: 274). No Halaf-Ubaid Transition (HUT) sites were identified so far, but possibly, with forthcoming results from the new projects in the Kurdistan area it will be possible in the future to reconsider the assemblage in the light of the new regional sequences.

The great continuity in the settlement, recorded by TGAS, can be tentatively related to the emergence of a new settlement stability, changes in the social and political organization and a sort of new "agricultural awareness": we can easily speculate that Ubaid communities decided to occupy ancient settlements (possibly largely abandoned at the time of the new occupation) with the aim to not "waste" free agricultural lands. In general terms, it seems that the Ubaid communities established a more stable way to settle, and this development relates to the emergence of widespread and shared criteria to manage, on the community level, the settlement resources (Ur 2017a: 18).

6.5 The Late Chalcolithic Period 1-2 (4500-3900 BC)

Chronology and Ceramic Periodization

The Late Chalcolithic chronology and periodization has long been controversial and misunderstood. However, thanks to the effort of many scholars, a new scheme, based on data from new excavations and radiocarbon dates, was proposed and accepted during a meeting organised by M. Rothman a Santa Fe in 1991[1]. The period under analysis was divided into five stages (LC 1-5) spanning from the late fifth to the fourth millennia BC (Rothman 2001b; Stein 2012).

Unfortunately, a complete ceramic periodization is still missing (Ur 2010; Oates 2010, 2011; Gavagnin *et al.* 2016; Pfälzner and Sconzo 2016). Due to this issue, the ALRG decided to tentatively subdivide the period in two big sub-phases LC 1-2 and LC 3-5 (Gavagnin *et al.* 2016; Pfälzner and Sconzo 2016). Indeed, due to the nature of the unstratified materials collected during surveys, this subdivision system was already applied in the past (Ur 2010) although, in some cases a single period was used to define the LC period only differentiating the sites with a Southern Uruk tradition (Wilkinson and Tucker 1995; Algaze *et al.* 2012), while in other cases a much more detailed subdivision was applied (Brustolon and Rova 2008).

Pottery

TGAS team collected only 111 sherds belonging to the Late Chalcolithic 1-2 period.

Best comparisons to TGAS assemblage are from excavations in the east bank of the Tigris river such as for instance at Qalinji Agha and Helawa in the Erbil Plain (Hijara 1973; Peyronel and Vacca 2015), Tepe Gawra (Tobler 1950), Nineveh (Gut 1995), Muqable I (Pfälzner *et al*. 2017) or in the western Iraqi and Syrian Jazirah, in sites such as Grai Resh (Kepinski 2011), Khirbet al Fakhar (al-Quntar *et al.* 2011, Jayyab 2012), Tell Feres al-Sharqi (Baldi and Jayyab 2012), Tell Brak (Matthews 2003a), Tell Leilan (Schwartz 1988). Further east comparisons can be found also in Chamchamal area at the site of Girdi Qala (Vallet *et al.* 2017).

The most attested type (Table 6.5.1, Chart 6.5.1) among TGAS repertoire is the "Bowl with Internally Thicked Rim" (T4/18). The type is characterized by a buff colour and a mineral tempered or quite fine chaff fabric. Sometimes, the rim is decorated by a dark red or brown band with occasionally some blobs occurring on the inner rim. The type evolves in a coarser chaff tempered fabric diagnostic

[1] The results of the School of American Research Advanced Seminar are published in Rothman (ed.) 2001a.

type for the LC 3-5 (T5b/13, Ur 2010: 240). This characteristic bowl is well attested in the Tigridian region at Muqable I (Pfälzner *et al.* 2017: pl. 2 nn. 41-48), Tepe Gawra (Tobler 1950: fig. CXLIV nn. 375, 382, 384; Rothman 2002: fig. 15 nn. 1816, 1819 and fig. 18 n. 1928), Nineveh (Gut 1995: fig. 53:800–802) and Helawa (Peyronel and Vacca 2015: fig. 12 nn. 8, 10 and 13). They occur also in the Chamchamal area (Vallet *et al.* 2107: fig. 19 n.1). In the Jazirah, the type is well known at Grai Resh (Kepinski 2011: pl. 5 nn. 3-5), Khirbat al-Fakhar (Al-Quntar *et al.* 2011: fig. 6:5–8), Feres al-Sharqi (Baldi and Jayyab 2012: fig. 4), Tell Brak (Matthews 2003a: fig. 3.13:2, 3.15.31), Leilan (Schwartz 1988: fig. 58 nn. 5-7), Umm Qseir (Tomita 1998: fig. 63 nn. 9-10), and much further west at Hacinebi (Pearce 2000: fig. 2 g).

Another well-attested type is the "Deep Bowl" (T4/15, Chart 6.5.1). This type, characterized by a medium-coarse chaff temper, is well attested at Muqable I (Pfälzner *et al.* 2017: pl. 2 nn. 50-51), Tepe Gawra (Tobler 1950: fig. CXLIV n. 383), Tell el- Hawa (Ball *et al.* 1989: fig. 28 nn, 23-24), Grai Resh (Kepinski 2011: pl. 4 n. 20 and 23) and Feres al-Sharqi (Baldi and Jayyab 2012: fig. 3).

The "Neckless Flaring Jar Rim" (T4/7) also occurs frequently in TGAS assemblage (Table 6.5.1, Chart 6.5.1), as well as the similar "Flaring Jar Rim" (T4/5).

The Neckless Flaring Rim Jar is also a very distinctive and diagnostic type for the early Chalcolithic, some examples are known from Muqable I (Pfälzner *et al.* 2017: pl. 3 n. 68), Gawra (Tobler 1950: 149, pl. 137 n. 290), Yorghan Tepe (Starr 1937: pl. 43), Girdi Qala (Vallet *et al.* 2017: fig. 18 n.3), Grai Resh (Kepinski 2011: pl. 9 n. 12 and pl. 15 n. 11), Khirbat al-Fakhar (Al-Quntar *et al.* 2011: 160, fig. 8 nn. 1–3) and Tell Leilan (Schwartz 1988: fig. 66:7).

Also the Flaring Har Rim is quite common in early Late Chalcolithic contexts i.e. at Gawra (Tobler 1950: pls. 142: 349, 351, 353 and 148: 430 and 431), Grai Resh (Kepinski 2011: pl. 15 nn. 12 and 14), Qalinji Agha (Hijara 1973: pl. 21 nn. 5-13) and Hammam et-Turkman (Akkemans 1988: 307).

Few examples of "Beaded Holemouth Jar Rim" (T4/2) and "Double-Rimmed Jar" (T4/4) are attested (Table 6.5.1 and Chart 6.5.1).

The "Beaded Holemouth Jar Rim" occurs at Gawra (Tobler 1950: 153, 158, pls. 142:343‑44, 146:402‑04), Muqable 1 (Pfälzner *et al.* 2017: pl. 3 nn. 78-79), Khirbet al-Fakhar (Al-Quntar *et al.* 2011: fig. 7 nn. 10, 11), Tell Brak (Matthews 2003a: fig. 3 nn. 13 and 19), and Hammam et-Turkman (Akkermans 1988: pl. 108 nn. 102 -103), only to cite some examples.

The Double Rim Jar appears in Gawra (Tobler 1950: 152, 158, pls. 142:346, 146:405‑06), Qalinji Agha (Hijara 1973: tav 21 nn. 1-4), Umm Qseir (Tomita 1998: fig. 64.1), Hamoukar and Feres al-Sharki (Baldi and Jayyab 2012: fig. 4).

The “Hammerhead Rim Bowl” and the “Casserole”, considered very diagnostics for the Jazirah LC, do not appear in TGAS repertoire. This seems to be a regional features of the eastern area of the Tigris basin, since this type is not well attested also in EHAS and LoNAP assemblages (Pfälzner and Sconzo 2016; Gavagnin *et al.* 2016) and in the excavations in the Erbil and Qara Dagh areas (Peyronel and Vacca 2015; Vallet *et al.* 2017).

Also the painted production, which is characteristic of the LC 1, the so-called “Sprig Ware”, is not attested in TGAS. In this case, the reason for this absence is due to the fine ware that features this peculiar type. Fine peculiar decorated wares are less likely to be found during surveys due to the physical characteristic of fine ware (easily destructed by ploughing activity) but also to the limited production of such peculiar types.

To sum up, the TGAS repertoire well fit in the widespread LC 1-2 pottery tradition, with comparison coming from the east from the Zagros foothills (the Qara Dagh area) to the west from the area of the Euphrates basin (Hacinebi).

PERIOD 4 – Pottery Types	
T4/0	34
T4/2	4
T4/4	2
T4/5	9
T4/7	15
T4/15	17
T4/18	30

Table 6.5.1 - Number of sherds for each type

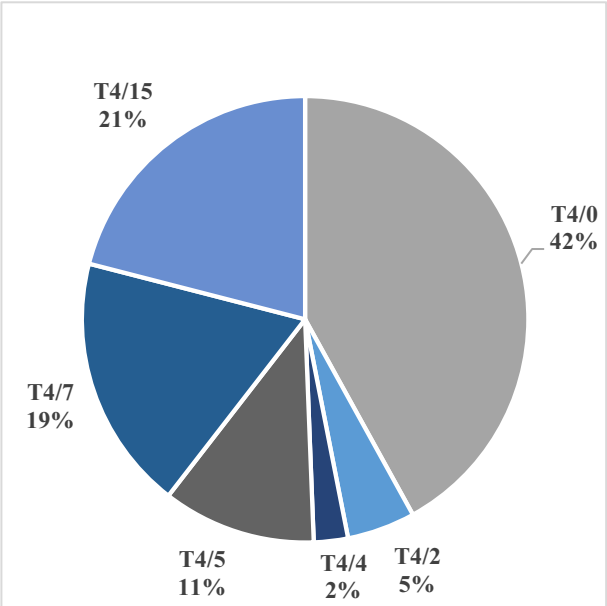

Chart 6.5.1 – Types attested for Period 4.

Fig. 6.5.1 - Late Chalcolithic 1-2 Period Pottery Types.

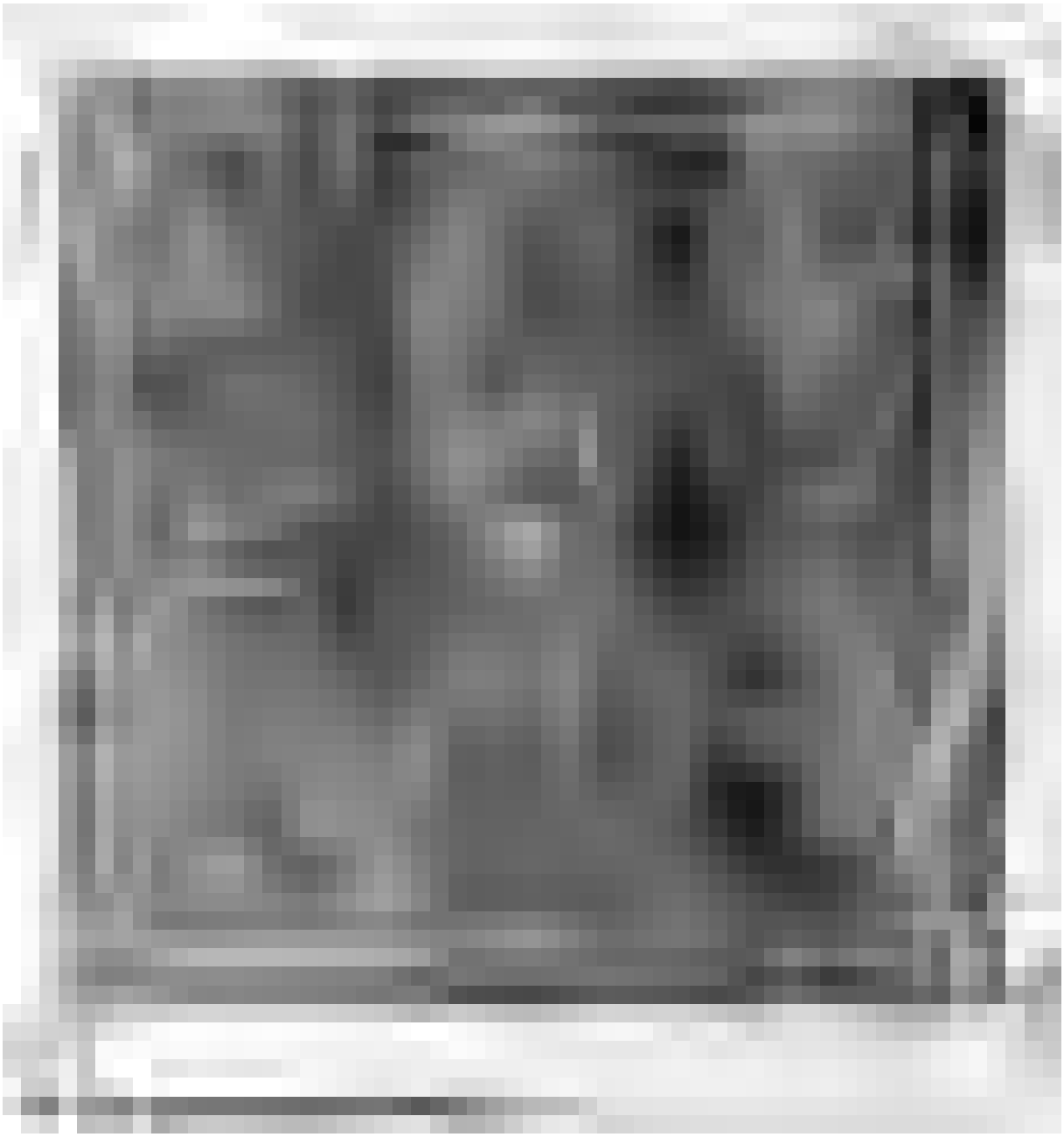

Fig. 6.5.2 - Late Chalcolithic 1-2 Settlement Development in TGAS area.

Settlements and settlement pattern

The survey identified 26 sites (0,26 site/km^2) belonging to the Late Chalcolithic 1-2 period. With a total aggregate area of 52, the human occupation during this period seems to be characterized by small sites of an average of c. 2 ha. The settlement pattern shows 43% of continuity with the previous phase, 12% of resettlement, and 45% of new foundation. The period clearly features a flourishment of settlements, shifting from 17 sites attested in the Ubaid period to 26 in the LC one. The Late Chalcolithic sites usually are located at the base of big *tells* and their dimensions are difficult to establish due to the later occupation stratification. Unfortunately, due to this characteristic of the LC sites, half of the settlements identified by TGAS yielded only traces of occupation (see Table 6.5.2). The same Tell Gomel has its origin as a tell during this period, and the scanty number of sherds collected on its surface (see Table 6.5.2) can only tentatively let us propose an extension of c. 13 ha. The estimation is very cautious due to the massive Early and Middle Bronze Age, and also Islamic, occupation.

Only three sites have a major occupation during the Late Chalcolithic 1-2 period: one is Tell Gomel at the centre of TGAS area, another is site 481 a few kilometres north of Tell Gomel, and the last is site 726 that seems to be one of the most important sites along the Nardush river. The limited number of sherds identified on sites is, in my opinion, not connected with an ephemeral or short occupation of the sites during this period, but it is most likely due to our limited knowledge of Late Chalcolithic pottery production of the area and to the overburden of the Late Chalcolithic occupation layer under meters of later occupation deposits.

A quite interesting cluster of sites is the group of sites located on the crevasse splay (a sedimentary deposit created by a stream breaks of the Gomel River on the floodplain). This area seems to be a privileged area for human occupation since the Neolithic (see Chapters 6.2-6.3) and in the Late Chalcolithic it looks to be completely, but maybe loosely/sparsely, settled (maybe with a pattern comparable on a smaller scale to Khirbet al-Fakhar example, see Ur 2010 and Al-Quntar *et al.* 2011).

In the LoNAP area, the site's number almost doubled from the Ubaid period. With 128 sites and a total aggregate area of c. 234 ha, the region experienced a completely new settlement development. The flourishment of small villages (average dimensions of c. 1,8 ha) scattered across the plains shows a demographic growth in the region and a new distribution pattern.

A similar new pattern was also recorded further east in the UGZAR region. The polish team identified 23 sites, with a total aggregate area of 21,5 ha. Also in this area, a strong flourishing of settlements was attested. The very small village-size sites (average dimensions of 0,9 ha) spread also in new,

previously unoccupied, areas, such as the Greater Zab valley and the Bastora Çai valley (Koliński 2018: 17)

North of LoNAP, the team of the University of Tübingen registered a decrease in settlement number from the previous period, but the data is still very provisional (Pfälzner and Sconzo 2016: 30).

The TERP further north in the Cizre-Silopi plain and the NJP in the Iraqi Jazirah did not divide the Late Chalcolithic into two phases and consequently it is difficult for us to compare our data with theirs. The only information they provided us concerns the number of sites having Southern Uruk pottery.

The LC sites identified by TERP are 16 in total, they are small and scattered in the plain. No hierarchy is distinguishable, and the biggest site was only 4 ha. A slight decrease is attested and a strong continuity in the settlement pattern is recorded (50%) (Algaze *et al.* 2012: 18-21).

In the NJP, a dispersed pattern is documented, and it is characterized by village-size settlements. The number of sites increases from the Ubaid (43) to the Late Chalcolithic period (66). The settlement continuity is limited to only 31% of the sites. The site's dimensions range or from 2,5-5 ha or from 5-7,5 ha. Tell el-Hawa experienced, during this period an unprecedented grow, rising to 35-50 ha of dimension (Wilkinson and Tucker 1995: 43-45).

Further west, in the Syrian Jazirah, the THS recorded, for the LC 1-2, 13 sites. The sites are very small (1,88 ha of average dimensions), and the total aggregate area is 25,32 ha. The 300 ha site of Khirbet al-Fakhar stands out for its unicity, it represents an extraordinary case of such a large scale site until the rise of ED cities in Southern Mesopotamia at the beginning of 3rd Millennium BC (Ur 2010: 96). The THS also recorded the first alignment along communication routes occurring in the region (Ur 2010: 99).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	21	13						x	
89	3		0,4					x	
91	2			2			x		
93	4		2			x			
94	1			2,5			x		
104	8		1,5				x		
105	5		1,8					x	
130	1			0,7		x			
179	2			2,3			x		
185	2			1,3			x		
187	2			3,5			x		
339	1			2,9		x			
354	2			0,5			x		
423	8		1,8			x			
481	16	2,7				x			
482	6		1,9				x		
484	1			2,2		x			
560	1			0,3		x			
562	1			0,5		x			
586	2			1,6	x				
587	4		0,4		x				
597	10		1,3		x				
600	7		1,3			x			
726	22	1,6				x			
803	1			0,5	x				
856	10		1,5		x				

Table 6.5.2 - Late Chalcolithic 1-2 sites.

Late Chalcolithic 1-2 Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	3	17,3	-	2	-	1	-
Minor	10	13,9	3	3	2	2	-
Traces	13	20,8	2	5	6	-	-
Tot.	26	52	5	10	8	3	-

Table 6.5.3 - TGAS area occupation during the Late Chalcolithic 1-2 period.

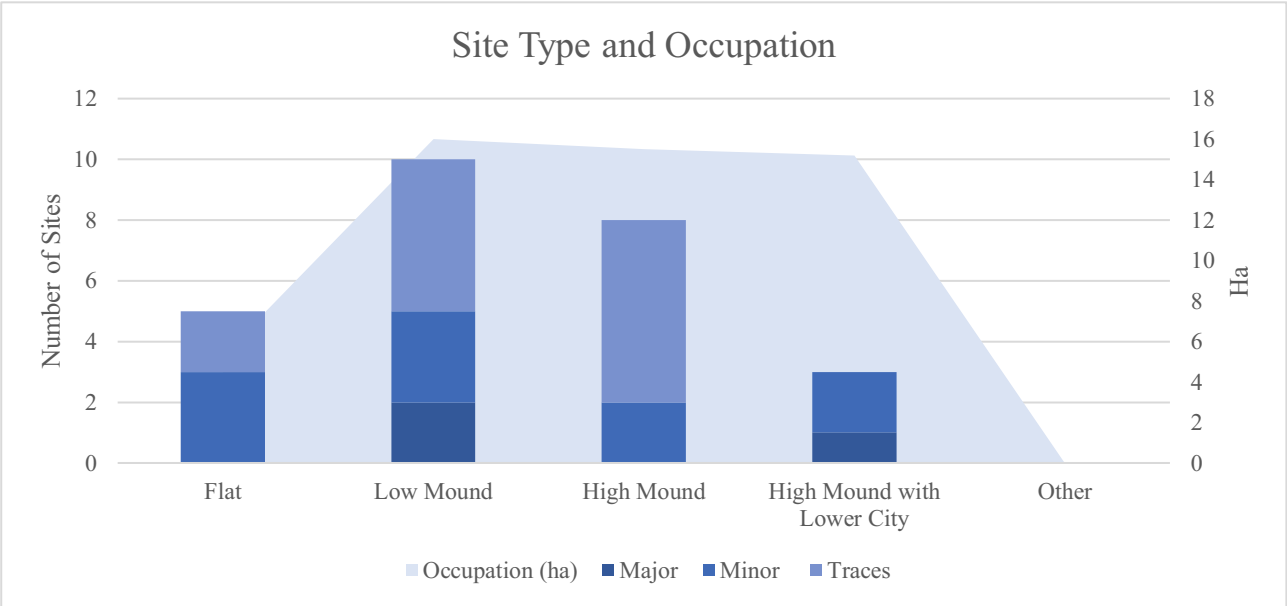

Chart 6.5.2 – Late Chalcolithic 1-2 site types and occupation for each type (ha).

Interpretation

The new trend witnessed by Upper Mesopotamia during the first phase of the LC is connected with the definition of a new dense rural landscape, characterized by shared similar basic cultural elements (material culture, religion, economy) from the Zagros piedmont to the Taurus.

In particular, the Late Chalcolithic represents a critical point in the development of social complexity in Northern Mesopotamia (Stein 2012: 126). The LC 1-2 is characterized by a strong change in the settlement pattern, with the appearance of a dense rural landscape and a reorganization and concentration of a part of the population in sites that reached unprecedented sizes. The most outstanding example is the site of Khirbet al-Fakhar that extends over an area of 300 ha (it was presumably only sparsely occupied, Ur 2010: 96-98) in the eastern Khabur region. Another good example is the settlement of Tell Brak that reaches 55 ha in the LC 2 (Ur *et al*. 2011: 6).

During this period, we also assist, besides the first urban revolution, to the development in Upper Mesopotamia of "powerful centralised system without urbanisation" (Frangipane 2009: 138-140) as it is evident from small complex sites as Tepe Gawra or Arslantepe.

Tepe Gawra located on the southern piedmont of the Jebel Maqloub is only at c. 20 km from the heart of the Navkur Plain and it represents the best-excavated site for the LC 1-3 period in the region. The site is characterized by a very small high mound (less than 2 ha[2]) but with a very high stratification of 22 m (Speiser 1935: 4). At Tepe Gawra the excavators found the evidence of the emergence of a political elite, as expressed in the architectural features of the "round house" (Tobler 1950: pl. VI; Rothman 2002: 88-97), and of the appearance of socio-economic differentiation among the inhabitants of the site, as visible in the wealthy "libn tombs"[3] (Tobler 1950: 98-125). Furthermore, Tepe Gawra was involved in a broad exchange networks for the trade of the obsidian but also of luxury goods as lapis lazuli ornaments (Rothman 2002: 81).

Looking at the evidence of such a small site not so far from our area, it is even more difficult to propose an interpretation to TGAS settlement pattern. It is possible to assume that the Navkur Plain was well fitted in the broad cultural network of LC 1-2, as previously showed through the analysis of the pottery recovered. Tell Gomel must have played from this moment onward as the primary node in the plain even if it had not developed in an urban character until the mid-late 3rd Millennium.

[2] Even if it is not to be excluded the presence of a Lower Town, quite easily distinguishable on the satellite images even if Rothman seems to discard this hypothesis (Rothman 2002: 19 note 5).
[3] Some of these "libn tombs", characterized by a more elaborate structure and also rich grave goods, belonged to children and this particular seems to suggest the presence of an hereditary elite (Stein 2012: 135).

However, as witness by the small site of Tepe Gawra, that does not preclude Gomel from being the seat of a newly emerged elite.

The interesting cluster of sites north of Tell Gomel could be interpreted as a concentration of population sparsely settled over the crevasse splay. Presumably, this undulate and discontinuous area, transformed by natural (the Gomel River levee break) and anthropic impacts (with intermittent occupation since the Hassuna period), was not easily arable but, more conveniently, it was suitable to be occupied by farms or small hamlets.

6.6 The Late Chalcolithic 3-5 Period

Pottery

Only 133 sherds belong to the Late Chalcolithic 3-5 period. Among TGAS and LoNAP assemblages, not a single Southern Uruk fragment was found. We only know a single fragment found out of context during the excavation in Tell Gomel (Iamoni pers. comm.).

Best comparisons to our repertoire come from Nineveh (Gut 1995), Tell el-Hawa (Ball *et al.* 1989), Tell Hamoukar (Gibson *et al.* 2002b), Tell Brak (Oates *et al.* 2007, Felli 2003) and Hacinebi (Pearce 2000).

The most attested type is the "LC Grey Ware" (T5b/3, Chart 6.6.1). This type especially occurs in open forms as bowls with externally swollen rims (such as at Nineveh, Gut 1995: fig. 55 nn. 800-802; or at T. Brak, Felli 2003: fig. 4.21 n. 30) or bowls with large beaded rim (i.e. Hacinebi, Pearce 2000: 117, fig. 5 a-e). The grey ware started to appear already in the previous phase (LC 1-2), but the later one, diagnostic for the LC 3-5, is distinguishable by the lighter colour, the more careful burnishing and the shape in which appear.

Another well-attested type is the "Chaffy Hemispherical Bowl or Cup" (T5b/13, Chart 6.6.1), which is a quite deep bowl featuring a chaffy fabric. The type is attested also in EHAS (Pfälzner and Sconzo 2016: pl. 4 nn. 1 and 2)

All the other types attested occur in less than 10 sherds per type (Table 6.6.1, Chart 6.6.1), namely they are the "Sharply Out-Turned Rim" (T5b/11), the "Chaffy Flat-Topped Shallow Bowl" (T5b/14), the "Internally Hollowed Jar Rim" (T5b/1), the "Internally Grooved Jar Rim" (T5b/ 2), the "Hammerhead Bowl Rim" (T5b/4) and the "Casserole" (T5b/5).

The "Sharply Out-Turned Rim" is a jar characterized by a simple but sharply out-turned rim. This type finds a comparison at Tell el-Hawa (Ball *et al.* 1989: fig. 28 nn. 6–8) and at Tell Brak (Felli 2003: fig. 4.20 nn. 7, 10).

The "Chaffy Flat-Topped Shallow Bowls" are characterized by the chaff temper and by the reduced cores, best comparisons are from Hacinebi (Pearce 2000: fig. 7 f-h) and Tell Brak (Felli 2003: fig. 4.22 n. 2 and 7).

Other two diagnostics type of jars are the "Internally Hollowed Jar Rim" (comparisons from Hamoukar, Gibson *et al.* 2002b: fig. 20 nn. 1-3; T. Brak, Oates and Oates 1993: 193, fig. 53. n. 56) an the "Internally Grooved Jar Rim" (with comparisons from T. Leilan, Schwartz 1988: fig. 60 n. 5; T. Brak, Oates and Oates 1993: fig. 51 nn. 19–20; Hacinebi, Pearce 2000: fig. 4 f–g)

As hallmarks of the period in Upper Mesopotamia (Schwartz 2001; Brustolon and Rova 2008; Stein 2012), the "Hammerhead Bowls" and the "Casseroles" are quite rare in our region and also further north in EHAS area and east in the Qara Dagh region (Gavagnin *et al.* 2016: 130; Pfälzner and Sconzo 2016: 33; Vallet *et al.* 2017) showing a regional trend that differs with the Jazirah one.

From a general point of view, the indigenous LC 3-5 pottery production of Upper Mesopotamia is still very little known and understood, but furthermore the new excavations in Muqable III, carried out by the German team of the University of Tübingen, reveal new interesting data concerning the local production between the LC 3-5 and the Ninevite V periods. The new sequence sheds light on a common-chaff-ware production that shows strong similarities in shapes and wares during the two periods (P. Sconzo pers. comm.). This means that some Ninevite V fragments could have been erroneously dated to the LC 3-5 period. Only the study of the new data coming from the new excavations in the region will help us to redefine the pottery diagnostics of these two periods.

PERIOD 5b – Pottery Types	
T5b/0	59
T5b/1	5
T5b/2	2
T5b/3	39
T5b/4	2
T5b/5	2
T5b/11	6
T5b/13	13
T5b/14	5

Table 6.6.1 - Number of sherds for each type.

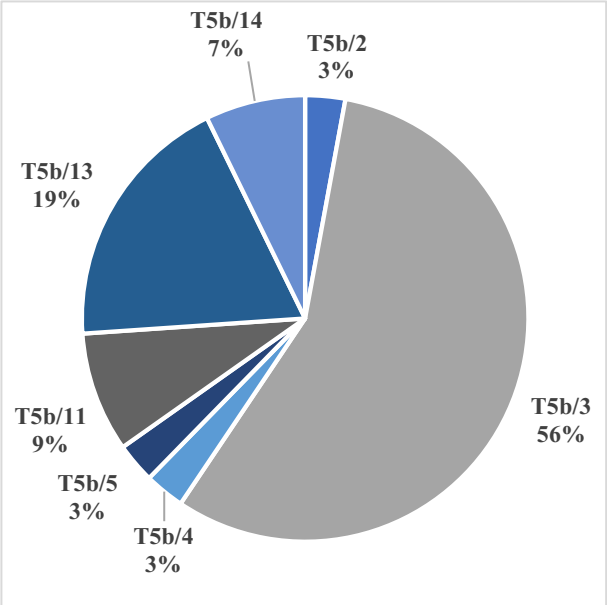

Chart 6.6.1 – Types attested for Period 5b.

Fig. 6.6.1 - Late Chalcolithic 3-5 Period Pottery Types.

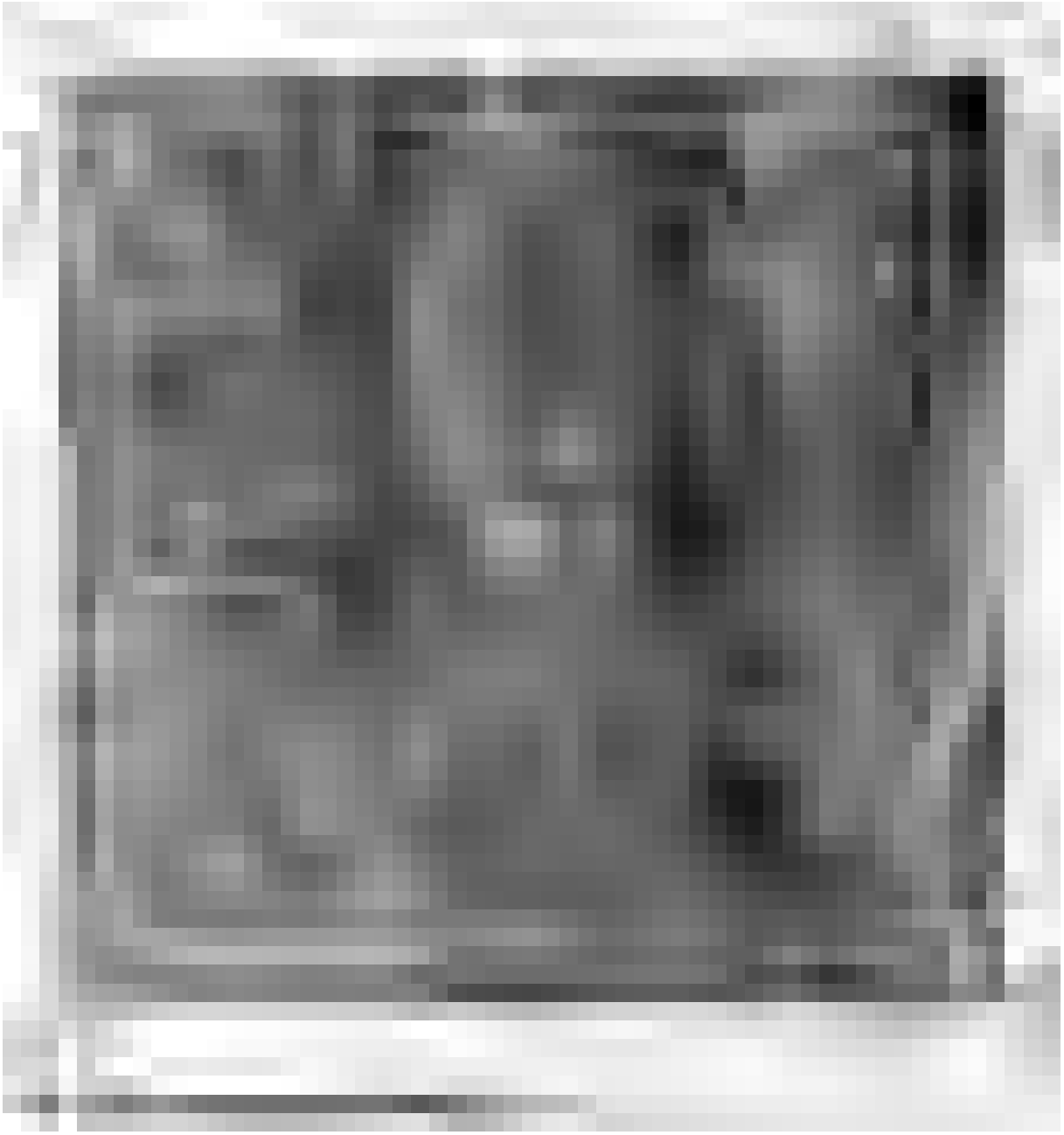

Fig. 6.6.2 - Late Chalcolithic 3-5 Settlement Development in TGAS area.

Settlements and Settlement Pattern

The TGAS team recorded 23 sites (0,23 site /km^2) with a total aggregate area of 46,1 ha. The survey recorded a very strong continuity with 77% of the sites in settlement continuity with the previous period, 9% of sites that resettled ancient sites and 14% of sites as new foundation. The settlement pattern in the TGAS area did not witness any particular or remarkable change.

As already noticed for the LC 1-2 period, almost half of the sites had only "traces of occupation" (see Table x). The sites with a major occupation are sites **726** and **185** south of the modern town of Chirra, site **423** south of the modern town of Kalakchi and Tell Gomel (site **40**). Also during this phase, the cluster of sites on the crevasse splay north of Tell Gomel seems to be settled.

The sites are small (c. 1,4 ha of average dimensions not considering T. Gomel), they do not exceed 3 ha in dimensions (considering only sites with major and minor occupation). Only Tell Gomel seems to be much larger (13 ha) but as already underlined for the LC 1-2, the estimation is based on a very small number of LC 3-5 pottery sherds collected. The LC settlement is buried presumably under meters of later occupation deposit and clarify its nature and extension is unfortunately very complicated.

The LONAP, as the TGAS, did not witness any substantial change between the two periods of the Late Chalcolithic. The survey team recorded 127 sites for the LC 3-5, with a total aggregate area of c. 216 ha. Only 8 sites with Southern Uruk materials were detected. The number of sites and their average dimensions (1,7 ha) do not differ significantly from the previous period. The settlement pattern of the Late Chalcolithic seems to not have experienced a specific development during the transition between the two phases (1-2 and 3-5).

UZGAR team recorded 24 sites, with 23,2 ha aggregate area and a remarkably almost complete absence of Souther Uruk materials on the western bank of the Great Zab (Koliński 2018: 17). Also in this area, it seems to not exist any substantial change, in site numbers and dimensions, between the two periods.

Similarly, the EHAS, during the 2013-2014 campaigns identified only 6 sites belonging to the LC 3-5, three of which with Southern Uruk materials (Pfälzner and Sconzo 2017: 30).

From the Cizre-Silopi Plain, we know from TERP that only two sites had distinctive Southern Uruk materials, but as I have already previously mentioned both TERP and NJP did not divide the LC in two phases.

Regarding the NJP, among 66 LC sites discovered, 15 sites yielded Southern Uruk pottery fragments. These sites are small (a similar trend was also recorded in Leilan survey see Stein and Wattenmaker

1989: 283; Brustolon and Rova 2008) and located close to the holloways (Wilkinson and Tucker 1995: 43-45).

In the Syrian Jazirah, the THS identified 18 sites, with a total aggregate area of 49,9 ha (average dimensions 2,8 ha). The settlement pattern is characterized by small sites and two towns of 9 and 15 ha. Only four of the sites have Southern Uruk materials including Hamoukar (15 ha) and one site is quite remarkable since it presents only Southern Uruk materials (Ur 2010: 100-103).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	12	13						x	
89	1			0,2				x	
93	2			2		x			
95	1			0,3			x		
104	1			1,5			x		
105	5		2,3					x	
176	1			2				x	
185	20	2					x		
186	1			4				x	
339	5		2,9			x			
423	12	1,8				x			
481	1			0,6		x			
482	1			2			x		
562	1			0,5		x			
586	1			1,7	x				
587	4		0,6		x				
597	9		2		x				
600	4		1,3			x			
726	48	1,6				x			
801	2			0,8	x				
803	3		0,5		x				
856	5		1,5		x				
874	5		1		x				

Table 6.6.2 –The Late Chalcolithic 3-5 sites.

Late Chalcolithic 3-5 Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	4	18,4	-	2	1	1	-
Minor	8	12,1	5	2	-	1	-
Traces	11	15,6	2	3	3	3	-
Tot.	23	46,1	7	7	4	5	-

Table 6.6.3 - TGAS area occupation during the Late Chalcolithic 3-5 period.

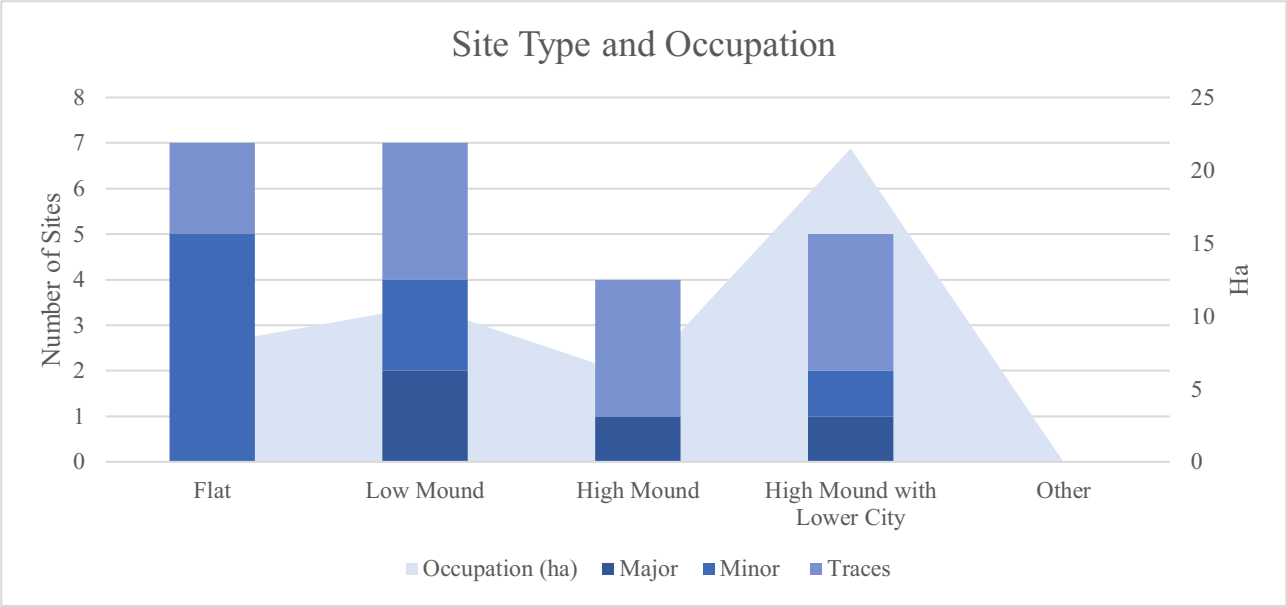

Chart 6.6.2 – Late Chalcolithic 3-5 site types and occupation for each type (ha).

Interpretation

During the LC3-5 period, Upper Mesopotamia experienced the establishment of complex and urbanised polities, which developed through indigenous processes (Stein 2012: 145-147). In this phase, the north of Mesopotamia also established a strong trade interaction with the south of the alluvium.

No evidence of southern Uruk material culture was recovered in TGAS area, but we know about the presence one single southern Uruk sherd from Tell Gomel excavation (Iamoni pers. comm.) and we know, from LoNAP survey results, that there are other 4 sites yielding southern Uruk fragments (3 of them with only one fragment) in the Navkur Plain. UZGAR team also reports an almost complete absence of Southern Uruk material from the west bank of the Great Zab (Koliński 2018: 17). We can consequently assume that the Navkur Plain had only limited contacts with South Mesopotamia during the Uruk period.

The explanation to this lack of connections must be searched in the exclusion of the Navkur Plain from the east-west and south-north routes that crossed Upper Mesopotamia. The plain remained isolated from the "Uruk network" while further west, along the Tigris, many sites provide evidence of Southern Uruk influence in the material culture (i.e. Nineveh and many Eski Mosul Dam Salvage Project sites, for a complete review of all the region see Rothman 2001: 378-386; recently also EHAS is recording the presence of several sites with southern Uruk material culture, Sconzo pers. comm.). The Tigridian region was much more attractive to the Uruk communities due to the high connectivity of the area (towards north to the Upper Tigris area and towards west to the Jazirah) and due to its position at the access to the steppe for the possibility of establishing sheep husbandry[4].

The Syrian and Iraqi Jazirah settlement pattern revealed a two or three level settlement hierarchy, with small, medium and large sites mostly located in the rain fed zone (Wilkinson *et al.* 2014: 79).

During the first process of urbanization in northern Mesopotamia, the Navkur Plain did not experience the development of any large sites, but it did indeed encounter an economic and social transformation that is reflected in the flourishing of a dense rural settlement pattern. In fact, even if the Navkur Plain remained excluded by the south-north interaction, it was in any case linked to the cultural processes of the western regions of Upper Mesopotamia as witnessed by the broadly shared indigenous material culture (showed by the pottery presented above).

[4] The access to marginal zones for opportunistic sheep husbandry is considered one of the reasons why a cluster (Jebel Harud, Habuba Kabira and Sheikh Hassan) of the so called "Uruk enclave" (Algaze 1993, 2008) was located at the Middle Euphrates (Wilkinson *et al.* 2014: 79).

Regarding the identification of a sub-regional development in the Navkur Plain, from the Late fifth to the fourth millennium, the data from TGAS survey are not particularly revealing. The number of sites and their dimensions do not change from the LC 1-2 to the LC 3-5 as well as the settlement pattern. A remarkable continuity is recorded, the two-tier hierarchy persists over a thousand of years, with Tell Gomel as nexus of the plain.

This likely only illusory homogeneity could be partially explained through a critical reflection. First, our very limited knowledge of the Late Chalcolithic regional pottery production could have led us to some misinterpretation of site's occupation dating. Second the location of the Late Chalcolithic sites at the base of the massive Bronze Age sites could have misled us in the site's dimensions dating.

Moreover, the general poor understanding of Late Chalcolithic cultural trajectories in the Tigridian area is not solvable through survey data and only new and extensive excavations in the area will help us to shed light on such crucial period.

The Third Millennium BC

6.7 The Ninevite V Period (ca. 3000-2600 BC)

Pottery

On the base of 3rd Millennium pottery classification, the Early Bronze Age is subdivided in two large periods: the Ninevite V and the mid-late 3rd Millennium. Even if recently the Associated Regional Chronology for the Ancient Near East and the East Mediterranean Project (ARCANE) have proposed different phases[1], until now the results from the Tigridian region remain unpublished. For this reason, for a general lack of information and a poor knowledge of this region, we decided to maintain a rough two main phase division of the EBA already used by previous and contemporary surveys (Wilkinson and Tucker 1995; Ur 2010; Algaze *et al.* 2012; and all the ALRG: Ur *et al.* 2013; Morandi Bonacossi and Iamoni 2015; Gavagnin *et al.* 2016; Pfälzner and Sconzo 2015 and 2016; Koliński 2018).
The Ninevite V period took its name from the fifth stratigraphic level excavated in 1931 in the deep sounding at Nineveh[2]. Good radiocarbon dating is available from Tell Brak (Matthews 2003b) and Tell Leilan (Weiss 2003) and thanks to them we are able to position the Ninevite V period in a timespan of ca. four centuries between 3000 and 2600 BC. The Ninevite V pottery sequence is especially known from the excavation at Tell Leilan and Tell Brak in the Syrian Jazirah (Schwartz 1988; Matthews 2003b) and from the excavations in the Eski Mosul area, in particular Tell Mohammed Arab (Roaf and Killick 1987) and Tell Kararrana 3 (Rova 1993). Throughout these pottery sequences it is possible to observe the presence of distinguishable chronological subphases, roughly with painted specimens in the earlier subphase and incised/excised examples in the later subphase, even though with a large overlap. Due to this overlap and the impossibility to verify the proportion between the painted and incised/excised specimens in survey unstratified materials, the Ninevite V period is here presented as one single phase.

Another noteworthy issue regarding the Ninevite V period pottery is related to types in use. The most easily recognizable types, included in the WCT, are decorated wares or fine wares that are most likely only a limited part of the pottery production[3]. Moreover, the fine wares usually find more difficulties

[1] Lebeau 2011 and 2013.
[2] For a good overview on the Ninevite V pottery see Grossmann 2014.
[3] Thanks to the new excavations in Muqable and Bassetki we have new information regarding a local production of "Common Ware", see the contributions of P. Sconzo in Pfälzner *et al.* 2017.

to survive in surface assemblages, due to their natural fragility they are less likely to survive to continuous ploughing.

Due presumably to the issue presented above, TGAS team collected only 80 sherds belonging to the Ninevite V period.

TGAS Ninevite V pottery repertoire is well settled among the assemblages of numerous excavations in the Tigris region[4] (Nineveh, Gut 1995; Mohammed Arab, Roaf and Killick 1987; Karrana 3, Rova 1993; Fisna, Jessary, Jigan and Tuwaij, Numoto 1988, 1990, 1992 and 2003), but it also finds good comparison with sites in the Syrian Jazirah (Leilan, Schwartz 1988; Brak, Matthews 2003b; Barri, Biscione 1998).

Among TGAS Ninevite V pottery the most common type (33%) is the "Pedestal Base" (T6/6, Chart 6.7.1, Table 6.7.1). The examples belonging to this type occur painted or undecorated. They are usually grey or green in colour and they are usually chaff-tempered even if they usually sustain fine mineral tempered upper bodies. Some comparisons appear in the Trigridian region (Karrana 3, Rova 1993: pls. XXIV n. 152 and 153; XLIV n. 508–520; Tuwaij, Numoto 2003: fig. 3 n. 108 and 114; Mohammed Arab, Killick 1986: fig. 3 n. 2; Nineveh, Gut 1995: pls. 83 n. 1182–1184, 85 n. 1189, 91 n. 1275) and in the Syrian Jazirah (Leilan, Schwartz 1988: figs. 35 n. 4 and 6; 38 n.1 and 2; 46 n. 4–6; Brak, Matthews 2003b: fig. 5.56 n. 22, fig. 5.57 n. 9).

Another very common type (20%, Chart 6.7.1, Table 6.7.1) in TGAS assemblage is the "Ribbed Fine Ware" (T6/5). They are usually very small body sherds distinguishable for the grooved/ribbed surface, a fine fabric and a grey to greenish colour. This type is attested at Nineveh (Gut 1995: pls. 90 n. 1272–1274, 91 n. 1277 and 1278), at different Eski Mosul Dam excavations (Karrana 3, Rova 1993: pl. XXV n. 191–194; Mohammed Arab, Roaf 1983: fig. 3 n. 9–12; Kutan, Bachelot 2003: fig. 19), and in the Upper Khabur Basin (Brak, Matthews 2003ba: figs. 5.58 n. 13–16, 5.68 n. 22–24; Leilan, Schwartz 1988: figs. 38 n. 1–3, 42 n. 7–14).

Also the "Painted Ware" (T6/1) is well attested in TGAS area (Chart 6.7.1, Table 6.7.1). Fabric occurs with mineral or chaff temper, the paint is dark and the motifs are naturalistic or geometric; the sherd unfortunately are usually too small to provide a good idea of the painted motif. This type is well known from several excavations such as Nineveh (Gut 1995: pls. 72 n. 1099, 1106; 78 n. 1149), Mohammed Arab (Roaf and Killick 1987: fig. 3), Fisna (Numoto 2003: figs. 7–11), Jessary (Numoto 1990: fig. 4 n. 64 and 65), Karrana 3 (Rova 1993: pl. XXIV n. 150 and 165) along the Tigris, and

[4] Ninevite V contexts were also excavated in Tepe Gawra and Tell Billa (Speiser 1933 and 1935).

Brak (Matthews 2003ba: 5.57 n. 28) and Leilan (Schwartz 1988: fig. 46 n. 7 and 8) in the Syrian Jazirah.

The "Incised Grey Fine Ware" type (T6/2) also occurs frequently (Chart 1, Table 1). The forms are usually cups or bowls in a greenish grey fine ware with no visible inclusions. Dots or lines occur as incised decoration. Similar specimens are attested at Karrana 3 (Rova 1993: pls. XXV n. 196 and 197), Fisna (Numoto 2003: fig. 12:102), Mohammed ʿArab (Roaf 1983: fig. 4:2) in the Eski Mosul area, but also at Nineveh (Gut 1995: pl. 93:1299–1301, 1305–1307), and in the Upper Khabur basin at sites such as Brak (Matthews 2003ba: figs. 5.61:2–5, 5.66:15, 5.67:4), Barri (Biscione 1998: fig. 16:1), Leilan (Schwartz 1988: figs. 31:11, 14; 32:4, 12, 15; 40:2–6; 43:11).
Other types attested by only one to a handful of sherds are: the "Fine Beaded Rim Bowl[5]" (T6/8); the "Excised Grey Fine Ware[6]" (T6/3); the "Vertical Grooved Fine Ware" (T6/4); the "Pointed Fine Ware Base[7]" (T6/7); the "Holemouth Pot with Crescent Lug[8]" (T6/9).

PERIOD 6 – Pottery Types	
T6/0	5
T6/1	12
T6/2	9
T6/3	3
T6/4	1
T6/5	16
T6/6	26
T6/7	1
T6/8	6
T6/9	1

Table 6.7.1 - Number of Sherds for each type.

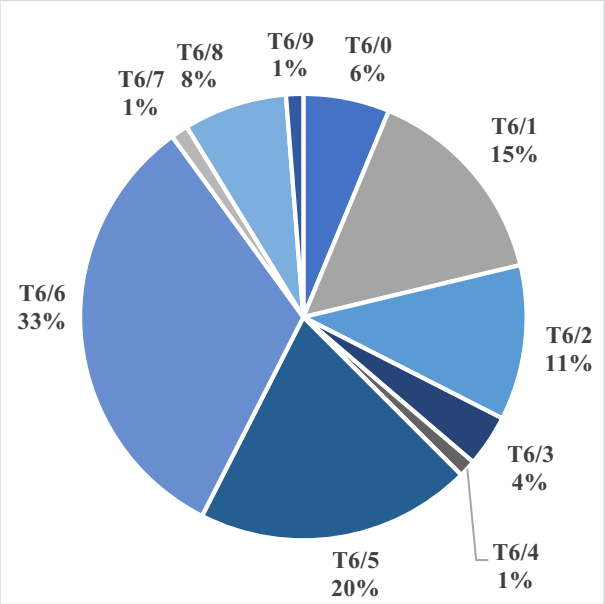

Chart 6.7.1 - Types attested for period 6.

[5] This is usually considered a very common type of Ninevite Period, see Mallowan 1964: 145; Schwartz 1985: 56; Rova 1988: 59.
[6] The type is commonly considered as diagnostic for the final phase of Ninevite V period (Grossman 2014) but it is also mainly present in the Syrian Jazirah sites (i.e. Fortin and Schwartz 2003) and it is only occasionally present in northern Iraq assemblages (i.e. Roaf and Killik 2003). Therefore, the low number of excised sherds recorded in TGAS area, as in LoNAP and EHAS (Gavagnin *et al.* 2016; Pfälzner and Sconzo 2017) could be related to a regional characteristic of Ninevite V repertoire.
[7] This type is quite uncommon, but a large group of examples of this type were collected by THS at Hamoukar in a single spot of the lower town (Ur 2010: 251-252, fig. B.17 n. 11-13).
[8] Also this type is usually widespread, see Numoto 1992: fig. 9 n. 105; Schwartz 1988: fig. 35 n. 1, 2; Matthews 2003a: figs. 5.56 n. 18; 5.58 n. 4, 15 and 30.

Fig. 6.7.1 - Ninevite V Period Pottery Types.

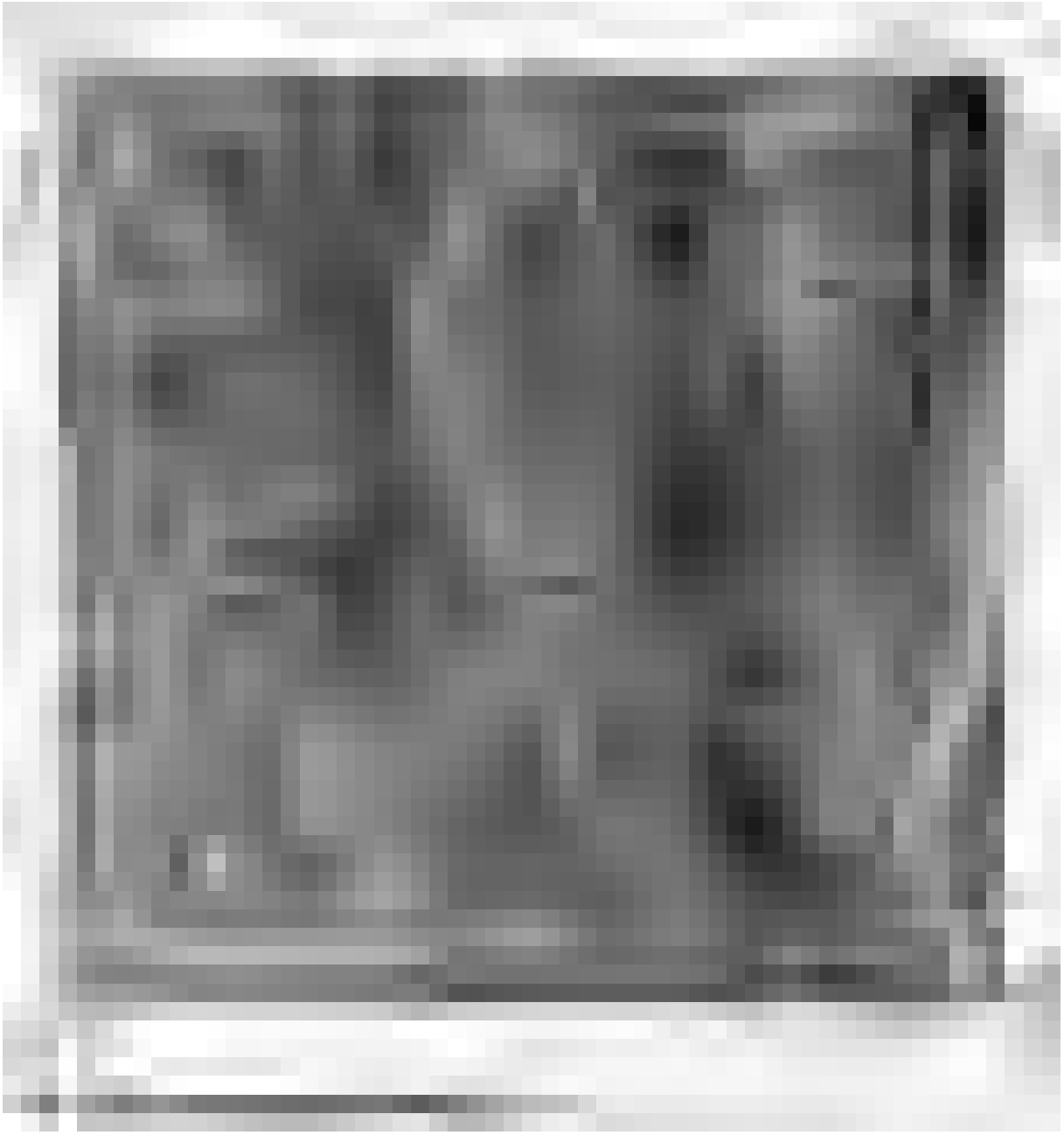

Fig. 6.7.2 - Ninevite V Settlement Development in TGAS area.

Settlements and settlement pattern

TGAS team identified only 13 Ninevite V sites (0,13 site/km^2) with a total aggregate area of 28,2 ha. Five sites yielded only traces of occupation (more than one third of the total settlements). During this period many settlements were abandoned and only 54% of Ninevite V sites present a continuity in the settlement from the previous period. Indeed 38% of the sites are new foundations and 8% are resettled sites, this data show clearly a shift in the settlement from the Late Chalcolithic mounds to new areas or to previously abandoned settlements.

The Ninevite V sites in TGAS area are generally very small, but a two-tier settlement hierarchy can be recognized. Considering only the sites with minor or major occupation, two ranks can be observed: the first includes Tell Gomel (site **40**, 8 ha); the second comprises all the other smaller settlement (generally smaller than 1 ha), with the only exception of two sites site **187** (2,2 ha) and site **339** (2,9 ha) that are slightly bigger (Table 6.7.2).

The sites are aligned along the Gomel River, along the Nardush river or along a small wadi in the western central area of TGAS area (fig. 6.7.1).

The sites are mostly flat or low mounded (Chart 6.7.2), but to the nature of Ninevite V settlement pattern, characterized by very small villages, I don't exclude the possibility that some small sites are completely buried, in the bigger high mounded sites, by later occupation layers or alluvial sedimentation.

Sites **801**, **803** and **874** are typical Ninevite V rural settlement, they are very small (less than 1 ha), flat and characterized by a strong Ninevite V occupation and only a limited later occupation. They would represent the perfect sites where to carry out extensive excavation in order to shed light on the Ninevite V culture in the Transtigridian region.

It must be pointed out, in fact, that most of the information regarding Ninevite V period in Upper Mesopotamia derives from small deep soundings cutting through for many meters the site surfaces, since at many sites Ninevite V levels were deeply buried in multi-period mounds. The almost only exceptions are the two small mounded sites of Tell Atij and Tell Raq'ai, in the Middle Khabur, that were extensively excavated (Fortin and Swartz 2003). For this reason, at the moment we have a very poor knowledge of the spatial and functional organisation of Ninevite V settlements and their social structure (Grossman 2014: 92), but we hope that new excavations in the heart of Ninevite V central province will bring us to a better understanding of this crucial phase.

In the whole LoNAP region there is a decrease in the settlement from the LC 3-5. A total number of 85 sites was identified, with an aggregate area of 143,98 ha. The sites are very small (in average c.

1,7 ha) and dispersed in the landscape with the major concentrations in the Navkur and Ba'dreh Plains. They are always located very close to watercourses.

Contrary to all the other survey results from Upper Mesopotamia, from UZGAR and EHAS surveys preliminary results seems that, in their region, the number of settlements increase during the Ninevite V period. UZGAR identifies a total number of 47 sites, with an aggregate area of 43,2 ha. They are very small, less than 1 ha, and scattered (Koliński 2018: 17). Similarly, EHAS preliminary results of the first two survey seasons showed that from the LC3-5 and the Ninevite period sites doubled (Pfälzner and Sconzo 2016: 35-36).

Further north in the Cizre Silopi Plain, TERP recorded the presence of only 14 sites dating to the Ninevite V period. The region witnessed a decline from the previous LC period. Not a single one-period site was identified. The Ninevite V occupation was usually recorded in multi-period sites and only through the presence of few sherds. For this reason, it was difficult to define the dimensions of the settlement, but from a general point of view it is possible to reconstruct a settlement pattern based on several small villages and only a preeminent site of 5 ha (Algaze *et al.* 2012: 22-25).

Moving west in the Jazirah, the NJP recorded 30 sites, with a clear 3 ranks hierarchy in the settlement. el-Hawa the most important site was a 42 ha town, a smaller town of 14 ha represents the second step of the hierarchy and many small satellite village or farms, around el-Hawa and along trade routes completed the settlement pattern of the Ninevite V period. The continuity with the previous period is in this region remarkably low with only a 13% of continuity in respect to the LC. The entire region southwest of Tell el-Hawa was almost abandoned (Wilkinson and Tucker 1995: 48-50).

In the Syrian Jazirah, the THS region experienced the abandonment of the area with only 4 sites recorded for the entire Ninevite V period (from 19 in the LC 3-5). Three of these sites are very small farmsteads of 1,18 ha or less and the other site identified is Hamoukar itself that probably reached 98 ha at the terminal phase of Ninevite V period (Ur 2010: 104-106).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	19	8						x	
93	1			2		x			
96	4		0,5			x			
176	5		0,7					x	
185	1			3			x		
187	9		2,2				x		
339	10		2,9			x			
722	1			3,4	x				
736	2			2		x			
742	1			1,2		x			
801	19	0,8			x				
803	14	0,5			x				
874	9		1		x				

Table 6.7.2 - Ninevite V sites.

Ninivite V Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	3	9,3	2	-	-	1	-
Minor	5	7,3	1	2	1	1	-
Traces	5	11,6	1	3	1	-	-
Tot.	13	28,2	4	5	2	2	-

Table 6.7.3 - TGAS area occupation during the Ninevite V period.

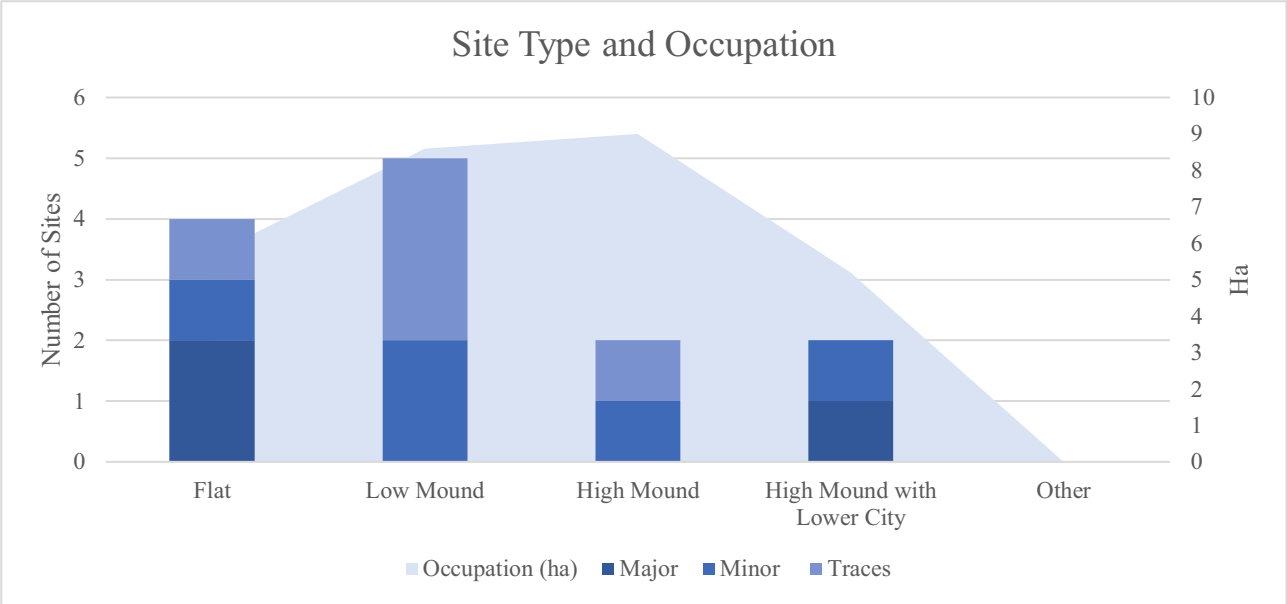

Chart 6.7.2 – Ninevite V site types and occupation for each type (ha).

Interpretation

Even if the Navkur plain was basically not engaged in the Uruk contact dynamics[9], rather following a different and unique regional trajectory, at the end of 4th Millennium BC, the region experienced a period of collapse, abandonment and discontinuity in the settlement occupation. After this phase, the Navkur Plain started to recover and to develop cultural traits typical of the Ninevite V tradition.

Thanks to the results presented here, we can argue that TGAS area, and the Navkur Plain in general, should be included in the core area of Ninevite V region, that had until now its eastern limits in the Tigris east bank (Grossmann 2014: 87).

According to several scholars (Forest 2003: 563-575; Schwartz 2003: 585-592; Matthews 2003b: 132-133; Roaf 2000), the Ninevite V societies took the form of complex chiefdoms, based on non-egalitarian communities, whose elites were maintaining their power through the control of the agricultural surpluses. This hypothesis is sustained by the revival of painted pottery tradition, possibly used by elites as emblems of high status (Boileau 1998), and by the presence of granaries at many Ninevite V sites (for an overview see Matthews 2003b). According to this model, the small village dispersed in the landscape were sites specialized in the production and storing of staples allocated elsewhere (probably in the larger centres presented below), and the rural settlement pattern was

[9] An explanation for the abrupt change in the settlement development of Upper Mesopotamia between the 4th and the 3rd Millennium BC relates with the withdrawal of Southern Uruk enclaves located in strategic areas important for the trade of resources from North to South (Algaze 2005).

reflecting a regional economic system based on the production, storage and distribution of grain products. This model is mainly sustained by the interpretation of the storage buildings found in Tell Raqa'i, and elsewhere, as too large for the needs of only the estimated local inhabitants of the site (Fortin and Schwartz 2003).

On the other hand, other scholars rejected this model, proposing a local consumption (of humans but also livestock) of the grain staples contained in these large storing facilities (Hole 1991, 1999; Pfälzner 2002). In particular, Hole's model proposes a more heterarchical Ninevite V society based on political and economic relationships between sedentary and pastoralist groups (Hole 1991, 1999).

The Ninevite V period also lead to the growth of some few large centres namely Tell Leilan (15 ha) but especially Tell Brak (40-65 ha), Tell Hamoukar (98 ha), Tell el-Hawa (42 ha). The material culture from these big sites and the small rural sites seems not to present differences. How to interpret these large centres is still unclear, they are called sometimes cities, sometimes town, or more cautiously, as in the present work, simply centres[10].

What old and new excavations have shown is that the Ninevite V period was not characterized by a strong social complexity, no chief residence, no temple complexes (only small shrines have been excavated, Schwartz 2000; Matthews 2003b), no written texts have been retrieved so far. The only evidence of a certain degrees of social stratification come from burial assemblages (Bolt and Green 2003; Forest 2003; Schwartz 2003).

The interpretation of the scanty evidence from TGAS results is quite problematic. Even determining the real dimensions of Tell Gomel for any period prior to the massive mid-late 3rd millennium occupation is complicated, notwithstanding the good results given by the intensive survey. In any case, we can argue that Tell Gomel with its 8 ha surface area was the largest centre in the plain during the Ninevite V period.

A single tomb dating to the final phase of the Ninevite V period (around c. 2600 BC, K. Gavagnin pers. comm.) was excavated in a small trial trench dug in the southwestern edge of Tell Gomel lower town. The level in which the pit tomb was dug was situated around two meters under the modern field surface. The relative depth of the tomb should let us reflect to the thickness of the natural alluvial deposit stratification witnessed by the plain.

[10] For an overview on the issue of urbanization during the Ninevite V period see Forest 2003: 573-575.

The tomb presented the inhumation, in a simple pit, of a woman buried with a significant number of grave goods. These goods comprised: a small jar with a small cup inside its mouth; a bronze diadem and a bronze pin; bracelets of bone and stone beads; a belt made of shells; some few carnelian beads and a very large number of small perforated shells[11]; the hind quarters of a small lamb.

If we compared this tomb to the other Ninivite V graves excavated in North Mesopotamia (for an overview see Bolt and Green 2003), we can interpret the finds from Tell Gomel as a case of above-average wealth. Other tombs, that presented also similar grave goods have been excavated in Chagar Bazar, Leilan, Rijim and Mohammed Arab (Bolt and Green 2003: 536-537). This is only a small clue that helps us to locate Tell Gomel in the wider regional spectrum of Ninevite V chiefdoms system.

What emerges from the data collected is that the Ninevite V period in the Navkur plain cannot be interpreted as a simple dispersion of small autonomous and self-sufficient villages, not tied by an internal regional relationship with Tell Gomel. Notwithstanding that we cannot simply translate the Jazirah chiefdoms model in our region, especially not having any information regarding the nature of the small villages scattered in the plain, what we can argue is that Tell Gomel must have been connected in an inter-regional trade/exchange system of peculiar goods as shell, carnelianss and metal objects. Moreover, considering the data coming from the Navkur Plain, the two-tiered hierarchy and the very high density of settlement for the period in discussion (42 Ninevite V sites identified) can suggest an organization of the Ninevite V community around the centre of Tell Gomel, which possibly was seat of an elite that based its wealth and power on the agricultural exploitation of the plain.

[11] Both the perforated shells and the shells used for the disks production are seashells and are likely coming from the Persian Gulf.

6.8 The Mid-Late 3rd Millennium BC (2600-2000 BC)

Pottery

Regarding the problematic connected with the identification of distinctive types among the surface assemblages belonging to the Mid-Late 3rd Millennium BC (for an overview see Ur 2010: 252-253), the ALRG decided to follow the other surveys of Upper Mesopotamia in considering the types as part of a single large period (Period 07).

An impressive number of pottery fragments was collected: 1163 of which 534 from the Tell Gomel intensive survey. The TGAS assemblage fits well among the repertoires of Upper Mesopotamia. Particularly, good comparisons could be found in the well-known mid-late 3rd millennium pottery production of the Jazirah (i.e. Beydar, Leilan, Muhammed Diyab, Brak, Chagar Bazar and many others) but also from the Tigridian region (i.e. Nineveh, Jessary, Fisna and Jigan).

Looking at the types attested in TGAS region (Chart 6.8.1), we can observe that unfortunately c. 61% of the pottery belong to the untyped group (T7/0). This fact is due to the almost complete absence[12] in the WCT of types belonging to the early sub-phase of this period, namely the EJ3[13]. Indeed, the majority of the diagnostic types included in the WCT belong to the "Akkadian" and more limitedly to the "post-Akkadian" sub-phases and must be dated to the EJ4.

The more attested type in the TGAS repertoire is the "Comb-Incised Decoration" type (T7/4, 8,7 %, Chart 6.8.1). This type is characterised by a wavy and/or horizontal decoration made with a comb on the external surface of the vessel (usually medium-large jars), sometimes a comb-impressed decoration and /or an applied rope-like rib are also present. The fabric is usually chaff tempered and the colour can vary from buff to greenish. The type can be distinguished by a similar Islamic production on the base of the fabric, especially by the presence of grits inclusions in the Islamic specimens. Comparisons to this very common type can be found in the Syrian Jazirah (Brak, Oates 2001: fig. 403 n. 299, fig. 405 n. 324 and 325; Hamoukar, Gibson *et al*. 2002: fig. 18; Leilan, Frane 1996 fig. 84 n. 2; Beydar, Rova 2003: pl. 9; Chagar Bazar: McMahon and Quenet 2007: pl. 3.20 nn. 98 and 99), in the Iraqi Jazirah (Taya, Reade 1968: pl. LXXXV n. 20; Rimah, Postgate *et al.* 1997: 27), and also in the Tigridian region (Jessary, Numoto 1990: fig. 8 nn. 147-149; Jigan, Oguchi 2003).

[12] With the exception of the "Indented Jar Rim" type (T7/8), of the "Folded Jar Rim" type (T7/14) and of the "Folded Ridged Jar Rim" type (T7/15).

[13] "Common Ware" types belonging to the EJ3 (with very clear comparison with Tell Beydar assemblage) were recognized in all LoNAP region and included in the T7/0 type (K. Gavagnin pers. comm.).

Another very common type recorded in TGAS assemblage is the "Beaded Cup Rim" (T7/19; 8%, Chart 6.8.1). This type of rim occurs not only in cups but also in fine fabric beakers and small bowls, and also in fine chaff tempered bowls. The type is very diagnostic for the Akkadian and post-Akkadian period (McMahon and Quenet 2007: 86; Ur 2010: 243; Rova 2011: 73) and it has been found for instance at Tell Leilan (Weiss 1983: fig 10 n. 7) and Tell Hamoukar (Gibson *et al.* 2002: fig. 22 nn. 20-26).

Only one example of the so called "Recessed Beaker Rim" (T7/23, Table 6.8.1), a thinned variant of the beaded rim, was found. This type occurred in the Syrian Jazirah at sites such as Tell Beydar (Bretschneider and Jans 1997: pl. I n. 5), Chagar Bazar (McMahon and Quenet 2007: pl. 3.9 nn. 40–43) and Tell Brak (Oates 2001: fig. 422 nn.716–22).

Another similar rim, widely attested, is the "In-turned Outside-Folded Rim Bowl" (T7/26; 3,6%, Chart 4). This type occurs, for instance, in the assemblages from Tell Brak (Oates 2001: fig. 419 nn. 649-651) and Chagar Bazar (McMahon and Quenet 2007: pl. 3.12 n. 66, pl. 3.13 nn. 68 and 69).

Very diagnostic and common types are also the "Indented Jar Rims" (T7/8; 5,1%, Chart 6.8.1), the "Folded Jar Rims" (T7/14; 5,8%, Chart 6.8.1) and the "Folded Ridged Jar Rim" (T7/15; 1,6%, Chart 6.8.1). They are found in contexts dating from the EJ3 to the post-Akkadian period, they are yellow to greenish in colour but sometimes they occur also in buff colour. The fabric is usually slightly chaff tempered and the external surface is often comb-incised decorated. Comparisons can be found in many assemblages of the Syrian Jazirah (Leilan, Calderone and Weiss 2003: fig. 10 nn. 1-3, Weiss *et al.* 1990: fig. 26 n. 1; Brak, Oates 2001: fig. 459 nn. 1544, 1547 and 1548, fig. 429 n. 864 and 865, fig. 460 nn. 1363-1366; Beydar; Gavagnin 2012a: tav. 39 n. 1, 41 n. 2, 42 n. 2, Gavagnin and Mas 2014: figs. 6 n. 2, 4-11, fig. 9 nn. 11-14; Chagar Bazar, McMahon and Quenet 2007: fig. 3.43 nn. 194-200, fig. 3.44 nn. 201-204; Hamoukar, Colantoni and Ur 2011: fig. 27 nn. 154 and155).

The "Flat Bowl Base" type also occurs in TGAS assemblage (T7/1, 2,1%, Chart 6.8.1). This type is characterized by a simple flat base, often with visible string-cut traces, the fabric is usually chaff tempered but also some well fired, mineral tempered examples are present. The type is well known in the Syrian Jazirah (Brak, Oates *et al.* 2001: fig. 432 nn. 940 and 942, fig. 438 n. 1099; Beydar, Bretschneider and Cunnigham 2007: fig. 25 and 27, Arbid and Mozan, Rova 2011: pl. 13 nn. 6 and 8).

A dozen of sherds belonging to the "Blue-Grey Stoneware" type (T7/5; 1%, Chart 6.8.1) were collected during the TGAS survey. This type occurs in many shapes and is diagnostic thanks to the peculiar fabric that is very fine, heavy-fired and without any inclusions. The colour varies usually from dark grey to blue-grey to green and it is often possible to observe yellow horizontal streaking

on the surfaces. The production centre of this pottery type must have been in the central and eastern Khabur, since the Stoneware appears in considerable amount at sites such as Tell Brak, Tell Mozan, Tell Leilan, Tell Mohammed Diyab and Tell Hamoukar (for an overview see Falb *et al.* 2014:181).

The other types that occur in less than 1% of TGAS repertoire are: the "Lugged Bowl" (T/9); the "Lid-Seated Jar Rim" (T7/16); the "Vertical Ribbed Jar Rim" (T7/21); the "Post-Akkadian Stoneware" (T7/7); the "Triangular Cooking Pot Rim"; the "Shallow Flaring Vat Rim" (T7/10); the "Grey Ware Round Bowl Rim" (T7/13) and the "Fine Straight Sided Cup Rim" (T7/20).

PERIOD 7 – Pottery Types	
T7/0	706
T7/1	25
T7/4	101
T7/5	12
T7/7	2
T7/8	71
T7/9	9
T7/10	2
T7/13	1
T7/14	68
T7/15	19
T7/16	5
T7/17	2
T7/19	93
T7/20	1
T7/21	3
T7/23	1
T7/26	42

Table 1.8.1 - Number of sherds for each type.

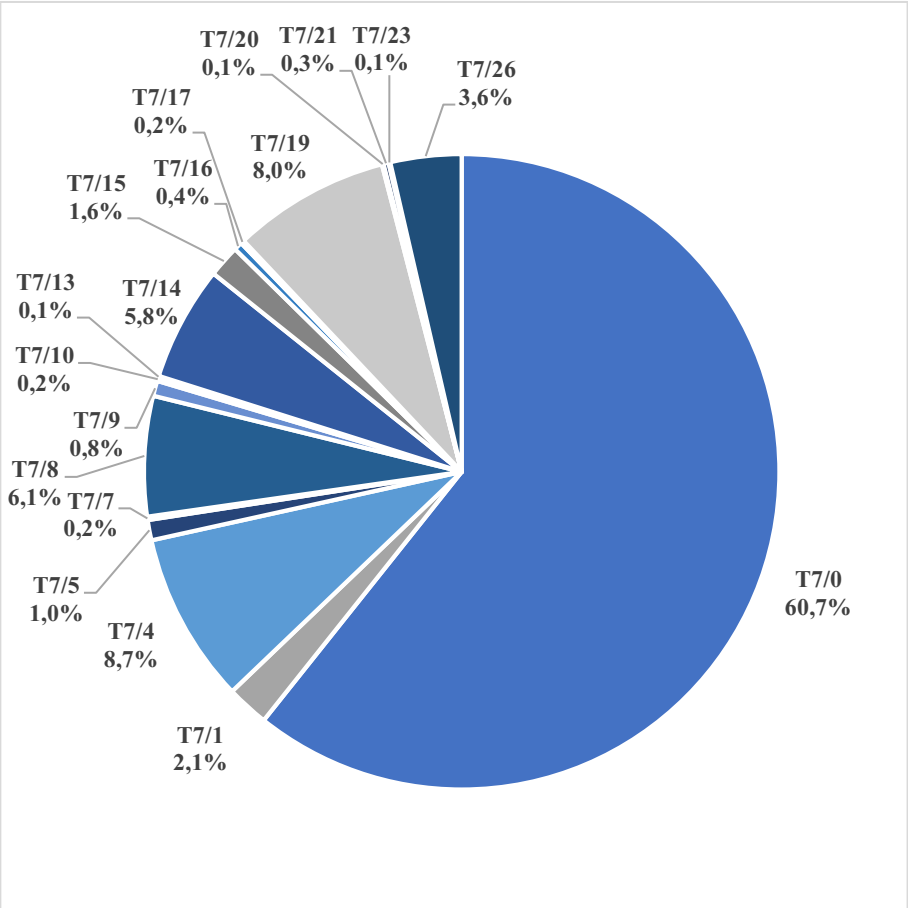

Chart 6.8.1 - Number of sherds for each type

Fig. 6.8.1 - Mid-Late 3rd Millennium Period Pottery Types.

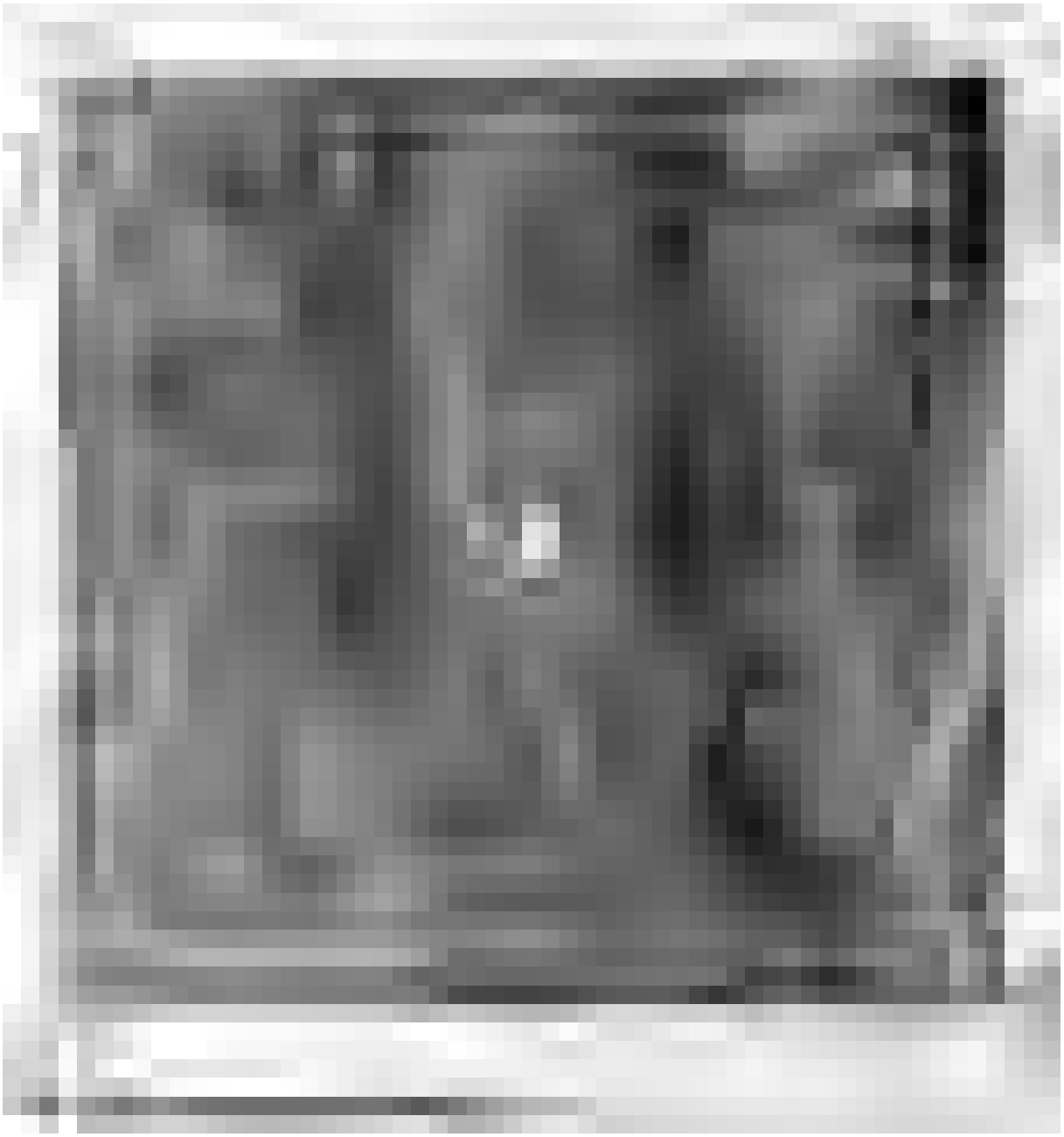

Fig. 6.8.2 - Mid-Late 3rd Millennium Settlement Development in TGAS area.

Settlement and Settlement Pattern

During the Mid-Late 3rd Millennium BC, the TGAS area witnessed a fourfold increase in the settlement number from the previous period. With 57 sites, a settlement density of 0,57 site/km^2 and 118,9 ha of total aggregate area (2,1 ha of average dimensions), this period is for the Navkur Plain the second peak in the human occupation after the Neo-Assyrian period. Notwithstanding the remarkable flourishment of settlements all over the plain, it is important to point out that more than one third of the sites (21) presented only traces of occupation. Moreover, 9 of them are flat sites and it is important to stress that the fragments collected on their surface could be alternatively interpreted as traces of manuring activities arrived on the site (occupied in other periods) through the ploughing activities. Regarding the continuity with the previous period, the fourfold increase brought to the foundation of completely new settlements (40%), while a 37% of resettlement and a 23% of continuous settlement were also recorded.

A three tier-hierarchy can be recognized in TGAS settlement pattern (considering the sites with minor and major occupations). The primary site was Tell Gomel (23 ha), three secondary sites can be identified in site **722** (8,7 ha) site **106** (7 ha), site **604** (6,6 ha), all the other sites are small villages, hamlets or single farmsteads ranging between 0,3 and 3,3 ha.

Sites **722** and **604** are similar and quite peculiar due to their shape and extension. Both sites are flat, very large and yielded a large number of pottery fragments.

In the LoNAP area, the sites number more than doubled. A total number of 229 sites were detected, with a total aggregate settled area of 443 ha (1,9 ha of average dimensions).

In the nearby area of UZGAR, there is a dropping in the number of sites. From 47 Ninevite V to 24 sites dating to the mid-late 3rd Millennium. The sites are small villages, with the only exception of a 30-ha site in the eastern area of the Navkur Plain (Koliński 2018: 17-18).

EHAS recorded a significant growth in the number of settlements from the previous period with 26 sites dating to this period. The most important site in EHAS region for this period is Bassetki, that covered 50 ha in this phase. Bassetki features a large lower town and many satellite settlements (Pfälzner and Sconzo 2016: 36).

The TERP recorded a completely different settlement pattern with only 6 sites, in full continuity with the Ninevite V period and only one larger site of 8 ha (Algaze *et al.* 2012: 25-27).

In the Jazirah, a three-tier hierarchy is recorded. In the NJP, 20 sites were identified, with continuity in only 25% of the settlements. This period also brought to the extinction of the small satellite sites around Tell al-Hawa. The settlement hierarchy is dominated by Tell al-Hawa (66 ha) as primary town,

as secondary towns 3 settlements were detected (10-19 ha) and as third rank a conspicuous number of small villages was identified (Wilkinson and Tucker 1995: 51-53).

Similarly, in the THS, 15 sites were recorded: Hamoukar (98 ha), a site of around 6 ha and 13 sites smaller than 3 ha. From the site typology point of view, seven settlements were prominent mounded sites, while the other eight were very low mounded hamlets (Ur 2010: 106-110).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	534	23						x	
60	17	2,3				x			
89	3		2,4					x	
91	3		2				x		
93	12	2				x			
94	17	2					x		
95	33	1					x		
96	8		1			x			
104	3		1,5				x		
105	5		0,7					x	
106	14	7						x	
128	2			1			x		
130	5		0,7			x			
174	5		0,8			x			
176	8		1,2					x	
179	2			2,3			x		
185	8		1,9				x		
186	31	2,7						x	
187	13	0,6					x		
232	1			0,7			x		
335	9		2,2			x			
339	2			2,9		x			
354	1			0,5			x		
423	4		1,8			x			
480	4		0,1				x		
481	2			2,8		x			
482	1			0,5			x		
483	2			0,8	x				
484	1			1		x			
560	26	0,3				x			
562	67	2,6				x			
567	8		0,6			x			
586	30	3,3			x				
587	1			0,2	x				
604	134	6,6			x				
713	28	0,6			x				
715	12	0,8			x				
722	78	8,7			x				

732	2			0,8		x			
736	4		2			x			
741	35	3,3			x				
742	11	2,7				x			
751	50	2			x				
763	1			0,4		x			
769	2			1	x				
792	18	2,4				x			
796	1			1,3	x				
801	2			0,8	x				
803	4		0,5		x				
818	2			0,8		x			
828	2			4,3					x
847	11	0,6			x				
851	1			0,2	x				
864	1			0,4	x				
874	1			1	x				
944	1			0,1	x				
974	68	1,2				x			

Table 6.8.2 - Mid-Late 3rd Millennium sites.

Mid- Late 3rd Millennium Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	21	75,7	8	7	3	3	-
Minor	15	19,4	1	7	4	3	-
Traces	21	23,8	9	6	5	-	1
Tot.	57	118,9	18	20	12	6	1

Table 6.8.3 - *TGAS area occupation during the Mid-Late 3rd Millennium BC.*

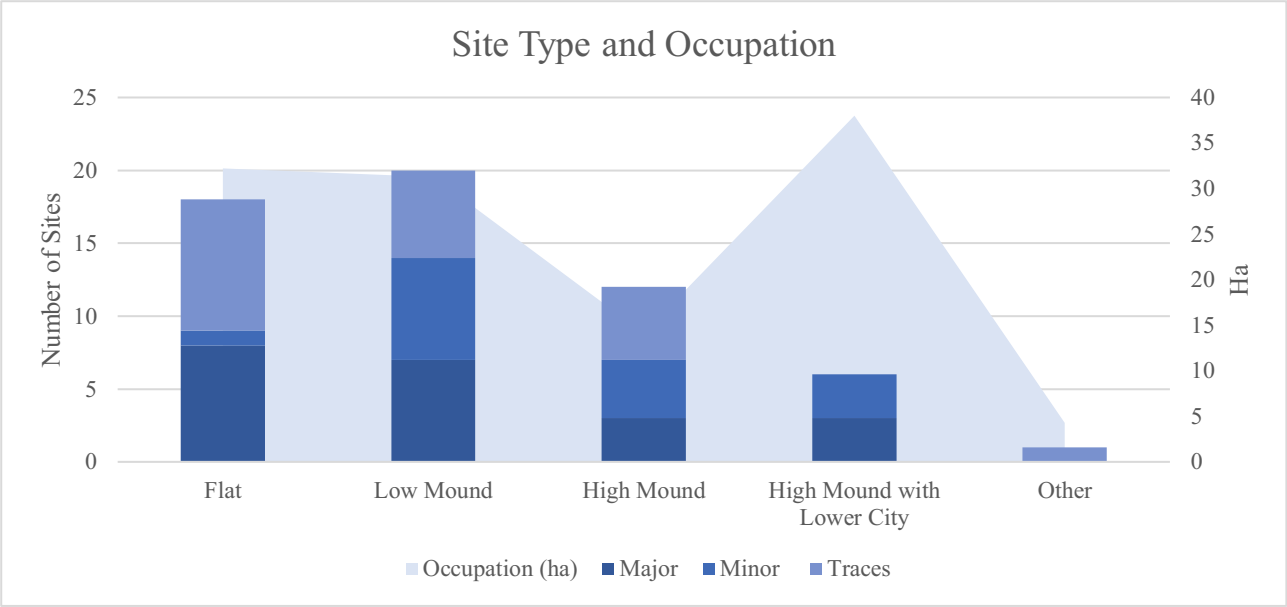

Chart 6.8.2 - Mid-Late 3rd Millennium site types and occupation for each type in (ha).

Interpretation

The end of the Ninevite V period corresponds to the urban explosion that characterized Upper Mesopotamia in the middle of 3rd Millennium BC. During this transition many sites experienced a very rapid transformation into cities. This phenomenon is well documented in the Khabur Basin at Leilan (90 ha, Weiss 1983 and 1986), Brak (70 ha, Ur *et al.* 2011), Mozan (125 ha, Buccellati and Kelly-Buccellati 1999), Hamoukar (105 ha, Ur 2010), and in North Iraq at el-Hawa (66 ha, Wilkinson and Tucker 1995), Koshi (90 ha, Kepinski-Lecomte 2001) and Taya (155 ha, Reade 1967). In the Tigridian region, Nineveh (the actual dimensions are not clear[14], but if we consider all the Kuyunjik mound as occupied during this period, the site was at least of 45 ha) and Bassetki (50 ha, Pfälzner and Qasim 2017) must have been also urban centres. In the Erbil Plain, Tell Baqrta (90 ha, Kopanias *et al.* 2016:122) is another recently discovered third-millennium urban center.

The main cities of the Jazirah controlled a densely inhabited countryside of villages and hamlets, the territory was reorganised for a full agricultural exploitation of the lands with a dense network of hollow ways connecting the urban centres with their satellite settlements.

The evenly location of these prominent settlements at intervals of 20 to 40 km along Upper Mesopotamia seems to suggest the presence of a network of interdependent polities (Wattenmaker 2009; Wilkinson 2009). These cities constitute some new territorial entities connected by the

[14] Regarding Nineveh occupation in the Late 3rd Millennium see Gut *et al.* 2001 and *contra* Westenholz 2004, but none proposed an estimation of the city dimensions in the second part of the 3rd Millennium BC.

development of trade and cultural exchange among them but also with the neighbouring regions (Lebeau 2011).

In the Navkur Plain, the urbanisation experienced a different trajectory not comparable with the one witnessed in the Jazirah or even more in Southern Mesopotamia. If urbanisation can bring to the extinction of small satellite sites, as it is clearly what happened in the second part of 3rd Millennium around Tell al-Hawa (Wilkinson and Tucker 1995: 51-53; 180, fig. 37) but also around Tell Leilan (Stein and Wattenmaker 2003: 365), in the Navkur plain no nucleation phenomenon is registered. On the contrary a large number of sites starts to stud the plain, but it cannot be either considered a phenomenon of ruralisation: first of all, because the number of sites grows but is not connected with a deurbanization, since no urban sites were recognized in the Ninevite V phase, and, second of all, because in the meantime, during the flourishment of small villages and satellites sites started to appear, Tell Gomel began to witness an unprecedented growth.

To start, we should introduce the issue of the interpretation of Tell Gomel as an urban site in the second part of 3rd Millennium BC. The first issue to address is the definitions of "city" and "urban". A good definition is the one proposed by Matney (2012: 561):

> *"The city (as both a concept and reality) was by then the most important and most permanent social, political, economic, and technological nexus for all social groups, although the disparate elements of the population would have participated differentially in urban life."*

This "functional definition" helps us to not invoke a long list of features to define a site as a city and it does notconsider the role of site's dimensions in defining an urban settlement. The city is considered by Matney a focal node of the landscape, a meeting point, "*a nexus for information and commodity exchange*" (Matney 2012: 560).

Following also a more "demographic definition" we should additionally argue that cities have a large and dense population living in them (Smith 2002; Cowgill 2004). Therefore, we can't exclude the scale as an important feature to identify a city, especially because estimate a site dimension is one of the main and most tricky goals of archaeological surveys.

The dimensions of Tell Gomel are unfortunately difficult to establish due to the strong erosion carried out in the wester half of the site by the river but considering that the site should have been around 42 ha before erosion (one third more than the site's size at present, 28 ha) we can estimate the dimension of the mid-late 3rd Millennium settlement as c. 35 ha. A site of such dimensions would be considered as secondary site in the Khabur region among the much bigger sites listed above, but it would be considered in any case urban as urban is considered, for instance, the much smaller site of Tell Beydar (c. 25 ha, Lebeau *et al.* 2005).

The reasons why Tell Gomel (and any other site in the plain) has never reached the size of the huge sites of the Jazirah are difficult to grasp. What we know is that multiple environmental, economic, social and political causes must have played a role in the different urbanisation dynamic that took place in the Navkur Plain. In fact, from simply an "environmental" point of view (see Chapter 3), the plain represents an ideal region for human occupation and the remarkable favourable conditions in terms of availability of surface and underground water and deep fertile soils reflects in the high site density recorded in the plain for all its history of occupation.

Considering the maximum size of Bronze Age sites in Upper Mesopotamia, T.J. Wilkinson argued the presence of a ceiling at around 100 ha beyond which sites could not grow in clear contrast with the 400 ha dimensions of Lower Mesopotamia sites (Wilkinson 1994). According to Wilkinson model, the Bronze Age sites of northern Mesopotamia exploited an intensively cultivated area around the settlement for self-sustainment and they were additionally sustained by the agricultural production of satellite communities (Wilkinson 1994). This central production zone (with a radius of c. 10-15 km) was able to sustain only the population of the primary sites (calculated between 10.000 and 20.000) and the other small satellites inside this zone; beyond this radius the production at a long distance from the main settlement would have been not convenient. Consequently, the sites in Upper Mesopotamia never grew more than a certain size. In my opinion, one of the reasons of the limited dimensions of Tell Gomel are related to the small extension of the Navkur Plain and to the presence of another urban site of c. 30 ha (identified by UGZAR n. S074, see Koliński 2018: 17) at the eastern edge of the plain (c. 20 km from TELL Gomel). Indeed, the Navkur Plain, notwithstanding its extraordinary favourable conditions, is a close and small niche limited by the presence of mountains and hilly areas. The agricultural production area of the plain would not be able to sustain a site of 100 ha and the c. 150 other small villages (plus one more urban site, like S074) identified in the Navkur Plain by LoNAP and UGZAR. Furthermore, the topography of the plain, surrounded by hills and mountains, would have limited the benefits of importing agricultural products from outside the Navkur.

The relationship between the new territorial entity at Gomel and the pastoral-nomadic component of the society must also be at the basis of the trajectory experienced by Tell Gomel during its growth. The presence of mobile pastoralist is sometimes deduced by the presence of wide non-settled area, interpreted as pasturelands, in densely occupied regions (Wilkinson 2003: 120-122) or by the appearance of a very low number of sherds on the sites (Lyonnet 1996: 371-372; Ur 2010: 64-65). The Navkur Plain is, as already emphasised (see Chapter 3), a "landscape of destruction" and it suffered a too strong human attrition to permit the survival of the ephemeral traces of non-sedentary occupation (Morandi Bonacossi *in press*). We have therefore only scanty evidence regarding the

nomadic presence in the Navkur Plain. The only true evidence of this presence is the large number of cairns identified by the LoNAP team along the Zagros piedmont and the northern piedmont of the Jebel Maqloub and unfortunately not dated yet (Morandi Bonacossi *in press*). On the other hand, written sources tell us about the large presence of semi-nomadic communities in Upper Mesopotamia at least starting with the late 3rd Millennium BC (Sallaberger 2007). Furthermore, we know that the pastoral communities were crucial for EBA urban economy (Wattenmaker 2009), but it also true that access to pasturelands was not homogeneous across all northern Mesopotamia (Wilkinson 2009). This latter point was critical in the Navkur Plain. As we already stressed above, the Navkur plain is a geographic niche, highly exploited from an agricultural point of view and with presumably very limited areas dedicated to pasture. The area that were probably used as pasturelands are the hilly interfluvial areas in the norther part of the plain and the southern limits of the plain, especially the area of the modern city of Bardarash that presents a remarkable void of settlements. These areas represent only marginal and very limited space that cannot be comparable with the possibility of other sites of Upper Mesopotamia that were able to have a direct access to the Mesopotamian steppe. This inaccessibility to extended pasturelands could have played a role in the economic strategy carried out by Gomel. The Navkur Plain did not participate in the high-risk/high-profit strategies carried out by the economies of the zone of uncertainty (Wilkinson *et al.* 2014), with the consequence that it never reached the size of other Mesopotamian cities. On the other hand, maybe precisely this more reliable economic strategy permitted the survival of the urban character of the site for a large timespan (with almost the same extension until the end of the MBA). Almost all the largest sites in the 80-120 ha range experienced a short trajectory (300-500 years) of grow and decline (Wilkinson *et al.* 2014; Pfälzner 2010; Danti and Zettler 2007) during the mid-late 3rd Millennium BC.

Notwithstanding the considerations presented above regarding the size of Tell Gomel, it is undeniable that the site must have played a central role in the plain during the mid-late 3rd Millennium BC. It is from this moment that the site started to be a landmark in the plain with an extended lower town, possibly walled (due to its steepness), and a (walled?) upper town[15]. The c. 30 ha site identified by UGZAR doesn't have the monumental characteristics of Tell Gomel. From the preliminary information available[16], the site (S074) is a small and low tell with an extended lower city.

Another important feature, identified through the archaeological survey that can help us to better sketch the urban character of Tell Gomel is the conspicuous number of small satellites settlements

[15] The 2018 excavations at Tell Gomel revealed the presence of a wall of the high mound belonging to the MBA phase. See Morandi *et al.* forthcoming.

[16] Information from the "UGZAR Project – Catalogue of the sites (2013)" freely available at https://www.academia.edu/5709687/UGZAR_The_site_catalogue_2013_part_2_Sectors_D1-F5 (accessed 10/05/2018).

and larger villages in its hinterland. Indeed, an important aspect of cities is that they cannot sustain themselves and they need to survive a certain number of smaller agricultural villages to provide them with the food that they are not able to produce autonomously (Ur 2017c). That is why it is now widely recognized that no ancient site, especially an urban site, can be really understood without considering its hinterland (Wilkinson 2003, 100; Ur 2010, 1).

The intensive survey carried out with tight fieldwalking transects, in a radius of c. 2.5 km from TELL Gomel, helped us to better understand the area around the new city in the mid-late 3rd Millennium BC. An outstanding number of small, flat or almost flat, sites belonging to this period was identified thank to the intensive methodology applied. Many of these sites were almost imperceptible in the aerial and satellite images and they were even difficult to notice while walking nearby them and not exactly "on them". Thanks to the results obtained through this approach we are now able to understand better the settlement of the hinterland of Tell Gomel, which is characterized by small satellite sites surrounding the main tell, but also to have some information regarding some agricultural and economic strategies carried out by the city. Indeed, another interesting result obtained by the intensive survey methodology used (described in Chapter 2) is the recording of the field scatters. As already described in more details elsewhere (see Chapter 4), the presence of a high percentage of mid-late 3rd Millennium fragments in the field around Tell Gomel indicate that the field were manured with the residues and rubbish of the city to improve the agricultural productivity. This strategy has to be read as symptoms of an increasing need of better yields for a growing population.

The Second Millennium BC

6.9 The Middle Bronze Age

Pottery

For this period TGAS collected 1315 diagnostic fragments, of which more than half are coming from the Tell Gomel intensive survey. The largest group, 46% of the total sherds, corresponds with the diagnostics that were not possible to insert in any of the WT 2013 types even if they were clearly belonging to the first half of the second millennium BC and that we can define as Common Ware (Coppini 2018). The best analogies to the TGAS MBA assemblages could be found in the excavated sites of Tell Rijim (Koliński 2000) and Tell Rimah (Postgate *et al.* 1997) in Northern Iraq or in the excavated sites of the Syrian Jazirah such as Tell Barri (Baccelli and Manuelli 2008; D'Agostino and Coppini 2014), Tell Brak (Oates *et al.* 1997; McDonald and Jakson 2003), Tell Leilan (Frane 1996) and Tell Mozan (Schmidt 2013). The TGAS materials also find parallels in the assemblages published in the reports of surveys in the plains that extend east to the Tigris such as the TERP (Algaze *et al.* 2012), EHAS (Pfälzner and Sconzo 2016) and, as expected, they fit in the LoNAP MBA assemblage (Gavagnin *et al.* 2016).

The most common type (Chart 6.9.1) for the period is the "Khabur Painted Ware" (T8/1). This peculiar type is considered diagnostic for the MBA period even if it continues to be present, as "Younger Khabur Ware", in the Mitanni period (Oguchi 1997, 2000). The Khabur Painted Ware production is characterized by a monochrome (from black to brownish or to dark red) painted decoration mainly on the external upper part of the vessel or on the rim. The ware can be chaff-tempered or mineral tempered. The decoration is often limited to horizontal painted bands (T. Rimah, Postgate *et al*. 1997: 90; T. Rijim, Koliński 2000: pls 41 A, B; T. Brak, Oates *et al.* 1997: fig. 193).

The second most attested type (Chart 6.9.1) is the "Channel Base" (T8/6), this type features a groove around the base's outer edge and it occurs both in common and grey ware (T. Brak, Macdonald and Jackson 2003: figs. 7.25 and 7.26; T. Rimah, Postgate *et al.* 1997: pls 44 and 54; T. Rijim, Koliński 2000: pls 42 and 43), it is considered highly diagnostic for all upper Mesopotamia and it is frequent in the NJP (NJP type 38: Wilkinson and Tucker 1995), the THS (12,6% of MBA sherds: Ur 2010) and the LoNAP (Gavagnin *et al.* 2016).

Another very frequent type (Chart 6.9.1) is the "Horizontally Grooved Jar Shoulder" (T8/2). It is common in the Syrian Jazirah (T. Leilan, Frane 1996: figs. 71-77) and Mohammed Diyab (Nicolle 2006: figs. 7.26), it can appear with chaff-tempered or mineral-tempered ware and sometimes with a painted decoration (T. Rijim, Koliński 2000: pls. 36 and 38).

The other types attested are less frequent (under 3%[1], Chart 6.9.1). Among these types there is the "Burnished Grey Ware" (T8/3) that is characterized by a soft burnishing and a grey fabric, fine-chaff-tempered or mineral-tempered. The type is attested only for open shapes and it occurs in several different types of bowls (also "Externally Grooved Bowl"), but especially in carinated bowl with ridges on the upper part of the walls (Coppini 2018: fig. 4 a-c). The MBA "Burnished Grey Ware" can be easily distinguished from the Late Chalcolithic one for the fabric and temper (Ur 2010) and can be distinguished from the later Mitanni specimens especially for the shapes in which it occurs and for the slightly lighter colour (Gavagnin *et al.* 2016).

Another less frequent type is the so-called "Concave Fine Bowl Base" (T8/8). It is a finer and smaller version of type T8/6 (Wilkinson and Tucker 1995: type 38, p. 211, fig. 70 n. 13-14).

It is interesting to notice how the results of the new excavations in the region, such as Tell Gomel (Coppini 2018) and Kurd Qaburstan (Schwartz 2016), are confirming the unity, in terms of material culture, of the East-Tigris area of Iraqi Kurdistan and the Iraqi and Syrian Jazirah regions.

PERIOD 8 – Pottery Types	
T8/0	503
T8/1	394
T8/2	49
T8/3	26
T8/4	2
T8/6	90
T8/8	36
T8/9	1
T8/13	1

Table 6.9.1 - Number of sherds for each type.

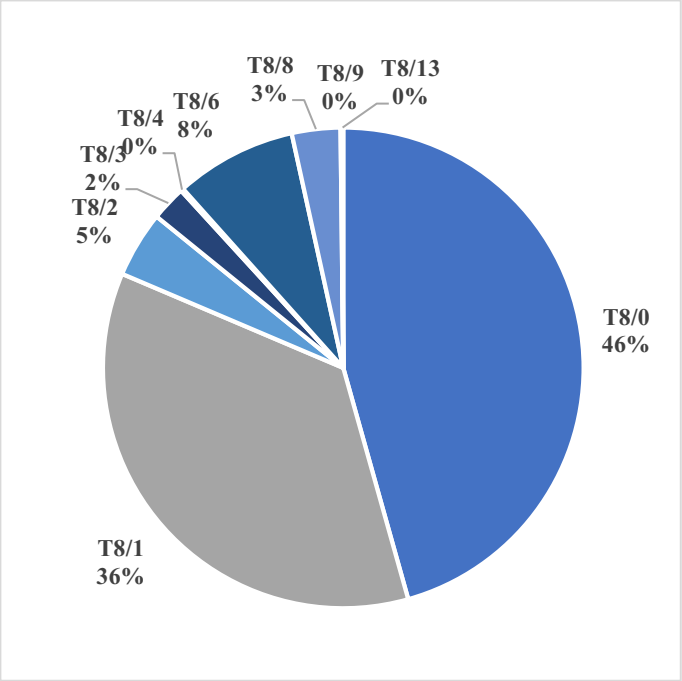

Chart 6.9.1 - Types attested for Period 8.

[1] The limited number of specimens collected during the survey and belonging to this type is quite surprising considering the large quantity of "Burnished Grey Ware" found in the small trial trench dug in the south-western slope of Tell Gomel lower town. The same anomaly is recorded by LoNAP survey (Coppini 2018: 73). The reason to this phenomenon can be related to the fragile nature of this pottery production, that is consequently easily destroyable by the ploughing activities.

Fig. 6.9.1 - Middle Bronze Age Pottery Types.

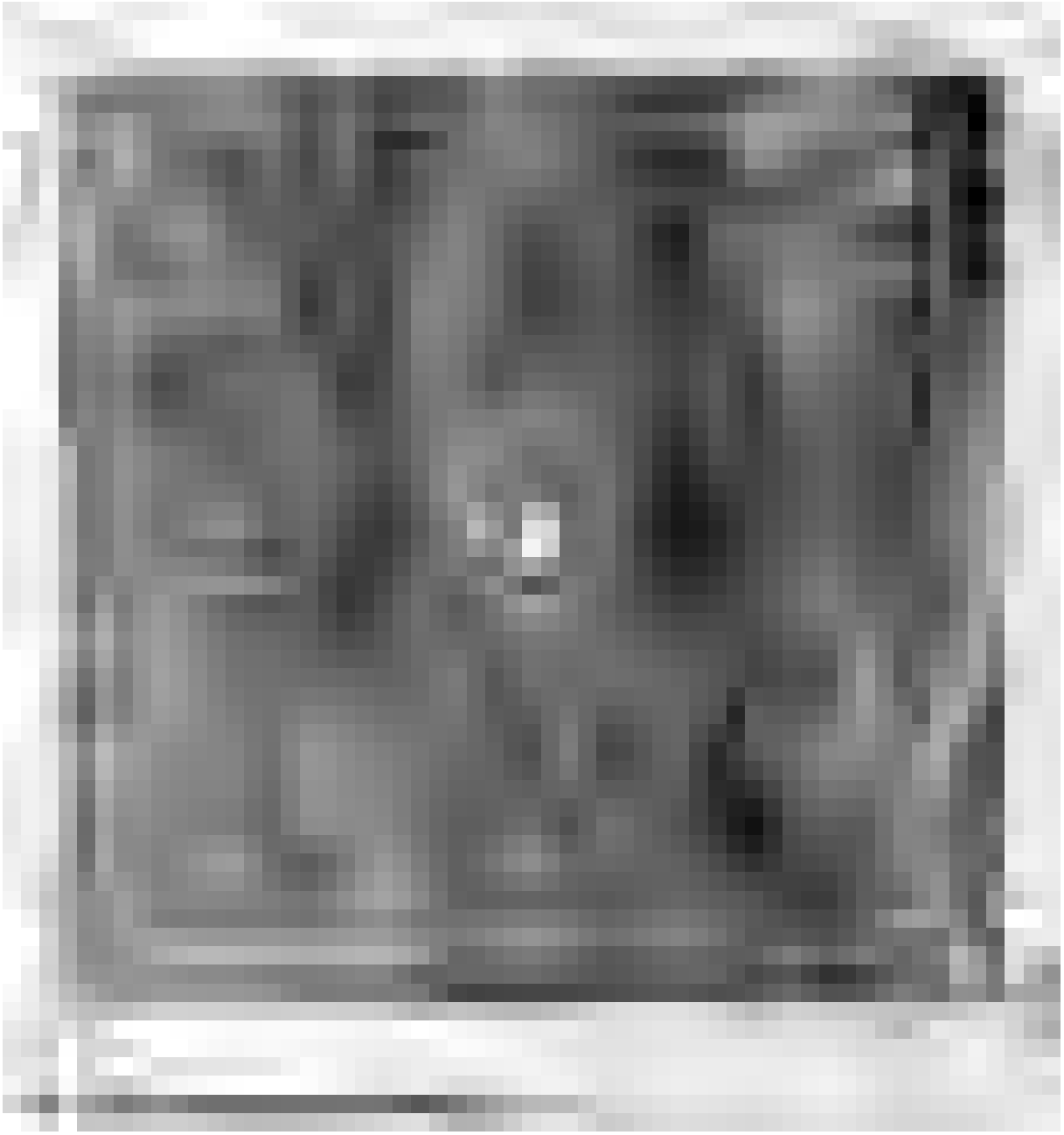

Fig. 6.9.2 - Middle Bronze Age Settlement Development in TGAS area.

Settlements and settlement pattern

TGAS recorded 41 sites for the MBA period (0,41 site/km^2) with an aggregate area of 108 ha. Only 11 sites have traces of occupation (tab. 6.9.2). If compared to the previous period it is not possible to see an abrupt change in the number of settlements (16 sites less than the previous period) and in the aggregate area (10,9 ha less than before). These limited changes are due basically to the disappearance of the several very small sites that represented the main feature of the Mid-Late 3rd Millennium BC settlement pattern. It is interesting to notice the remarkable continuity of settlement with 76% of the sites already settled during the previous period, 7% of resettled sites and 17% of new foundations. The sites are mostly low mounded, but if we excluded the sites with only traces of occupation it is possible to observe that the sites are in the majority of the cases low mound, high mound or high mound with lower town (tab. 6.9.3). Regarding the aggregate area the largest part of the occupation is connected to high mounded sites or low mounded sites (chart 6.9.2).

The sites are clustered around Tell Gomel (**site 40**) and Tell Chirra (**site 186**), and there is a clear hierarchy in the settlement, with Tell Gomel as the primary settlement of 24 ha (maybe even more extended but eroded by the river) surrounded by small satellite villages, with the exception of **site 722** located immediately on the opposite bank of the river that extends for a total area of 7,3 ha. The nature of this site immediately on the other bank of the river is difficult to determine. **Site 722** is a large almost flat site with an important occupation during the Mid-Late 3rd millennium BC and a more dispersed occupation during the following periods of occupation (until the Neo Assyrian period).

A similar situation can be found in the area of Tell Chirra (**site 186**). The site grew during the first half of the 2nd Millennium BC and a group of small satellite sites remained occupied from the previous period, with the exception of site **604**, a large flat site (6,6 ha) that extends immediately southwest of the lower town of Tell Chirra on the same bank of the Nardush River. Also in this case, **site 604** was densely occupied during the Mid-Late 3rd Millennium BC and more sparsely settled during the first half of the 2nd Millennium BC.

Other secondary large sites are Tell Sheikh Ibrahim (**site 176**, 4,5 ha), **site 106** (10 ha), Tell Abbas (**site 742**, 5,9 ha). These sites are located in the southern part of the survey area and they look isolated, but also distributed at an even distance from each other (c. 4-4,5 km) and from Tell Gomel (c. 4-4,8 km).

It is interesting to notice that two of the hollow-ways identified around Tell Gomel connect the site with Tell Chirra and Tell Sheikh Ibrahim.

The other smaller sites are mostly located along the Gomel River with sizes varying from 0,3 ha to 3 ha.

The LoNAP survey identified 224 sites with an aggregate area of 477,74 ha and an average size of 2,13 ha. As observed for TGAS area, the changes are limited: From the previous period the settlement pattern did not change abruptly, and the number of sites decreased only by 5 sites while the aggregate area slightly increased. The MBA sites concentrate in the Navkur Plain, but they are also scattered throughout the piedmont belt of the Zagros foothills. Most of the settlements were small-sized rural villages, with only few major sites (bigger than 8 ha) all located in the Navkur Plain (Morandi Bonacossi 2018a: 60; Morandi Bonacossi and Iamoni 2015).

Regarding the results from neighbouring areas, UZGAR project identified 49 sites with an aggregate area of 98,6 ha. Among these, 3 township-size settlements of between 10–14 ha were found by the Polish team, they are all located in the eastern part of the Navkur plain and are interpreted as secondary settlements representing a local level of administration and economy (Koliński 2018: 18).

In the north on the eastern bank of the Tigris, EHAS identified 23 sites (Pfälzner-Sconzo 2016: 38). Bassetki, with an extension of 50 ha, was the main regional centre (Pfälzner-Sconzo 2016: 26).

Further north the TERP discovered 27 sites in the Cizre-Silopi Plain, with an extraordinary 100% continuity with previous Mid-Late 3rd Millennium BC. The settlement pattern shows a six-fold increase over the immediately preceding period in number of sites and aggregate area. Almost certainly five sites were large towns from 8 to 15 ha. Some small villages surrounded these towns and others were scattered across the plain. Four of these towns were located on perennial rivers, in the middle of the plain and 5-7 km distant from each other, indicating the presence of large catchment areas. All these larger sites reached their maximum expansion in the first half of the 2nd Millennium BC (Algaze *et al.* 2012: 28-29).

On the other bank of the Tigris, the NJP was able to identify 43 sites belonging to this period. Tell el-Hawa was the major centre of 65-70 ha, while three other sites between 15-20 ha are considered secondary townships. The NJP also recorded the presence of numerous small satellite sites (i.e. nine satellite sites were discovered around Tell el-Hawa) in a pattern similar to the one identified by TGAS. Another interesting feature recorded by the project was the development during the first half of the 2nd Millennium BC of sites along routes as result of the establishment of new trade networks. (Wilkinson and Tucker 1995: 53-54; 180-182).

Further west, the THS registered only 9 sites, with an aggregate area of 31,85 ha. Also in this case the continuity with previous occupation is high (40% continuity) with only one completely new foundation. On the other hand, in THS there is no clear alignment along hollow-ways for this period. (Ur 2010: 110-111).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	701	24						x	
60	86	3,7				x			
89	27	0,8						x	
90	5		1,5				x		
93	61	2,5					x		
95	59	1,5					x		
106	48	10						x	
176	30	4,5						x	
185	3		0,3				x		
186	21	4,7						x	
187	5		0,6				x		
335	31	3,2				x			
353	5		1,4			x			
354	3		0,5				x		
423	1			1,8		x			
480	12	1,4					x		
481	27	3,4				x			
482	3		1,3				x		
484	2			1		x			
485	1			1		x			
560	3		0,3			x			
562	11	1,6				x			
567	4		0,6			x			
586	8		3,3		x				
587	5		0,6		x				
600	2			1,3		x			
604	21	6,6			x				
666	1			0,8		x			
705	2			0,6		x			
710	1			1,6					x
715	5		0,8		x				
722	16	7,3			x				
726	3		0,6			x			
742	74	5,9				x			
763	2			0,4		x			
769	6		1		x				
771	2			1,2		x			
791	1			2,5		x			

847	3		0,6		x				
944	1			0,1	x				
974	13	1,2				x			

Table 6.9.2 – Middle Bronze Age sites.

Middle Bronze Age Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	16	82,3	2	6	3	5	-
Minor	14	13,4	5	4	5	-	-
Traces	11	12,3	1	9	-	-	1
Tot.	41	108	8	19	8	5	1

Table 6.9.3 - TGAS area occupation during theMiddle Bronze Age period.

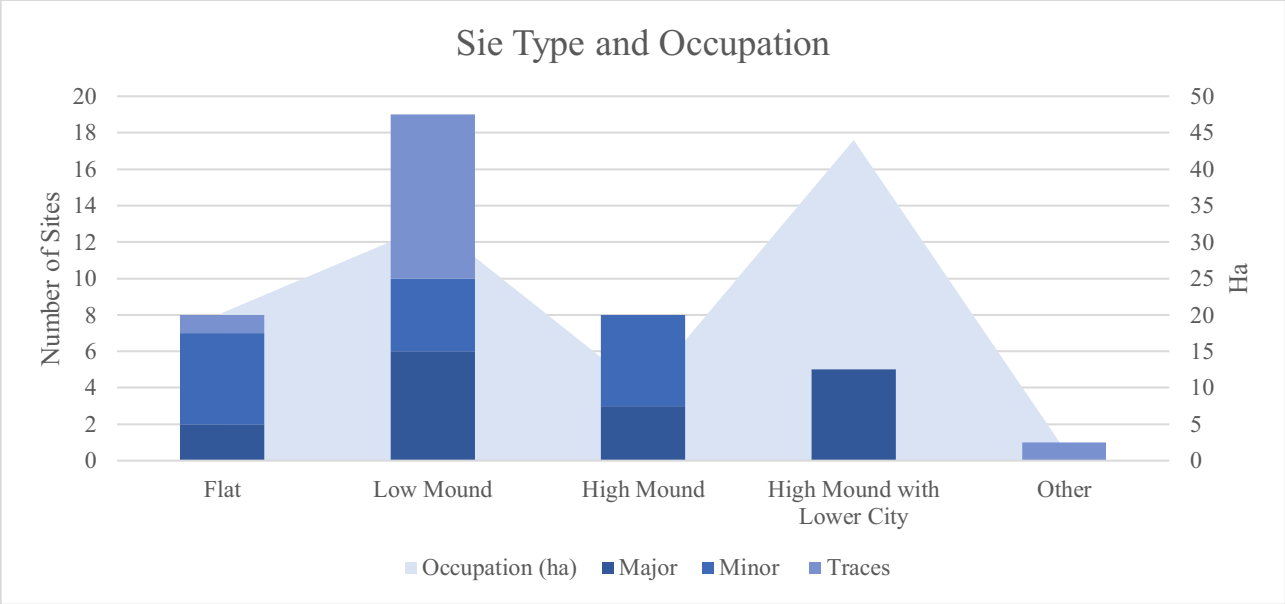

Chart 6.9.2 - Middle Bronze Age types and occupation for each type (ha).

Interpretation

The period from the end of the 3rd millennium to the beginning of the 2nd millennium BC is at the centre of a strong debate. On one hand, several scholars sustain for the period an abrupt climate change, depopulation and settlement collapse with the abandonment of the large EBA tells (Weiss *et al*. 1993; Weiss - Courty 1993; Weiss 1997 and 2000; Weiss - Bradley 2001; Weiss *et al.* 2012). This hypothesis is sustained by several proxies that witness what it is called the 4.2 Ka BP event, a climate change that brought to a "megadrought" in all Upper Mesopotamia and a consequent collapse of the fragile economy of the Jazirah steppe. The survey results from the Jazirah seem to reflect well this strong process of depopulation and deurbanization (THS, Ur 2010; Beydar-Survey Wilkinson 2000c; Ur - Wilkinson 2008, Leilan Survey, Risvet 2008; Risvet - Weiss 2000; Stein - Wattenmaker 2003), but we have to stress that considering the chronological resolution of the survey data it is not possible to determine with precision in which phase this collapse took place (i.e. for Beydar see Ur and Wilkinson 2008: 307-309).

On the other hand, other scholars, even if there is a general agreement regarding this aridification trend, presented data from different excavations that show a quite different impact of such change in Upper Mesopotamia settlements during the transition between the EBA and the MBA (Kuzucuoglu and Marro 2007). In certain regions, as the Middle Khabur, a process of abandonment of the area has already started as consequence of the Akkadian empire expansion (Schwartz 2007). Furthermore, a consistent number of sites presents evidence of continuity in the last century of the third millennium BC as Tell Mozan, Tell Brak, Tell Chagar Bazar, Tell Arbid, Tell Barri and Tell Hamoukar (Pfälzner 2012, Schwartz 2007; Koliński 2007).

The results from TGAS show a significant continuity in the region with the previous period. This continuity, in the number of sites, is also attested in LoNAP, EHAS and UGZAR survey results that were presented above. The NJP and TERP even witness a flourishing of new settlements. These results are contributing in our understanding of the transformation processes occurring in Northern Mesopotamia between the end of the EBA and the beginning of the MBA. Clearly the Trans-Tigridian region did not witness a phenomenon of collapse and depopulation.

In the Navkur Plain a hypothetical heavy break over the two periods does not emerge in the archaeological record, the remarkable continuity of 76% of the sites and the limited reduction in site number seem to suggest the absence of a collapse in the settlement pattern. In the same way Tell Gomel almost maintained the same extension over the two periods. This stability can be related with the favourable conditions of the plain (see Chapter 3), and the position of the area well outside the so

called "zone of uncertainty" (Wilkinson 2000b). The Navkur Plain can be described as a "zone of sustainable settlement", a label used to define an area of relatively stable and long-term settlement (Smith *et al.* 2014), with no need to develop a high-risk-high-return economy[2] basically without being deeply affected by climatic or environmental changes, but also not having any high return benefit. The lack of a high-risk-high return economy can be one of the most important reasons why the site of Tell Gomel (but this consideration can be extended to all the urban sites of the LoNAP region) never developed in a large urban site, comparable to the bigger sites of the Jazirah, between the 3rd and 2nd Millennium BC.

On the other hand, is also important to underline that the coarse periodization in use for the survey doesn't let us to understand in detail the transition between the two periods. In particular, even if recently Koliński (2014b) tried to shed lights on the MB I/Old Jazirah I (c. 1950-1800 BC) pottery from the Khabur Triangle, isolating a production that he calls "Early Khabur Ware", from the survey materials of our region is not possible to make a distinction between MBI and MBII.

During the first half of the 2nd millennium BC, the Navkur Plain was included in the territory of the Kingdom of Nurrugûm. The location of the kingdom and of its capital with the same name is still debated, but it is clear that the reign extended on the eastern bank of the Tigris and it included the cities of Ninet[3] (Nineveh) and Shibanum (Tell Billa) (Ziegler and Langlois 2017; Ziegler 2004; Charpin and Ziegler 2003; Yuhong 1994).

Tell Gomel could be the ancient capital Nurrugûm (Morandi Bonacossi and Coppini pers. comm.), because it represents the largest site in the entire region. We know from the sources that the ancient capital was walled[4] and the conformation of Tell Gomel lower town, with steep slopes on its eastern edge, can be possibly connected with the presence of monumental city walls.

Furthermore, from the U2 images (see **site 40** in the catalogue) it is possible to distinguish at the eastern limits of the lower town what may look like a city gate. Moreover, the results of a small trial trench dug in the south-western slope of the lower town seem to indicate the presence of a local elite at the site. The excavation brought to light three vaulted baked-brick tombs. The tombs are only a small portion of a larger cemetery belonging to Middle Bronze Age (Morandi Bonacossi 2018a: 61). Similar vaulted baked-brick tombs, interpreted as elite tombs, were found in several other northern Mesopotamian sites such as Assur (Hockmann 2010: 43 and 89), Tell Barri (Valentini 2003), Tell Arbid (Koliński 2011) and Tell Mohammed Diyab (Bachelot 1992). Unfortunately, the tombs were

[2] The model proposed by Wilkinson and other scholars for the Fourth and Third millennium urbanisation (Wilkinson *et al.* 2014).
[3] Ninet during the Middle Bronze Age was an important religious, and not political, centre (Ziegler 2004).
[4] Nurrugûm must have been well fortified and it was sieged for long time by Samsî-Addu, before its conquest (c. 1780 BC): Ziegler 2004: 24.

partially destroyed by the erosion of the river and looted. The grave goods included ceramic vessels, terracotta figurines, a bronze pin and several beads of vitreous material and carnelian (Morandi Bonacossi 2018a: 61).

6.10 The Mitanni Period

Pottery

All the 431 fragments found for the Mitanni period consist in type T9/0 specimens, even if some types are included among period 10 types. This choice relates to the aim of maintaining LBA TGAS data easily comparable with the other projects of the ALRG. On the other hand, the new studies of LBA materials (Pfälzner 1995 and 2007; Duistermaat 2008) are now helping us to achieve a better understanding of the ceramic of this period (Coppini 2018; Gavagnin *et al.* 2016), and it was decided to include the new well defined diagnostic Mitannian types in this group.

The more easily identifiable types are the "Nuzi Ware" (T10/1), the "Red Edged Ware" (T10/4), the "Grey Burnished Ware", the "Younger Khabur Ware" and the "Pie-Crust Potstands" (T10/11).

Only one fragment of Nuzi Ware was found on the high mound of the major **site 89**. Also in all LoNAP region only a handful of sherds belonging to this type was recorded (Gavagnin *et al.* 2016: 375). The Nuzi Ware is characterized by a fine fabric and a white painted decoration on a red or brown background. The motifs are usually geometric, floral or zoomorphic. This type is very diagnostic for the Mitanni Period, but it is also very rare both in survey and excavation materials (Ur 2010: 267), it should be not surprising since it is considered a "luxury production" (Pfälzner 1995: 231; Postgate *et al.* 1997: 54-55), but it was found also in domestic contexts (D'Agostino 2014). Furthermore, as well as all the fine ware productions is easily destroyed by the ploughing activities and it is less likely to survive in the archaeological record.

The "Red Edged Ware" is another good diagnostic type for the period. It is characterized by a red or brown painted decoration on the inner side, and sometimes also on the outside of plates or bowls rims. It is well attested in North Iraq (T. Nemrik, Reiche 2014a: pl. 2 nn. 3-5; Khirbet Hatara, Cellerino 1997: fig 1 n.11; T. Rimah, Postgate *et al*. 1997: pl. 34) and in the Syrian Jazirah exavations (T. Bderi, Pfälzner 1995: Taf. 1; T. Barri, D'Agostino 2008: fig 5 n. 7; T. Brak, Oates *et al.* 1997: fig. 187).

Another diagnostic type is the "Grey Burnished Ware" as already mentioned for the MBA pottery, the Mitannian "Grey Burnished Ware" can be distinguished from the MBA grey ware for its lighter grey colour, for the occurrence of a fine mineral temper, and for the different types of shapes and rims that it features (Oates *et al.* 1997: 65-66; Pfälzner 2007: 241).

The "Younger Khabur Ware" is characterized by a fine mineral-tempered fabric and by a decoration of horizontal painted bands. Usually beakers and cups occur in this ware (Pfälzner 2007: 242), it is

wide-spread in all the Syrian Jazirah (T. Sheikh Hamad, Pfälzner 1995: Taf. 35 b and f; T. Brak (Oates *et al.* 1997: fig. 194, 331-332).

More complicated is the chronological attribution of the so-called "Pie-Crust Pot-stands". These pot stands are probably the most recognizable and one of the most frequent diagnostic types for the Mitanni Period. This type is widely attested everywhere in Upper Mesopotamian Mitanni contexts (T. Nemrik, Reiche 2014a: pl. 5; T. Rimah, Postgate *et al.* 1997: pls. 93 and 94; T. Brak, Oates *et al.* 1997: fig. 215; T. Bderi, Pfälzner 1995: Taf. 57 b and c; T. Barri, D'Agostino 2008: fig. 6). However, this type was also found in MBA (T. Rijim, Koliński 2000: 35, pls 20, 21 and 22; Kurd Qaburstan, Schwartz *et al*. 2017: fig. 26, n. 17) and in Middle Assyrian contexts (Gavagnin *et al.* 2016: 142). Nevertheless, the Mitannian specimens are distinguishable from the other periods specimens by their shapes and fabric and the ones considered for this period were attributed with certainty (Gavagnin *et al.* 2016: 142; Coppini 2018: 71).

Besides these highly distinguishable types, there is a large number of undecorated types that has been determined through comparisons with stratified materials (Coppini 20018). One very common example is the carinated bowl characterized by straight or vertical walls above the carination (T. Brak, Oates *et al.* 1997: fig. 188; T. Bderi (Pfälzner 1995: Taf. 9.b; Taf. 10 a,b; T. Barri, Coppini 2008b: fig. 3f; Nemrik, Reiche 2014a: pl. 2.9 and pl. 3.1; Kurd Qaburstan, Schwartz 2016: fig. 8.8). Another frequent diagnostic is the large storage jar with squared rims, with chaff fabric (T. Brak, Oates *et al.* 1997: pl. 212.614–615); T. Bderi, Pfälzner 1995: Taf. 28.a; T. Barri, Coppini 2008a: fig. 6.c, d; Nemrik, Reiche 2014a: pl. 10.3; Kurd Qaburstan, Schwartz 2016: fig. 8.14–15).

Fig. 6.10.1 – Mitanni Period Pottery Types.

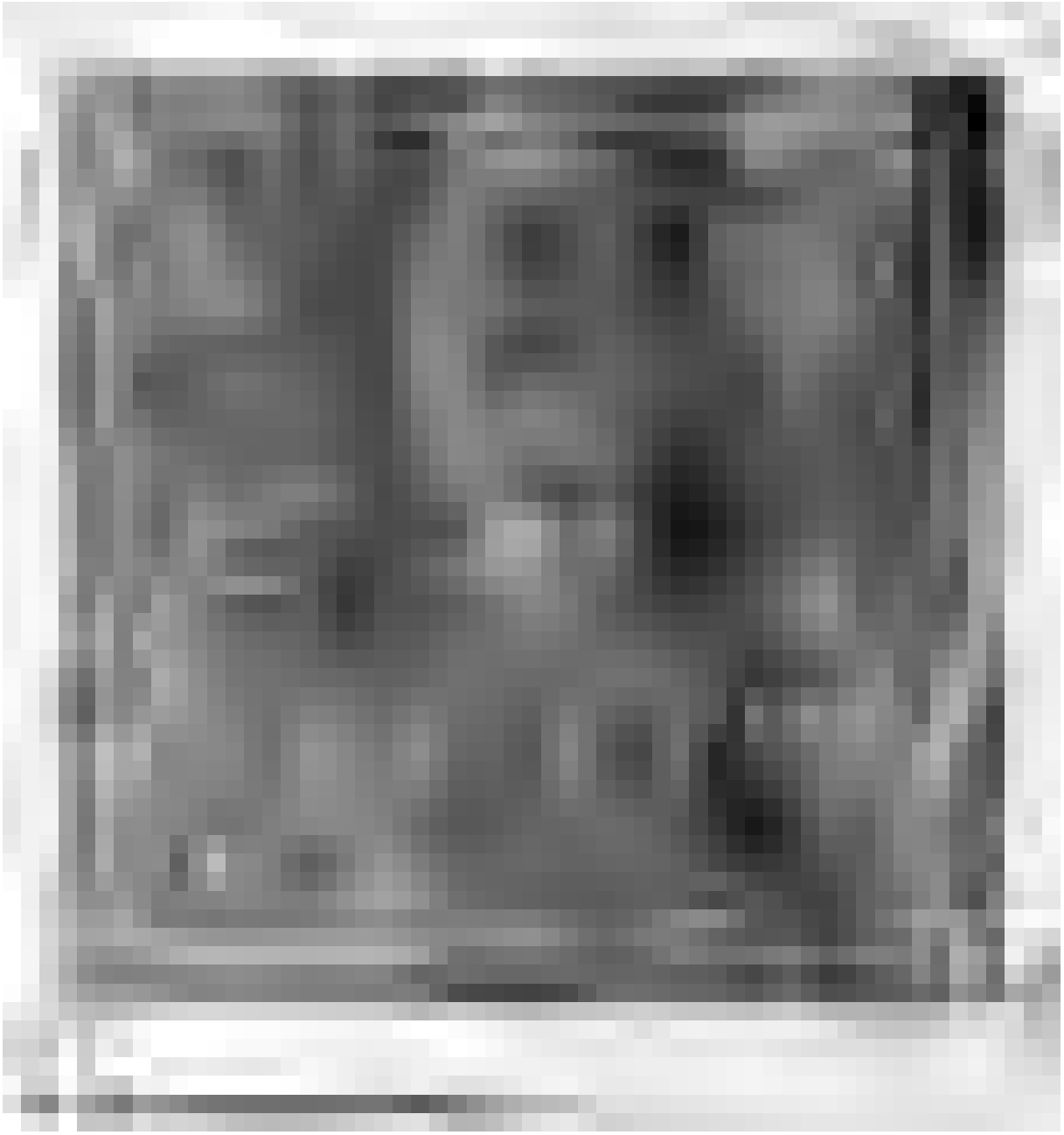

Fig. 6.10.2 – Mitanni Settlement Development in TGAS area.

Settlements and Settlement Pattern

TGAS recorded 33 Mitannian sites (0,33 site/km^2) with a total settled area of 88,5 ha (tab. 6.10.1). At more than one third of the sites only one or two fragments of Mitanni diagnostic types (tab. 6.10.2) were collected. Continuity in the settlements occupation is attested at 67% of the sites, the resettlement at 28% and only 8% of the sites are new foundations. There is a decline in the number of sites from the previous period with c. one quarter of sites less. The largest number of sites is low mounded, while the high mounded sites with an extended lower town include the majority of the aggregate area (Chart 6.10.1). It is important to underline that the largest number of sites with major occupation belongs to the high mound with extended lower town site type (Chart 6.10.1).

The site of Tell Gomel reduced in size from 24 ha to 21 ha, the other major sites (for size and major type of occupation) are Tell Zinawa Miri (**site 89**) with 6 ha and Tell Chirra (**site 186**) with 4,7 ha, both characterized by a high mound and an extended lower town, and Tell Abbas (**site 742**) with 4,5 ha. These three sites are all in a radius between 4,6 and 6,4 km from Tell Gomel. The sites are aligned along the Gomel, along the Nardush river and on a possible route in the south-west TGAS area.

LoNAP documented 148 sites for the Mitanni period with a total aggregate area of 298 ha. As attested in the Navkur Plain, in all the LoNAP region a conspicuous decline is recorded in the number of sites from the previous period. All the major sites between 5 and 8 ha are located in the Navkur Plain.

The neighbouring UGZAR project did not distinguish, in its preliminary report, the LBA in Mitanni and Middle Assyrian. The project recorded 56 sites for the period with an aggregate area of 145 ha. The sites included 4 medium size sites (with no clear dimension in ha) and also a "significant degree of continuity" was reported (Koliński 2018: 18).

Regarding the preliminary results from EHAS, we know that 7 Mitanni sites were identified, among them there are the two sites of Bassetki and Muqable III that are now excavated within a Kurdish-German cooperation project (Pfälzner and Sconzo 2016: 39; Pfälzner and Qasim 2017; Pfälzner *et al.* 2017; Pulijz and Qasim in press).

The TERP, the NJP and the THS, did not distinguish between Mitanni and Middle Assyrian for the LBA period.

The TERP recorded a decline from the MBA period to 21 sites, two of these are classified as town-sized settlements of 7-11 ha, while the other are small villages. Despite the general decline, it was possible to document 52% of continuity in the settlement. (Algaze *et al.* 2012: 31-33).

In the Iraqi Jazirah, the NJP recorded 28 sites for the LBA, with a continuity in the settlement of 47%. In this period, voids of unoccupied lands started to appear (Wilkinson and Tucker 1995: 59).

In the THS a new settlement pattern is attested in the LBA with more than double the number of settlements from the previous phase. The THS recorded 21 sites with an aggregate area of 58,8 ha. During this period, the ruralisation phenomenon of the area started and a clear non-nucleated settlement pattern appeared. Also in this case, a remarkable continuity was documented by the project, with only 6 sites resettled and 8 new foundations. The hierarchy in the settlement pattern it is quite clear: a major settlement of 16 ha, 2 large secondary villages of 7-8 ha, and several small villages of 1,55 ha. Spatially, the sites are dispersed in the territory without alignment but in some case clustering. (Ur 2010: 111-112).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	190	21						x	
60	22	2,3				x			
89	29	6						x	
91	1			2			x		
93	2			2		x			
94	15	1,4					x		
95	28	1,5					x		
104	3		1,5				x		
106	16	1						x	
130	3		0,3			x			
176	10		3,2					x	
177	1			2,5			x		
185	4		1				x		
186	11	4,7						x	
335	7		3,2			x			
481	1			2,8		x			
482	2			0,5			x		
486	1			1,4		x			
562	5		0,5			x			
586	1			1,6	x				
587	9		0,9		x				
597	3		0,7		x				
604	8		6,6		x				
666	3		1,1			x			
715	2			0,8	x				
722	11	2,9			x				
726	2			0,6		x			
742	35	4,5				x			
751	1			2	x				
759	1			4,3			x		
789	2			3		x			
856	1			0,6	x				
944	1			0,1	x				

Table 6.10.1 - The Mitanni sites.

Mitanni Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	9	45,3	1	2	2	4	-
Minor	10	19	3	4	2	1	-
Traces	14	24,2	5	5	4	-	-
Tot.	33	88,5	9	11	8	5	

Table 1.10.2 - TGAS area occupation during the Mitanni period.

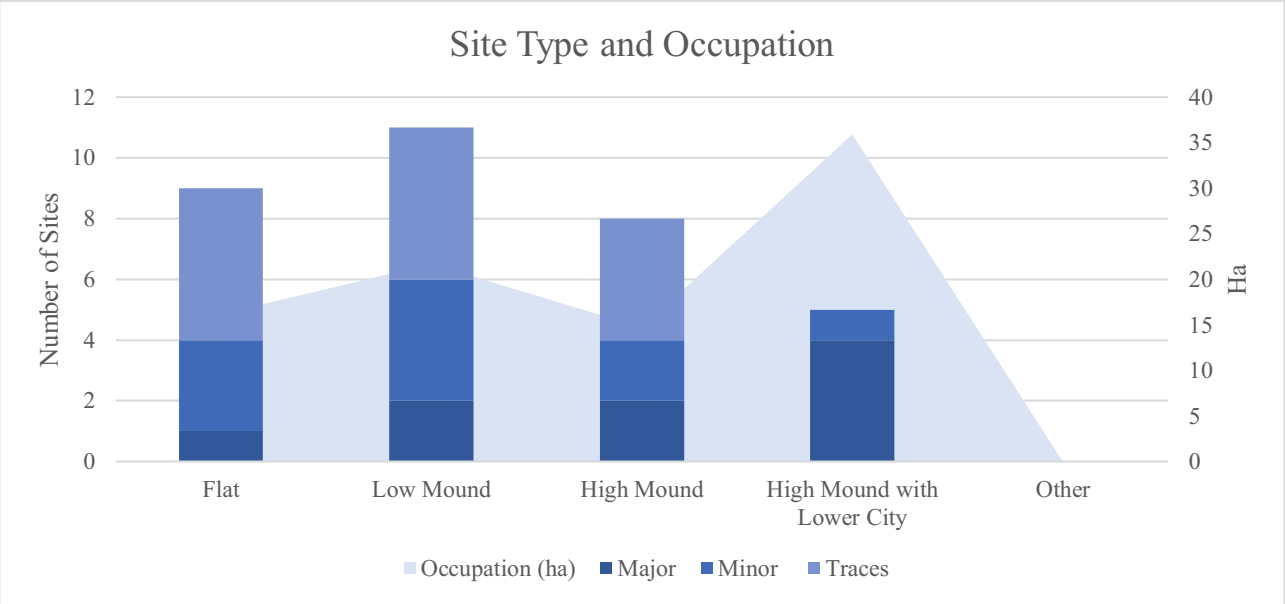

Chart 6.10.1 - Mitanni site types and occupation for each type (ha).

Interpretation

As shown by the material culture, the Navkur Plain must have been part of the Mitanni Kingdom until the expansion of the Middle Assyrian empire in the 13th century, when it was incorporated into the empire's territory. Since the beginning of Mitanni expansion, the Navkur Plain, with its high agricultural potential, must have been indeed quite alluring to the eyes the new kingdom.

The decline in the settlement number from the MBA to the LBA is clearly in opposition to the phenomenon of ruralisation attested in the Jazirah and described above. On the other hand, there is also no evidence of any nucleation process. Tell Gomel slightly reduces in settlement dimension (from 24 ha to 21 ha) but clearly decreases in settlement density (from 1315 to 431 diagnostic fragments).

Which processes brought to a distinct depopulation of the plain are unclear. What is clear is a reorganization in the distribution and typology of the sites, that heavily affected the settlement pattern of the period.

The settlement pattern in the Navkur Plain for this period seems not to find comparisons with the ones attested in other areas of Upper Mesopotamia. One of the characteristics of the settlement pattern of this period in the Syrian Jazirah and in Northern Iraq is the abandonment of the tells during the Mitanni period in agreement with a ruralisation process that will continue until its accomplishment in the Iron Age (Reiche 2014b: 56; Pfälzner 1995: 224). In this model, the tells are abandoned and the settlements shift to previously not occupied lands, the sites are reduced in size and complexity and the landscape ceased to be tell-dominated in favour of a scattering of small sized villages and farmsteads.

This phenomenon is clearly not attested in the Navkur Plain, on the contrary, the high mounded tells, certainly small and not comparable in size with the larger tells of the Jazirah, become central in the control of the territory, dominating large catchment areas.

The reason to the different settlement pattern recorded by TGAS can be related to the position of the Navkur far from the heart of the Mitanni Empire, while the best studied areas are located in the heartland of the Empire. The Navkur Plain, due to her favourable agricultural conditions, was exploited by the Mitanni Empire through the new settlement organisation presented above.

6.11 The Middle-Assyrian Period

Pottery

TGAS team collected 371 fragments belonging to the Middle Assyrian period (Tab. 6.11.1). The Middle Assyrian pottery is characterized by a high degree of standardization in shapes and fabric (Pfälzner 1995 and 2007; *contra* Duistermaat 2008). Regarding the latter, the rather coarse and chaff-tempered ware that distinguish most of the specimens collected, has been called "Middle Assyrian Standard Ware" by Pfälzner (2007: 251-253).

The most frequent type attested (Chart 6.11.1) is the "Collared Jar Rim" (T10/5); it occurs in Northern Iraq as well as in the Syrian Jazirah (T. Nemrik, Reiche 2014a: pl. 14: 4; T. Brak, Oates *et al.* 1997: fig. 183: 45; T. Sabi Abyad, Duistermaat 2008: figs. IV: 29n, IV: 31a, T. Sheikh Hamad, Pfälzner 1995: Taf. 87a, 122b; T. Barri, D'Agostino 2008: fig. 7: 1) and is considered one of the Middle Assyrian "standard types" (Pfälzner 1995: 235-243; D'Agostino 2008: 532).

The second most common type (Chart 6.11.1) is the "Coarse Ring Base" (T10/9), it is a coarse and thick ring base usually belonging to a coarse ware storage jar. This very diagnostic type is also attested in the Syrian Jazirah (T. Sheikh Hamad, Pfälzner 1995: Taf. 97a; T. Barri, D'Agostino 2014: fig. 2 nn. 9 e 10).

Another very diagnostic type, well represented among TGAS specimens (Chart 6.11.1), is the "Soft Carinated Bowl" (T10/13). The carination of this type is softer than the sharp carination of the "Small Bowl" (T10/6). The type is also frequent in the Syrian Jazirah and is also known as "*Starke Knickwandschalen"* (Pfälzner 1995: 133, Abb. 116d).

The "Small Bowls" were found almost in equal numbers. This type is also known as "*Leichte Knickwandschalen*" (Pfälzner 1995: 132-133, Abb. 116c-d). This type includes a large morphological variability, but it is essentially characterized by a sharp carination. They occur in the Northern Iraq (T. Nemrik, Reiche 2014a: pl. 13 nn. 1-6; Khirbet Hatara, Cellerino 1997: figg. 1-2; T. Rimah, Postgate *et al.* 1997: pls. 35–37) and in the Syrian Jazira excavation assemblages (T. Barri, D'Agostino 2008: fig. 7 n. 1 and 2014: fig. 2; T. Brak, Oates *et al.* 1997: fig. 181; T. Bderi, Pfälzner 1995: Taf. 9-16).

Among the other types attested (Chart 6.11.1) we found the "LBA Plate" (T10/10), the "Square Jar Rim" (T10/12) and the "Nipple Base" (T10/8). All these types can be easily found in the ceramic assemblages of important Middle Assyrian settlements of the Syrian Jazirah such as T. Sheikh Hamad (Pfälzner 1995: Taf. 67, 85 and 130), T. Fekheriye (Bonatz *et al.* 2008: Abb. 19), T. Barri (D'Agostino 2014: fig. 2), and T. Sabi Abyad (Duistermaat 2008: fig. IV).

Also for the LBA, as already noticed for the MBA, it is important to underline how the recent excavations in Iraqi Kurdistan, such as Tell Gomel (Coppini 2018), Muqable (Puljiz and Qasim *in press*), Qasr Shemamok (Masetti Rouault and Calini 2016), Tell Baqrta and Tell Nader (Kopanias *et al.* 2013), are confirming the results of the regional surveys on the Tigris East bank in recording a strong unity, in terms of material culture, of these regions with the Iraqi and Syrian Jazirah.

PERIOD 10 – Pottery Type	
T10/0	121
T10/5	41
T10/6	16
T10/8	3
T10/9	33
T10/10	15
T10/12	7
T10/13	17

Table 6.11.1 - Number of sherds for each type.

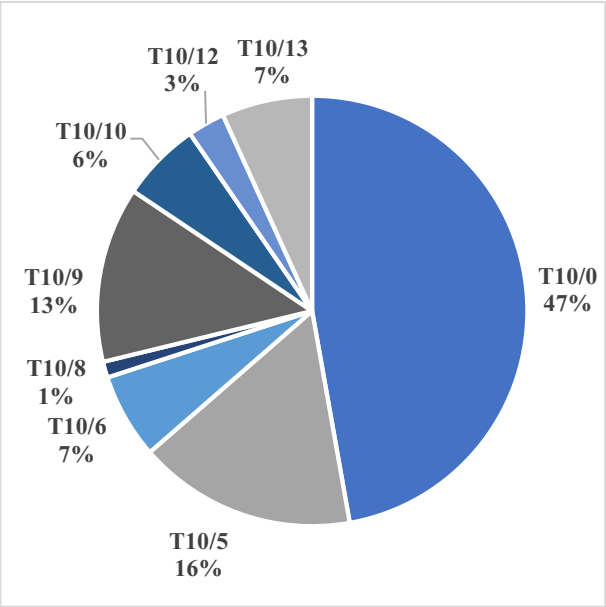

Chart 6.11.1 - Types attested for Period 10.

Fig. 6.11.1 - Middle Assyrian Period Pottery Types.

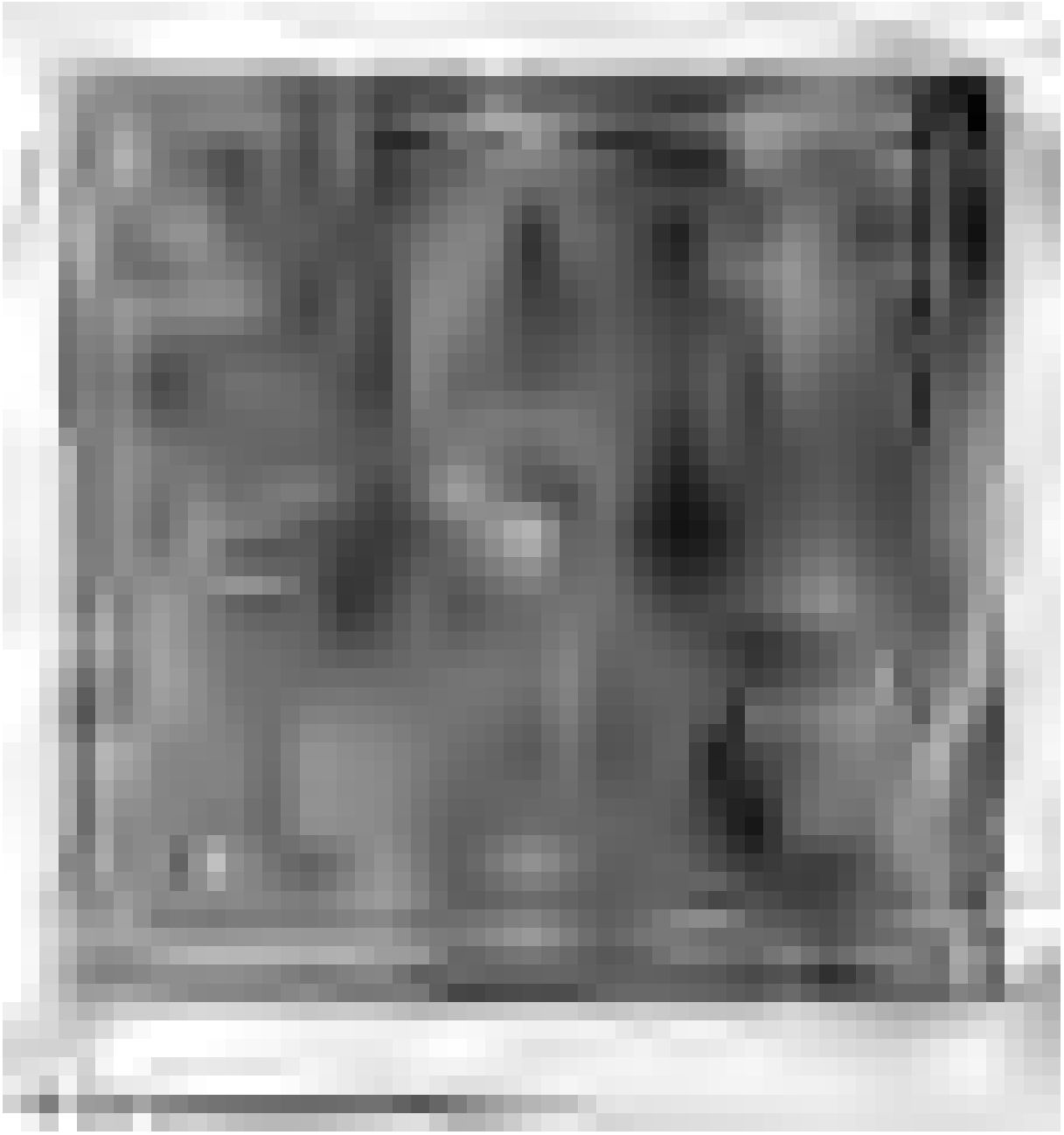

Fig. 6.11.2 - Middle Assyrian Settlement Development in TGAS area.

Settlements and Settlement Pattern

TGAS team identified 28 sites for the Middle Assyrian period (0,28 site/km^2), for a total aggregate area of 85,8 ha. The number of sites reduced by 5 sites in comparison to the previous period and also the aggregate ha diminished slightly. In the broader region surveyed by LoNAP an opposite pattern appears. The team identified 201 sites for a total of 436 ha aggregate area. There is indeed an increase in site dimensions and aggregate ha, moreover the sites are slightly bigger in relation to the previous period.

The preeminent sites (major occupation and larger dimension, tab. 6.11.2-3) for the Middle Assyrian Period are Tell Gomel (**site 40**, 21 ha as during the Mitanni Period), **site 106** (10 ha), Tell Zinawa Miri (**site 89**, 6,1 ha), Tell Chirra (**site 186**, 4,7 ha), Tell Sheikh Ibrahim (**site 176**, 4,3 ha) and Tell Abbas (**site 742**, 3,3 ha). **Site 104** and **site 759** have a minor occupation but a remarkable size (3,5 and 4,3 ha).

The pattern of these major sites replicates the Mitanni period pattern, with Tell Gomel at the centre and the other sites in a radius between 4,6 and 6,4 km (fig. 6.11.1).

It is interesting to notice that 10 sites are smaller than 1 ha. Some small sites are also high mounded as in the case of the small **sites 94** (1,4 ha) and **354** (0,5 ha). In the category of the small sites **site 851** is quite remarkable. It is a very small (0,2 ha) and flat site few meters north of Tell Sheikh Ibrahim, perhaps a small farmstead. The other sites are in the majority very small sites several times with only traces of occupation (tab. 6.11.3).

It is interesting to notice how the sites with major or minor occupation and with a larger extension are, as in the previous period, mainly high mounded sites with an extended lower town (chart. 6.11.2).

Compared to the previous period the settlement pattern in the Middle Assyrian epoch seems to accentuate its highly organized pattern. The position of the most important sites (considering dimension and type of occupation) show a strong linearity along three possible routes, two with NS direction, one along the Gomel river (**sites 89** – **94** – **40**) and one along the Nardush River (sites 186 – **187** – **177** – **176** – **789**), and a third one on the south with direction EW (**sites 789** – **106** – **104** – **742**). Also the distances between these sites are quite even (between c. 2-3 km).

Looking to a general picture of the Navkur Plain the possible route EW extends from the limits of LoNAP license area, in the direction of the Great Zab, throughout all the southern part of the plain in the direction of the Ba'idrah Plain (fig. 6.11.2). This alignment has its origin during the Mitanni period, but it was not so obvious and sharpened as in the MA period due to the lower number of sites aligned along it.

Fig. 6.11.2 - Possible MA route in orange (clear) and in violet (uncertain).

Regarding this period, the hollow-ways that connected Gomel with Tell Chirra and Tell Sheikh Ibrahim must have been still in use, as the hollow-way in the direction of site **789**.

EHAS team has hitherto recorded 5 sites (Pfälzner and Sconzo 2016: 39), among these the most important are the two sites of Bassetki (Pfälzner and Qasim 2017) and Muqable III under excavation (maybe a *dunnu*, Pulijz and Qasim in press; Pfälzner *et al.* 2017). The excavations in Bassetki started in 2015; during the 2017 campaign a group of c. 70 Middle Assyrian tablets was found hidden in a small jar. This important discovery led to the identification of the site with the ancient city of Mardama, the capital of a previously unknown province of the Middle Assyrian Empire (B. Faist pers. comm.).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	74	21						x	
60	6		0,7				x		
89	22	6,1						x	
94	29	1,4					x		
95	9		0,4				x		
104	6		3,5				x		
105	2			2,5			x		
106	58	10					x		
130	3		0,3			x			
176	14	4,3						x	
177	3		2,5				x		
186	11	4,7						x	
187	2			2,2			x		
354	12	0,5					x		
423	7		1,8			x			
480	2			0,9			x		
481	4		0,5			x			
482	3		0,7				x		
484	5		2			x			
560	2			0,3		x			
597	1			0,7	x				
666	2			1,5		x			
722	2			3,3	x				
742	63	3,3				x			
759	9		4,3				x		
789	4		3			x			
838	2			3,2		x			
851	14	0,2			x				

Table 6.11.2 - Middle Assyrian sites.

Middle Assyrian Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	9	51,5	1	1	2	5	-
Minor	11	19,7	-	5	6	-	-
Traces	8	14,6	2	3	2	1	-
Tot.	28	85,8	3	9	10	6	-

Table 6.11.3 - TGAS area occupation during the Middle Assyrian period.

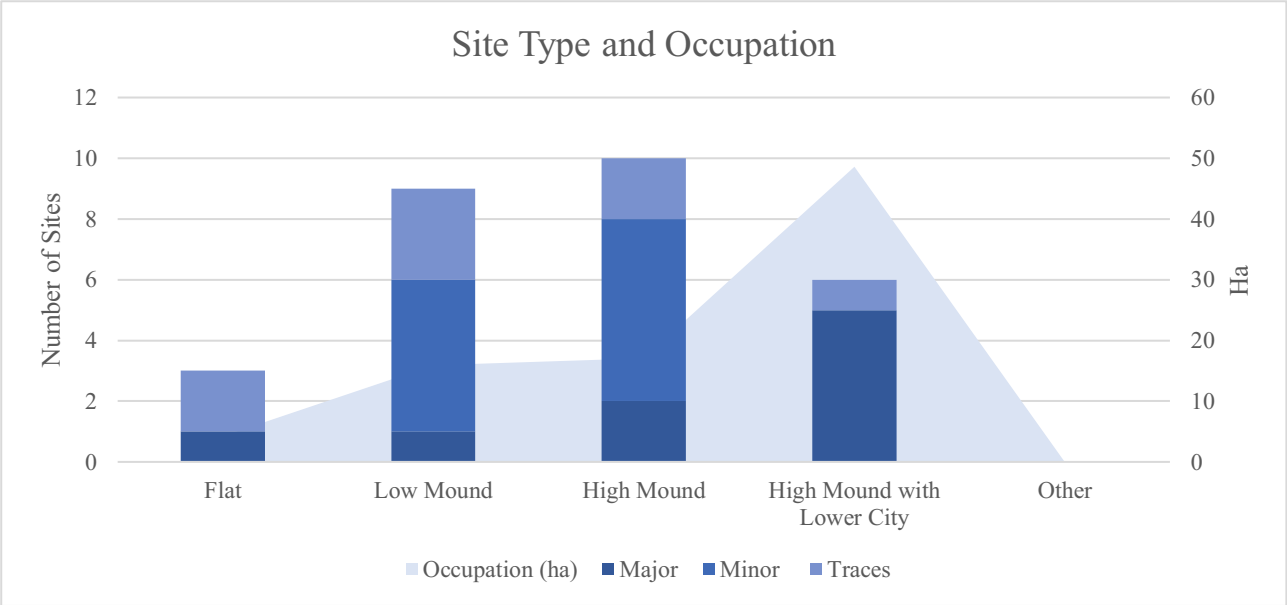

Chart 6.11.2 - Middle Assyrian site types and occupation for each type (ha).

Interpretation

An outstanding number of scientific works was published in the last ten years regarding the transformation of the settlement pattern during the LBA and especially during the Middle Assyrian period (Brown 2013 and 2014; D'Agostino 2011, 2014 and 2015; Koliński 2001, 2014a and 2015; Morandi Bonacossi 1996, 2018; Morandi Bonacossi and Iamoni 2015; Mühl 2015; Tenu 2009 and

2015). What seems to be clear, at least regarding the area extending from the Euphrates to the Tigris[5], is that there is a clear connection between the Mitanni and Middle Assyrian settlement pattern.

In the Navkur Plain, the Middle Assyrian settlement pattern has clearly its origin in the Mitanni period. The settlement pattern of the LBA is different from the MBA one. The high mounded tells start to become the most important settlements in the plain and this characteristic starts during the first part of the LBA and continues and strengthens during the Middle Assyrian Period. The settlement pattern shows Tell Gomel at the centre of the plain and at the centre of a group of tells characterized by large catchment areas.

This pattern must be connected with the exploitation of the fertile Navkur Plain by the MA Empire, as replication of a system to control and administrate efficaciously the rich agricultural lands of the plain, a system already set by the Mitanni Empire. One of the keystones of the Middle Assyrian control of the countryside was a very peculiar type of settlement: the *dunnu*[6]. The *dunnu*, as well as its probable Mitannian predecessor, the *dimtu*[7], was a very small and fortified rural settlement established by the empire to administrate the agricultural production of a determined area (Düring 2015; Wiggermann 2000; Radner 2004).

Some scholars (Düring 2015; Reiche 2014b) propose that the Mitannian *dimtu* were resettled and reused as *dunnu* during the MA period, therefore maintaining the same special administrative function. Even if there is no evidence that any of the TGAS sites could have been an ancient *dunnu*[8], it is important to underline the strong continuity in the settlement pattern and in the occupation of the sites. This is especially true for the high mounded settlements.

From the Middle Assyrian archive found at Shibaniba (Tell Billa, 21,5 km from Tell Gomel) we know that the settlement was a provincial city controlling a wide territory (Finkelstein 1953). The structure of the settlement in the territory of Shibaniba is maybe revealed in a tablet (Bi 47), in which a total of 30 settlements are mentioned (Finkelstein 1953: 132). Koliński (2001: 79) interpreted these settlements according to the following hierarchy: 1 city (Shibaniba), 1 town, 10 villages and 18 *dunnu*.

The area surrounding Tell Billa was never surveyed and we cannot know if a similar representation of the settlement pattern is mirrored by the archaeological evidence. What we know is that a similar pattern can be tentatively seen in TGAS area, with Tell Gomel (not much smaller than Tell Billa

[5] The results of the new surveys and excavations in Iraqi Kurdistan will bring new important data in the scientific discussion and will shed new lights on the processes of transformation that took place in the regions at east of the Tigris.
[6] For an extensive study of *dimatu* in the 2nd Millennium see Koliński 2000; for a more recent reassessment of the MA *dunnu* see Düring 2015.
[7] For the hypothesis of an evolution of the Hurrian *dimtu* to the MA *dunnu* see Radner 2004: 138.
[8] Regarding the identification of *dimtu/dunnu* settlements throughout a survey see Koliński 2001: 64 – 88.

mound 26 ha versus 21 ha eroded) as main centre or "city", site 106 as a town (10 ha), some villages and 10 very small settlements of less than 1 ha (possibly *dunnu*?).

Some clues on the importance of Tell Gomel during the MA period are given by the conspicuous quantity of clay nails found during the excavation of the small trench in the southwestern edge of the lower town (Coppini 2018: 73, Fig. 18a, b). In this period, clay nails were used in palaces, important representative buildings, or temples as attested in Tell Rimah (Coppini 2018; Postgate *et al.* 1997: pl. 25e).

The possible new route, that connected the Great Zab with the Plain of Ba'idrah (maybe in the direction of the important site of Jerrahiyah), can be read as an "archaeological correlate" of the MA empire (see Kühne 2015 for the archaeological correlates of MA empire tested for the Lower Khabur and Dur Katlimmu). The establishment of new sites and the reinforcement of Mitanni settlement along a possible road shed new lights also on the land tenure infrastructure system.

The Neo-Assyrian Empire and its Collapse

6.12 The Neo Assyrian Period

Pottery

The Neo-Assyrian period embraces a large timespan as it goes from the tenth to the late seventh century BC. Unfortunately, the first centuries of the period are quite obscure from an archaeological and historical point of view (Roaf 2001). As a consequence, the pottery production of the tenth to the mid eighth century BC is not well determined, especially due to the fact that only few excavations brought to light contexts belonging to this phase and only a small amount of studies and publications regarding the associate materials were carried out till the most recent times (Anastasio 2010: 4-5; Kreppner 2006, 128; Parker 2001: 26).

On the contrary, the Neo-Assyrian pottery from the mid eight-late seventh centuries BC is well known and it features a very homogeneous and standardized production with a broad geographic distribution (Anastasio 2010). The excavations in the capitals of the empire (Assur: Haller 1954, Hausleiter 1999b, Beuger 2007; Nimrud: Lines 1954, Oates 1959, Hausleiter 1999a; Khorsabad: Loud 1936; Loud and Altman 1938; Nineveh: Lumsden 1999) but also in many other secondary centres or rural villages of Northern Iraq (Eski Mosul Region, Green 1999; T. Rimah, Postgate *et al.* 1997; T. Billa, Speiser 1933; Balawat, Oates 1974; Curtis *et al.* 1993) permitted to define a set of "imperial types" (Parker 2001: 283-285; 2003). Since the pottery repertoires available dates basically to the last phase of the Neo-Assyrian period it is also important to stress that also the WT types are mainly based on this short timespan (mid eight-late seventh centuries BC).

TGAS team collected 1332 pottery fragments belonging to the Neo-Assyrian Period. For this period, only a limited number of fragments remained untyped (23%, T11/0, Table 6.12.1, Chart 6.12.1), this is especially due to the large number of WT types for this period and for our good knowledge of the Neo-Assyrian ceramic production. Furthermore, what is also clear from this data is that the pottery assemblage collected in the Navkur Plain, thanks to its location in the heart of the empire, significantly reflects the well-established pottery production that we know from the seventh-century imperial capitals repertoires (see above).

From a general point of view, the pottery is often not evenly fired and the surface is roughly smoothed or in some case roughly burnished. The colour of the fragments varies from buff to orange, even if some yellowish/greenish sherds occur. The fabric is commonly chaff tempered but also mineral tempered sherds were frequently recorded. The same occurrence is noted by Gavagnin in the LoNAP material; the scholar argues that this incidence of mineral-tempered fabric can be possibly connected with a late production date or the rural nature of the settlements (Gavagnin *et al.* 2016: 145-146). On the base of the data from the TGAS area, we can argue that the occurrence of the mineral tempered fabric could be read as a peculiarity of our region and not as an indication of a late production date. The flourishment of a large number of very small settlements in the Navkur Plain is strongly connected to the agricultural exploitation of the area during the maximum expansion of the Empire in the mid eight-seventh century BC. The collapse of the empire corresponds in the Navkur to the collapse of the thick settlement pattern in the Post Assyrian period, see Chap. 6.13. Therefore, it is possible to speculate that the majority of the settlements belonging to this period are datable to the seventh century BC and not to a later date.

The most attested type (Chart 6.12.1) is the "Thickened Bowl Rim" (T11/2): this form occurs with or without carination in many excavations (Eski Mosul excavations, Green 1999: 126 fig. 8, 4; Erbil, van Ess *et al.* 2012, pl. 11 j; Nineveh, Lumsden 1999, 11 fig. 4, 10; Sheikh Hamad, Kreppner 2006: Taf. 5, 10; Ahmar, Jamieson 2012: 325, fig. 3.3, 16) and survey assemblages (NJP, Wilkinson and Tucker 1995: fig. 73, nn. 18 and 19; THS, Ur 2010: 272-274; Leilan Survey, Gavagnin 2012b: fig. 3 b and c; Wadi Ajij: Bernbeck 1993: Abb. 99 l–r and 102 e–h) of Upper Mesopotamia.

Another very common type (Chart 6.12.1) is the "Necked Jar Rim" (T11/8), which is characterized by a very simple round rim on a long neck. It is quite common in Northern Iraq (Nineveh, Lumsden 1999: fig. 6, nn. 28 - 35; Fort Shalmaneser, Oates 1959: pl. XXXVIII, nn. 93–99; Erbil, van Ess *et al.* 2012, pl. 9 b; Khirbet Khatuniye, Curtis and Green 1997: fig. 39, n. 168 and 41, n. 179; Abu Dhair Green 1999: fig. 5, n. 21; Seh Gubba, Green 1999: fig. 7, nn. 5–7; Qasrij Cliff, Curtis 1989: fig. 11, nn. 49–53) and in the Syrian Jazirah (Ahmar, Jamieson 2012: 335, fig. 3.8 n. 1 and 337, fig. 3.9 n. 2; T. Sheikh Hamad, Kreppner 2006: Taf. 14 n. 2).

The "Carinated Bowl" (T11/12) also occurs in significant quantity (Chart 6.12.1). This type features a simple thickened or everted rim and a sharp carination under a vertical wall. The form is well known from almost all the Neo Assyrian assemblages (Nimrud, Oates 1959: pl. XXXV n. 26; Assur, Haller 1954: Taf. 6 ba. bc; Nineveh, Lumsden 1999: 12, fig. 5, 23; Eski Mosul excavations, Green 1999: 124, fig. 6, nn. 4 and 5).

A common diagnostic type is also the "Ribbed Bowl Rim" (T11/1), which is characterized by a rounded rib on the edge of the rim or by a deep groove in the rim. This particular shape occurs in Northern Iraq (Fort Shalmaneser, Oates 1959, pl. XXXV, 12. 13; Nineveh, Lumsden 1999: fig. 4 nn. 13-14; Kar-Tukulti -Ninurta, Schmidt 1999: fig. 5 and 6; Assur, Haller 1954: p. 6 aa-al; Eski Mosul, Green 1999, 122 fig. 5, 1; Khirbet Hatara, Negro 1997: fig. 2 nn.17-21) as well as in the Syrian Jazirah (T. Sheikh Hamad, Kreppner 2006, Taf. 4, 7; T. Rad Shaqrah, Reiche 1999: fig. 3 a-d; T. Ahmar, Jamieson 2000: fig. 4 nn. 1-4).

The "Internally Hollowed Jar Rim" (T11/9) is another very diagnostic shape characterized by a convexity behind the folded rim. The type is known from the Eski Mosul excavations (Qasrij Cliff, Curtis 1989: fig. 11 nn. 58‑59; Khirbat Qasrij, Curtis 1989: fig. 33 nn. 168, 171‑73, 180‑81).

Other types are attested but with less than 2% of occurrence (Chart 6.12.1), namely they are the "Folded Jar Rim" (T11/10, see for upper and lower Khabur Anastasio 1999: fig. 6f and Morandi Bonacossi 1999: figs. 10d, 13a; for the NJP, Wilkinson and Tucker 1995: 214, fig. 73, nn. 24 and 25), the "Oblique T-Shaped Bowl Rim" (T11/11, for THS see Ur 2010: 276-277), the "Holemouth Cooking Pot" (T11/15, see for the Upper Tigris: Parker 2003: fig. 6; for the Wadi Ajij survey Bernbeck 1993: Abb. 188-199), the "Ribbed Carinated Bowl" (T11/14, for the NJP see Wilkinson and Tucker 1995: 101; for the THS see Ur 2010: 277), the "Button Base" (T11/5, for the THS see Ur 2010: 276) and the "Assyrian Shouldered Bowl" (T11/7, for the THS see Ur 2010: 276).

Not even a sherd of the so called "Palace Ware" (T11/6) was found by the TGAS team[1], this very peculiar and diagnostic type is plentifully attested in the Assyrian capitals and provincial centres (Anastasio 2010: 32; Hunt 2015), and it is still considered an elite product (Hunt 2015: 205-206) even if it was also found in rural settlements as Khirbat Qasrij (Curtis 1989: fig. 31) and Tell Hamoukar (Ur 2010: 274) and the same occurrence in small village-sized mounds is reported in TERP (Algaze *et al.* 2012: 34-35) and NJP (Wilkinson and Tucker 1995: 61). Therefore, it is surprising that this type was not attested in the TGAS area. Its absence can be related with its physical characteristics. In fact, the very thin walls and the general fragile nature of the type are with no doubt more exposed to the destructive ploughing activities heavily carried out in the Navkur Plain.

[1] A "very sparse presence" of Palace Ware or, more generally, fine ware was also recorded in LoNAP area, see Gavagnin *et al.* 2016: 146.

PERIOD 11 – Pottery Type	
T11/0	233
T11/1	45
T11/2	348
T11/5	1
T11/7	1
T11/8	284
T11/9	18
T11/10	8
T11/11	5
T11/12	86
T11/14	2
T11/15	5

Table 6.12.1 - Number of sherds for each type.

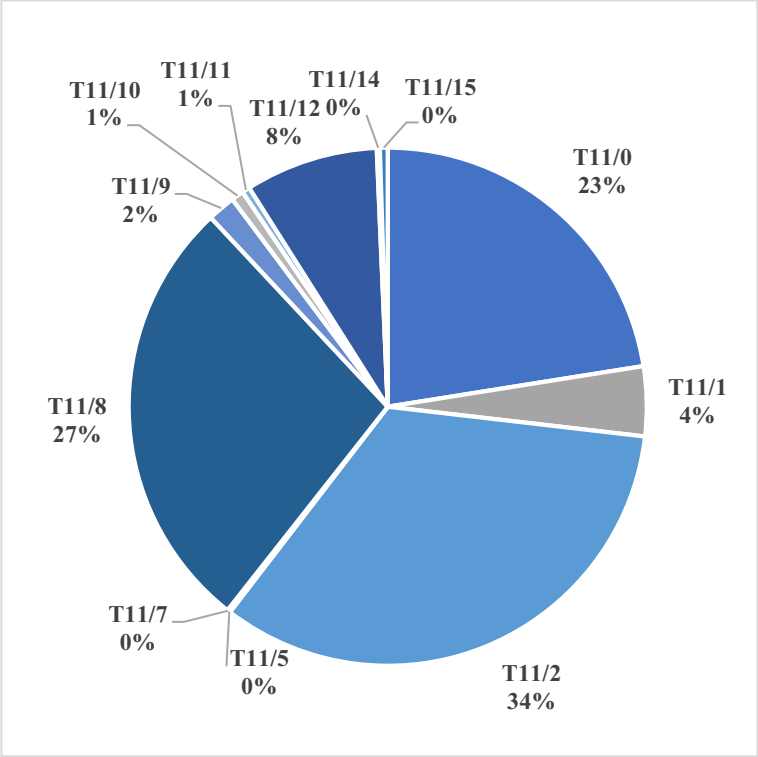

Chart 6.12.1 - Types attested for Period 11.

Fig. 6.12.1 – Neo Assyrian Period Pottery Types.

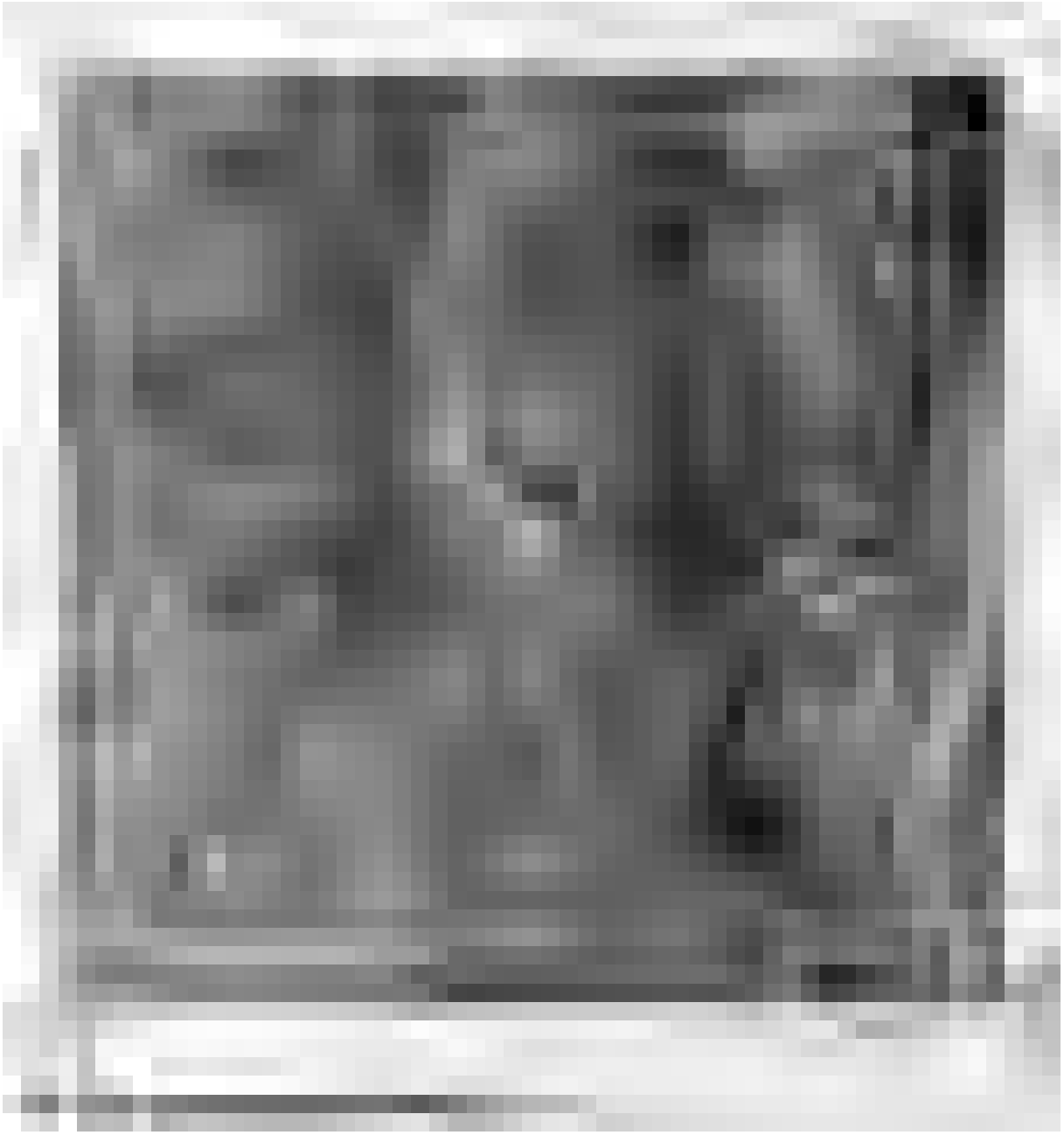

Fig. 6.12.2 – Neo Assyrian Settlement Development in TGAS area.

Settlements and Settlement Pattern

TGAS recorded 59 sites for the Neo Assyrian period. With 0,59 site/km^2 and a total aggregate area of 166,7 ha, the Neo Assyrian period represents the peak of human occupation in the TGAS region. The sites are 22% new foundations, 34% resettlement of sites not occupied during the MA period, and 44% of them shows a continuity with the previous phase of occupation. The sites average size is 2,8 ha (average size of 2,4 ha if we don't consider the site of Tell Gomel).

Although the nature of the settlement pattern is clearly rural, with a large number of sites scattered along the banks of the Gomel River, the Nardush River and of some small wadis, it is possible to recognize a settlement hierarchy. Indeed, the Navkur Plain during the Neo Assyrian period was not simply dotted by farmsteads or small villages of 1-2 ha. Considering the sites with minor or major occupation (Table 6.12.2), we have: two sites with a large extension (> 10 ha, site 106 and Tell Gomel) and 17 sites belonging to a class ranging from 3,5 to 4,7 ha of surface area.

Regarding the sites typology, the sites are mostly low mounded while only few flat sites are attested (chart 6.12.2).

LoNAP identified 337 sites with an aggregate area 691,1 ha, attesting a heavy increasement in settlement number compared to the Middle Assyrian period (201 sites recorded). The average dimension of the sites is 2 ha, almost equivalent to the one attested in the previous period (2.1 ha).

UZGAR recorded 68 sites with a total aggregate area of 168 ha. Numerous small sites were identified and only two settlements are larger than 10 ha, the average size is 2,47 ha (Koliński 2018: 18).

From EHAS, available information shows a strong increase in settlement number (5 folds more than in previous period) and that 26 sites were identified for this period (Pfälzner and Sconzo 2016: 40).

Regarding the preliminary data from EPAS, in the Lower Siwasor Zone a density of 0,34 site/km^2 was registered.

In the Cizre Plain, TERP discovered 41 Neo Assyrian sites. The number of settlements doubled from the previous 20 sites of the LBA. The survey recorded 4 or 5 town-sized sites and a copious number of small dependant villages. The sites show 33% continuity and a 61% of new settlements (Algaze *et al.* 2012: 35).

The NJP recorded 78 Neo Assyrian sites, showing in the majority of cases a strong continuity with the previous period. The sites seem to be dispersed evenly in the plane but with a cellular pattern with cells being 2-4 km across. The sites are small, between 1 to 2,5 ha, and only in few cases the dimensions reach a size of 5 ha. They are interpreted as farmstead or small villages. Tell el-Hawa

was settled only in 7 ha and it was not anymore a major centre. No evidence of sites' alignment along previously used holloways, some new alignments seem to suggest the establishments of new routes (Wilkinson and Tucker 1995: 60-62).

In the Syrian Jazireah, the THS identified 22 sites with a total aggregate area of 76,6 ha. The results show some continuity and seven sites were resettled. The settlement pattern shows less clustering withrespect to the LBA, on the contrary a higher dispersion of settlements is recorded. The biggest sites reduced in dimension, but quite the reverse, the small villages grew from an average of 1,87 ha of the LBA occupation to 2,79 ha in the Neo Assyrian period.

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	116	21						x	
60	4		3,7			x			
89	14	0,4						x	
93	15	2				x			
94	33	2,5					x		
95	31	1,5					x		
96	1			2		x			
103	3		10 (?)			x			
104	75	3,5					x		
105	50	4					x		
106	67	10					x		
128	79	4,4					x		
129	11	1				x			
130	74	0,7				x			
174	10		0,8			x			
176	46	4,3						x	
177	8		2,5				x		
179	17	2,3					x		
185	12	1,5					x		
186	32	4,7						x	
187	45	3,5					x		
232	11	0,7					x		
338	16	0,8					x		
339	2			2,9		x			
340	1			1		x			
354	27	0,5					x		
423	6		1,8			x			
424	10		0,8			x			
480	84	2,5					x		
481	3		5,7			x			
482	11	4					x		
483	4		0,8		x				
484	30	2				x			
485	2			1		x			
486	5		1,4			x			
487	4		4,2			x			
488	2			1,7		x			
489	7		0,5		x				

597	2			1,4	x				
600	2			1,3		x			
666	55	3,4				x			
709	3		0,5			x			
722	18	4,4			x				
732	28	0,8				x			
733	6		1,6		x				
742	22	4,5				x			
751	10		2		x				
759	38	4,3					x		
764	1			2,6		x			
789	55	3				x			
791	6		2,5			x			
792	1			2,4		x			
796	25	1,3			x				
818	6		0,8			x			
828	2			4,3					x
838	5		3			x			
839	6		1,5			x			
953	71	1,7				x			
955	3		0,8			x			

Table 6.12.2 – The Neo-Assyrian sites.

Neo Assyrian Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	30	101,2	2	9	13	6	-
Minor	18	44,9	4	13	1	-	-
Traces	11	20,6	1	9	-	-	1
Tot.	59	166,7	7	30	14	6	1

Table 6.12.3 - TGAS area occupation during the Neo Assyrian period.

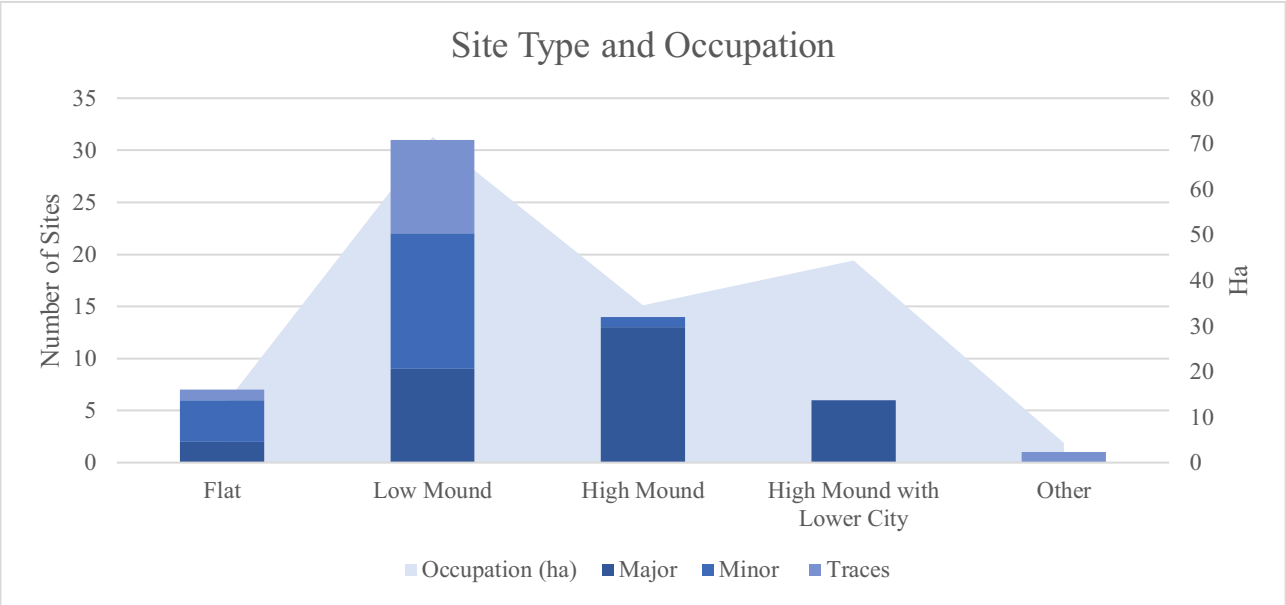

Chart 6.12.2 – The Neo Assyrian site types and occupation for each type (ha).

Interpretation

The "signature landscape" [2] of the Neo Assyrian period, characterized by the unprecedented growth of the capital cities and by a countryside scattered by small villages and farmsteads, was the focus of many studies with special attention to the relationship between the landscape transformation and the Empire's organisation (Wilkinson 1995; Morandi Bonacossi 1996, 2000 and 2018a; Wilkinson and Barbanes 2000; Wilkinson *et al.* 2005; Ur 2017a).

Until a few years ago, the information available was limited to the western portion of the Assyrian heartland thanks to the numerous surveys carried out both in North Iraq and in the Khabur basin in Syria (for a review see Ur 2017a). The new projects carried out in Iraqi Kurdistan are recording a large amount of new data from the eastern part of the Assyrian core (Ur *et al.* 2013; Ur and Osborne 2016; Morandi Bonacossi and Iamoni 2015; Morandi 2018a) offering a good opportunity to verify the persistence of the Neo Assyrian "signature landscape" also east of the Tigris river.

The collection of rules and imposition that the empire established in order to model and administrate its territories is quite large[3], but the impact of the Assyrian imperial control on the countryside had the following peculiar characteristics: the creation of a dense network of rural settlements; the forced movement of populations; the investment in infrastructures, namely canals, roads and possibly quays.

[2] For the concept of signature landscape see Wilkinson 2003: 214.
[3] For an overview Wilkinson *et al.* 2005; Ur 2017a; Morandi Bonacossi 2018a.

All these features emerged from TGAS results, confirming the strong imperial control on the Navkur Plain.

The survey data shows us how the rapid growth in the number of settlements in the Navkur Plain is not a result of a new colonisation process, rather it is a consequence of a rapid settlement intensification of a high-productivity agricultural area already extensively exploited during the Middle Assyrian period. The settlement pattern of the Neo Assyrian epoch revealed an intensification of settlements along the Gomel River and the Nardush River, the new occupation of previously unexploited marginal wadis and an intensification of the settlement in the interfluvial zones for the free arable lands full exploitation.

If we compare the site density data from different projects in the Kurdistan region and the North Jazirah area we can observe that TGAS density of 0,59 is the highest recorded since nowadays (see table 6.12.4).

In the case of the Neo Assyrian period, it is not my opinion that TGAS intensive methodology is the reason for the identification of such high number of sites. This assumption is based on the typology of Neo Assyrian sites; they are low mounded and not particularly small settlements. Of course, we cannot consider that the tools and resources used by the oldest projects are not comparable for example with our use of GPS, GIS and satellite imagery. However, even if we compare our data with those from contemporary surveys, TGAS site density is extraordinarily high and the reasons must be researched in the physical and geographical characteristics of the Navkur plain.

Project Name	*Area (km^2)*	*NA sites*	*Sites/km^2*	*Aggregate Area (ha)*
NJP	475	184	0,16	123
Tell Beydar Survey	316	82	0,11	97
THS	125	60	0,18	70,59
Lower Khabur Survey	400	128	0,16	268
Wadi ‘Ajij Survey	1,150	40	0,03	41
EPAS (Lower Siwarsor)	160	167	0,34	189,6
LoNAP	1730	337	0,19	691,1
TGAS	**100**	**59**	**0,59**	**166,7**

Table 6.12.4 -(data from Bernbeck 1993; Morandi Bonacossi 1996; Wilkinson, Ur and Casana 2004; Ur 2010; Ur and Osborne 2016: 171)

The formidable transformation that changes the settlement pattern in the TGAS area is well observable through a Thiessen Polygon analysis carried out on the settlements from the Mitanni to the Neo Assyrian period (fig. 6.12.2-4). Thiessen Polygons are used to determine the catchment areas

of a group of points (our settlements) so that any location inside the delimited area is closer to that site than any other settlements. From this spatial analysis, it is possible to determine the transformation and reorganization of the settlement distribution and (possible) catchment areas from a loose knit pattern to a very tight one (fig. 6.12.2-4). The Neo Assyrian tight knit pattern is not even comparable with the one recorded by the THS and the NJP in North Jazirah (fig. 6.12.5).

As already observed by Ur and Osborne (2016: 170) regarding the EPAS survey results from the Lower Siwasor area, it looks like the heartland of the empire went through a greater rural demographic transformation than the peripheral areas.

An explanation of this phenomenon is given by Radner (2011). She suggests that the small central provinces were expected to have almost the same agricultural potential as the much larger peripheral provinces, and from the textual sources[4], it might be inferred that all governors were demanded to give the same contributions to the central administration regardless the dimension of their province (Radner 2011: 327). This means that the core provinces had to be much more densely populated to be able to produce as much as the larger periphery provinces.

In my opinion, the strong agricultural potential, the proximity to the Assyrian capitals of Khorsabad and Nineveh and the infrastructure implementation carried out by the empire are the reasons that brought the Navkur Plain to experience such heavy transformation. Certainly, the flourishment of settlements in the period is not to be interpreted as a spontaneous repopulation of the plain, but rather it must be explained as a top-down imposition of a rural colonisation (Morandi Bonacossi 2000; Wilkinson *et al.* 2005; Ur *et al.* 2013; Ur and Osborne 2016; Ur 2017a; Morandi Bonacossi 2018a). The Navkur plain for its position and potential was certainly considered one of the first area to be exploited for sustaining the capitals of the empire and it could have been one of the regions with the largest number of deportees in Assyria (Oded 1979: 28, 116‑35).

According to Radner (2006), the Navkur Plain was probably encompassed by three provinces: Barhalzu positioned west of the Gomel River, Šimu located between the Gomel and the Khazir and Šibhiniš between the Khazir and the Great Zab (fig. 6.12.6). In particular, TGAS area includes the Barhalzu and the Šimu provinces. Notwithstanding that, a division of the Navkur in three different provinces looks not very efficient from an administrative and economic point of view. The identification of at least the western part of the Navkur as the province of Barhalzu[5] seems quite

[4] See especially the records on the foundation of Dur-Šarruken (Parpola 1995).
[5] Regarding the location of Barhalzu in the Navkur see Radner 2006: 53-54. *Contra* Postgate (1995: 2, fig. 6.12.5) located the province north of the Jebel Sinjar and east of the province of Nisibina, but we know from a text dated to Ashurbanipal's Kingdom that the Governor of Barhalzu took some lands from the neighbour land of Halahhu (SAA 10, 173). Halahhu district was assigned to the new province of Dur-Sharrukin, and it must be located in an area between Nineveh and the

appealing. Barhalzu is indeed known not only as an important agricultural area (Fales 1990: 88), but also as destination of deportees during Tiglath-Pileser III's reign (Tadmor 1994: 44, Ann 9 n. 10).

The presence of deportees in the Navkur Plain can be partially manifested in the abrupt demographic changes, which occurred in the plain, albeit the recent excavation in Tell Gomel might have brought to light a much more crucial evidence of the presence of foreigners in the plain.

The excavation of a small trial trench on the south-western edge of the Lower Town revealed a group of nine Iron Age II tombs (Morandi Bonacossi 2018a: 69-72). The unicity of the discovery is related to the incineration ritual that characterized these tombs. The cremation of the body was carried out in 50- centimetre-deep elongated pit through a pyre constructed directly above the pit. After the burning of the pyre, the cremated remains and the rest of the pyre were covered with earth. Therefore, we can consider the grave a primary cremation pit. The grave goods recovered are limited to one or two vessels for each tomb belonging to a clearly Neo-Assyrian material culture horizon (Morandi Bonacossi 2018a: 71). This particular type of funerary ritual and burial is attested, in Neo Assyrian contexts, only in other two sites: Tell Sheikh Hamad on the Lower Khabur (Kreppner 2014) and Ziyaret Tepe on the Turkish Tigris River (Matney *et al.* 2002). The inhumation was the typical Assyrian ritual[6], while the cremation was more common in Iron Age II western Syria and Eastern Anatolia[7] (even if the cremation directly in the grave cut is not attested, with the exception of Ziyaret Tepe case). Considering that the study of the funerary area at Tell Gomel is still limited to a test trench, Morandi tentatively suggests that this alien funerary practice, in a site located in the heartland of the Empire, can possibly reflect the presence of deportees at Tell Gomel (Morandi Bonacossi 2018a: 72).

Also the construction of the monumental canal system[8] impacted the landscape of the Navkur Plain. The most important canal studied by LoNAP team, the Canal of Sennacherib, is not crossing the plain, but instead it circumvents the Navkur running on its western edge. Notwithstanding the track of the main canal, the LoNAP team was able to identify a seriesof secondary canals most likely used as source of irrigation for the lands close to the primary canal. According to a computer simulation based on an Aster DEM, a large area south of Jerwan was easily irrigable through the secondary channels which branched from the primary canal and that were identified on the satellite images and in the

Navkur and consequently the neighbour province of Barhalzu can be located north of Dur-Sharrukin in the Navkur Plain (Radner 2006: 54).

[6] For an overview see Mofidi-Nasrabi 1999, in particular for Ashur tombs, see Hauser 2012.

[7] For an overview of Syria, see Kreppner 2014, for Anatolia see Wicke 2013.

[8] The monumental hydraulic systems created by the Assyrians have been investigated throughout the study of cuneiform sources, the remote sensing analysis and archaeological surveys: i.e. Fales 1990 and 2008; Bagg 2000a and 2000b; Reade 1978; Ur 2005; Wilkinson *et al.* 2005; Ur *et al.* 2013; Morandi Bonacossi 2018b.

field (Morandi Bonacossi 2018b). Almost all the western half of TGAS area is included in this area that could have been irrigated through the secondary canals (fig. 6.12.7).

It is interesting to notice that no manuring practices during this period are revealed by the off-site field scatters recording carried out in the TGAS area, even if the total aggregate area of the Neo Assyrian period is indeed much larger than the ones of the Mid-Late 3rd Millennium or Early 2nd Millennium BC (see Chapter 5.1). The lack of evidence of such practices can be related to a different agricultural practices and techniques compared to the Bronze Age period or it can be related to the fact that agriculture was already enhanced by irrigation. As Ur (2005: 343) argues, the large-scale irrigation projects allowed a more intensive production of grain and vegetables even reducing the use of the biennial fallow.

Regarding the presence of infrastructures in the central and lower part of the Navkur Plain, it is interesting to notice how the alignment along the possible route that already emerged in the LBA (see Chapter 6.11) it is now reinforced and enhanced with the foundation of new settlements along it. A Least-Cost Path analysis[9], run with ArcGIS software, retraces almost perfectly the alignment identified along all the southern portion of the plain[10] (fig. 6.12.8). The possible route had probably the aim to connect the Ba'dreh Plain (maybe the major centre of Jerrachiyah) with a possible ford on the Great Zab (in the area of the modern town of Chamah), and consequently to access the Arbail Province that extends south-west from the other bank of the river. Probably the route was also used as trade route for the products coming from the plain and directed to Nineveh or Khorsabad. Indeed the best way to reach the capitals was to go south in the Navkur Plain, then bypass the southern Jebel Bardarash and Jebel Maqloub going west to the Ba'dreh Plain and only at that point travel further south towards the capitals.

A ford, exactly in the area where the route interrupts, is attested in later sources (fig. 6.12.9, see Fiey 1965:183). Moreover, in 2016 R. Palermo and M. Marciak of LoNAP team, while investigating the issue of the possible the location of the Battle of Gaugamela in the Navkur Plain, visited the area of Chamah on the Great Zab looking for a possible northern crossing point of the Great Zab by the Macedonian and Persian armies.

According to the inspection (Palermo and Marciak pers. comm.) the terrain at Chamah is ideal for a river crossing to ford by foot, here the stream of the Great Zab is wide and the level of water is relatively low.

[9] The Least-Cost Path analysis was run in ArcGIS, considering site S080 (the last site, identified by UGZAR, of the alignment before the Great Zab) as "Origin point" and the site of Jerrachiyah as "Destination point" and using a DEM with 30m resolution to calculate the "Slope variation".

[10] A group of UGZAR sites, published online in the catalogues of the Polish project, were considered in this reconstruction.

The depth of the river at this spot, at least during summer, varies between c. 0,50 and c. 1 m, making it a perfect location for a ford (fig. 6.12.10).

The creation of an extensive route network in the empire is well documented by textual sources and the hundreds of holloways detected in the satellite images especially in the Ashur and Nineveh hinterlands (Fales 1990; Kühne 2011; Wilkinson *et al.* 2005; Altaweel 2008). The written sources mentioned a network of "royal roads" connecting the capitals with the most important administrative centres, but, as observed by Ur (2017a: 26), although we translate the term *harran sharri* with "royal roads", the term "road" can be quite misleading. There are a few indications that this network of routes was technically built or planned; the "roads" were most probably only tracks with some way stations along them (Ur 2017a).

The Gomel and Khazir rivers themselves must have been used as communication and trade routes during the Neo Assyrian period. Evidences of such use were discovered along the bank of the rivers, they are stone-block structures interpreted as quays (Morandi 2014, 2018a and 2018b).

From a general point of view, river navigation and river infrastructures are not well known in the archaeological literature, even if we have many information coming from the textual sources and the Assyrian reliefs (Morandi 2018b). Only few structures are attested, namely two monumental stone quays found at Ashur and Nimrud and other two stone quays identified along the Khosr at Nineveh[11].

Two new examples of these likely navigation infrastructures were detected by the LoNAP team. The first quay (LoNAP site n. 264) was detected north of the TGAS area, on the right bank of the Gomel river and close to the village of Zinawa Ghazi. The quay was a big structure of limestone blocks set in mortar and measures c. 28.9 x 3,1 m. The structure was covered at the north end by a dozen of paving slabs of irregular dimensions identical to those used to pave the Jerwan aqueduct[12]. The building technique and the material used, both similar to the one used in the Jerwan aqueduct, make it plausible to date them to the Neo Assyrian period (Morandi Bonacossi 2014).

The second quay was unfortunately found completely destroyed; the site (LoNAP site n. 267) is located on the left bank of the Khazir river were dozens of limestone blocks were piled up after been dug from the river bed by gravel diggers. Approximately 60 blocks coming from this site were used on site **268** to build the foundation of a house in the town of Kalakchi. One block preserves part of a cuneiform inscription (Morandi Bonacossi 2014). Another group of these block is now in the Archaeological Museum in Duhok.

[11] For Ashur, see Andrae 1938: 67–68 and pl. 29; for Nimrud see Mallowan 1966: 76–81; for Nineveh see Scott and MacGinnis 1990: 68- 69, fig. 6.12.4. n. 22-23.
[12] The Jerwan aqueduct is less than 10 kilometres west from the site.

The discovery of two quays on the Gomel and the Khazir river sheds light on the possibility that river transport was common in smaller rivers and seasonal watercourses of the Navkur Plain. The rivers, the wadis and also the canals may therefore have played a central role for the transport of food commodities abundantly produced in the plain.

Fig. 6.12.2 - Thiessen Polygon for the Mitanni Period considering only sites with minor or major occupation (number of sherds > 2).

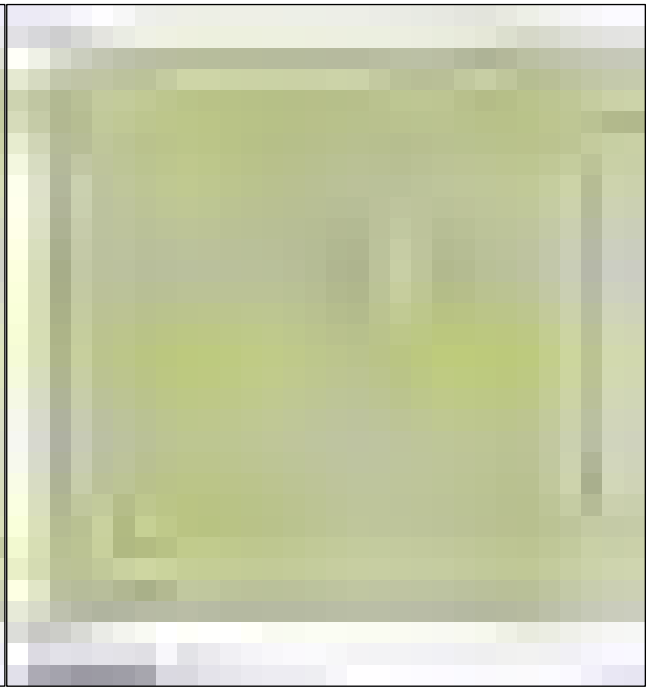

Fig. 6.12.3 - Thiessen Polygon for the Middle Assyrian Period considering only sites with minor or major occupation (number of sherds > 2).

Fig. 6.12.4 - Thiessen Polygon for the Neo-Assyrian Period considering only sites with minor or major occupation (number of sherds > 2).

Fig. 6.12.5 - Neo Assyrian sites in THS and NJP (from Ur 2010: 162, fig. 8.6).

Fig. 6.12.6 - Centra Assyrian provinces according to Radner. TGAS area is almost equally divided in Barhalzu (n. 29) and Šimu (n. 10). (Radner 2006:44, Karte 1)

Fig. 6.12.7 – Canals in the Nineveh hinterland and the areas that could be irrigated by secondary canals. (Map A. Perego; Morandi Bonacossi 2018b)

Fig. 6.12.8 - Least-Cost Path (blue line) from the Great Zab (Chamah area) to Jerrachiyeh in the Baidre Plain. The white dots represent the Neo-Assyrian sites recorded in the LoNAP area and the yellow dots the Neo-Assyrian sites recorded by UGZAR along the possible route.

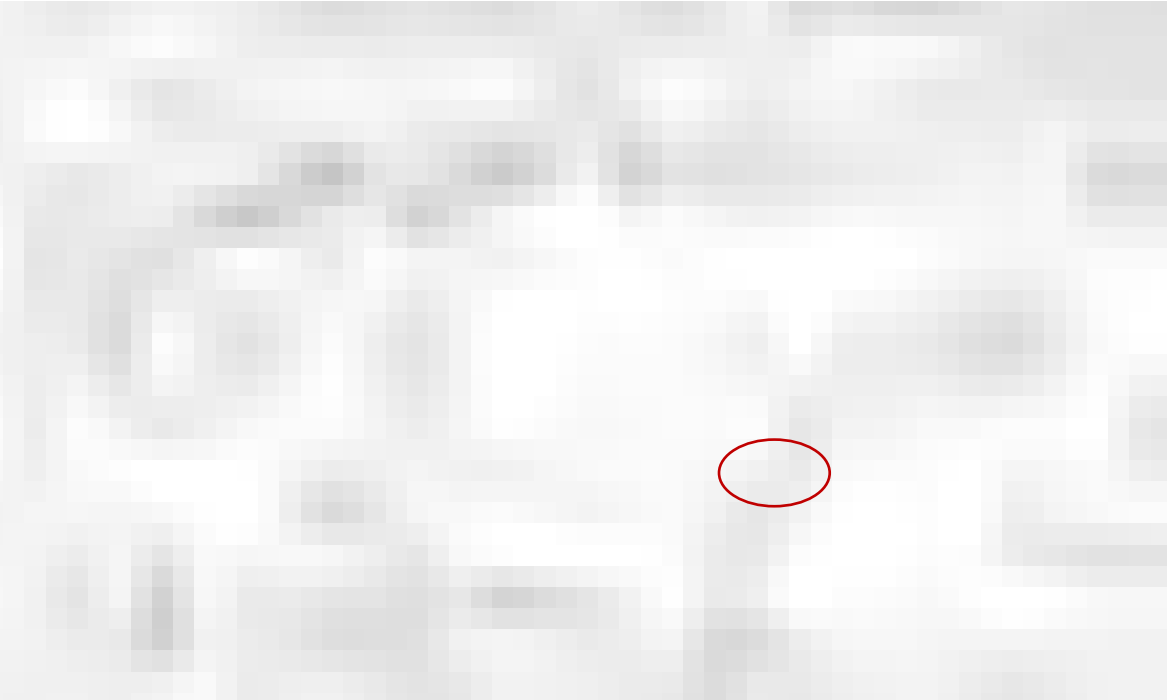

Fig. 6.12.9 – Map of the Marga region (Fiey 1965: 224-225). A ford is reported close to the village of Estwan.

Fig. 6.12.10 - The Great Zab at Chamah (photo R. Palermo - September 2016).

6.13 Post-Assyrian Period

Pottery

The period defined as Post-Assyrian[13] runs from the fall of the Assyrian capital of Nineveh (612 BC) to the beginning of the Hellenistic epoch in the late fourth century BC. During these centuries, Upper Mesopotamia witnesses the collapse of the Assyrian Empire, the rise of the Babylonian Empire and the spread of Achaemenid occupation (Kuhrt 1995; Tuplin 2004). The transition to this phase is known and documented in some sites such as Khirbet Qasrij (Curtis 1989), Khirbet Khatunyeh (Curtis and Green 1997) and T. Sheikh Hamad (Kühne 2005; Kreppner 2006 and 2008), while the Achaemenid final stage is attested in Kharabeh Shattani (Goodwin 1995).

Although Curtis (1989; Curtis and Green 1997) argues that the Post-Assyrian pottery differs from the Neo-Assyrian for a more mineral tempered fabric, many scholars disagree on our ability to differentiate the pottery of the two periods (Kreppner 2006: 128; Anastasio 2010: 3-5; Hausleiter 2010: 195; Algaze *et al.* 2012: 34). This position derives mainly from the results of the "Red House" excavations in Sheikh Hamad (Kreppner 2008) that demonstrates the presence of a large number of common types and wares belonging to both period assemblages.

Notwithstanding these results, the WCT, that we decided to adopt, offers us a handful of types that Wilkinson and Tucker (1995: 102, fig. 74) selected as highly diagnostic for the Iraqi Jazirah. Therefore, even if with some difficulties, we were able to distinguish some Post-Assyrian specimens.

For the Post-Assyrian period TGAS team collected only 50 pottery fragments. From a general point of view, the fragments are characterized by a mineral- tempered fabric with only some fine chaff occasionally occurring. The colour varies from buff to light brown even if sometimes some greenish specimens occur.

Only 18% remained untyped (T12/0, Chart 6.13.1). The most common types, representing almost half of the diagnostic sherds, are the "Grooved-Top Bowl Rim" (T12/3, Chart 6.13.1) and the "Shallow (grooved) carinated bowl" (T12/5), they occur in several assemblages dated to the post-Assyrian period, such as Khirbet Khatuniyeh (Curtis and Green 1997: fig. 55 n. 353), Kharabeh Shattani (Goodwin 1995: fig. 35 n. 3), Khirbet Qasrij (Curtis 1989: fig. 30 nn. 107-10). These two types are, together with the "Bowl with Notched Exterior", an evolution (Gavagnin *et al.* 2016: 144;

[13] For the use of the label Post-Assyrian in LoNAP see Palermo 2016: 277.

Ur 2010: 279; Wilkinson and Tucker 1995: 102) of the Neo-Assyrian "Thickened-Rim Bowl" (T11/2).

Another attested type is the "Flat Bowl Rim" (T12/6), the shape is well known in Upper Mesopotamia with comparisons found in Northern Iraq (Nimrud, Oates 1959: pl. 35.4; Kharabeh Shattani, Goodwin 1995: figs. 32:3; 33:6; Khirbet Khatuniyeh, Curtis and Green 1997: fig. 56:362; NJP, Wilkinson and Tucker 1995: fig. 74 nn. 1-2) and in the Syrian Jazirah (Kreppner 2006: pls. 47, 48; Tell Leilan survey, De Aloe 2003: tav. 51:2; THS, Ur 2010: fig. B.29:6).

The "Jar with Grooved Top" type (T12/1) is also attested among the TGAS Post-Assyrian assemblage (Chart 4). These particular specimens seem to represent a well-identified type in all LoNAP region (Gavagnin *et al.* 2016: 146) and it was especially common in the upper Tigris area (Goodwin 1995: figs. 33 n. 7, 51 n. 2; Curtis and Green 1997: fig. 49 n. 227) but it has also some comparisons in the Khabur region (Tell Sheikh Hamad, Kreppner 2006: pl. 44 nn. 6-9).

Regarding the decorated examples, notched decoration (occurring on different types), "Oval Stamped Decoration" (T12/7) and "Crescent Stamped Ware" (T12/8) are also attested. These decorations occur usually on jars but also on bowls (especially for the notched decoration, see Ur 2010: fig. B.29 nn. 3-6) and they are attested in the Eski Mosul region (Khirbet Khatunyeh, Curtis and Green 1997: fig. 68 n. 541) but also in the Jazirah (NJP, Wilkinson and Tucker 1995: fig. 74; THS, Ur 2010: 29).

PERIOD 12 – Pottery Type	
T12/0	9
T12/1	4
T12/3 + T12/5	21
T12/4	2
T12/6	8
T12/7	2
T12/8	4

Table 6.13.1 - Number of sherds for each type.

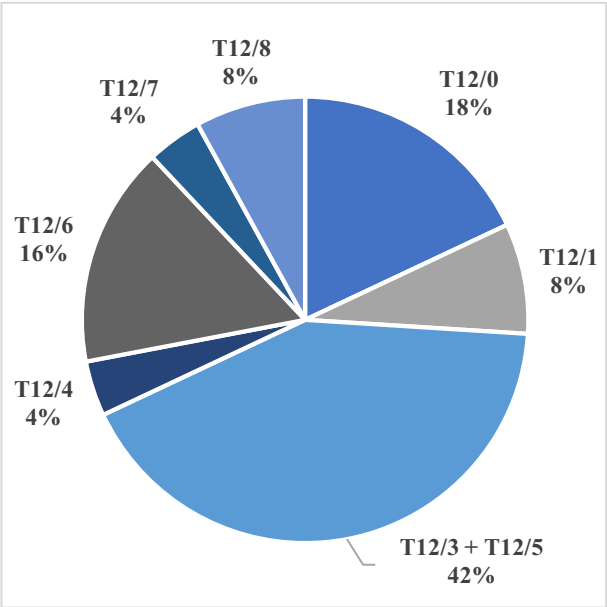

Chart 6.13.1 - Types attested for Period 12.

Fig. 6.13.1 - Post Assyrian Period Pottery Types.

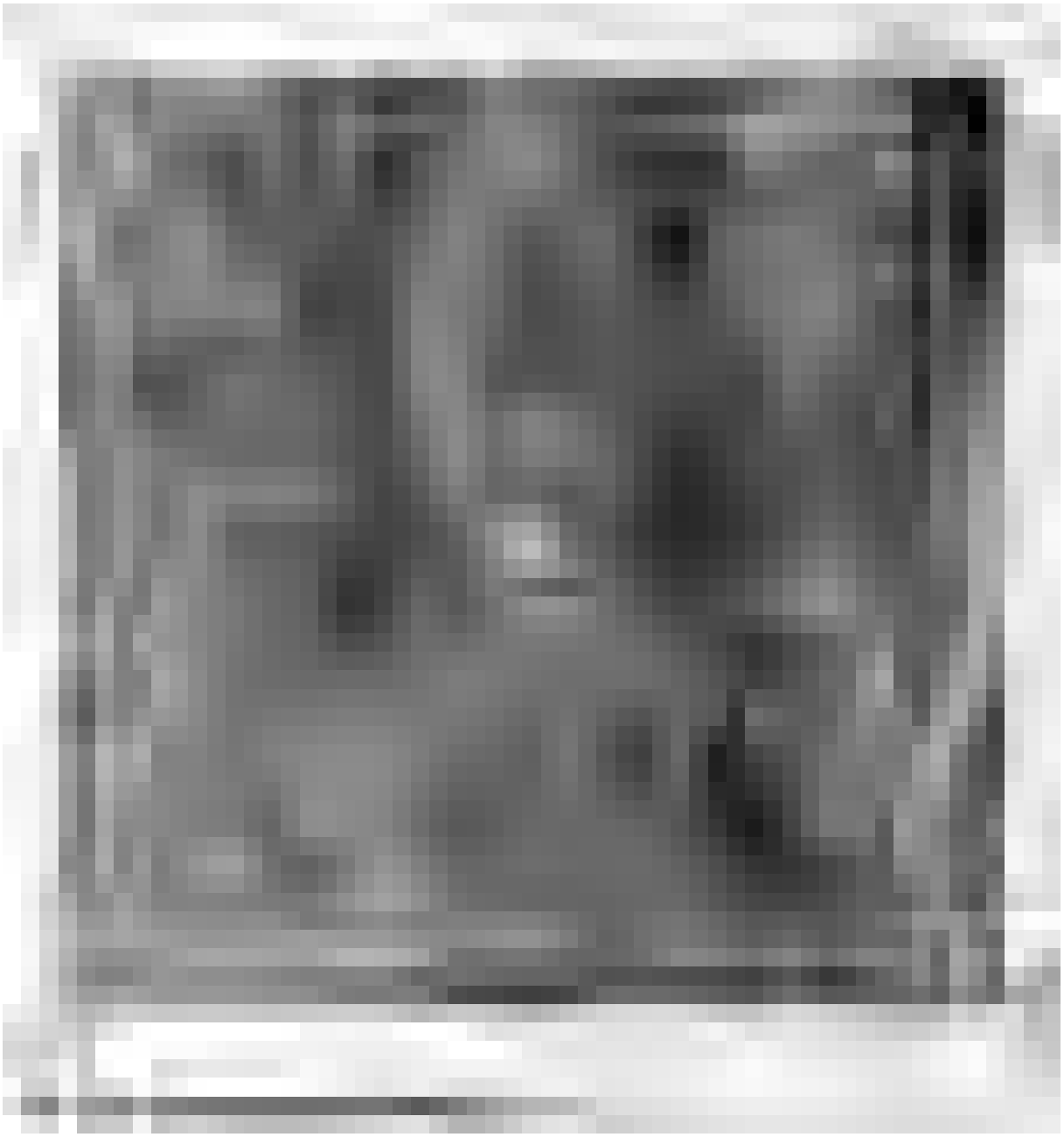

Fig. 6.13.2 - Post Assyrian Settlement Development in TGAS area.

Settlements and Settlement Pattern

TGAS team identified in 18 sites a Post-Assyrian occupation, the result shows a heavy reduction in settlements number. With a density of 0,18 site/km^2 and an aggregate area of only 43,2 ha, the settlement pattern seems to reflect the consequences of the collapse of the Assyrian Empire.

The settlements pattern study reveals a 90% continuity with the Neo Assyrian period, 10% of resettlement of sites not occupied in the previous phase and no new foundations.

Not taking Tell Gomel into consideration (15 ha, probably overestimated due to the intensity of the survey), the average size of the settlements is 1,66 ha (table 6.13.2). They are very small sites positioned along the Gomel River or dispersed in the plain. In all sites less than 10 sherds were found (tables 6.13.2 and 3) with the only exemptions of Tell Gomel (16 sherds) and Tell Abbass (10 sherds). No flat site was recorded as Post-Assyrian, the site-types attested are Low mounded, High mounded or High mounded with Lower Town (Chart 6.13.2).

The LoNAP recorded an abrupt decrease of settlements, with only 100 sites attested and 197,1 ha aggregate area. The sites seem to be very small, less than 2 ha, with no major settlements. From the preliminary analysis it appears that the landscape was scattered with small and isolated sites (Palermo 2016: 277).

Likewise, in the Great Zab area, there is a reduction in the settlement number. The UZGAR recorded only 20 sites identified with only 29 sherds (Koliński 2018: 18).

Up to the north, the EHAS made no distinction with the Neo Assyrian pottery production and consequently we don't have information about the Post-Assyrian phase (Pfälzner and Sconzo 2016: 40).

Similarly, the TERP, in the Cizre Plain, decided to not distinguish between Neo Assyrian and Post-Assyrian, although then they present 6 sites as probable Post-Assyrian sites (Algaze *et al*. 2012: 38-39).

In the NJP, a "virtual cessation of settlement over the plain for some 200-300 year" is recorded (Wilkinson and Tucker 1995: 64).

In the Syrian Jazirah, the THS recorded 22 very small sites of which 17 were already occupied in the Neo Assyrian period, 13 were occupied in the subsequent Hellenistic period and 11 were settled in both periods (Ur 2010: 116).

Site Number	Total Sherds	Occupation in Ha			Site Type				
		Major (> 10 fragments)	Minor (3-10 fragments)	Traces (1-2 fragments)	Flat	Low Mound	High Mound	High Mound with Lower Town	Settled Hill
40	16	15						x	
89	5		0,3					x	
94	6		2,2				x		
95	8		0,3				x		
106	1			0,4			x		
128	3		4,4				x		
130	3		0,7			x			
174	3		0,8			x			
177	1			2,5			x		
185	3		3				x		
186	1			2,5				x	
335	1			4		x			
354	3		0,5				x		
480	2			0,1			x		
482	2			0,6			x		
742	10		3,2			x			
838	1			1,2		x			
839	1			1,5		x			

Table 1.13.2 – Post Assyrian sites.

Post Assyrian Occupation							
	Number of sites	**Ha**	**Flat**	**Low Mound**	**High Mound**	**High Mound with Lower Town**	**Other**
Major	1	15	-	-	-	1	-
Minor	9	15,4	-	3	5	1	-
Traces	8	12,8	-	3	3	2	-
Tot.	18	43,2	0	6	8	4	-

Table 6.13.3 - TGAS area occupation during the Post Assyrian period.

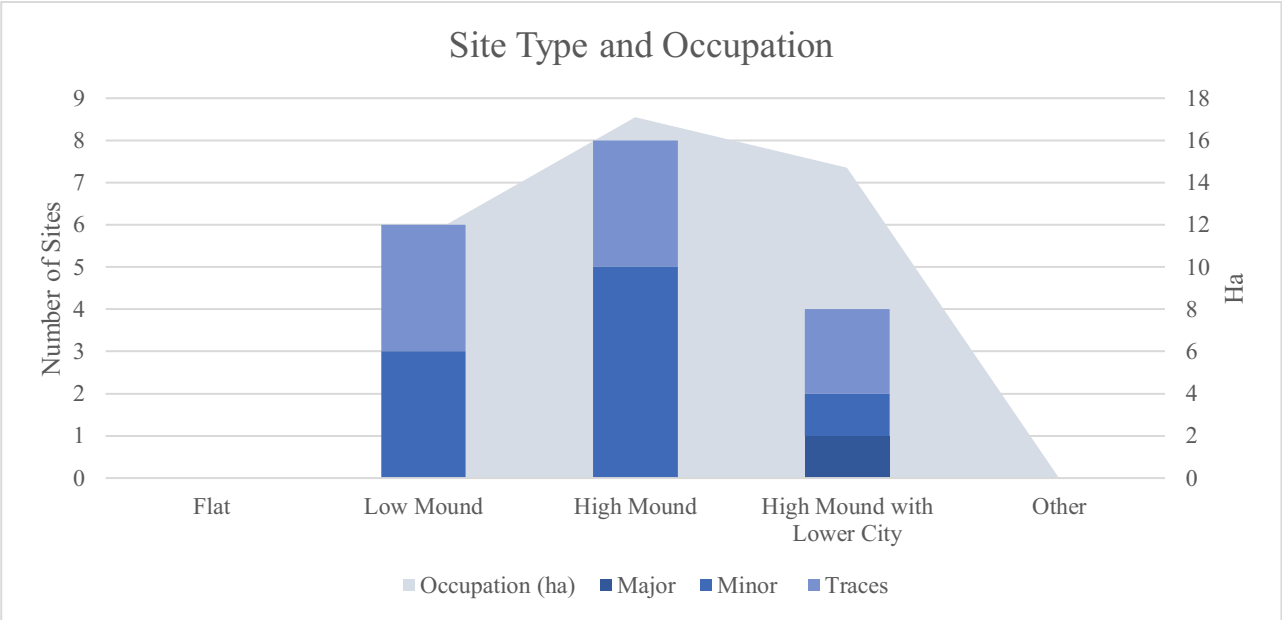

Chart 6.13.2 – Post Assyrian site types and occupation for each type (ha).

Interpretation

In the interpretation of the settlement pattern of the Post-Assyrian period a quite large amount of caution is needed. It is important to underline that our reconstruction of the settlement occupation is based on a very limited number of pottery fragments (70 sherds considering TGAS and LoNAP) and the continuity of some Neo-Assyrian shapes in the subsequent period could have brought us to a slight underestimation in the number of Post-Assyrian sites.

To further complicate the situation there is a paucity in the Assyrian heartland of textual sources and archaeological evidence belonging to the period immediately after the fall of the Assyrian Empire (Kuhrt 1995; Curtis 2003 and 2005).

If before the idea of a complete demographic collapse, a wipe out of all the settlements and a void in power and culture following the fall of Nineveh was commonly spread (Postgate 1979), now scholars are trying to challenge this view of a completely destroyed and annihilated Assyria (Dalley 1993; Kuhrt 1995; Curtis 2003 and 2005).

What emerge from these recent studies is that the Assyrian heartland finished firstly under the Median or Babylonian control (this point is still unclear Curtis 2003: 157) and after the conquest of Babylon in 539 BC by Cyrus it was absorbed into the Achaemenid empire. During this whole period the region of North Iraq never remained a devalued backwater area due to its agricultural potential and to the

routes crossing the region (Kuhrt 1995: 240; Curtis 2003: 18). Indeed, the lack of major urban centres does not exclude the existence of a prosperous countryside.

The evidence from TGAS seems to confirm the survival of a rural settlement pattern after the fall of the Neo Assyrian Empire. Certainly, a depopulation and a general decrease in settlement number and size is attested and this must have been due to the end of the pressing demand of agricultural products from the Assyrian capitals now reduced to ruins (Kuhrt 1995; Curtis 2003 and 2005). On the other hand, with a density of 0,18 sites/km^2 the Navkur Plain during the Post-Assyrian period can be compared to the rural Neo-Assyrian countryside recorded in the Syrian or Iraqi Jazirah (Chapter 6.12, table 4).

7.
CONCLUSIONS

7.1 Results Achieved

The Tell Gomel Archaeological Survey had the first aim to investigate and understand the development of the Navkur Plain archaeological landscape. The survey was also set out to explore the role of Tell Gomel in the region and for this reason, it was designed to cover an area of 100 km^2 around the site.

Furthermore, the project was the first project in near eastern landscape archaeology designed to test how the use of two different methodological approaches on the same territory could lead to two substantially different results in the understanding and interpretation of settlement development and land-use.

From the methodological point of view, the result of the combination of three different strategies to investigate the site of Tell Gomel, the other archaeological sites in the TGAS area and the off-site was very effective (Chapters 2.2-4). Even if more time-consuming, such intensive approaches allowed to obtain a high-resolution reconstruction of the settlement's development and limits. This is especially true for Tell Gomel, where the intensive survey led to a completely new interpretation of the site limits and dimensions (Chapter 4.1). In particular, the intensive survey shed light on the importance of the site between the mid-late 3rd millennium and the first half of 2nd millennium BC, when the site reached its maximum extension. The evidence is also now confirmed by the beginning of extensive excavation at the site (Morandi Bonacossi *et al.* in press).

The use of a thick grid of transects for the off-site survey is quite uncommon in Near Eastern archaeology but it is the norm in Mediterranean archaeology (Chapter 2.4). This type of fieldwalking activity permitted to identify a large number of sites previously undetected and which were also not visible on any of the satellite or aerial images in our possession (Chapter 4.5). This shows how even in a plain landscape not every site is identifiable through remote sensing and that only fieldwalking can help us in having a better assurance in site's recovery rate. The identification of these sites brought also to a change in the diachronic interpretation of settlement dynamics since many pre- and proto-historic sites were detected only through the intensive survey. For instance, a great misrepresentation

occurred because of several small 0,5-1 ha, flat or low mounded) mid-late 3rd millennium sites were missed by the remote sensing (extensive) survey. This, of course, could have had misled the researchers in the interpretation of urban nucleation phenomena.

The fieldwalking strategy permitted also to register and analyse the presence of the field scatters in an area of 25 km^2 surrounding Tell Gomel (Chapter 5.1). The pottery fragments distributed on the field's surface were recorded through the transects with the help of a tally counter and with the use of 10x10 squared units which provided a better perception of the change of sherds quantity. The results confirmed the validity of the manuring hypothesis (also confirmed by the P analysis) since the appearances of the field scatters seem to coincide with the maximum urban expansion of the site of Tell Gomel. In other words, the results allowed us to determine that even in the Tell Gomel area, albeit on a smaller scale, manuring was practised in the second part of the 3rd millennium and at the beginning of the 2nd millennium BC. Furthermore, the study permitted to understand better the correlation between the practice of manuring and the settlement development. In fact, the appearance of field scatters is not correlated to the peak in the population of the plain, occurring during the Neo-Assyrian period, but it is correlated with the peak in the urban expansion of Tell Gomel. This mean that the practice of manuring is strictly connected, at least in the Navkur Plain, with the urbanisation phenomena.

A clear limitation to this thesis was that, unfortunately, it could not benefit from the comparison with the final results of the neighbouring projects EHAS, UGZAR and EPAS. In fact, the study was able to integrate only the data available through the several, but only preliminary, published reports.

In sum, the results presented in this thesis show that the goals of the project were fully achieved. Hopefully, the experience of the TGAS will persuade future regional surveys to adopt a double strategy comprising a combined approach of intensive survey and extensive survey as already advocated almost 20 years ago by T. Wilkinson (2000: 227).

7.2 Overview of the Navkur Plain Settlement Development in the Upper Mesopotamian Context

The data collected shows how the Navkur Plain is culturally strictly related to the Jazirah cultural context, especially the Khabur Triangle and the North Iraqi Jazirah. This strong relation is not only

related to the affinity in the material culture but also to the similar socio-political dynamics. In the Navkur Plain it is possible to recognize, even if with some differences, a settlement development close to the pattern recorded by the other Upper Mesopotamian surveys (NJP: Wilkinson and Tucker 1995; THS: Ur 2010; TBS: Ur and Wilkinson 2008; TBSS: Ur *et al.* 2011)

The Navkur Plain can be included among the "Agricultural Plains" of the Northern Fertile Crescent, as defined by Wilkinson *et al.* (2014: 50), and it forms as well a classic "Landscape of tells" (Wilkinson 2003: 100) characterized by a dry-farming staple economy. The peculiarity of the Navkur Plain is related to its favourable environmental conditions (high average annual rainfall, deep soils, abundance of water resources, see Chapter 3) but also its distance and peripheric position in relation to well-known communication routes and marginal lands (the steppe).

The settlements in the plain were relying on an agricultural economy, based on dry farming with, at certain times, the enhancement of manuring and/or irrigation. Even if it is difficult to determine on the base of the survey data, an agro-pastoral dimorphism must have been existed, possibly a sedentary pastoralism[1] was practiced. From the settlement density and distribution, it seems that only few areas were dedicated to pasture lands in the plain and it is for this reason that we could hypothesize that the nomadic component must have played a minor role in the economy of the plain. In fact, we have to consider that the the Navkur Plain is far from the marginal land of the Jazirah, in which the economic and political relations with the tribes who lived in the steppe were much more crucial.

Regarding the history of the settlements in the plain, the first small villages that appear during the Late Neolithic period, they were small and scattered in the plain mostly located closely to water streams. During the Early Pottery Neolithic and the Halaf period, the small settlements were probably occupied for only few generations and then abandoned (Nieuwenhuyse *et al.* 2016: 38). Consequently, the sites were not all occupied at the same time and in reconstructing the settlement patterns, we should take into consideration that there was possibly a shift from settlement to settlement within every single period (Wilkinson and Tucker 1995: 79; Chapters 6.2 and 6.3). The foremost change in the settlement strategy is recognizable in the Ubaid period, when for the first time the settlement starts to grow in number and aggregate area (Chapter 6.4).

With the Late Chalcolithic, Tell Gomel started to become an important node at the centre of the plain surrounded by small villages without a distinctive hierarchy (Chapters 6.5 and 6.6). Even if it is not possible to determine whether the Navkur Plain experienced a first urbanization during the 4th millennium BC (due to the scanty data coming from the intensive survey), what is clear is that the

[1] The nomadic pastoral component is difficult to determine. Since no campsites were found, the only evidence of this component are the cairns identified by LoNAP at the foothills of the mountains (see Morandi Bonacossi in press and Chapter 2.3)

bulk of the settlement in Tell Gomel was formed during this period[2]. Furthermore, the new excavations in Operation 3 at Tell Gomel revealed the existence of a pottery production area (with a sequence of superimposed pottery kilns) in the north-western limits of the site, dating to the Late Chalcolithic, that reflects the emergence of a more stable settlement, the subdivision of the settled area by function and the development of social complexity (Morandi Bonacossi *et al*. in press). The scarce traces of southern Uruk materials in the plain suggest that the region was not deeply involved in the cultural and economic relations with the southern Uruk communities, probably because they were quite far from the south-north communication route that was probably running along the Tigris river (Rothman 2000: 378-386).

Between the end of the 4th and the beginning of the 3rd millennium, the region experienced a period of collapse, abandonment and discontinuity. With the Ninevite V period, the Navkur Plain started to recover and develop a landscape of few and very small villages scattered all over the plain (Chapter 6.7). Tell Gomel was the biggest site in the plain (8 ha) and a wealthy Ninevite V tomb was excavated in Operation 1 (Morandi Bonacossi *et al.*in press). The relative richness of the grave goods (with metal objects, marine shells and carnelians) can let us argue that an elite, engaged in an inter-regional trade exchange system, was present at Tell Gomel.

The evidence for the rise of urbanisation in the Navkur Plain started at the middle of the 3rd millennium BC with the emergence of Tell Gomel as major centre in all the plain (Chapter 6.8). As already recorded in other areas like at Hamoukar, al-Hawa and Brak (Wilkinson *et al.* 2014 for a review) the urban site dominates a dense matrix of rural settlements. The difference in this case is that the settlement density in this period in TGAS area is 0,57 sites/km^2 that is for instance almost four times more than the THS density (15 sites, Ur 2010) and even more if compared to the results of NJP (20 sites, Wilkinson and Tucker 1995). This difference could derive from the fact that there was no nucleation in Tell Gomel, during the flourishment of small villages and while satellite sites started to appear, Tell Gomel began to witness an unprecedented growth. The growth of Tell Gomel was weaker if compared to the other urban sites of North Mesopotamia and it never reached the dimensions of some of the 3rd Millennium urban sites of the Jazirah. This occurrence should relate to a different subsistence strategy and singular socio-political dynamics.

According to the data collected by TGAS, a strong continuity is visible in the settlement pattern of the Middle Bronze Age (Chapter 6.9). This continuity could suggest a demographic endurance and a settlement resilience to the controversial aridification phenomenon that is recorded in the Jazirah (Weiss et al. 1993; Weiss - Courty 1993; Weiss 1997 and 2000; Weiss - Bradley 2001; Weiss et al.

[2] The creation of high and bulky mounds during the Late Chalcolithic is a characteristic of the major settlements of this period for all Upper Mesopotamia (Wilkinson *et al.* 2014: 79).

2012). During this period, the region was part of the Kingdom of *Nurrugum* (Ziegler and Langlois 2017; Ziegler 2004; Charpin and Ziegler 2003; Yuhong 1994) and Tell Gomel could be possibly identified as the ancient capital of the reign (Morandi Bonacossi *et al.*in press; Morandi and Iamoni 2015: 24). The excavations in Operation 1 revealed the existence of an extended cemetery characterized by the presence of at least 5 vaulted baked-brick tombs (Morandi Bonacossi *et al.* in press) that show the existence of a local elite in Tell Gomel during the MBA. Furthermore, the recent excavations in Operation 2 brought to light a large building, with two large courtyards and a representation area, in the area of the possible eastern city gate (Morandi Bonacossi *et al.*in press), but only further excavations can confirm the identification of the site with the ancient capital of *Nurrugum*.

During the shift from the Middle Bronze Age to the Mitanni period, there is a distinct depopulation in the plain, with a drop in the settlement number and a reduction in the dimensions of Tell Gomel. If in the Jazirah the characteristic pattern of the period is the abandonment of the tells (Reiche 2014b: 56; Pfälzner 1995: 224), in the Navkur Plain quite the opposite was recorded during this period. In fact, the high mounded tells became central in the control of the territory and they dominated large catchment areas (Chapter 6.10). This pattern provided the basis for the control and administration of the region in the subsequent Middle-Assyrian period during which the plain was agriculturally exploited by the Middle Assyrian Empire (Chapter 6.11).

Only with the Neo-Assyrian period the Navkur Plain assumed the characteristics of a “Landscape of dispersal” (Wilkinson 2003:128), with the creation of the imposed Neo-Assyrian signature landscape characterized by a rapid settlement intensification process (Chapter 6.12). The Navkur Plain, due to its proximity to two capitals of the Empire, and due to its favourable characteristics, experienced a much more enhanced transformation, confirming what already Ur and Osborne observed in EPAS region (2016: 170), that is that the heartland of the Empire went through a greater demographic transformation than the peripheral areas.

At the fall of the Neo-Assyrian period, due to its agricultural potential, the Navkur Plain did not become a devaluated backwater area, but rather a rural settlement pattern continued to prosper in the region (Chapter 6.13).

7.3 Future Direction

The research on the late periods, from the Hellenistic to the Late Islamic epoch, will be the future priority for the project.

Another direction that is necessary to undertake-is the assessment of the complex irrigation system discovered in the Navkur Plain thanks to the U2 aerial images (Chapter 5.3). A complete study of

these features, including ground-truthing and field measurement, is necessary to obtain a wider perspective on the irrigation and agricultural enhancement of the plain.

Hopefully, the project will also have the prompting of new archaeological excavations in the Navkur Plain as an outcome. The TGAS site's catalogue will offer the basis for the research of scholars who want to start a new research project in the region, providing useful information regarding the characteristics and occupational history of every single site.

Only new excavations will lead us to a better understanding of the peculiar development trajectories experienced by the community living in the Navkur Plain from the Neolithic to nowadays.

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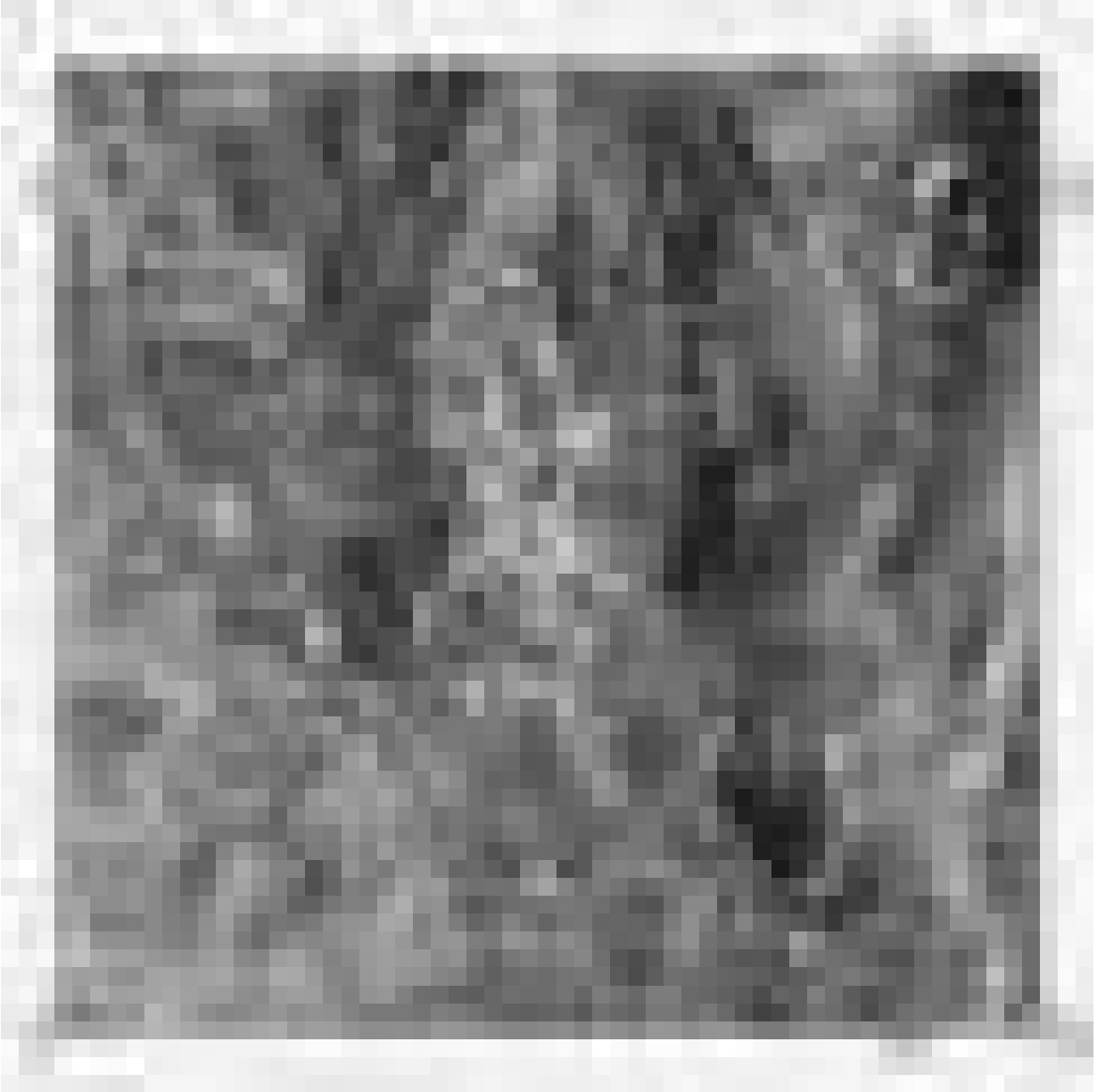
Appendix A.

Maps



1 – General site distribution in the TGAS area.

Corona satellite imagery (Corona 1039, 28 Feb 1967).

2 – General site distribution in the TGAS area.

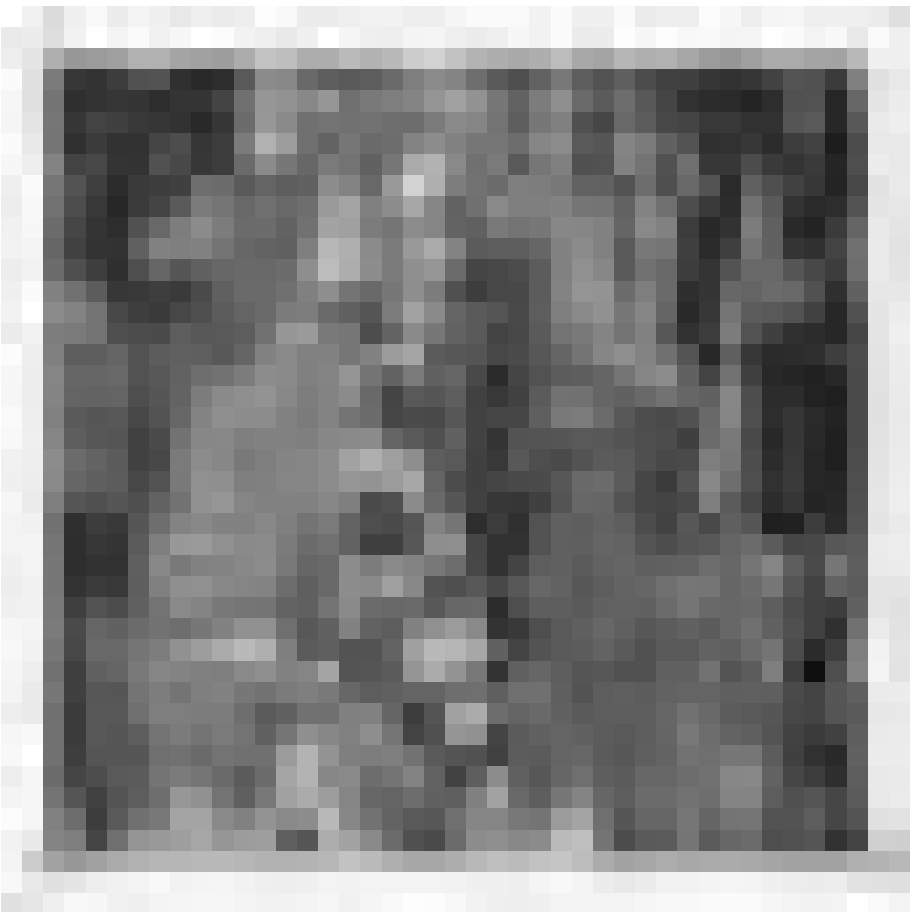
DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

A1

3 – A1 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

4 – A1 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

A2



5 – A2 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

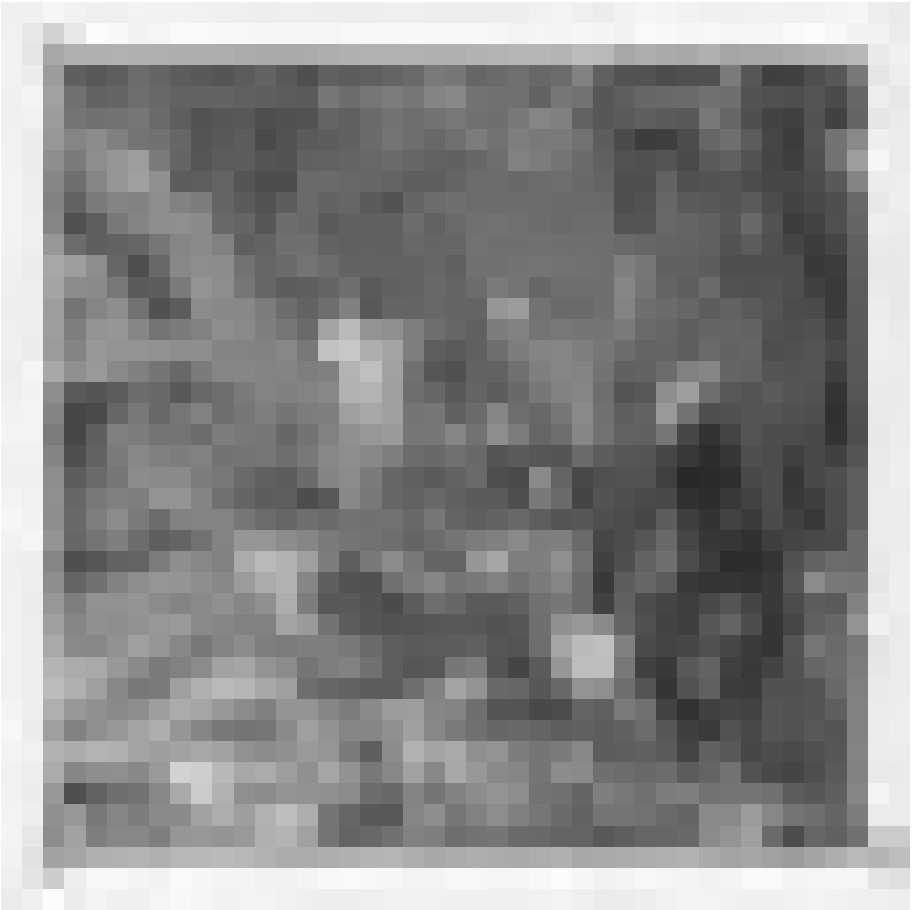
4 – A2 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

A3

7 – A3 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

6 – A3 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

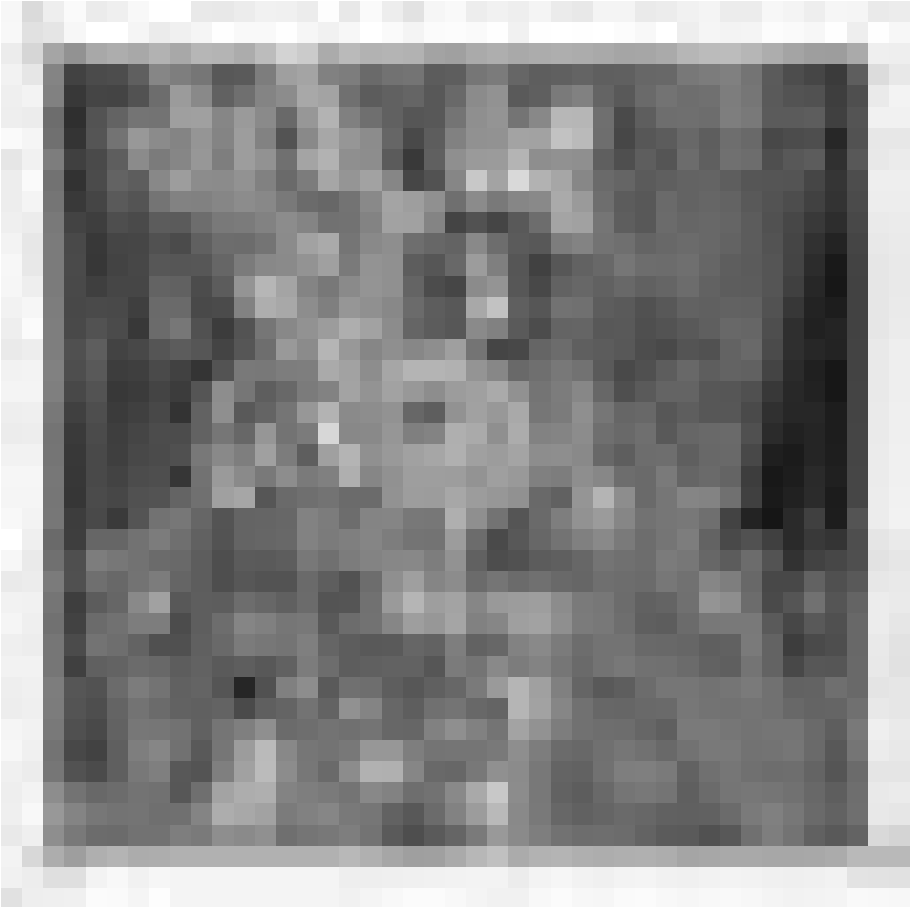
B1



9 – B1 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

8 – B1 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

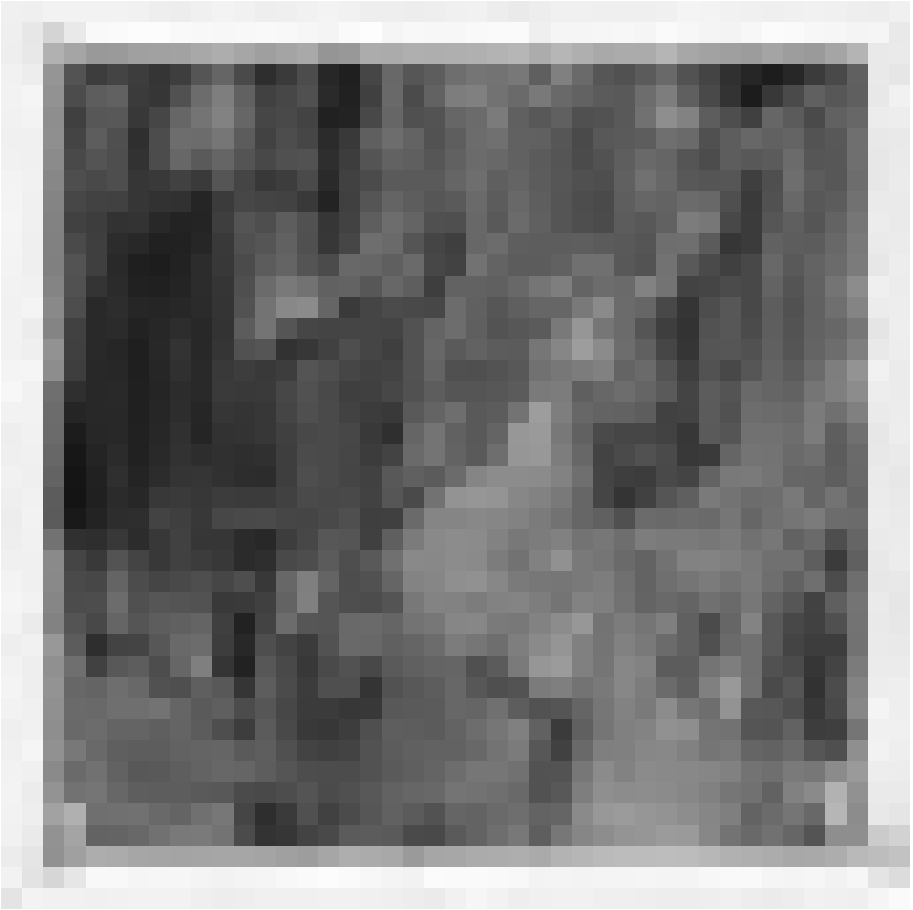
B2



10 – B2 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

11 – B2 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

B3



12 – B3 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

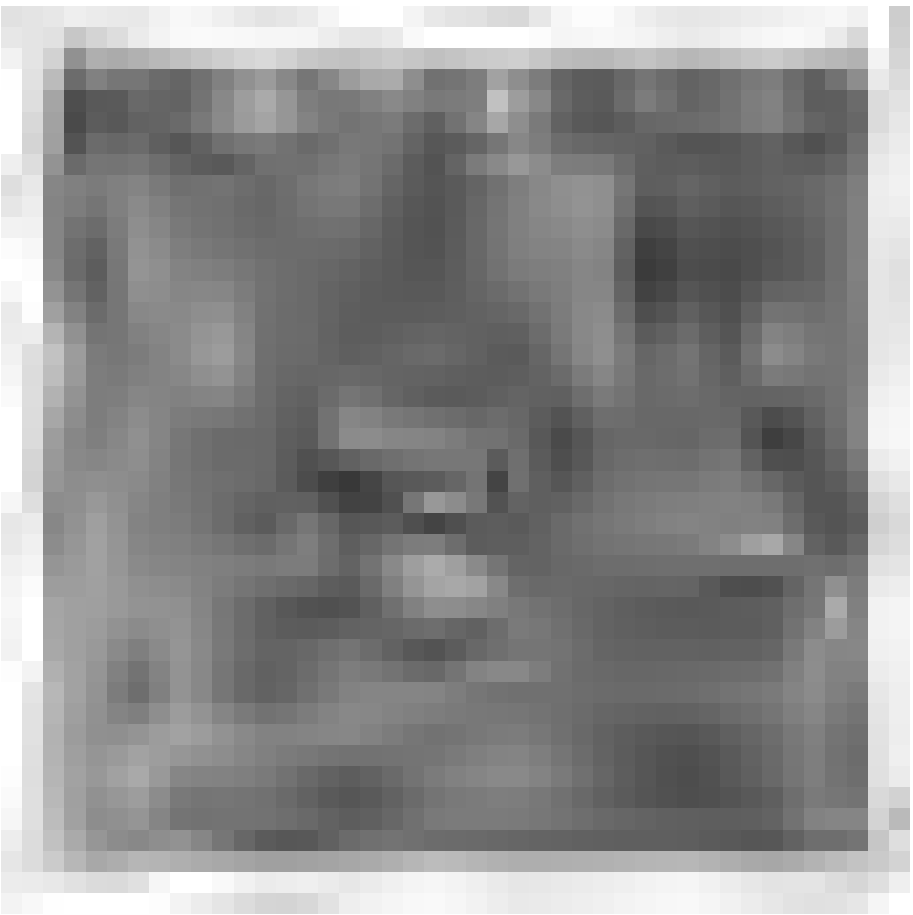
13 – B3 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

C1

14 – C1 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

15 – C1 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

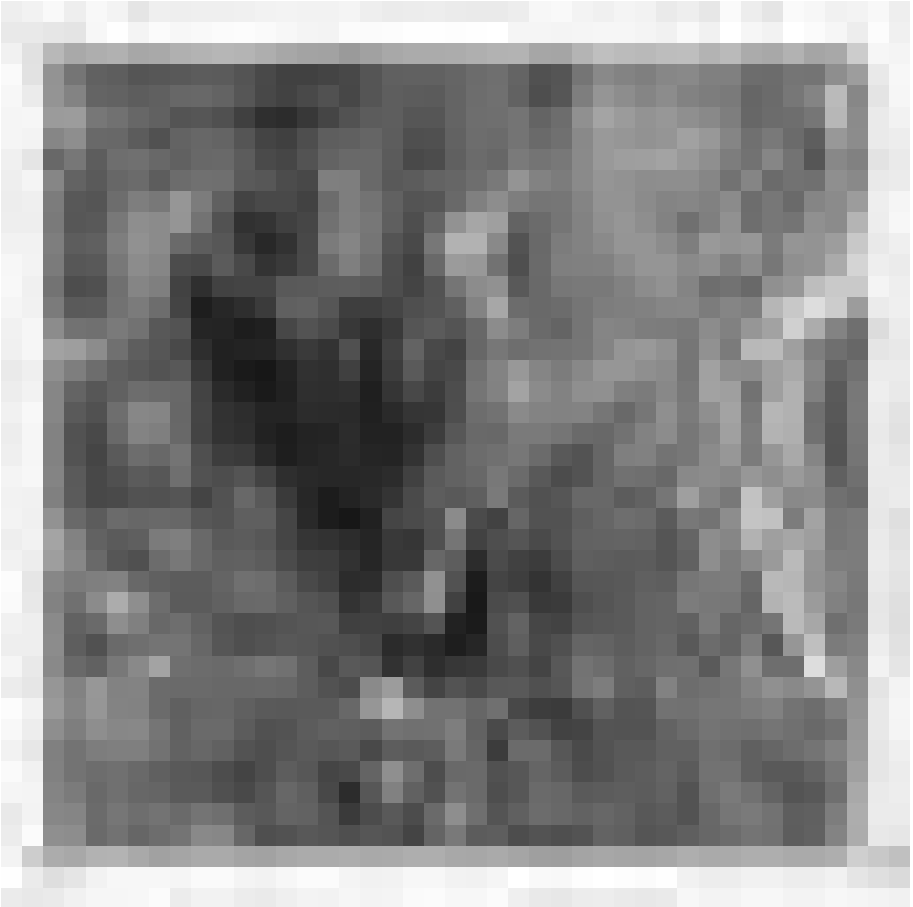
C2



16 – C2 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

17 – C1 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

C3



19 – C3 sector. Corona satellite imagery (Corona 1039, 28 Feb 1967).

20 – C3 sector. DigitalGlobe imagery (24 Jun 2010, Sources: Esri, DigitalGlobe).

Appendix B.
Working Ceramic Typology

Ceramic Types by Type Number and Period according to WCT 2013 (7th ed.)*

Early Pottery Neolithic (1)
T1/0 Untyped Early Pottery Neolithic
T1/1 Painted Ware
T1/2 Husking Tray
T1/3 Red Burnished Ware
T1/4 Coarse Chaff- or Grit-Tempered Ware
T1/5 Hassuna Incised Ware
T1/6 Hassuna Stabbed Ware
T1/7 Samarra Ware

Halaf (2)
T2/0 Untyped Halaf
T2/1 Halaf Painted Ware
T2/2 Finger-Nail Rusticated Ware

Northern Ubaid (3)
T3/0 Untyped Ubaid
T3/1 Ubaid Painted Ware
T3/2 Ubaid Corrugated Ware
T3/3 Open Bowl with Grooved Top
T3/4 Ubaid Everted Rim Jar
T3/5 Ubaid Incurved Rim

LC 1-2 (4)
T4/0 Untyped LC1-2
T4/1 Coarse shallow straight-sided bowl
T4/2 Hole-Mouth Jar
T4/3 Sprig Ware
T4/4 Double-Rimmed Jar
T4/5 Flaring Rim Jar
T4/6 Fine Beaker
T4/7 Neckless flaring rim jar
T4/8 Deep straight-sided urn
T4/9 Early internally hollowed rim
T4/10 Clay "Eye Idol"
T4/11 Drooping Ledge Rim
T4/12 Blister ware
T4/13 Internally incised bowl
T4/14 Clay Ladle
T4/15 Deep Bowl
T4/16 Bowl w/ext groove
T4/17 Brown-Washed Ware
T4/18 Bowl with Internally Thickened Rim
T4/19 Coba bowl

Southern Uruk (5a)
T5a/0 Untyped southern Uruk
T5a/1 Bevelled Rim Bowl
T5a/2 Nose & Crescent Lug Handles
T5a/3 Drooping Spout
T5a/4 Broad Strap Handle
T5a/5 Oblique Rimmed Bowl
T5a/6 Undercut-Rim Jar
T5a/7 Conical Cup Rim
T5a/8 Conical Cup Base

LC 3-5 (5b)
T5b/0 Untyped LC3-5
T5b/1 Internally Hollowed Rim Jar
T5b/2 Internally Grooved Rim Jar
T5b/3 LC Gray Ware
T5b/4 Hammerhead bowl
T5b/5 Casserole
T5b/6 Carinated Fineware Bowl
T5b/7 Grooved-Rim Beaker
T5b/8 Sharp Interior-Carination Jar
T5b/9 Scraped-Exterior Shallow Bowl
T5b/10 Small Carinated Bowl
T5b/11 Sharply Out-Turned Rim
T5b/12 Internally Moulded Bowl
T5b/13 Chaffy hemispherical bowl or cup
T5b/14 Chaffy flat-topped shallow bowl
T5b/15 Flared-Rim Cooking Pot
T5b/16 Ceramic Ring
T5b/17 Double-Mouth Jar

Ninevite 5 (6)
T6/0 Untyped Ninevite 5
T6/1 Painted Ware
T6/2 Incised Grey Fine Ware
T6/3 Excised Grey Fine Ware
T6/4 Vertical Grooved Fine Ware
T6/5 Ribbed Fine Ware
T6/6 Pedestal Base
T6/7 Pointed or Parabolic Fine Ware Base
T6/8 Fine Ware Beaded-Rim Bowl
T6/9 Crescent Lug holemouth CW Pot

Mid-Late 3rd Millennium (7)
T7/0 Untyped Mid-Late 3rd Mill
T7/1 Flat-Based Bowl
T7/2 Flat-Based Beaker
T7/3 String-Cut Flat Base
T7/4 Comb-Incised Jar
T7/5 Calcareous Stoneware
T7/6 Non-calcareous stoneware
T7/7 Post-Akkadian stoneware
T7/8 Indented-Rim Jar
T7/9 Lugged Bowl
T7/10 Shallow Flaring Vat
T7/11 Flat Extended-Foot Base
T7/12 Lug-Footed Base
T7/13 Greyware Round Rim Bowl
T7/14 Folded-Rim Straight-Sided Jar
T7/15 Folded ridged rim jar
T7/16 Lid-seated storage jar rim
T7/17 Triangular-Rim Cooking Jar
T7/18 Triangular Lug Holemouth CW Pot
T7/19 Beaded-rim cup
T7/20 Fineware straight-sided cup
T7/21 Screw-top pot
T7/22 Sloping shoulder collared jar
T7/23 Recessed Rim Beaker
T7/24 Ribbed Shoulder Jar
T7/25 Stand w/hand-formed rim
T7/26 In-turned outside-folded bowl rim

Middle Bronze Age (8)
T8/- Pie-Crust Potstand
T8/0 Untyped MBA
T8/1 Khabur Painted Ware
T8/2 Jar with Horizontally Grooved Shoul
T8/3 Burnished Grey Ware Bowl
T8/4 Externally Grooved Bowl
T8/5 High Ring or Pedestal Base
T8/6 Channel Base
T8/7 Carinated Bowl
T8/8 Concave Fine Bowl Base

T8/9 Indented-Cordoned Jars
T8/10 Jar with Impressed Circles
T8/11 Red-brown wash ware
T8/12 Ledge Rim "grain measure"
T8/13 Ledge Rim with Inner Rib

Mitanni (9)
T9/0 Untyped Mitanni

Late Bronze Age (10)
T10/0 Untyped LBA
T10/1 Nuzi White-Painted Ware
T10/2 Fine Painted Goblet
T10/3 Pedestal (Stump) Base
T10/4 Plate or Dish, Red-Painted
T10/5 Collared Rim Jar
T10/6 Small Bowl
T10/7 Fine Beaker
T10/8 Nipple Base
T10/9 Coarse Ring Base
T10/10 Plate or Dish
T10/11 Pie-Crust Potstand
T10/12 Square Rim Jar
T10/13 Soft carinated bowl
T10/14 Inwardly bevelled storage jar rim
T10/15 Incurved ledge rim
T10/16 Recessed convex base
T10/17 Sherds with Wavy Grooved Lines

Iron Age/Neo-Assyrian (11)
T11/- Powder Box Base
T11/0 Untyped Iron Age/Neo-Assyrian
T11/1 Bowl with Ribbed Rim
T11/2 Bowl with Thickened Rim
T11/3 Swollen Convex Base
T11/4 Angled Ring Base
T11/5 Button Base
T11/6 Palace Ware Beaker
T11/7 Assyrian Shouldered Bowl
T11/8 Necked Jar
T11/9 Internally Hollowed Jar Rim
T11/10 Jar with Folded Rim
T11/11 Oblique T-Shaped Bowl Rim
T11/12 Carinated Bowl
T11/13 Button Ring Base
T11/14 Ribbed Carinated Bowl
T11/15 Hole Mouth Cooking Pot

Post-Assyrian (12)
T12/0 Untyped Post-Assyrian
T12/1 Jar with Grooved Top
T12/2 Hole Mouth Jar with Grooved Rim
T12/3 Bowl with Grooved-Top Rim
T12/4 Bowl with Notched Exterior
T12/5 Carinated Bowl Variant
T12/6 Flat-Rimmed Bowl
T12/7 Oval Stamps
T12/8 Crescent Stamped Ware

Seleucid/Hellenistic (13)
T13/0 Untyped Seleucid/Hellenistic
T13/1 Incurved Rim Bowl
T13/2 Jar with Rolled-Over Rim
T13/3 Hellenistic Plates
T13/4 Hellenistic Fine Ware
T13/4 Deeply excised Fineware
T13/5 Hellenistic Fine Ring Base
T13/6 Impressed Rocker Pattern on Hell fabric
T13/7 Impressed Dog-Tooth
T13/8 Out-Turned Rim Bowl
T13/9 "Hemispherical Bowl"
T13/10 Amphora Base
T13/11 Bag-Shaped Jar (or Phiale)
T13/12 Large grooved rim vat
T13/13 Hard Gritty Rolled Rim
T13/14 Fine T-shaped bowl rim

Parthian-Roman (14)
T14/0 Untyped Parthian
T14/1 Diamond Stamped Sherds
T14/2 Straight or Grooved Jar
T14/3 Strap Handle with Central Hollow
T14/4 Fine Strap Handle with Central Holl
T14/5 Rod Handle
T14/6 Hole Mouth Jar with Grooved Rim
T14/7 Flat Collared Rim
T14/8 Flared Rim Dish
T14/9 Parthian/Sasanian Green Glaze
T14/10 Fine Brittle Ware
T14/11 Impressed Rocker Pattern on other fabric
T14/12 Coarse red painted large bowl
T14/13 Flanged Hole Mouth
T14/14 Concave Band Rim
T14/15 Fine band jar rim

Sasanian (15)
T15/0 Untyped Sasanian
T15/1 Corrugated Jar Rim
T15/2 Simple Gritty Jar Rim
T15/3 Sasanian Stamped Ware
T15/4 Smeared Ware
T15/5 Double rim grit tempered holemouth jar rim

Sasanian-Early Islamic (16)
T16/0 Untyped Sasanian-E Islamic
T16/1 Beaded jar rim
T16/2 Coarse Brittle Strap Handle
T16/3 Buff Grooved/Ridged Strap Handle
T16/4 Early Islamic Blue-Green Glaze on Pale Yellow Body
T16/5 Early Islamic Blue-Green Glaze on Fabrics of Other Colors
T16/6 Comb and Slash Decoration
T16/7 Late Comb Incision on Green Gritty Fabric
T16/8 Late Comb Incision on Other Fabrics
T16/9 Coarse Brittle Ware
T16/10 Honeycomb Ware

General Islamic (21)
T21/0 Untyped General Islamic

* The Working Ceramic Typology was developed by Jason Ur on the base of D. Tucker and T. Wilkinson work. For more information see Chapter 2.5.

Appendix C.

The Soil Samples Analysis

Total P from Transects

Code	P mg kg^{-1}	Square Unit (10x10m) *Sherd number*	Square (100x100m) *Sherd number*	Notes
T1.1	1017	12	24	Still inside Tell Gomel sites (?)
T1.10	837			
T1.11	859	10		
T1.12	844			
T1.13	785	0	3	
T1.14	815	9	6	
T1.15	896	2	17	
T1.16	748	3		
T1.17	747			
T1.18	773	2		
T1.19	837	4		
T1.2	913	13	31	
T1.20	799	6		
T1.21	807	4		
T1.22	910	4		
T1.3	1228			Archaeological site
T1.4	1272			Archaeological site
T1.5	1274	75		Archaeological site
T1.6	1035	16	29	
T1.7	828			
T1.8	807			
T1.9	775			
T10.11	1299	14	60	
T10.13	970	13	58	
T10.15	885	3	10	
T12.3	842	4	7	
T13.13	806	12	23	
T14.3	869	1	8	
T14.5	724	5	17	
T14.7	833	1	27	
T14.9	925	7	15	
T15.13	758	0	0	
T20.11	754	0	6	
T20.5	691	3	3	
T20.7	814	1	2	
T20.9	829	6	18	
T22.1	787	15	97	
T22.3	694	14	53	
T22.5	747	17	54	
T22.7	712	1	19	
T26.1	799	11	0	
T26.10	732	0	12	
T26.11	708	2	19	
T26.12	717	0	6	

T26.13	635	0	0	
T26.14	118	0	0	
T26.15	320	0	0	
T26.16	514	0	0	
T26.17	344	0	0	
T26.18	703			
T26.19	731			
T26.2	738	1	4	
T26.20	721			
T26.21	773	2		
T26.22	750	0	0	
T26.23	722	0	0	
T26.3	700	2	9	
T26.4	773	6	26	
T26.5	669			
T26.6	715			
T26.7	709			
T26.8	896	3		
T26.9	690	0	13	
T3.3	958	47		
T3.5	890	7	48	
T3.7	774	9	21	
T3.9	775	6		
T31.1	953	11	40	
T31.3	742	7	23	
T31.5	731	6	26	
T4.11	877	14	59	

Table 1 – Total P values from the transects soil samples.

P Speciation from Various Transects

Code		P fractions	%	Sum of the fractions	P tot	Recovery
		mg/kg	%	mg/kg	mg/kg	%
T22.1	$NaHCO_3$	77.8	11,4			
	HCl	501	73,4			
	NaOH	104	15,2	683	787	87
T20.9	$NaHCO_3$	70.1	10,9			
	HCl	490	76.4			
	NaOH	80.8	12,6	641	829	77
T20.5	$NaHCO_3$	90.0	13,8			
	HCl	460	70,8			
	NaOH	100	15,4	650	691	94
T31.1	$NaHCO_3$	530	57			
	HCl	379	40,8			
	NaOH	20.7	2,2	930	953	98
T31.5	$NaHCO_3$	408	56,1			
	HCl	299	41,1			
	NaOH	20.0	2,8	727	731	99
T3.5	$NaHCO_3$	80.1	9,7			
	HCl	583	70,8			
	NaOH	160	19,4	823	890	93
T3.7	$NaHCO_3$	66.4	10,2			
	HCl	486	74,5			
	NaOH	98.9	15,2	652	774	84
T10.13	$NaHCO_3$	73.1	9			
	HCl	619	75,9			
	NaOH	124	15,2	816	970	84
T14.9	$NaHCO_3$	74.2	9,3			
	HCl	593	74,5			
	NaOH	130	16,3	796	925	86
T14.5	$NaHCO_3$	68.3	13,1			
	HCl	393	75,4			
	NaOH	60.2	11,6	521	724	72
T15.13	$NaHCO_3$	73.1	11,8			
	HCl	474	76,2			
	NaOH	74.7	12	622	758	82
T13.13	$NaHCO_3$	70.1	11,5			
	HCl	472	77,4			
	NaOH	68.2	11,2	610	806	76

$NaHCO_3$: P soluble
HCl: P organic
NaOH: P inorganic

Table 2 – P speciation values from the transects soil samples.

P Speciation from Transect 1

Code		P fractions	%	Sum of the fractions	P tot	Recovery
		mg/kg	%	mg/kg	mg/kg	%
T1.1	$NaHCO_3$	114	11,4			
	HCl	636	63,9			
	NaOH	245	24,6	996	1017	98
T1.3	$NaHCO_3$	65.3	6,5			
	HCl	719	71,1			
	NaOH	226	22,4	1011	1228	82
T1.7	$NaHCO_3$	55.9	8			
	HCl	537	76,7			
	NaOH	107	15,3	700	828	84
T1.9	$NaHCO_3$	71.0	11,3			
	HCl	455	72,5			
	NaOH	102	16,2	628	775	81
T1.11	$NaHCO_3$	57.6	8,3			
	HCl	518	74,2			
	NaOH	122	17,5	698	859	81
T1.13	$NaHCO_3$	60.1	9,9			
	HCl	478	78,4			
	NaOH	72.3	11,9	610	785	78
T1.15	$NaHCO_3$	55.5	7,5			
	HCl	565	76,5			
	NaOH	119	16,1	739	896	83
T1.21	$NaHCO_3$	56.8	9			
	HCl	487	77,2			
	NaOH	87.4	13,9	631	807	78
T1.19	$NaHCO_3$	73.6	11,4			
	HCl	487	75,5			
	NaOH	84.0	13	645	837	77
T1.16	$NaHCO_3$	55.5	10,1			
	HCl	431	78,2			
	NaOH	65.2	11,8	551	748	74

$NaHCO_3$: P soluble
HCl: P organic
NaOH: P inorganic

Table 3 – P speciation values from Transect 1 soil samples.

P Speciation from Transect 26

Code		P fractions	%	Sum of the fractions	P tot	Recovery
		mg/kg	%	mg/kg	mg/kg	%
T26.15	$NaHCO_3$	44.0	15,2			
	HCl	220	75,9			
	NaOH	26.0	9	290	320	91
T26.13	$NaHCO_3$	74.8	13,8			
	HCl	387	71,3			
	NaOH	81.7	15	543	635	86
T26.11	$NaHCO_3$	71.8	14,1			
	HCl	355	69,9			
	NaOH	80.3	15,8	508	708	72
T26.9	$NaHCO_3$	63.4	18,8			
	HCl	232	68,8			
	NaOH	41.7	12,4	337	690	49
T26.7	$NaHCO_3$	56.6	12			
	HCl	282	59,6			
	NaOH	134	28,3	473	709	67
T26.3	$NaHCO_3$	62.0	10,5			
	HCl	472	79,6			
	NaOH	58.9	9,9	593	700	85
T26.19	$NaHCO_3$	115	20			
	HCl	397	69,2			
	NaOH	62.4	10,9	574	731	79
T26.23	$NaHCO_3$	53.5	10			
	HCl	431	80,9			
	NaOH	48.5	9,1	533	722	74

$NaHCO_3$: P soluble
HCl: P organic
NaOH: P inorganic

Table 4 – P speciation values from Transect 26 soil samples.

Total P from Tell Gomel "Halo"

Code	P mg kg-1	SU (25x25 m) *Sherd number*	Notes
A3	1691	91	
A5	951	35	
B3	2546	95	
B5	898	101	
G12	1302	154	
G13	814	121	
G14	1375	130	
G15	1473	84	
G16	932	17	
G17	847	19	
M12	2781	219	
M13	1971	82	
M14	1894	47	
M15	1802	61	
M16	1610	54	
M17	1056	43	
MM103	651	4	
MM107	554	0	
MM3	799	56	
NN103	546	11	
NN107	406	2	
NN3	1495	18	
OO103	2080	57	
OO107	454	6	
OO3	1723	34	
Q12	3606	291	
Q13	1571	105	
Q14	948	41	
Q15	1032	19	
Q16	940	35	
Q17	912	26	

Table 5 – Total P values from Tell Gomel halo soil samples.

P Speciation from Tell Gomel "Halo"

Code		P fractions	%	Sum of the fractions	P tot	Recovery
		mg/kg	%	mg/kg	mg/kg	%
OO103	$NaHCO_3$	78.1	4,4			
	HCl	1466	82,4			
	NaOH	235	13,2	1779	2080	86
NN3	$NaHCO_3$	77.5	5,4			
	HCl	1005	69,4			
	NaOH	366	25,3	1448	1495	97
Q12	$NaHCO_3$	78.9	2,2			
	HCl	2308	64,3			
	NaOH	1200	33,5	3587	3606	99
Q13	$NaHCO_3$	74.8	4,8			
	HCl	999	64,4			
	NaOH	477	30,8	1551	1571	99
Q14	$NaHCO_3$	66.2	7,9			
	HCl	546	65,1			
	NaOH	226	26,9	839	948	88
Q15	$NaHCO_3$	77.2	8,1			
	HCl	614	64,6			
	NaOH	260	27,4	950	1032	92
Q16	$NaHCO_3$	77.8	9,1			
	HCl	572	66,6			
	NaOH	210	24,4	859	940	91
Q17	$NaHCO_3$	86.0	10,1			
	HCl	566	66,4			
	NaOH	200	23,5	852	912	93
M12	$NaHCO_3$	77.7	2,8			
	HCl	1980	72,3			
	NaOH	680	24,8	2738	2781	98
M14	$NaHCO_3$	81.5	4.3			
	HCl	1186	63,2			
	NaOH	610	32,5	1877	1894	99
M16	$NaHCO_3$	75.6	4,7			
	HCl	1098	68,7			
	NaOH	425	26,6	1598	1610	99
B3	$NaHCO_3$	88.5	3,5			
	HCl	1600	63,2			
	NaOH	841	33,2	2530	2546	99
A5	$NaHCO_3$	78.5	8,3			
	HCl	606	63,8			
	NaOH	265	27,9	950	951	100

$NaHCO_3$: P soluble
HCl: P organic
NaOH: P inorganic

Table 6 – P speciation values fromTell Gomel halo soil samples.

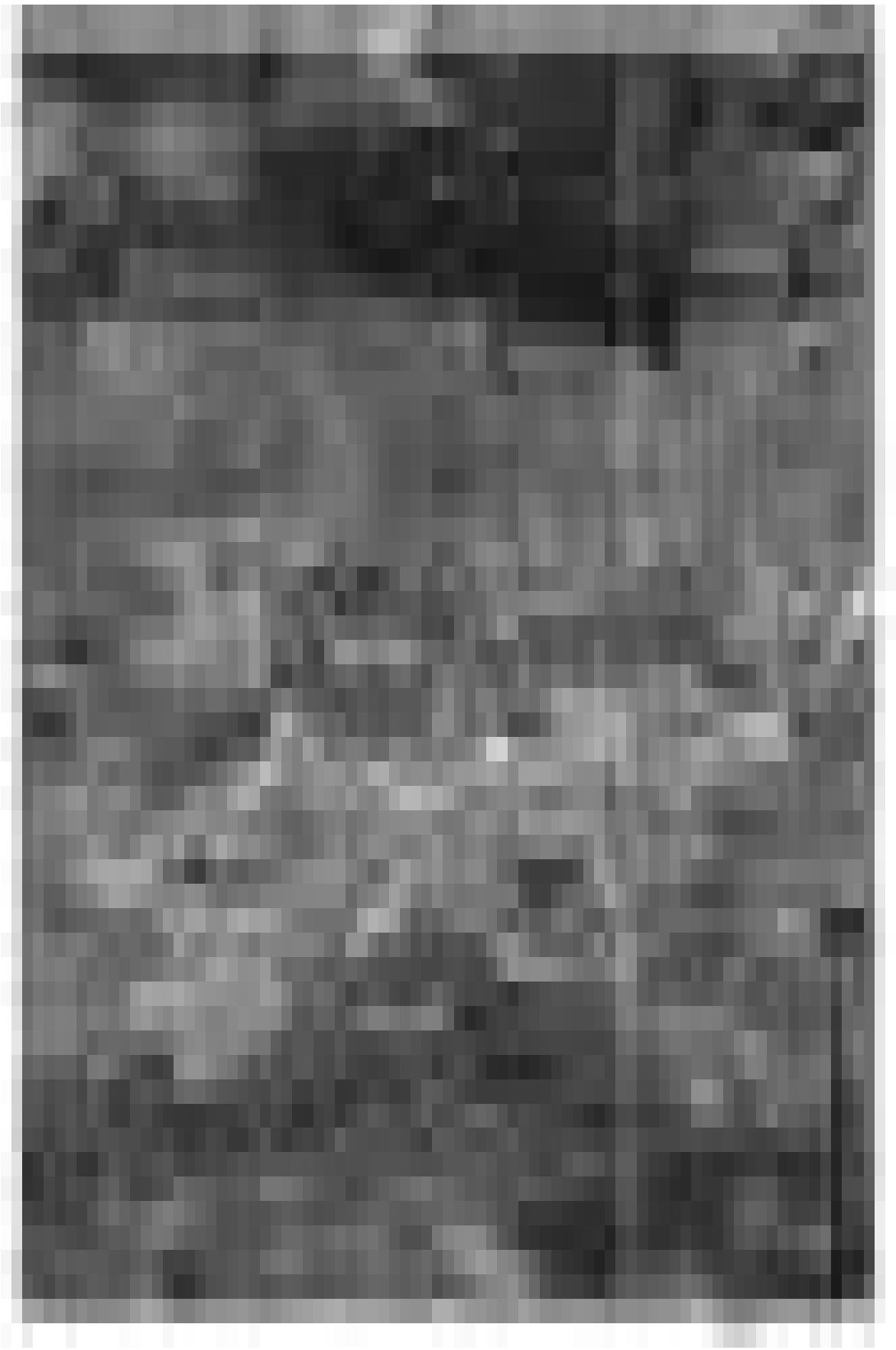


Fig. 1 – Provenience of the Transects samples.

Fig. 2 – Provenience of the Tell Gomel halo samples.

Università
Ca'Foscari
Venezia

EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Corso di Dottorato di ricerca

in Scienze dell'Antichità

ciclo XXX

Tesi di Ricerca

in cotutela con Eberhard Karls Universität Tübingen

The Tell Gomel Archaeological Survey

Surface research and off-site investigations in the heart of the Navkur Plain, Iraqi Kurdistan

Vol. II

SSD: L-OR/05

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Vol. II

1. TELL GOMEL INTENSIVE SURVEY CATALOGUE 1

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LIST OF ABBREVIATIONS

AD	*anno domini*
asl	above sea level
BC	before Christ
BP	before present
c.	*circa*, approximately
cm	centimeter(s)
dm	decimeter(s)
e.g.	*exempli gratia*, for example
EHAS	Eastern Ḫabur Archaeological Survey
EPAS	Erbil Plain Archaological Survey
esp.	especially
et al.	*et alii*, and others
etc.	*et cetera*, and so forth
fig(s).	figure(s)
GIS	Geographic lnformation System
GPS	Global Positioning System
Ha	hectare
i.e.	*id est*, that is
kg	kilogram(s)
km	kilometre(s)
LoNAP	Land of Nineveh Archaeological Project
m	meter(s)
mm	millimetre(s)
NJP	North Jazira Project
n(n).	number(s)
P	period
pers. comm.	personal communications
pl(s).	plate(s)
SRTM	Shuttle Radar Topography Mission
sq.	square
TBS	Tell Beydar Survey
TBSS	Tell Brak Suburban Survey
TERP	Tigris-Euphrates Reconnaissance Project
TGAS	Tell Gomel Archaeological Survey
THS	Tell Hamoukar Survey
UGZAR	Upper Great Zab Archaeological Reconnaissance
UTM	Universal Transverse Mercator
WCT	Working Ceramic Typology

LEGEND

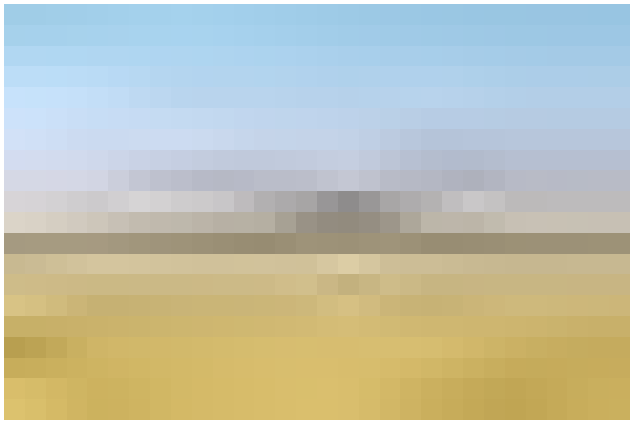
Period	Designation
Und.	Undetermined
1	Early Pottery Neolithic
2	Halaf
3	Ubaid
4	Late Chalcolithic 1-2
5	Late Chalcolithic 3-5
6	Ninevite V
7	Mid-Late 3rd Millennium
8	Middle Bronze Age
9	Mitanni
10	Middle-Assyrian
11	Neo-Assyrian
12	Post-Assyrian
13	Hellenistic
14	Parthian
15	Sasanian
21	Undifferentiated Islamic (Early, Middle and Late)

1.

TELL GOMEL INTENSIVE SURVEY CATALOGUE

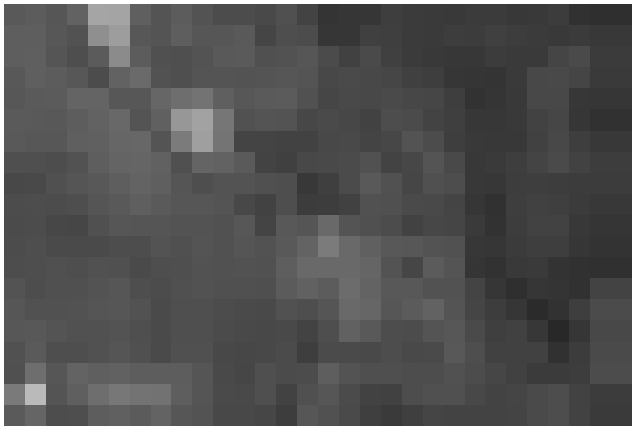
SITE 40 - Tell Gomel

(B2 sector)

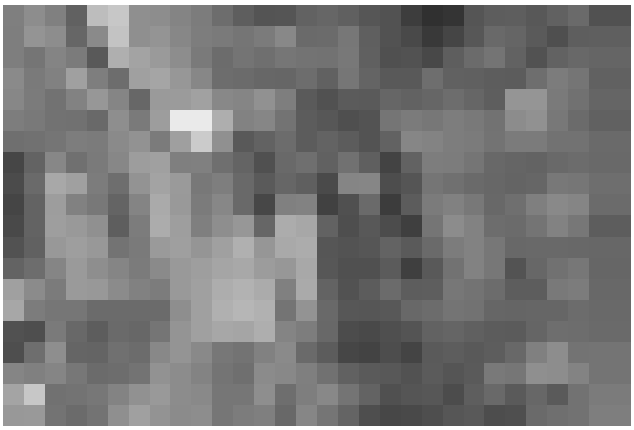


1 - Tell Gomel from North-East. (2013)

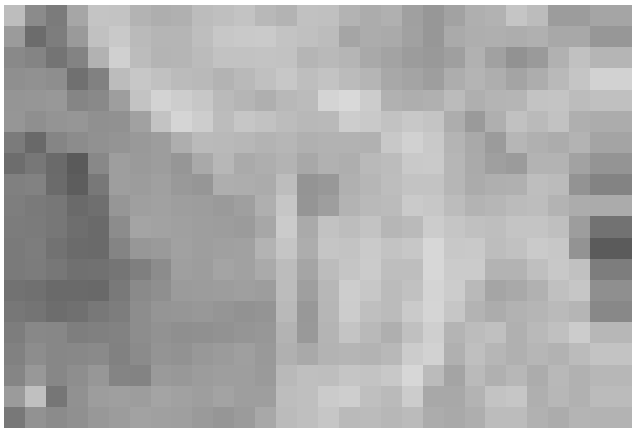
2 - Tell Gomel from West. (2013)



3 - Tell Gomel in a U2 image (U2 1554, 29 Jan 1960).



4 - Tell Gomel in a Corona satellite image (Corona 1039, 28 Feb 1967).



5 – Tell Gomel in a Orbview-3 satellite image (taken on 24 Oct 2004.)

6 – Tell Gomel in a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

SITE NUMBER	40
LOCAL NAME	Tell Gomel
POSITION	364075 E; 4050765 N
AREA	Present area 28 ha ca.; Former area possibly 42 ha ca.
SURVEY YEARS	2013 and 2016
TYPE OF SITE	High mounded with extended lower town
OBSERVATION CONDITIONS	2013: good; 2016: good
DAMAGE AND THREATS	Erosion by the river; modern cemetery on the southern lower town; house constructions; water-tanks; illegal excavations.

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**13**	**13**	**8**	**23**	**24**	**21**	**21**	**21**	**15**	**22**	**24**	**16**	**25**
N. fr. TGAS	447	-	-	-	13	7	8	488	620	166	60	100	11	90	297	22	1868
N. fr. LoNAP	74	-	-	-	8	5	11	46	81	24	14	16	5	17	37	1	112

SITE DESCRIPTION

Tell Gomel is situated on the left bank of River Gomel, c. 5 km. south of the Erbil-Dohuk road. The site features an elevated upper town (about 40 m above the surrounding plain) that dominates an extensive lower town. The high mound is almost completely free of buildings, while the lower town is partially covered by the modern village. The modern houses cover especially the area immediately surrounding the acropolis and the northern part of the site. The southern part of the site is used as a modern cemetery. On the eastern side of the lower town some large water-tanks have been dug into the archaeological layers (we detected at least 4 water-tanks). The ancient settlement also expands beyond the limit of the lower town under the modern fields.

The site was surveyed in 2013 by the LoNAP team and in 2016 by the TGAS team, who conducted an intensive survey of the settlement.

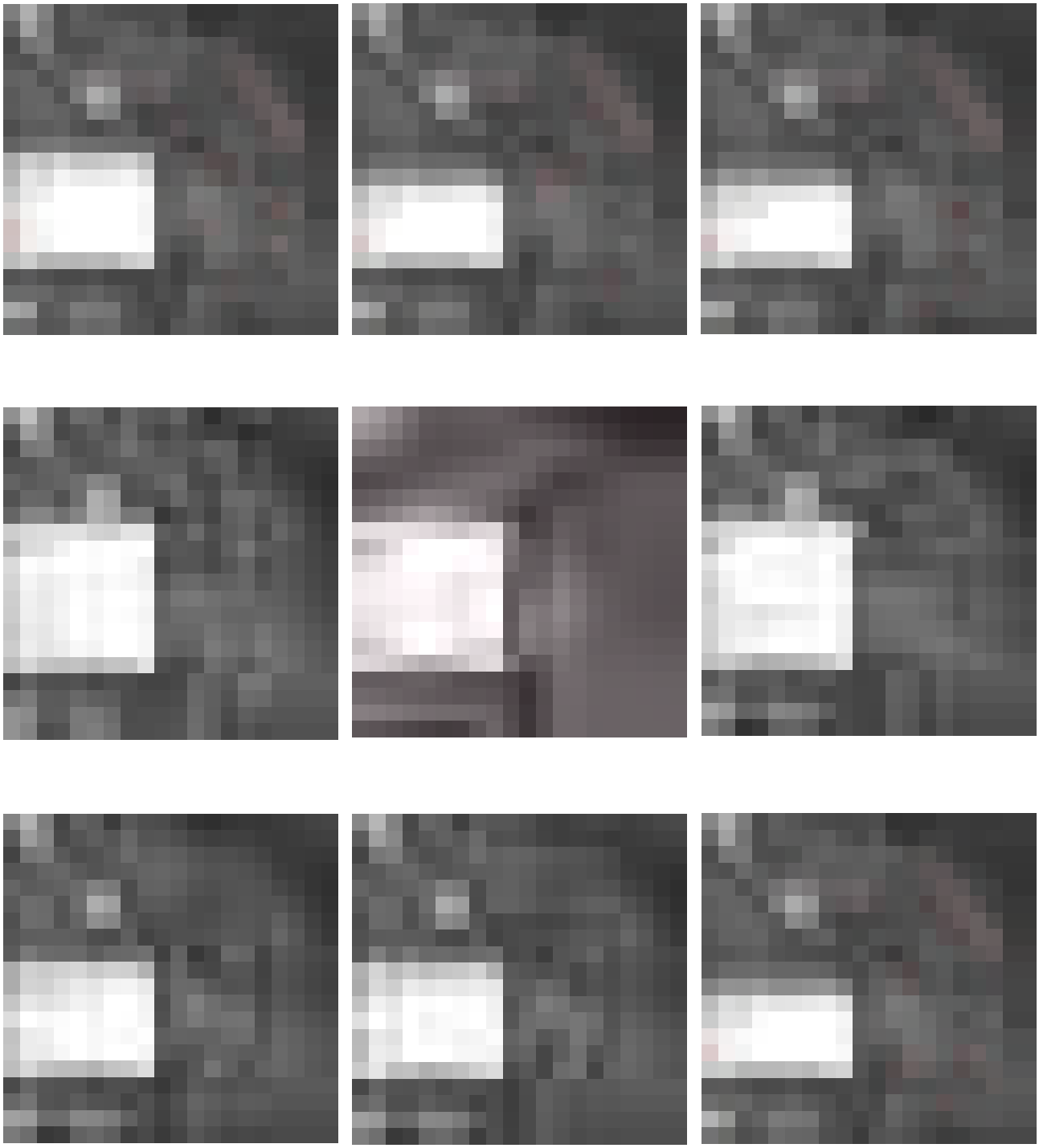
SITE BIOGRAPHY

The settlement sequence ranges from the Late Chalcolithic to the Late Islamic period. However, the site may already have been occupied in the Ubaid period, since Frankfort has published an Ubaid stamp seal found at Tell Gomel in the 1930s and now kept in the Oriental Institute Museum of Chicago[1]. The almost continuous history of occupation had a peak from the mid-late 3rd millennium BC to the Mitanni period. Another time of thriving occupation was certainly the Parthian epoch. The Islamic phases were the last era during which the entire settlement flourished.

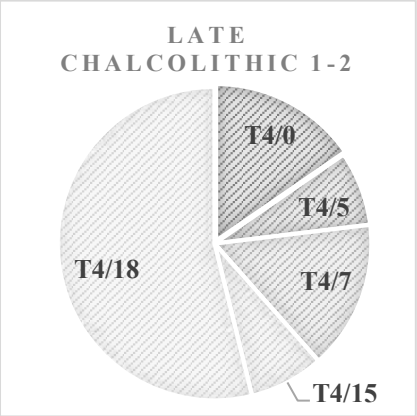
With regard to the recent history, the 20th century village was destroyed during the *Al-Anfal* campaign conducted by the Iraqi government against the Kurdish fighters of the region. At present about 20 houses constitute the modern village of Gomel.

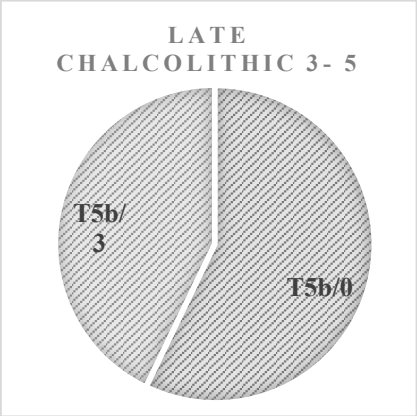
[1] Frankfort H., 1935, *Oriental Institute Discoveries in Iraq, 1933/34: Fourth Preliminary Report of the Iraq Expedition*, Oriental Institute Communications 19: 29–31, fig. 31.

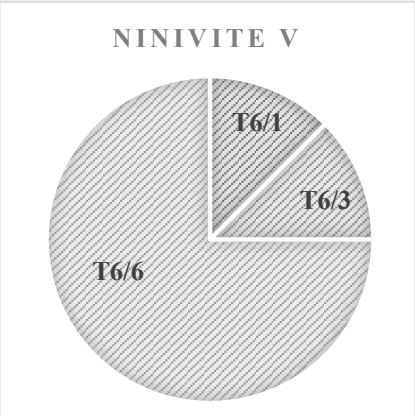
SITE BIOGRAPHY

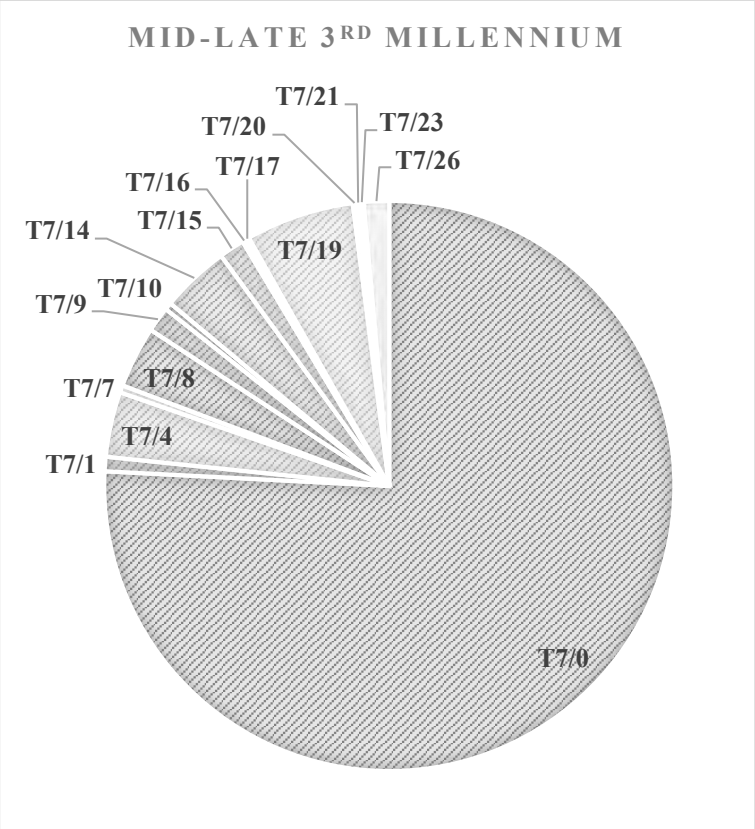


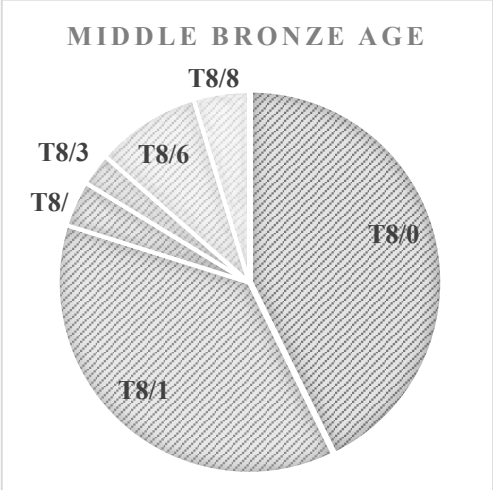
POTTERY TYPES ATTESTED FOR EACH PERIOD

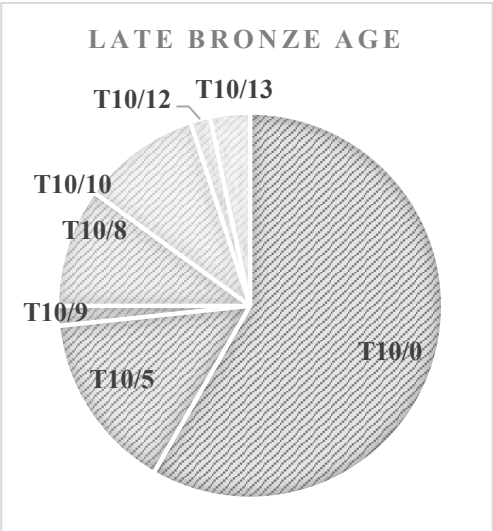


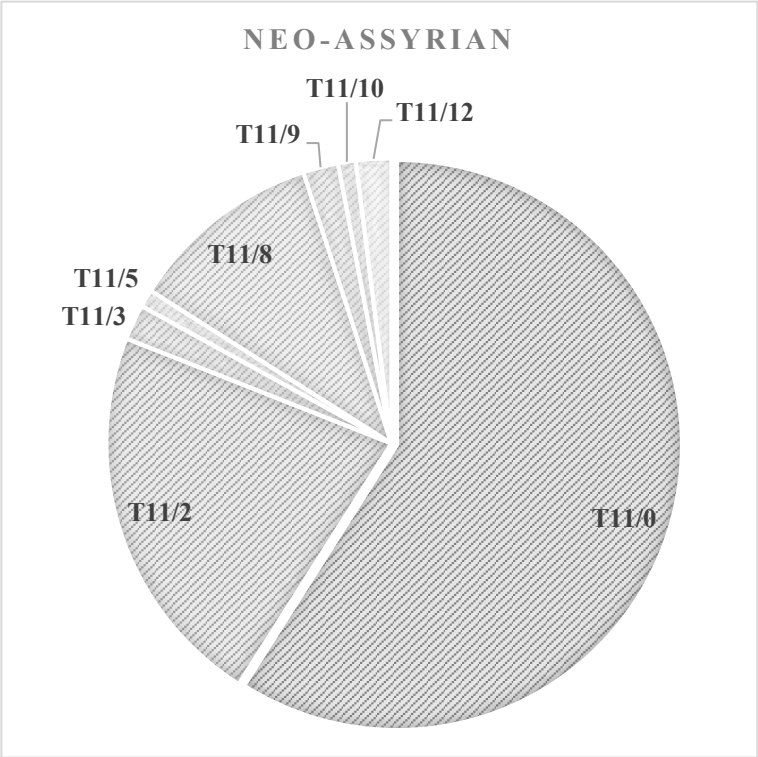


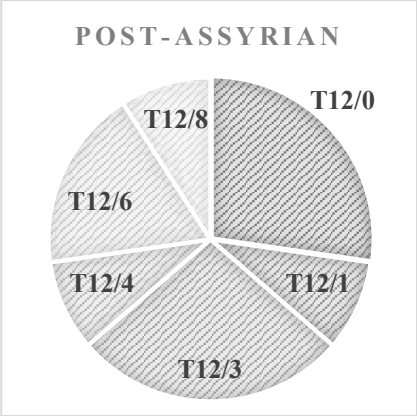







LATE BRONZE AGE
T10/12
T10/13
T10/10
T10/8
T10/9
T10/5
T10/0


NEO-ASSYRIAN
T11/10
T11/12
T11/9
T11/8
T11/5
T11/3
T11/2
T11/0


POST-ASSYRIAN
T12/0
T12/8
T12/6
T12/4
T12/1
T12/3

TYPES ATTESTED

PERIOD	TYPE	TOTAL
04	0	2
04	5	1
04	7	2
04	15	1
04	18	7
05b	0	4
05b	3	3
06	1	1
06	3	1
06	6	6
07	0	370
07	1	4
07	4	18
07	7	2
07	8	17
07	9	7
07	10	2
07	14	19
07	15	7
07	16	1
07	17	1
07	19	30
07	20	1
07	21	1
07	23	1
07	26	7
08	0	265
08	1	230
08	2	24
08	3	17
08	6	55
08	8	29
09	0	166
10	0	35
10	5	9
10	8	1
10	9	6
10	10	6
10	12	1
10	13	2
11	0	59

PERIOD	TYPE	TOTAL
11	2	22
11	3	2
11	5	1
11	8	11
11	9	2
11	10	1
11	12	2
12	0	3
12	1	1
12	3	3
12	4	1
12	6	2
12	8	1
13	0	51
13	1	15
13	2	10
13	3	8
13	5	3
13	8	1
13	12	1
13	13	1
14	0	236
14	2	2
14	3	1
14	6	22
14	7	11
14	8	1
14	9	3
14	13	3
14	14	14
14	15	4
15	0	11
15	1	4
15	2	2
15	5	1
16	0	1
16	1	1
16	6	2
21	0	1868
0	0	447
TOT		**4199**

POTTERY SELECTION

Late Chalcolithic 1 – 2

Plate 1

N.	Code	Description	Type	Period	Area
1	40.16.N3.1	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T4/0	4	N3
2	40.16.T8.1	Rim; very pale brown surfaces (10YR 8/2) and light brownish gray core (2.5Y 6/2) with pink margins (7.5YR 7/4); mineral fabric with abundant fine to large calcite inclusions and frequent fine grits; brown painted decoration on the surfaces. Rim dm. 40 cm.	T4/0	4	T8
3	40.16.Q12.3	Rim; very pale brown exterior surfaces (10YR 8/3) and pinkish core (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; smoothed surfaces; black painted decoration on the interior surface of the jar. Rim dm. 11 cm.	T4/0	4	Q12
4	40.16.E6.1	Rim; red surfaces (2.5YR 5/6) and reddish yellow core (7.5YR 7/6); mineral fabric with abundant fine grits inclusions; burnished surfaces. Rim dm. 12 cm.	T4/7	4	E6
5	40.16.Q12.2	Rim; pinkish white surfaces (7.5YR 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; trace of red painted decoration on the rim and on the interior surface.	T4/7	4	Q12
6	40.16.V3.39	Rim; reddish brown (slipped ?) surfaces and dark gray core (7.5YR 4/1) with reddish yellow margins (5YR 6/6); mineral fabric with frequent chaff and occasional fine calcite inclusions; burnished surfaces. Rim dm. 15 cm.	T4/7	4	V3
7	40.16.Q10.87	Rim; light red exterior surface (2.5YR 6/6), very pale brown interior surface (10YR 8/3) and dark gray core (2.5Y 4/1); chaff fabric with common fine to large calcite inclusions and frequent fine grit; smoothed exterior surface. Rim dm. 18 cm ?	T4/15	4	Q10
8	40.16.Q12.1	Rim; reddish yellow core and surfaces (7.5YR 7/6); fine mineral fabric with rare fine calcite inclusions; burnished surface. Rim dm. 18 cm.	T4/18	4	Q12
9	40.16.L11.1	Rim; very pale brown slipped surfaces (10YR 8/2) and light reddish brown (5YR 6/4); mineral fabric with frequent fine calcite and grits inclusions; smoothed surfaces (traces of burnishing). Rim dm. 20 cm.	T4/18	4	L11
10	40.16.U5.2	Rim; pale yellow surfaces (5Y 8/2) and core (5Y 7/3); mineral fabric with frequent chaff and abundant fine to medium calcite and grits inclusions. Rim dm. 24 cm.	T4/18	4	U5

Late Chalcolithic 3 - 5

Plate 2

N.	Code	Description	Type	Period	Area
1	40.16.E10.1	Rim; light red surfaces (2.5YR 6/6) and dark reddish gray (2.5YR 3/1); mineral fabric with abundant fine calcite inclusions.	T5b/0	5b	E10
2	40.16.S3.1	Rim; very pale brown surfaces (10YR 8/2) and very dark gray core (2.5Y 3/1); mineral fabric with abundant chaff and abundant fine calcite and grits inclusions; smoothed surfaces (traces of burnishing). Rim dm. 30 cm.	T5b/0	5b	U5
3	40.16.S2.1	Rim; light gray surfaces (10YR 7/2) and gray core (10YR 5/1); mineral fabric with frequent fine calcite inclusions; burnished surfaces. Rim dm. 36 cm.	T5b/3	5b	S2
4	40.16.U5.3	Rim; light brownish gray (10YR 6/2) and very dark gray core (2.5Y 3/1); chaff fabric with rare fine calcite inclusions; traces of burnishing on the surface. Rim dm. 18 cm.	T5b/3	5b	U5
5	40.16.E9.1	Rim; pink surface (7.5YR 7/4) and grayish brown core (10YR 5/2); chaff fabric with no visible inclusions; burnished surfaces.	T5b/13	5b	E9
6	40.16.DD7.1	Rim; pink core and surface (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions. Rim dm. 18 cm.	T5b/13	5b	DD7

Ninivite V

Plate 3

N.	Code	Description	Type	Period	Area
1	40.16.D9.1	Body sherd; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; black painted decoration on the exterior surface.	T6/1	6	D9
2	40.16.B5.1	Body sherd; light gray surfaces and core (10YR 7/2); mineral fabric with frequent fine to medium calcite and grits inclusions; incised and excised decoration on the exterior surface.	T6/3	6	B5
3	40.16.E10.2	Base; pink surfaces (7.5YR 7/4) and very pale brown core (10YR 8/3) with pink margins (7.5YR 7/4); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 13 cm.	T6/6	6	E10
4	40.16.P9.1	Base; very pale brown surfaces (10YR 8/3) and pale brown core (10YR 6/3); mineral fabric with occasional chaff and frequent fine calcite and grits inclusions. Rim dm. 10 cm.	T6/6	6	E10
5	40.16.P9.2	Base; very pale brown surfaces (10YR 8/3) and pink core (7.5 YR 7/4); mineral fabric with occasional chaff and frequent fine to medium calcite inclusions; smoothed surfaces.	T6/6	6	E10
6	40.16.O10.1	Base; pink surfaces (7.5YR 8/3) and core (7.5YR 7/4); mineral fabric with occasional fine calcite and grits inclusions; smoothed surfaces.	T6/6	6	O10

Mid-Late 3rd Millennium

Plate 4

N.	Code	Description	Type	Period	Area
1	40.16.EE7.9	Rim; very pale brown core (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with rare chaff and no visible inclusions; smoothed surfaces. Rim dm. 40 cm.	T7/0	7	EE7
2	40.16.FF6.1	Rim; reddish yellow core and surfaces (7.5YR 7/6); chaff fabric with abundant fine to large inclusions; smoothed surfaces; half-moon lug.	T7/0	7	FF6
3	40.16.GG5.1	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with very fine calcite and grits inclusions; smoothed surfaces. Rim dm. 17 cm.	T7/0	7	GG5
4	40.16.EE7.69	Rim; very pale brown core (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; incised decoration on the exterior surface. Rim dm. 14 cm.	T7/0	7 (Akk.)	EE7
5	40.16.EE7.45	Rim; pale yellow core and surfaces (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T7/0	7 (Akk.)	EE7
6	40.16.EE7.76	Rim; very pale brown core (10YR 8/4) and surfaces (10YR 8/2); mineral fabric with frequent fine calcite inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 18 cm.	T7/0	7 (Akk.)	EE7
7	40.16.EE7.36	Rim; very pale brown core and surface (10YR 8/3); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed exterior surface. Rim dm. 14 cm.	T7/0	7	EE7
8	40.16.EE7.16	Rim; very pale brown exterior surface (10YR 8/3), pink core and interior surface (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T7/0	7	EE7
9	40.16.EE7.74	Rim; very pale brown surfaces (10YR 8/2) and reddish yellow core (5YR 7/6); mineral fabric with frequent fine calcite inclusions; incised decoration. Rim dm. 46 cm	T7/0	7 (Akk.)	EE7

Mid-Late 3rd Millennium

Plate 5

N.	Code	Description	Type	Period	Area
10	40.16.EE7.75	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with occasional chaff and abundant fine calcite inclusions; incised decoration on the exterior surface. Rim dm. 30 cm.	T7/0	7 (Akk.)	EE7
11	40.16.EE7.58	Base; very pale brown core and surfaces (10YR 8/3); mineral fabric smoothed surfaces; string cut marks on the base. Base dm. 2,4 cm.	T7/0	7	EE7
12	40.16.EE7.61	Base; pale yellow surfaces (5Y 7/3) and olive gray core (5Y 5/2); fine mineral fabric with no visible inclusions; smoothed surfaces; overfired.	T7/0	7	EE7
13	40.16.EE7.101	Body sherd; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; incised and comb-incised decoration on the exterior surface.	T7/4	7 (Akk.)	EE7
14	40.16.EE7.18	Rim; very pale brown exterior surface (10YR 8/3), reddish yellow core and interior surface (5YR 6/6); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T7/8	7	EE7
15	40.16.EE7.14	Rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 8/4); mineral fabric with occasional chaff and no visible inclusions; smoothed exterior surface. Rim dm. 42 cm.	T7/14	7	EE7
16	40.16.L9.2	Rim; pale yellow core and surfaces (2.5Y 8/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 30 cm.	T7/15	7	L9
17	40.16.EE7.3	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 7 cm.	T7/19	7	EE7
18	40.16.EE7.68	Rim; gray core (5Y 6/1) and pale yellow surfaces (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 6 cm.	T7/19	7 (Akk.)	EE7
19	40.16.EE7.6	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with rare chaff and no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/26	7	EE7

Middle Bronze Age

Plate 6

N.	Code	Description	Type	Period	Area
1	40.16.FF6.3	Rim; reddish yellow core and surfaces (5YR 7/6); fine mineral fabric with abundant fine calcite inclusions; smoothed surfaces.	T8/0	8	FF6
2	40.16.P10.31	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. > 45 cm.	T8/0	8	P10
3	40.16.P10.7	Rim; pale yellow slipped exterior surface (5Y 8/2), pink core and interior surface (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; black painted decoration on the rim. Rim dm. 20 cm.	T8/1	8	P10
4	40.16.FF6.1 (bis)	Rim; very pale brown exterior surface (10YR 8/2), pink interior surface (7.5YR 7/4) and light reddish brown core (5YR 6/4); mineral fabric with frequent chaff and common fine calcite inclusions; smoothed surfaces; black painted decoration on the rim. Rim dm. 20 cm.	T8/1	8	FF6
5	40.16.FF6.9	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; dark brown painted decoration on the rim and exterior surface. Rim dm. 14 cm.	T8/1	8	FF6
6	40.16.P9.16	Rim; pink surfaces (7.5YR 7/4) and reddish yellow core (5YR 7/6); mineral fabric with rare chaff and no visible inclusions; red to black painted decoration on the rim and exterior surface. Rim dm. 27 cm.	T8/1	8	P9
7	40.16.P10.22	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); fine mineral fabric with frequent fine to medium calcite inclusions; black painted decoration on the rim. Rim dm. 11 cm.	T8/1	8	P10
8	40.16.P9.12	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; smoothed surfaces; black painted rim. Rim dm. 11 cm.	T8/1	8	P9
9	40.16.FF6.7	Rim; pink core (7.5YR 7/4) with very pale brown surfaces (10YR 8/3); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces; traces of black painted decoration on the exterior surface. Rim dm. 10 cm.	T8/1	8	FF6

Middle Bronze Age

Plate 7

N.	Code	Description	Type	Period	Area
10	40.16.V10.1	Rim; very pale brown surfaces (10YR 8/2) and brown core (10YR 5/3); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 44 cm.	T8/2	8	V10
11	40.16.DD102.2	Rim; light brownish gray (10YR 6/2) and gray core (10YR 6/1); mineral fabric with common fine calcite inclusions; externally grooved surface; burnished surfaces. Rim dm. 26 cm.	T8/3	8	DD102
12	40.16.L9.13	Rim; light gray surfaces (10YR 7/2) and gray core (7.5YR 6/1); mineral fabric with common fine calcite inclusions; traces of burnishing on the surfaces. Rim dm. 34 cm.	T8/3	8	L9
13	40.16.FF6.2	Rim; light gray surfaces (10YR 7/2) and light yellowish brown core (10YR 6/4); mineral fabric with common chaff and occasional fine calcite inclusions; burnished surfaces. Rim dm. 24 cm.	T8/3	8	FF6
14	40.16.L9.16	Base; light gray exterior surface (2.5Y 7/1), dark gray interior surface (2.5Y 4/1) and light brownish gray core (2.5Y 6/2); mineral fabric with common very fine calcite inclusions; burnished exterior surface. Base dm. 13 cm.	T8/3	8	L9
15	40.16.P9.19	Base; very pale brown slipped exterior surface (10YR 8/2), pink core and interior surface (7.5YR 7/4); chaff fabric with frequent calcite inclusions. Base dm. 16 cm.	T8/6	8	P9
16	40.16.FF6.11	Base; very pale brown exterior surface (10YR 8/3), pink core and interior surface (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; smoothed surfaces. Base dm. 3 cm.	T8/8	8	FF6
17	40.16.FF6.13 (bis)	Base; very pale brown surfaces and core (10YR 7/4); mineral fabric with abundant fine to medium calcite inclusions; smoothed surfaces. Base dm. 4 cm.	T8/8	8	FF6

Mitanni

Plate 8

N.	Code	Description	Type	Period	Area
1	40.16.Q10.27	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); chaff fabric with rare fine calcite and grits inclusions; smoothed surfaces; red-brown painted decoration on the exterior surface. Rim dm. 32 cm.	T9/0	9	Q10
2	40.16.U3.8	Rim; reddish yellow core (5YR 6/6) and surfaces (7.5YR 7/6); mineral fabric with frequent fine to large calcite inclusions; burnished surfaces. Rim dm. 24 cm.	T9/0	9	Z3
3	40.16.Z3.5	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 8/4); chaff fabric with no visible inclusions; smoothed surfaces. Rim dm. 24 cm.	T9/0	9	Z3
4	40.16.EE102.6	Rim; very pale brown surfaces (10YR 8/2) and core (10YR 8/4); mineral fabric with frequent chaff and rare fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T9/0	9	EE102
5	40.16.EE102.10	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and abundant fine calcite inclusions; smoothed surfaces; traces of red painting on the exterior surface and on the rim. Rim dm. 20 cm.	T9/0	9	EE102
6	40.16.EE102.14	Rim; very pale brown surfaces (10YR 8/3) and yellow core (10YR 7/6); mineral fabric with occasional chaff and common fine calcite inclusions; burnished interior surface. Rim dm. 38 cm.	T9/0	9	EE102
7	40.16.Z3.4	Rim; light gray surfaces (10YR 7/2) and brown core (10YR 5/3); fine mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 12 cm.	T9/0	9	Z3
8	40.16.Q10.95	Rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with abundant fine to medium calcite inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 38 cm.	T9/0	9	Q10
9	40.16.FF6.8	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with rare chaff and abundant fine calcite inclusions. Rim dm. 56 cm.	T9/0	9	FF6

Mitanni

Plate 9

N.	Code	Description	Type	Period	Area
10	40.16.EE102.15	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine to medium calcite inclusions; smoothed exterior surface. Rim dm. 16 cm.	T9/0	9	EE102
11	40.16.EE102.16	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine to medium calcite inclusions. Rim dm. 13 cm.	T9/0	9	EE102
12	40.16.FF6.10	Base; pale yellow core and surfaces (2.5Y 7/4); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Base dm. 3,4 cm.	T9/0	9	FF6
13	40.16.EE102.17	Base; very pale brown exterior surface (10YR 8/4), pink interior surface (7.5YR 7/4) and pinkish gray core (7.5YR 6/2) with reddish yellow margins (5YR 7/6); chaff fabric with abundant fine to medium calcite inclusions; smoothed exterior surface. Base dm. 14 cm.	T9/0	9	EE102
14	40.16.Q10.30	Base; very pale brown exterior surface (10YR 8/2) and reddish yellow core and interior surface (7.5YR 7/6); chaff fabric with abundant fine to medium calcite inclusions. Base dm. 14 cm.	T9/0	9	Q10
15	40.16.Z3.6	Pot stand; very pale brown surfaces (10YR 8/2) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff, frequent fine calcite inclusions and rare fine grits. (Pie crust) Base dm. 13 cm.	T9/0	9	Z3
16	40.16.EE102.5	Pot stand; very pale brown core (10YR 7/4) and pale yellow surfaces (2.5Y 8/3); chaff fabric with common fine calcite inclusions; smoothed surfaces. “Pie crust”. Base dm. 14 cm.	T9/0	9	EE102

Middle Assyrian

Plate 10

N.	Code	Description	Type	Period	Area
1	40.16.DD101.5	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 8/2); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 36 cm.	T10/0	10	DD101
2	40.16.BB2.2	Rim; reddish yellow core (5YR 6/6) and very pale brown surfaces (10YR 8/3); mineral fabric with occasional fine to large calcite inclusions. Rim dm. 5 cm.	T10/0	10	BB2
3	40.16.Q10.41	Body sherd; very pale brown exterior surface (10YR (/2), very pale brown interior surface (10YR 7/4) and pink core (7.5YR 7/4); mineral fabric with common chaff and occasional fine to medium calcite inclusions; rope plastic decoration on the exterior surface.	T10/0	10	Q10
4	40.16.Q2.1	Base; very pale brown surfaces (10YRE 7/3) and pink core (7.5YR 7/4); chaff fabric with abundant fine to large calcite inclusions; smoothed surfaces. Base dm. 11 cm.	T10/9	10	Q2
5	40.16.Q1.5	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with common chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T10/10	10	Q1
6	40.16.U3.9	Rim; light red core and surfaces (2.5YR 6/6); mineral fabric with abundant chaff and frequent fine calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T10/10	10	U3
7	40.16.T2.9	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 8/4); mineral fabric with frequent chaff and occasional fine to medium calcite inclusions. Rim dm. 50 cm.	T10/12	10	T2

Neo Assyrian

Plate 11

N.	Code	Description	Type	Period	Area
1	40.16.L2.9	Rim; light red exterior surface (2.5YR 6/6), reddish yellow core and interior surface (7.5YR 7/6); mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 16 cm	T11/2	11	L2
2	40.16.L8.5	Rim; pink surfaces (5YR 7/4) and very pale brown core (10YR 7/4); mineral fabric with abundant fine to large grits, calcite and quartz inclusions; burnished exterior surface. Cooking pot. Rim dm. 21 cm.	T11/0	11	L8
3	40.16.P9.36	Rim; pink surfaces (7.5YR 7/4), gray core (10YR 5/2) with very pale brown margins; mineral fabric with abundant fine to medium grits and calcite inclusions. Rim dm. 26 cm.	T11/2	11	P9
4	40.16.P10.59	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with abundant fine calcite inclusions and occasional fine grits. Rim dm. 31 cm.	T11/2	11	P10
5	40.16.P12.13	Base; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with no visible inclusions; smoothed surfaces.	T11/3	11	P12
6	40.16.M10.16	Rim; pale yellow exterior surface (2.5Y 8/2), reddish yellow core and interior surface (5YR 7/6); mineral fabric with frequent fin calcite inclusions; traces of burnishing on the rim. Rim dm. 10 cm.	T11/8	11	M10
7	40.16.L2.10	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional grits; smoothed exterior surfaces. Rim dm. 9 cm.	T11/9	11	L2
8	40.16.M10.12	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/12	11	M10
9	40.16.H4.2	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/3); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 15 cm.	T11/12	11	H4

Post Assyrian

Plate 12

N.	Code	Description	Type	Period	Area
1	40.16.U3.12	Rim; very pale brown surfaces (10YR 8/3) and pinkish gray core (7.5YR 7/2) with pink margin (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T12/0	12	U3
2	40.16.CC8.11	Rim; very pale brown surfaces (10YR 8/2) and reddish yellow core (5YR 7/6); mineral fabric with abundant very fine calcite and grits inclusions; smoothed surfaces. Rim dm. 56 cm.	T12/3	12	CC8
3	40.16.I5.1	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/3); mineral fabric with abundant fine calcite and occasional grits inclusions; grooved rim. Rim dm. 45 cm.	T12/3	12	I5
4	40.16.L11.6	Rim; yellow surfaces (10YR 7/6) and light brown core (7.5YR 6/3) with pink margins (7.5YR 7/4); mineral fabric with abundant fine to medium calcite and grits inclusions. Rim dm. 54 cm.	T12/3	12	L11

2.

SITES CATALOGUE

LEGEND

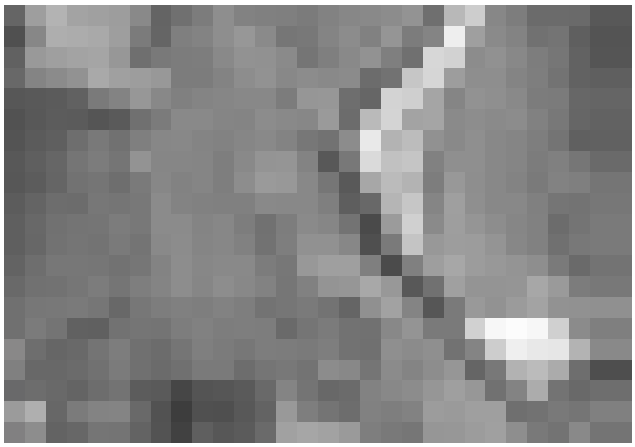
PERIODS OF OCCUPATION (fragments number)

> 50	
25< >50	
10< >25	
3< >10	
1-2	

Period	Designation
Und.	Undetermined
1	Early Pottery Neolithic
2	Halaf
3	Ubaid
4	Late Chalcolithic 1-2
5	Late Chalcolithic 3-5
6	Ninevite V
7	Mid-Late 3rd Millennium
8	Middle Bronze Age
9	Mitanni
10	Middle-Assyrian
11	Neo-Assyrian
12	Post-Assyrian
13	Hellenistic
14	Parthian
15	Sasanian
21	Undifferentiated Islamic (Early, Middle and Late)

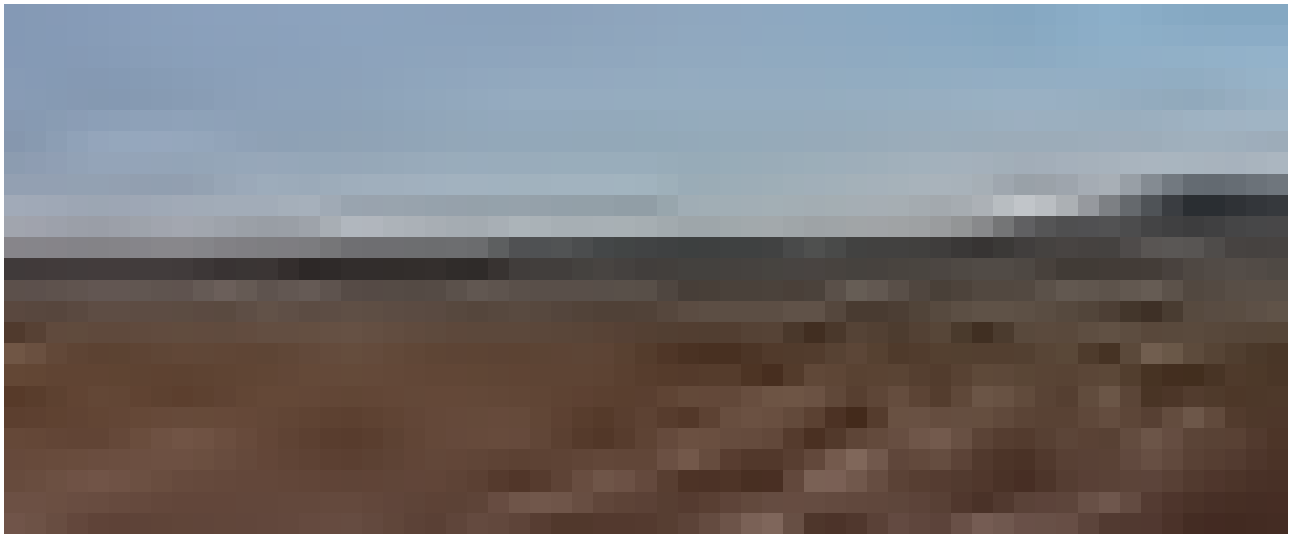
SITE 60

(B2 sector)



1 - Site 60 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 60 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3 - Site 60 from North-West. (2015)

SITE NUMBER	60
LOCAL NAME	-
POSITION	363533 E; 4051050 N
AREA	3,7 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Slightly eroded by the Gomel river
COLLECTION AREAS	1-6

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha								**2,3**	**3,7**	**2,3**	**0,7**	**3,7**					**3,7**
N. fr. TGAS	65							14	57	20	2	1					24
N. fr. LoNAP	5							3	29	2	4	3					7

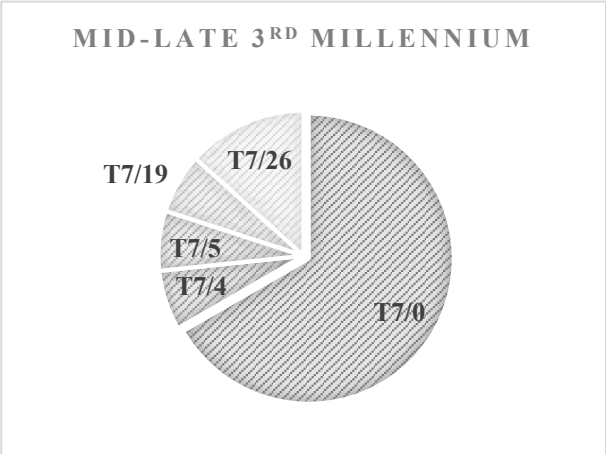
SITE DESCRIPTION

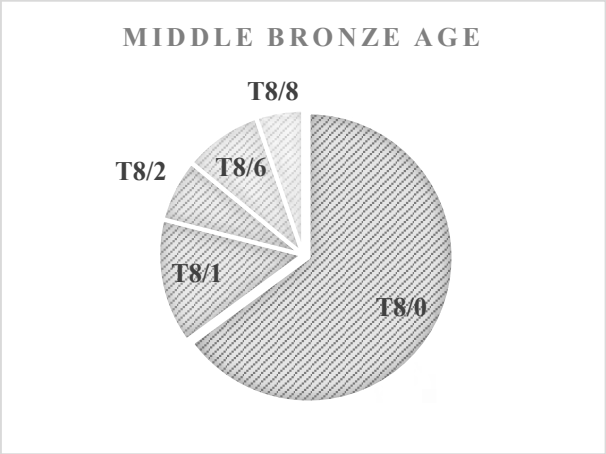
Low mounded site situated close to the site of Tell Gomel on the west bank of the river. The site was surveyed in 2012 by the LoNAP team (1 collection area). In 2015 the site was newly investigated by the TGAS team and the surface was divided into 6 collection areas. Visibility was high and many pottery fragments, some baked brick fragments, a few fragments of basalt grindstones, and occasional microliths were found on the surface. The site has been slightly eroded on its eastern side by the River Gomel.

SITE BIOGRAPHY

The site was first occupied during the mid-late 3rd millennium (c. 2.3 ha) and grew during the Middle Bronze Age (c. 3.7 ha), was continually inhabited through the Mitanni (c. 2.4 ha) and Middle Assyrian periods (c. 0.7 ha) periods until the Neo-Assyrian epoch (c. 3.7 ha); the last is documented by only 2 sherds collected by the LoNAP team. Islamic period occupation is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6
60	07	0	9			1	5		3
60	07	4	1			1			
60	07	5	1						1
60	07	19	1						1
60	07	26	2						2
60	08	0	37	2	5	3	4	4	19
60	08	1	8	1	1		1	1	4
60	08	2	4		2				2
60	08	6	5				1		4
60	08	8	3	2	1				
60	09	0	20		5	3	5		7
60	10	0	2			1			
60	10	5	1		1				
60	11	0	1			1			
60	21	0	24	4	2	4	5	6	3
60	Und.	-	65	13	12	6	9	6	19
TOT			**183**	**22**	**29**	**20**	**30**	**17**	**65**

POTTERY SELECTION

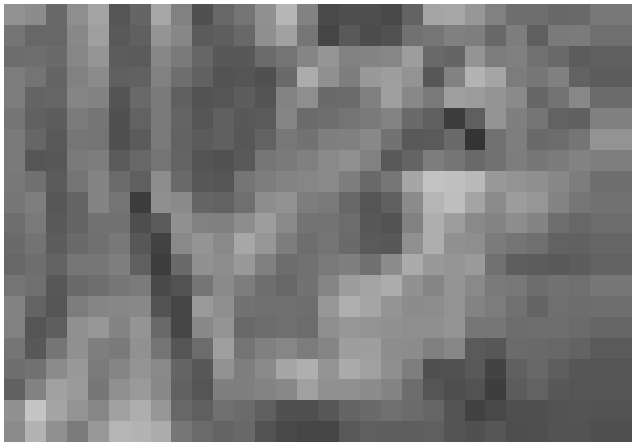
Plate 1

N.	Code	Description	Type	Period	Area
1	60.15.6.4	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Dm. 18 cm.	T7/0	7	60.6
2	60.15.3.7	Body sherd; very pale brown core and surfaces (10YR 8/3); mineral fabric with no visible inclusions; smoothed surfaces; incised and comb-incised decoration on the exterior surface.	T7/4	7 Akk.	60.3
3	60.15.6.7	Rim; light brownish gray surfaces (2.5Y 6/2) and dark gray core (GLEY N4/); fine mineral fabric with no visible inclusions; yellow horizontal streaks on the exterior surface; burnished surfaces. Dm. 12 cm.	T7/5	7 Akk.	69.6
4	60.16.6.1	Rim; pink core and surfaces (7.5YR 7/4); fine mineral fabric with abundant grit and calcite inclusions. Dm. 10 cm.	T7/19	7	60.6
5	60.16.6.5	Rim; pale yellow surfaces (2.5Y 7/3) and gray core (2.5Y 6/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Dm. 12 cm.	T7/26	7 Akk.	69.6
6	60.15.6.26	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Dm. 14 cm.	T8/0	8	60.6
7	60.15.6.24	Rim; pale yellow core and surfaces (2.5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Dm. 14 cm.	T8/0	8	60.6
8	60.15.6.30	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with frequent fine to medium calcite inclusions; dark brown-black painted surfaces. Dm. 18 cm.	T8/1	8	60.6
9	60.15.1.3	Rim; pale yellow slipped exterior surface (2.5Y 8/2), pink interior surface (7.5YR 8/4) and light brown core (7.5YR 6/4); mineral fabric with abundant fine calcite and grits inclusions; smoothed exterior surface; red painted decoration on the rim and exterior surface. Dm. 30 cm.	T8/1	8	60.1
10	60.15.6.31	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional fine calcite inclusions; smoothed surfaces; grooved exterior surface. Dm. 36 cm.	T8/2	8	60.6
11	60.15.6.8	Base; pale yellow core and surfaces (2.5Y 7/4); mineral fabric with no visible inclusions; smoothed surfaces. Dm. 18 cm.	T8/6	8	60.6
12	60.15.1.2	Base; very pale brown core and surfaces (10YR 8/4); fine mineral fabric with rare fine calcite and grits inclusions; smoothed surfaces. Dm. 2,5 cm.	T8/8	8	60.1

Plate 2

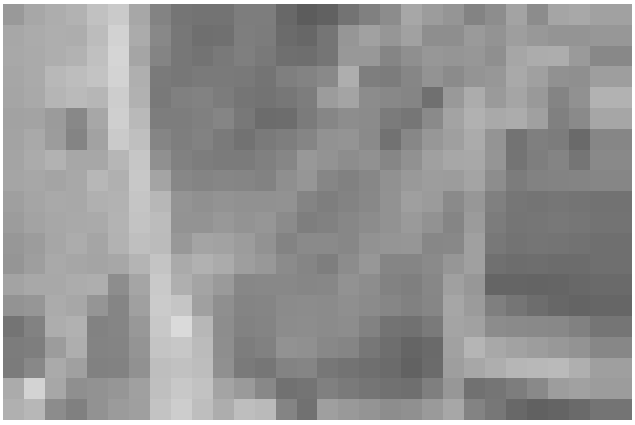
N.	Code	Description	Type	Period	Area
13	60.15.6.37	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with frequent fine to medium calcite inclusions; smoothed surfaces. Dm. 18 cm.	T9/0	9	60.6
14	60.15.6.43	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Dm. 14 cm.	T9/0	9	60.6
15	60.15.6.38	Rim; very pale brown core and surfaces (10YR 7/3); fine mineral fabric with rare fine calcite inclusions; smoothed surfaces. Dm. 10 cm.	T9/0	9	60.6
16	60.15.6.42	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; black painted decoration on the exterior surface. Dm. 14 cm.	T9/0	9	60.6
17	60.15.6.39	Pot stand; pink core and surfaces (7.5YR 7/4); mineral fabric with occasional chaff and abundant fine calcite and grits inclusions. Pie crust. Dm ?	T9/0	9	60.6
18	60.15.2.16	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with occasional medium calcite inclusions. Dm. 10 cm.	T10/5	10	60.2
19	60.12.1a.17	Rim; light gray surfaces (10YR 7/2) and gray core (2.5Y 6/1); mineral fabric with occasional chaff and abundant fine to medium grits and calcite inclusions; burnished interior surface.	T11/2	11	**LoNAP**

SITE 89 – Tell Zinawa Miri (A2 sector)



1 - Site 89 on Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 89 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3 - Site 89 on Orbview-3 satellite image (taken on 24 Oct 2004.)

4 - Site 89 from North-West. (2012)

SITE NUMBER	89
LOCAL NAME	Tell Zinawa Miri
POSITION	363944 E; 4055426 N
AREA	6 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded with extended lower town
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	The construction of a street destroyed a small part of the high mound
COLLECTION AREAS	1 - 8

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha					**0,2**	**0,2**		**2,4**	**0,8**	**6**	**6,1**	**0,4**	**0,3**	**0,1**	**0,2**	**0,9**	**2,4**
N. fr. TGAS	31				2				11	17	12	6	3	1	1		15
N. fr. LoNAP	27				1	1		3	16	12	10	8	2	7	5	1	15

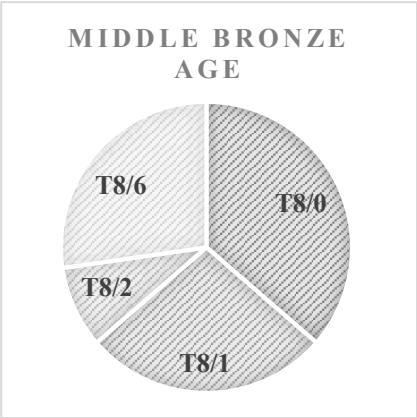
SITE DESCRIPTION

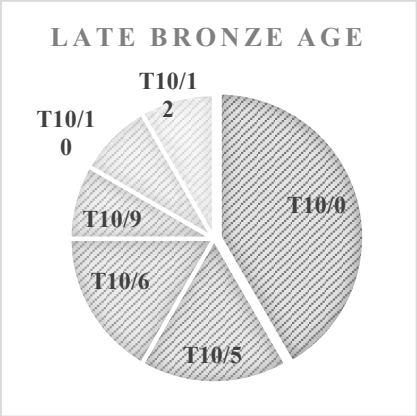
Tell Zinawa Miri is a high-mounded site with an extensive lower town. Site 89 is located immediately south of the modern village of Zinawa Miri on the east bank of the River Gomel. The site was surveyed in 2012 by the LoNAP team (5 collection areas). In 2015 the site was newly investigated by the TGAS team and the surface was divided into 8 collection areas. The visibility was generally high in areas 1-7 but quite low in area 8 (due to the presence of straw). Area 6 included an open section created by bulldozers to widen a street that ran close to the north-eastern side of the mound.

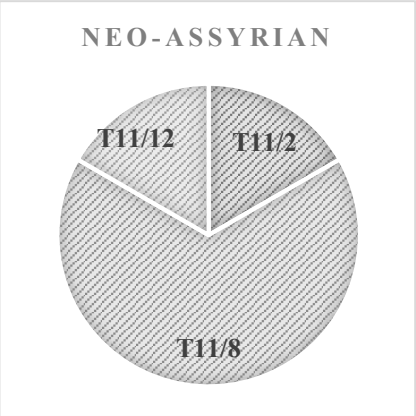
SITE BIOGRAPHY

Late Chalcolithic occupation (c. 0.2 ha) was recorded only in area 6, where the few sherds found probably indicate a buried settlement. The site was continuously occupied from the Middle Bronze Age until the Islamic epoch. The Middle Bronze Age is attested only at the northern edge of the mound (c. 0.8 ha). In the Mitanni and Middle Assyrian periods occupation is also attested in the lower city (c. 6 ha). Neo-Assyrian (c. 0.4 ha) and Post-Assyrian (c. 0.3 ha) occupation seems to be limited to the mound area.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6	7	8
89	04	0	1						1		
89	04	15	1						1		
89	08	0	4						3	1	
89	08	1	3						2	1	
89	08	2	1						1		
89	08	6	3						2	1	
89	09	0	17			5	1		8		3
89	10	0	5						4		1
89	10	5	2				1		1		
89	10	6	2			1			1		
89	10	9	1								1
89	10	10	1			1					
89	10	12	1						1		
89	11	2	1			1					
89	11	8	4		1				2		1
89	11	12	1						1		
89	12	0	1		1						
89	12	3	1						1		
89	12	8	1				1				
89	13	0	1				1				
89	14	14	1						1		
89	21	0	15		3	1	4	3		4	
89	Und.	-	31		2	1	1	4	10	5	8
TOT			**99**	**0**	**7**	**10**	**9**	**7**	**40**	**12**	**14**

POTTERY SELECTION

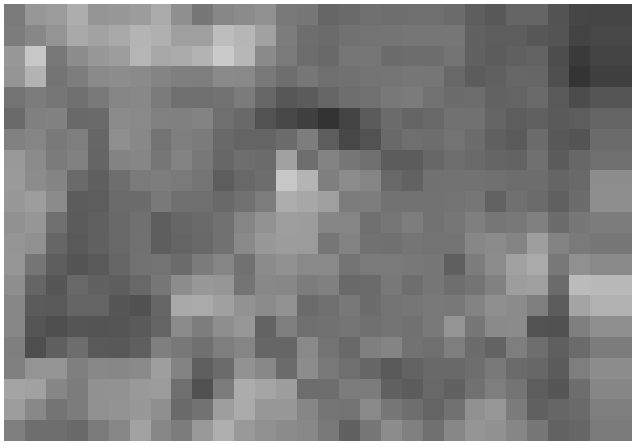
Plate 1

N.	Code	Description	Type	Period	Area
1	89.15.6.2	Rim; very dark gray core (10YR 3/1), grayish brown exterior surface (10YR 5/2) and dark gray interior surface (GLEY N3/); mineral fabric with occasional fine mineral inclusions; burnished surfaces; cooking pot. Dm. 12 cm.	T4/0	4	89.6
2	89.15.6.1	Rim; reddish yellow surfaces (7.5YR 7/6) and dark gray core (5YR 4/1) with reddish yellow margins (7.5YR 7/6); mineral fabric with frequent fine calcite inclusions; traces of burnishing on the exterior surface. Dm. 36 cm.	T4/15	4	89.6
3	89.15.6.3	Rim; very pale brown exterior surface (10YR 8/4), light red core and interior surface (2.5YR 6/6); mineral fabric with frequent fine calcite inclusions. Dm. 12 cm.	T8/0	8	89.6
4	89.15.6.7	Jar rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/3); mineral fabric with common chaff and frequent fine calcite inclusions. Dm. 28 cm.	T8/0	8	89.6
5	89.15.7.2	Rim; pale yellow surfaces (10YR 8/2) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and abundant fine calcite inclusions; smoothed surfaces; black painted decoration on the exterior surface. Dm. 28 cm.	T8/2	8	89.7
6	89.15.6.10	Body sherd; pink core (7.5YR 7/4) and surfaces (7.5YR 7/3); mineral fabric with frequent fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T8/1	8	89.6
7	8.15.7.9	Base; pink exterior surface (7.5YR 8/3), light brown core and interior surface (7.5YR 6/4); chaff fabric with frequent fine calcite inclusions; smoothed exterior surface. Dm. 10 cm.	T8/6	8	89.7
8	89.15.8.1	Rim; pale yellow slipped surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); chaff fabric with frequent fine to medium calcite and grits inclusions. Dm. 26 cm.	T9/0	9	89.8
9	89.15.4.1	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 6/6); chaff fabric with abundant fine calcite inclusions; smoothed surfaces; red painted decoration on the rim surface. Dm. 26 cm.	T9/0	9	89.4
10	89.15.6.13	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and common fine calcite inclusions; smoothed surfaces; painted decoration on the rim and interior surface. Dm. 20 cm.	T9/0	9	89.6
11	89.15.6.12	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent chaff and occasional fine grit and calcite inclusions; smoothed surfaces. Dm. 16 cm	T9/0	9	89.6
12	89.15.3.2	Rim; very pale brown core and surfaces (10YR 8/3); fine mineral fabric with frequent fine calcite inclusion; smoothed exterior surface; red painted decoration on the rim and exterior surface. Dm. 10 cm.	T9/0	9	89.3
13	89.15.3.3	Rim; very pale brown surfaces (10YR 7/3) and grayish brown core (10YR 5/2); mineral fabric with occasional fine calcite inclusions; dark brown painted decoration on the rim and exterior surface. Dm. 14 cm.	T9/0	9	89.3
14	89.15.6.16	Base; pink surfaces (5YR 7/4) and reddish yellow core (5YR 7/6); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed exterior surface. Dm. 10 cm.	T9/0	9	89.6

Plate 2

N.	Code	Description	Type	Period	Area
15	89.15.6.19	Rim; light red core and exterior surface (2.5YR 6/6), reddish yellow interior surface (7.5YR 7/6); mineral fabric with abundant fine to medium calcite inclusions; smoothed surfaces. Dm. 10 cm.	T10/0	10	89.6
16	89.15.4.2	Rim; very pale brown exterior surface (10YR 8/3), reddish yellow core and interior surface (5YR 6/6); mineral fabric frequent fine to medium calcite inclusions. Dm. 16 cm.	T10/0	10	89.4
17	89.15.6.21	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with occasional fine calcite inclusions; smoothed exterior surface. Dm. 14 cm.	T10/5	10	89.6
18	89.15.3.6	Rim; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Dm. 12 cm.	T10/10	10	89.3
19	89.15.6.22	Rim; very pale brown surfaces (10YR 8/2) and pink core (5YR 7/4); mineral fabric with common chaff. Dm. 24 cm.	T10/12	10	89.6
20	89.15.6.18	Bowl rim; very pale brown core (10YR 8/4) and pale yellow exterior surface (2.5Y 8/2); chaff fabric with frequent fine calcite inclusions. Dm. 24 cm.	T10/13	10	89.6
21	89.15.3.9	Rim; pale yellow surfaces (2.5Y 8/3) and gray core (7.5YR 5/1); mineral fabric with no visible inclusions; smoothed surfaces. Dm. 22 cm.	T11/2	11	89.3
22	89.15.8.6	Rim; very pale brown exterior surface (10YR 7/4), light red core and interior surface (2.5YR 6/6); mineral fabric with common fine calcite inclusions; burnished exterior surface. Dm. 22 cm.	T11/8	11	89.8
23	89.15.6.26	Rim; very pale brown exterior surface (10YR 8/2), pink core and interior surface (5YR 7/4); mineral fabric with occasional chaff and fine calcite inclusions. Dm. 22 cm.	T11/8	11	89.6
24	89.15.6.25	Rim; very pale brown surfaces (10YR 8/2) and pink core (5YR 7/4); mineral fabric with occasional chaff and abundant fine calcite inclusions. Dm. 20 cm.	T11/12	11	89.6
25	89.15.6.27	Rim; very pale brown slipped surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); chaff fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Dm. 38 cm.	T12/0	12	89.6
26	89.15.2.2	Rim; very pale brown surfaces (7.5YR 7/3) and pink core (7.5YR 7/4) mineral fabric with abundant fine calcite inclusions; notched decoration on the exterior surface. Dm 60 cm. (?)	T12/0	12	89.2
27	89.15.6.28	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with abundant fine to medium calcite inclusions; grooved rim. Dm. 24 cm.	T12/3	12	89.6
28	89.15.4.3	Body sherd; very pale brown exterior surface (10YR 8/3), pink core and interior surface (7.5YR 7/4); mineral fabric with frequent fine calcite inclusions; crescent stamped decoration on the exterior surface.	T12/8	12	89.4

SITE 90 – Tell Zinawa Miri 2 (A2 sector)



1 - Site 90 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 90 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 90 from South. (2012)

SITE NUMBER	90
LOCAL NAME	Tell Zinawa Miri 2
POSITION	364043; 4055713
AREA	1,5 ha ca. (?)
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded site
OBSERVATION CONDITIONS	2012: low; 2015: low
DAMAGE AND THREATS	Buildings on the top of the mound
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									**1,5**						**1,5**	**1,5**	**1,5**
N. fr. TGAS	5								3						2	2	11
N. fr. LoNAP	11								2								4

SITE DESCRIPTION

The small circular site is completely surrounded by the modern village of Zinawa Miri. The top of the mound was flattened by bulldozers and is now occupied by new houses. The site was surveyed in 2012 by the LoNAP team and again in 2015 by the TGAS team (on both occasions with 1 collection area). Due to the problematic survey conditions and low visibility, it was possible to recover only a few sherds.

SITE BIOGRAPHY

The estimated extension of the site is based on the Corona images. The site was first occupied during the Middle Bronze Age (c. 1.5 ha) but was abandoned immediately after. The settlement was again occupied only from the Parthian period until modern times.

TYPES ATTESTED

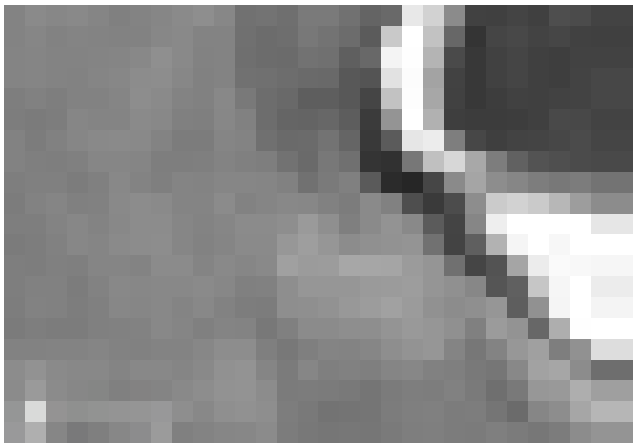
SITE	PERIOD	TYPE	TOTAL	1
90	08	0	1	1
90	08	1	2	2
90	14	0	1	1
90	14	7	1	1
90	15	0	1	1
90	15	1	1	1
90	21	0	11	11
90	Und.	-	5	5
TOT			**23**	**23**

POTTERY SELECTION

Plate 1

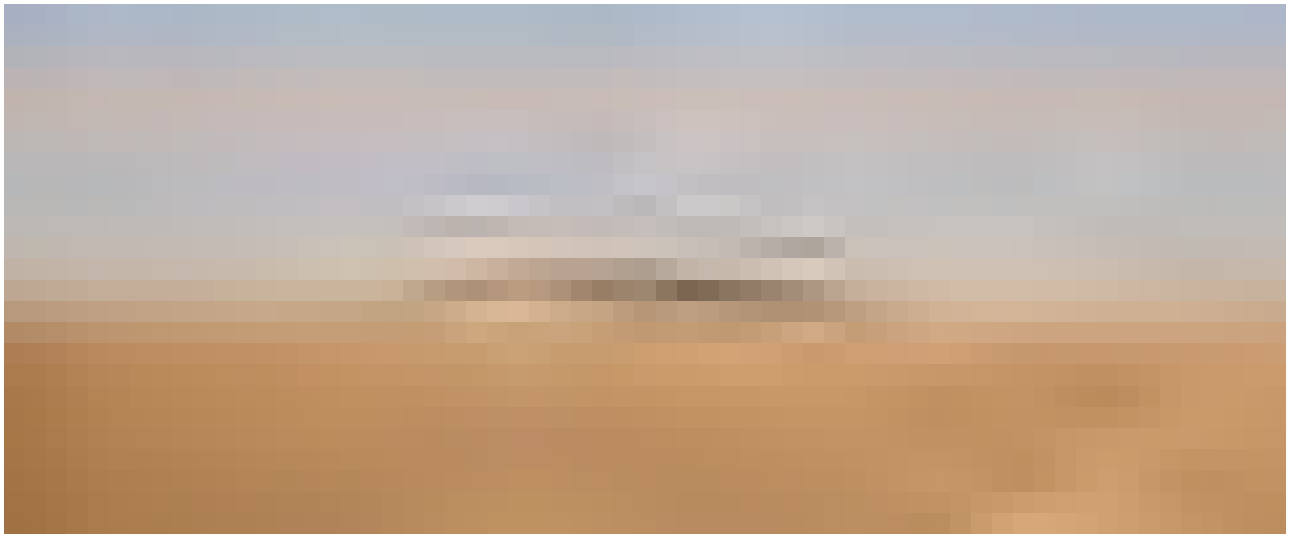
N.	Code	Description	Type	Period	Area
1	90.15.1.1	Bowl rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 6/6); mineral fabric with common chaff with frequent fine calcite and grits inclusions. Rim dm. 18 cm.	T8/0	8	90.1
2	90.15.1.3	Body sherds; pale yellow exterior surface (2.5Y 8/2) and light brown core (7.5YR 6/4); chaff fabric with abundant fine calcite inclusions; smoothed exterior surface.	T8/1	8	90.1

SITE 91 – Tell Gargushilan (A2 sector)



1- Site 91 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 91 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3- Site 91 from North-West. (2012)

SITE NUMBER	91
LOCAL NAME	Tell Gargushilan
POSITION	363578 E; 4054021 N
AREA	2 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: low; 2015: low
DAMAGE AND THREATS	A big house with a swimming pool is built on the top of the mound
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**2**	**2**	**2**	**2**			**2**		**2**						**2**	**2**
N. fr. TGAS	4	1	15					1								4	
N. fr. LoNAP	9	2	24	2	2			2		1						1	4

SITE DESCRIPTION

Tell Gargushilan in a small elongated site situated north of Zinawa Kahve on the west bank of the River Gomel. The site has been partially eroded by the river on its eastern edge. The construction of a large house (with a swimming pool, fountains and an extended garden) involved terracing and excavation activities. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit). On the top of the mound survey was problematic due to the presence of buildings and trees.

SITE BIOGRAPHY

The site was first settled during the Early Pottery Neolithic and continuously occupied until the end of the Late Chalcolitic 1-2 (c. 2 ha). The Halaf phase is likely to have been the most densely settled epoch. During the Bronze Age the site was settled in the mid-late 3rd millennium and in the Mitanni period (c. 2 ha). Later, after a long occupation hiatus, the settlement grew up again during the Sasanian and Islamic periods (c. 2 ha).

TYPES ATTESTED

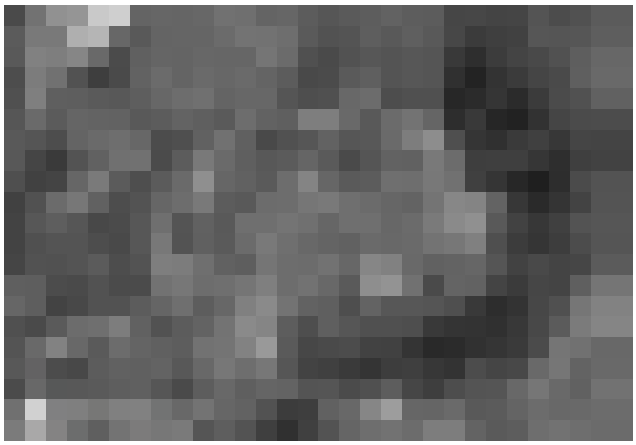
SITE	PERIOD	TYPE	TOTAL	1
91	01	0	1	1
91	02	0	14	14
91	07	0	1	1
91	15	0	3	3
91	15	3	1	1
91	Und.	-	3	3
TOT			**23**	**23**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	91.15.1.1	Bowl rim; dark gray core (7.5YR 4/1) and yellowish red surfaces (7.5YR 6/6); mineral fabric with abundant fine-medium grits and calcite inclusions; burnished surfaces. Rim dm. 12 cm.	T1/0	1	91.1
2	**91.12.1.12**	Jar rim; grayish brown core and surfaces (2.5Y 5/2); mineral fabric with abundant fine calcite, quartz and grits inclusions; smoothed surfaces. Cooking pot ?. Rim dm. ?	T1/0	**1**	**LoNAP**
3	91.15.1.2	Bowl rim; very pale brown surfaces (10YR 8/3) and light reddish brown core (5YR 6/4); mineral fabric with occasional medium calcite inclusions; smoothed surfaces; red painted decoration on the rim and on the interior surface. Rim dm. 20 cm.	T2/1	2	91.1
4	91.15.1.4	Bowl rim; pink surfaces and core (7.5YR 8/4); mineral fabric with no visible inclusions; burnished surfaces; dark brown painted decoration on the surfaces. Rim dm. 26 cm.	T2/1	2	91.1
5	91.15.1.5	Bowl rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 8/3); mineral fabric with occasional chaff with no visible inclusion; burnished surfaces; dark brown painted decoration on the exterior surfaces. Rim dm. 24 cm.	T2/1	2	91.1
6	91.15.1.3	Bowl rim; reddish yellow surfaces (5YR 7/6) and very pale brown core (10YR 7/4); mineral fabric with few chaff and occasional fine grits inclusions; impressed decoration on the interior surface; burnished interior surface. Rim dm. 28 cm.	T2/1	2	91.1
7	91.15.1.7	Body sherd; reddish yellow exterior surface and core (5YR 7/6), pink interior surface (7.5Yr 8/4); mineral fabric with rare chaff and rare fine mineral inclusions; burnished surfaces; red painted decoration on the surfaces.	T2/1	2	91.1
8	91.15.1.11	Body sherd; light brownish gray surfaces and core (10YR 5/2); mineral fabric with occasional fine calcite inclusions; burnished exterior surface; dark brown painted decoration on the exterior surface.	T2/1	2	91.1
9	91.15.1.6	Body sherd; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); mineral fabric with no visible inclusions; burnished exterior surface; brown painted decoration on the exterior surface.	T2/1	2	91.1
10	91.15.1.9	Body sherd; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with no visible inclusions; burnished exterior surface; dark brown painted decoration on the exterior surface.	T2/1	2	91.1
11	91.15.1.14	Flat base; very pale brown surfaces and core (10YR 7/3); fine mineral fabric with no visible inclusions; smoothed exterior surface; red painted decoration on the exterior surface. Base dm. 12 cm.	T2/1	2	91.1
12	**91.12.1.1**	Jar rim; pale brown slipped surfaces (10YR 6/3) and light brownish gray (10YR 6/2); chaff fabric with frequent fine calcite and grits inclusions; burnished surfaces. Rim dm. 35 cm. (?)	**T4/0**	**4**	**LoNAP**
13	**91.12.1.9**	Bowl rim; pale yellow surfaces (2.5Y 8/2) and pink core (10YR 7/4); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 23 cm (?)	**T4/15**	**4**	**LoNAP**
14	91.15.1.16	Flat base; pale yellow surfaces and core (5Y 7/3); mineral fabric with common chaff and occasional fine mineral inclusions; burnished exterior surfaces; Base dm. 16 cm.	T7/0	7	91.1
15	**91.12.1.11**	Bowl rim; pale yellow slipped surfaces (5Y 8/2) and pink core (7.5YR 7/4); mineral fabric with occasional fine chaff and no visible mineral inclusions; burnished surfaces. Rim dm. 21 cm.	**T9/6**	**9**	**LoNAP**

SITE 92 – Zinawa Khave (A2 sector)



1 - Site 92 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 92 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)

3 - The modern village of Zinawa Khave. (2012)

SITE NUMBER	92
LOCAL NAME	Zinawa Khave
POSITION	364039 E; 4053081 N
AREA	12 ha ca. (?)
SURVEY YEARS	2012 and 2015
TYPE OF SITE	flat
OBSERVATION CONDITIONS	2012: very low; 2015: very low
DAMAGE AND THREATS	The modern village obliterates completely the ancient settlement
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	**12**
N. fr. TGAS																	5
N. fr. LoNAP	1																3

SITE DESCRIPTION

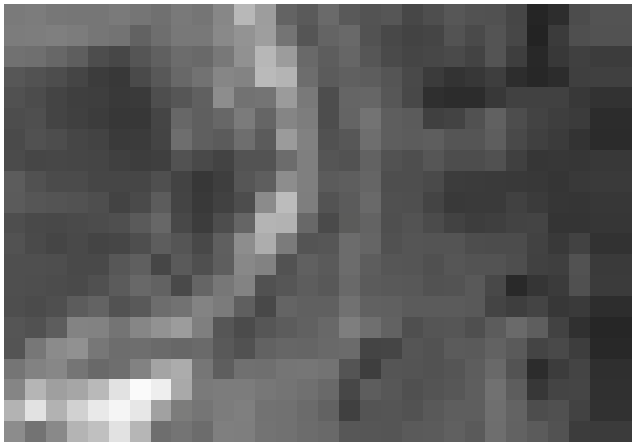
The site is completely buried by the modern village of Zinawa Khave. The site was surveyed in 2012 and 2015 by the LoNAP and the TGAS team. Unfortunately, the visibility conditions were very poor and it was possible to collect only a few sherds.

SITE BIOGRAPHY

It is difficult to estimate the size of the ancient settlement, although on the basis of the Corona image it must have covered c. 12 ha. The few pottery fragments collected seem to indicate only an Islamic period occupation of the site.

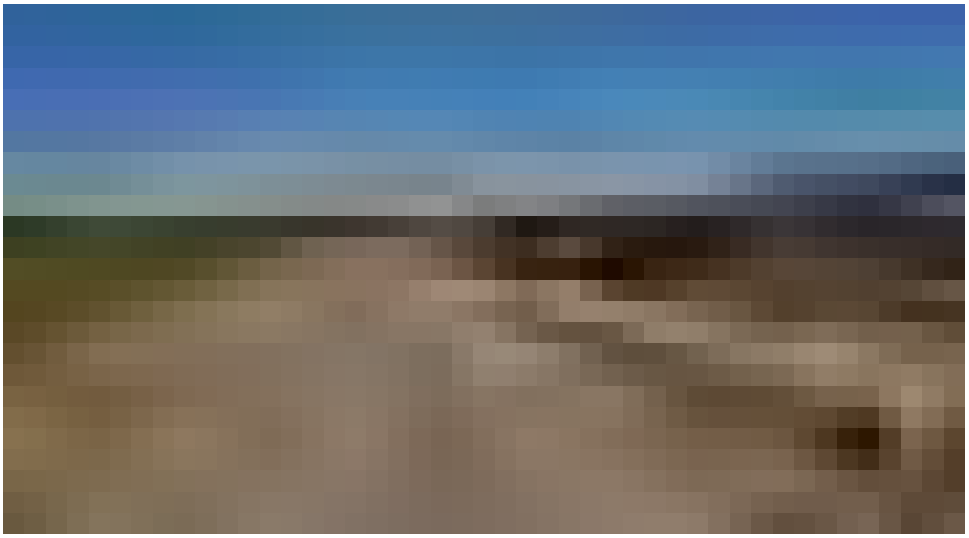
SITE 93

(A2 sector)



1 - Site 93 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 93 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3- Site 93 from North. (2015)

SITE NUMBER	93
LOCAL NAME	Gir Kochek
POSITION	363977; 4053633
AREA	2 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: low
DAMAGE AND THREATS	Eroded by the river
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha				**2**	**2**	**2**	**2**	**2**		**2**		**2**			**2**		**2**
N. fr. TGAS	9			1	3	2	1	7		2		9			3		3
N. fr. LoNAP	7				1			4				5					

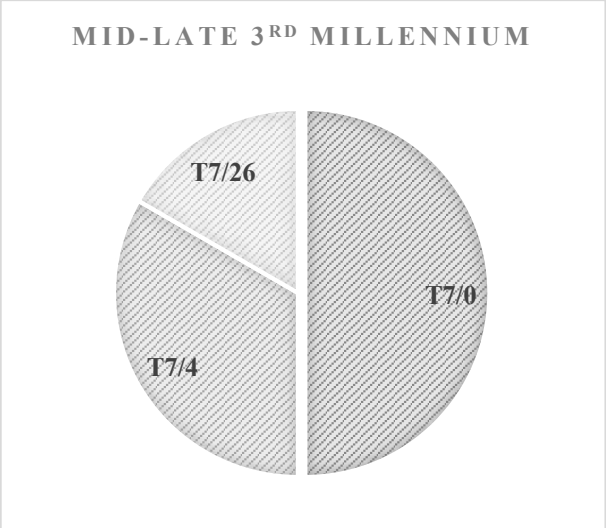
SITE DESCRIPTION

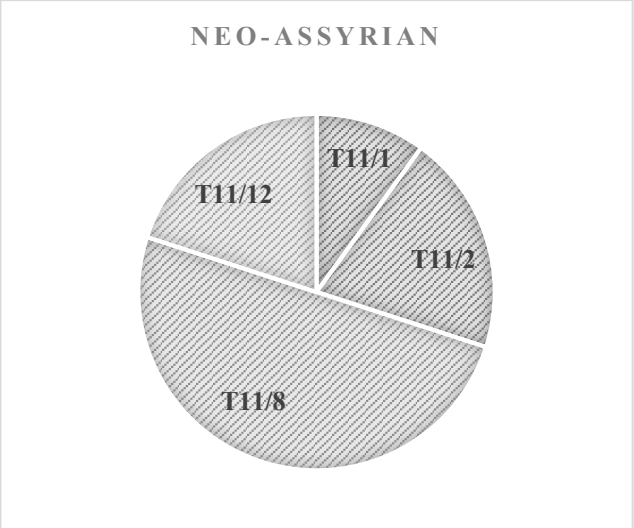
The small elongated low-mounded tell is crossed by a dirt road and has been partially eroded by the River Gomel on its western side. The site is situated on the east bank of the river immediately north of Zinawa Khave. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit).

SITE BIOGRAPHY

The small site might conceal a buried Obeid core underneath, although only one sherd from this period was found. Scanty traces of occupation are also attested during the Late Chalcolithic and Ninivite V periods. During the mid-late 3rd millennium the site seems to have been more densely occupied. A gap in the settlement's occupation occurred during the Middle Bronze Age and Middle Assyrian period. The site grew once more in the Neo-Assyrian epoch, but with regard to the later phases it is possible to recognize only Parthian and Islamic period occupation.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
93	03	0	1	1
93	04	0	2	2
93	04	18	1	1
93	05b	0	2	2
93	06	5	1	1
93	07	0	3	3
93	07	4	2	2
93	07	26	1	1
93	09	0	2	2
93	11	1	1	1
93	11	2	2	2
93	11	8	5	5
93	11	12	2	2
93	14	0	3	3
93	21	0	3	3
93	Und.	-	9	9
TOT			**38**	**38**

POTTERY SELECTION

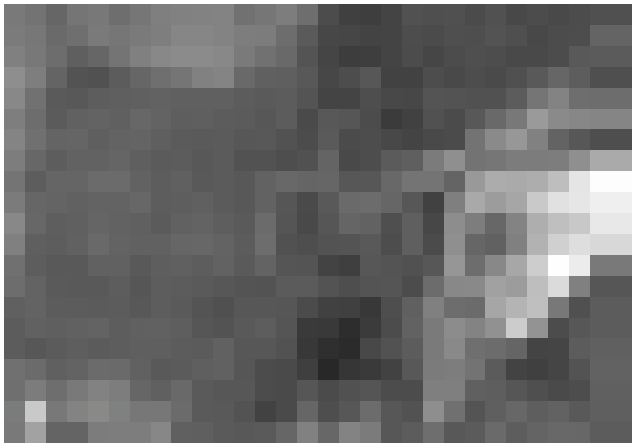
Plate 1

N.	Code	Description	Type	Period	Area
1	93.15.1.7	Rim; brownish yellow surfaces and core (10YR 6/6); mineral fabric with occasional chaff and abundant fine grits and calcite inclusions. Rim dm. 18 cm.	T4/18	4	93.1
2	93.15.1.8	Rim; pale yellow slipped exterior surface (5Y 8/2), very pale brown interior surface (10YR 7/3) and dark gray core (10YR 4/1) with reddish yellow margins (7.5YR 6/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 32 cm.	T5b/0	5b	93.1
3	93.13.1.2	Rim; very pale brown surfaces (10YR 7/4) and very dark gray core (10YR 3/1) with grayish brown margins (2.5Y 5/2); chaff fabric with abundant fine calcite inclusions; smoothed surface. Rim dm. 22 cm.	T4-5/0	4-5	93.1
4	93.15.1.3	Rim; reddish yellow surface (5YR 6/6), dark gray (10YR 4/1) and light brown core (7.5Yr 6/4); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T4-5/0	4-5	93.1
5	93.15.1.4	Rim; red exterior surface (2.5YR 5/6), light brown interior surface (7.5YR 6/4) and dark grayish brown core (10YR 4/2); mineral fabric with abundant fine and medium grits inclusions; burnished surfaces. Rim dm. 18 cm.	T4-5/0	4-5	93.1
6	93.15.1.12	Body sherd; light gray surfaces and core (2.5Y 7/1); fine mineral fabric with no visible inclusions; smoothed surface.	T6/5	6	93.1
7	93.15.1.10	Rim; pale yellow surfaces and core (2.5Y 7/4); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed interior surface and burnished exterior surface. Rim dm. 12 cm.	T7/0	7	93.1
8	93.15.1.11	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with frequent calcite and grits inclusions. Rim dm. 12 cm.	T7/0	7	93.1
9	93.15.1.14	Body sherd; pale yellow surface (2.5Y 7/4) and light reddish brown core (5YR 6/4); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions; smoothed surface; comb incised decoration.	T7/4	7 (akk.)	93.1
10	93.15.1.15	Body sherd; pale yellow core and surfaces (5Y 7/3); mineral fabric with common chaff and fine calcite inclusions; comb incised decoration; traces of bitumen on the interior surface.	T7/4	7 (akk.)	93.1
11	93.12.1.4	Rim; pale yellow core and surfaces (5 Y 7/3); fine mineral fabric with no visible inclusions; burnished exterior surface and smoothed interior surfaces; comb incised and incised decoration on the exterior surface. Rim dm. 10 cm.	T7/4	7 (post-akk.)	LoNAP
12	93.15.1.9	Rim; pale yellow exterior surface (5Y 8/3) and very pale brown core (10YR 7/4); mineral fabric with occasional chaff and frequent fine calcite and grits inclusions. Rim dm. 24 cm.	T7/26	7	93.1
13	93.15.1.16	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); chaff fabric with frequent fine grits; smoothed surfaces; painted black decoration on the surfaces. Rim dm. 18 cm.	T9/0	9	93.1
14	93.15.1.17	Base; very pale brown surfaces (10YR 7/4) and pink core (7.5YR 7/4); chaff fabric with frequent fine grits and calcite inclusions; burnished exterior surface. Base dm. 12 cm.	T9/0	9	93.1
15	93.15.1.20	Rim; very pale brown surfaces and core (10YR 7/4); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T11/2	11	93.1
16	93.15.1.24	Rim; very pale brown surfaces (10YR 7/4) and grayish brown core (10YR 5/2); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/8	11	93.1
17	93.15.1.28	Rim; reddish yellow surfaces (5YR 6/6); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/8	11	93.1
18	93.15.1.18	Rim; pale yellow surfaces (2.5Y 6/2) and light brownish gray core (10YR 6/2); chaff fabric with occasional fine-medium calcite inclusions. Rim dm. 28 cm.	T11/12	11	93.1
19	93.15.1.19	Rim; very pale brown surfaces (10YR 8/3) and very pale brown core (10YR 7/4); mineral fabric with common chaff and fine calcite inclusions; burnished surfaces. Rim dm. 18 cm.	T11/12	11	93.1

Plate 2

N.	Code	Description	Type	Period	Area
15	93.15.1.20	Rim; very pale brown surfaces and core (10YR 7/4); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T11/2	11	93.1
16	93.15.1.24	Rim; very pale brown surfaces (10YR 7/4) and grayish brown core (10YR 5/2); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/8	11	93.1
17	93.15.1.28	Rim; reddish yellow surfaces (5YR 6/6); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/8	11	93.1
18	93.15.1.18	Rim; pale yellow surfaces (2.5Y 6/2) and light brownish gray core (10YR 6/2); chaff fabric with occasional fine-medium calcite inclusions. Rim dm. 28 cm.	T11/12	11	93.1
19	93.15.1.19	Rim; very pale brown surfaces (10YR 8/3) and very pale brown core (10YR 7/4); mineral fabric with common chaff and fine calcite inclusions; burnished surfaces. Rim dm. 18 cm.	T11/12	11	93.1

SITE 94 - Khraba Sheikh Mawalid 2 (A2 sector)



1 - Site 94 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 94 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)

3- Site 94 from North. (2015)

SITE NUMBER	94
LOCAL NAME	Khraba Sheikh Mawalid 2
POSITION	363549 E; 4053475 N
AREA	2,5 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Eroded by the river
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha			**0,4**		**2,5**			**2**	**2,5**	**1,4**	**1,4**	**2,5**	**2,2**	**1**	**1,3**	**2,5**	**0,8**
N. fr. TGAS	37		1					11	37	11	10	16	6	5	9		7
N. fr. LoNAP	20				1			6	24	4	19	17		1	10	2	1

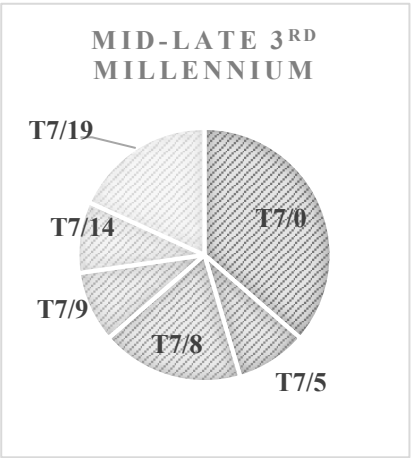
SITE DESCRIPTION

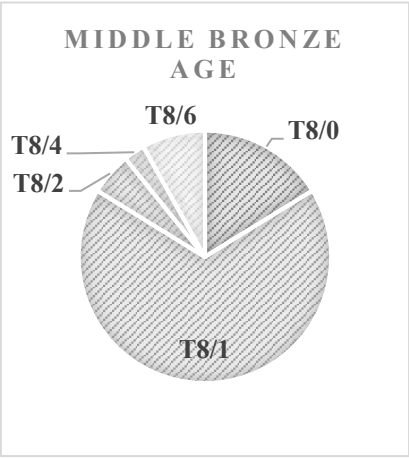
Kraba Sheikh Mawalid 2 is an almost circular high-mounded site located on the right bank of the River Gomel, north-west of Zinawa Kahve. The eastern side of the site has been eroded by the river. The settlement was surveyed by the LoNAP team in 2012 (only 1 collection unit) and again in 2015 by the TGAS team (5 collection units). The visibility was high.

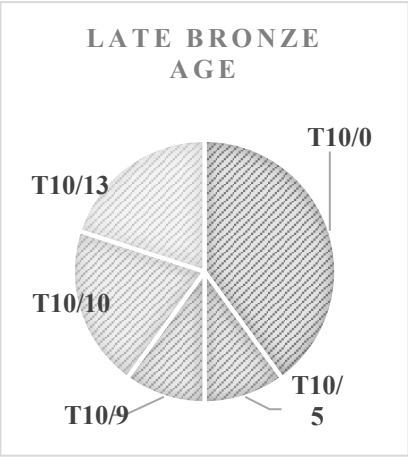
SITE BIOGRAPHY

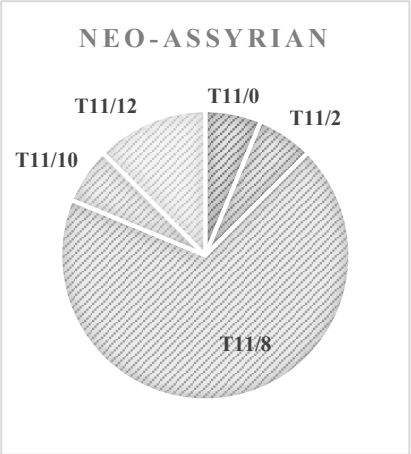
The site has had a long and continuous history of occupation from the mid-late 3rd millennium BC to the Islamic epoch. A Halaf sherd (from the western slope of the mound) and a single Late Chalcolithic fragment might possibly signify the presence of a buried Pre- and Proto-Historic settlement. The site probably reached its maximum expansion during the Middle Bronze Age (c. 2.5 ha), with another peak in occupation during the Neo-Assyrian epoch.

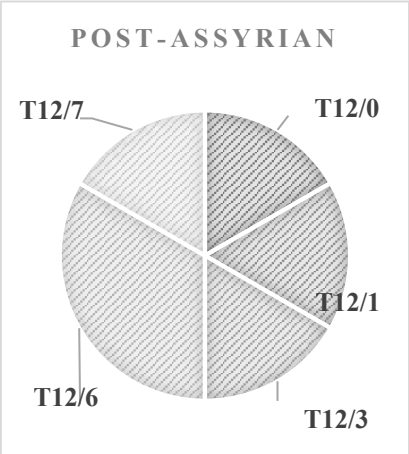
POTTERY TYPES ATTESTED FOR EACH PERIOD











TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
94	02	1	1			1		
94	07	0	4	2	1	1		
94	07	5	1	1				
94	07	8	2			1	1	
94	07	9	1			1		
94	07	14	1	1				
94	07	19	2		2			
94	08	0	6	2			4	
94	08	1	25	4	10	3	7	1
94	08	2	2	2				
94	08	4	1		1			
94	08	6	3				3	
94	09	0	11		7		4	
94	10	0	4	4				
94	10	5	1		1			
94	10	9	1				1	
94	10	10	2		1	1		
94	10	13	2	2				
94	11	0	1		1			
94	11	2	1					1
94	11	8	11	2	4	2		3
94	11	10	1		1			
94	11	12	2	1	1			
94	12	0	1				1	
94	12	1	1				1	
94	12	3	1		1			
94	12	6	2		1			1
94	12	7	1			1		
94	13	0	1		1			
94	13	8	1		1			
94	13	9	1			1		
94	13	13	2		2			
94	14	0	5	1	3	1		
94	14	14	3		3			
94	14	15	1	1				
94	21	0	7				7	
94	Und.	-	37	14	19	2		2
TOT			**150**	**37**	**61**	**15**	**29**	**8**

POTTERY SELECTION

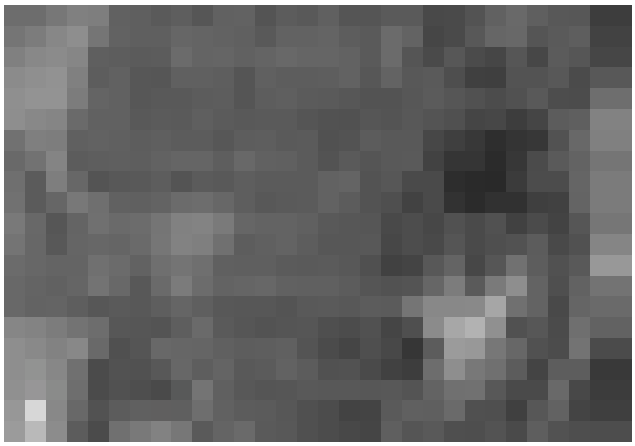
Plate 1

N.	Code	Description	Type	Period	Area
1	94.15.3.1	Body sherd; pale yellow slipped (?) surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); fine mineral fabric with rare chaff and occasional fine calcite inclusions; lightly burnished surfaces; black painted decoration on the surfaces.	T2/1	2	94.3
2	94.15.2.3	Rim; pale yellow exterior surface (2.5Y 8/2), very pale brown interior surface (10YR 8/3) and pink core (7.5YR 7/4); chaff fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 28 cm.	T7/0	7	94.2
3	94.15.1.1	Rim; pale yellow slipped surfaces (5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with common fine grits and calcite inclusions; smoothed exterior surface. Rim dm. 10 cm.	T7/0	7	94.1
4	94.15.3.2	Rim; very pale brown surfaces (10YR 8/3) and light brown core (7.5YR 6/4); mineral fabric with common chaff and frequent fine calcite inclusions. Rim dm. 26 cm.	T7/9	7	94.3
5	94.15.1.2	Rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (5YR 7/6); mineral fabric with abundant chaff and frequent fine calcite inclusions. Rim dm. 20 cm.	T7/14	7	94.1
6	94.15.2.1	Rim; pink surfaces and core (7.5YR 8/3); mineral fabric with very few fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	94.2
7	94.16.4.2	Rim; pale yellow surfaces and core (2.5Y 7/4); mineral fabric with abundant chaff and frequent fine calcite inclusions; smoothed exterior surface. Rim dm. 30 cm.	T8/0	8	94.4
8	94.15.4.5	Rim; pale yellow slipped surfaces (5Y 8/3) and very pale brown core (10YR 7/4); mineral fabric with abundant chaff and frequent fine calcite inclusions; smoothed surfaces; dark painted decoration on the exterior surface. Rim dm. 30 cm.	T8/1	8	94.4
9	94.15.1.7	Rim; reddish yellow surfaces (7.5YR 7/6) and brown core (10YR 5/3) with reddish yellow margins (7.5YR 7/6); mineral fabric with abundant chaff and common fine-medium calcite inclusions; red painted decoration on the rim and on the exterior surface. Rim dm. 34 cm.	T8/1	8	94.1
10	94.15.2.5	Rim; pale yellow surfaces (5Y 7/4) and pale olive core (5Y 6/4); mineral fabric with common chaff and common fine calcite inclusions; dark painted decoration on the exterior surface and on the rim. Rim dm. 10 cm.	T8/1	8	94.2
11	94.15.2.7	Rim; pale yellow surfaces (5Y 7/4) and pale olive core (5Y 6/4); mineral fabric with abundant chaff and common fine calcite inclusions; dark brown painted decoration on the rim. Rim dm. 14 cm.	T8/1	8	94.2
12	94.15.1.8	Rim; pale yellow surface and core (5Y 7/3); chaff fabric with occasional fine-medium calcite inclusions; smoothed exterior surface. Rim dm. 28 cm.	T8/2	8	94.1
13	94.15.1.5	Rim; pale yellow interior surface (2.5Y 8/3), reddish yellow exterior surface (5YR 7/6) and gray core (10YR 5/1); mineral fabric with occasional chaff and fine-medium calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T8/2	8	94.1
14	94.15.4.4	Base; very pale brown surfaces and core (10YR 7/4); chaff fabric with frequent fine grits. Base dm. 10 cm.	T8/6	8	94.4

Plate 2

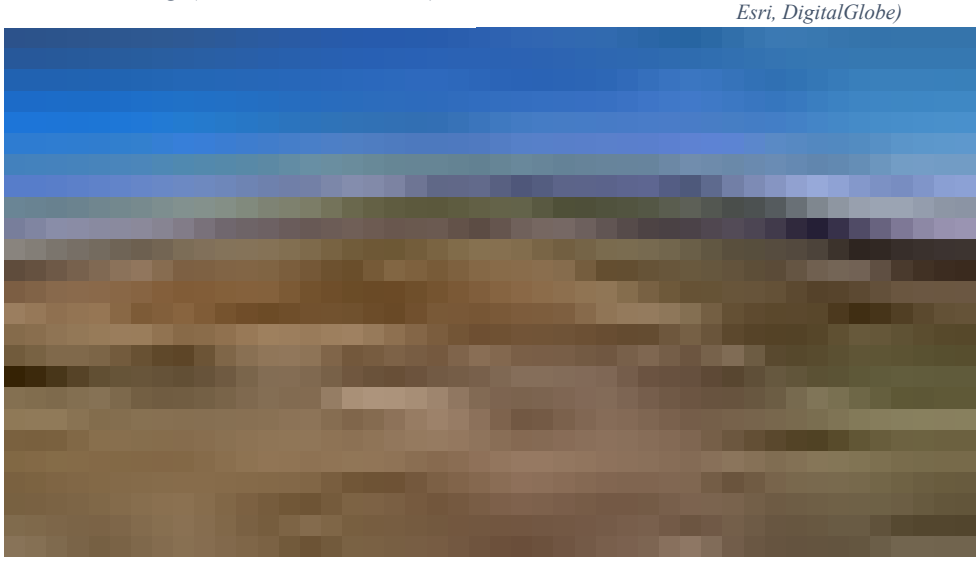
N.	Code	Description	Type	Period	Area
15	94.15.2.21	Rim; pale yellow surface (5Y 8/3) and pink core (7.5Y 7/4); chaff fabric with abundant fine calcite and grits inclusions. Rim dm. 30 cm.	T9/0	9	94.2
16	94.15.2.15	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR7/6); mineral fabric with common fine and medium calcite inclusions. Rim dm. 28 cm.	T9/0	9	94.2
17	94.15.2.20	Base; very pale brown surfaces (10YR 8/3) and very pale brown core (10YR 7/4); mineral fabric with occasional fine chaff and very few calcite inclusions.	T9/0	9	94.2
18	94.15.2.19	Base; pale yellow surfaces (2.5Y 7/4) and reddish yellow core (5YR 7/6); chaff fabric with occasional fine calcite inclusions. Base dm. 14 cm.	T9/0	9	94.2
19	94.15.1.14	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with abundant chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T10/0	10	94.1
20	94.15.1.16	Rim; very pale brown surfaces and core (10YR 7/4); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 12 cm.	T10/0	10	94.1
21	94.15.2.23	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 8 cm.	T10/5	10	94.2
22	94.15.2.22	Rim; pale yellow surfaces (5Y 8/2) and light olive gray core (5Y 6/2); chaff fabric with occasional fine calcite inclusions; smoothed surface. Rim dm. 22 cm.	T10/10	10	94.2
23	94.15.1.13	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with abundant fine-medium calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T10/13	10	94.1
24	94.15.2.28	Rim; gray surfaces and core (5Y 6/1); mineral fabric with occasional medium calcite inclusions. Rim dm. 10 cm.	T11/0	11	94.2
25	94.15.2.26	Rim; light brown core and surfaces (7.5YR 6/4); mineral fabric with frequent fine grits and calcite inclusions; smoothed surfaces. Rim dm. 8 cm.	T11/8	11	94.2
26	94.15.2.27	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with abundant fine grits and fine to large calcite inclusions. Rim dm. 20 cm.	T11/10	11	94.2
27	94.15.1.20	Rim; reddish yellow surfaces (5Yr 7/6) and light brown core (7.5YR 6/4); mineral fabric with common chaff and frequent fine calcite inclusions. Rim dm. 22 cm	T11/12	11	94.1
28	94.15.2.32	Rim; light yellowish brown surfaces (10YR 6/4) and grayish brown core (10YR 5/2); mineral fabric with fine grits inclusions. Rim dm. 18 cm.	T12/6	12	94.2
29	94.15.3.11	Body sherd (pot shoulder); pale yellow exterior surface (2.5Y 8/3) and light brown interior surface and core (7.5YR 6/4); mineral fabric with abundant fine calcite inclusions; smoothed exterior surface; stamp impressed decoration.	T12/7	12	94.3

SITE 95 – Kraba Sheikh Mawalid 1 (A2 sector)



1 - Site 95 in a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 95 in a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3 - Site 95 from South. (2015)

SITE NUMBER	95
LOCAL NAME	Kraba Sheikh Mawalid 1
POSITION	363532; 4053266
AREA	2 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good.
DAMAGE AND THREATS	Eroded by the river
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**1**	**1,5**	**1,5**	**0,4**	**1,5**	**0,3**	**0,7**	**1,5**	**2**	**0,9**
N. fr. TGAS	65							25	42	28	3	16	4	11	14		4
N. fr. LoNAP	23							8	17		6	15	4	10	7	1	

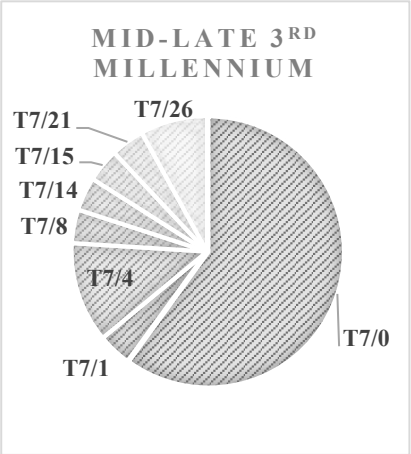
SITE DESCRIPTION

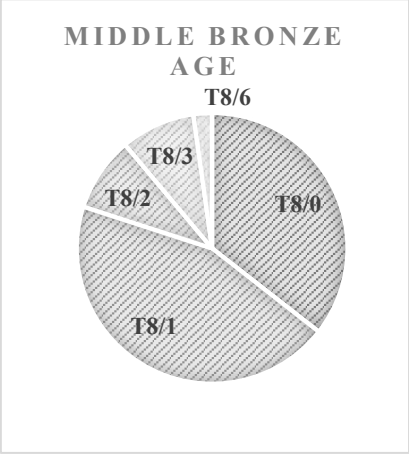
Kraba Sheikh Mawalid 1 is an almost circular high-mounded site located on the right bank of the River Gomel, north-west of Zinawa Kahve. The eastern side of the site has been eroded by the river. The settlement was surveyed by the LoNAP team in 2012 (only 1 collection unit) and again in 2015 by the TGAS team (5 collection units). The visibility was high.

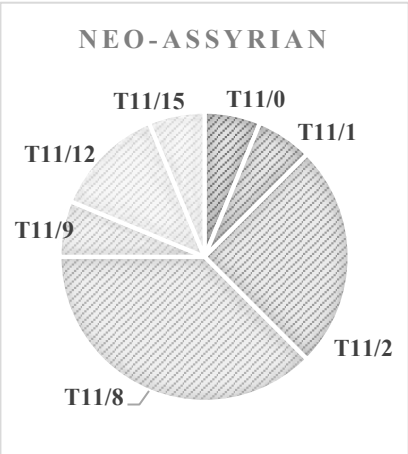
SITE BIOGRAPHY

The site has had a long and continuous history of occupation from the mid-late 3rd millennium BC to the Islamic epoch. The peaks in settlement occupation seem to be the Middle Bronze Age, the Mitanni period and the Neo-Assyrian epoch, with a decline in settlement density during the Middle Assyrian period.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
95	07	0	15	2		1		12
95	07	1	1					1
95	07	4	3					3
95	07	8	1					1
95	07	14	1					1
95	07	15	1					1
95	07	21	1					1
95	07	26	2	1				1
95	08	0	13	1	2	2		8
95	08	1	20	1	3	2		14
95	08	2	4					4
95	08	3	4	1		1		2
95	08	6	1					1
95	09	0	28		1	3		24
95	10	5	1			1		
95	10	6	2	2				
95	11	0	1					1
95	11	1	1					1
95	11	2	4		1			3
95	11	8	6		2	1		3
95	11	9	1	1				
95	11	12	2					2
95	11	15	1					1
95	12	3	3					3
95	12	8	1					1
95	13	0	5	2				3
95	13	1	1	1				
95	13	2	2	1	1			
95	13	3	1	1				
95	13	5	1		1			
95	13	9	1	1				
95	14	0	11	2	3	1		5
95	14	7	1					1
95	14	14	2	1		1		
95	21	0	4		3	1		
95	Und.	-	65	6	11	5	1	42
TOT			**212**	**24**	**28**	**19**	**1**	**142**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	95.15.5.1	Rim; very pale brown exterior surface (10YR 8/3), pale yellow interior surface (5Y 8/1) and pink core (7.5YR 7/4); mineral fabric with common chaff and frequent fine to large calcite inclusions; smoothed interior surface. Rim dm. 34 cm.	T7/0	7	95.5
2	95.15.1.2	Rim; very pale brown exterior surface (10YR 8/3) and light red interior surface and core (2.5YR 7/6); mineral fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/0	7	95.1
3	95.15.1.3	Rim; pale yellow exterior surface (2.5Y 8/2) and very pale brown interior surface and core (10YR 7/4); fine mineral fabric with rare very fine calcite inclusions; smoothed surfaces. Rim dm. 10 cm	T7/0	7	95.1
4	95.15.5.13	Rim; reddish yellow core and surfaces (5YR 7/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 44 cm.	T7/0	7	95.5
5	95.15.5.16	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (5Y 4/1); mineral fabric with frequent chaff and abundant calcite, quartz and other minerals fabric; burnished surfaces. Rim dm. 18 cm.	T7/0	7	95.5
6	95.15.3.1	Base; light olive gray surfaces (5Y 6/2) gray core (10YR 5/1); fine mineral ware with no visible inclusions; smoothed surfaces. Base dm. 5 cm.	T7/0	7	95.3
7	95.15.5.21	Base; very pale brown exterior surface (10YR 8/4), reddish yellow core and interior surface (5YR 7/8); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 5 cm.	T7/0 Akk.	7	95.5
8	95.15.5.17	Rim; pale yellow core and surface (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 8 cm.	T7/0 Akk.	7	95.5
9	95.15.5.20	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (5YR 7/4); chaff fabric with abundant fine calcite inclusions; smoothed surfaces; comb incised decoration on the exterior surfaces. Rim dm. 24 cm.	T7/4 Akk.	7	95.5
10	95.15.1.1	Rim; very pale brown slipped surfaces (10YR 8/3) and light red core (2.5YR 7/6); fine mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 10 cm.	T7/26	7	95.1
11	95.15.5.5	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 36 cm.	T7/26	7	95.5
12	95.15.5.23	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with abundant fine-medium calcite inclusions. Rim dm. 18 cm.	T8/0	8	95.5
13	95.15.2.3	Rim; pale yellow slipped exterior surface (5Y 8/2), light gray interior surface (10YR 6/2) and pinkish gray (7.5YR 6/2); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 20 cm	T8/0	8	95.2
14	95.15.2.4	Rim; dark gray surfaces and core (2.5Y 4/1); mineral fabric with abundant fine calcite and quartz inclusions; burnished surfaces. Rim dm. 16 cm.	T8/0	8	95.2
15	95.15.3.4	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with occasional chaff and occasional medium-large inclusions; burnished exterior surface; red painted decoration on the rim. Rim dm. 24 cm.	T8/1	8	95.3
16	95.15.1.6	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 6/6); mineral fabric with common chaff and abundant fine calcite and grits inclusions. Rim dm. 14 cm.	T8/1	8	95.1
17	95.15.5.40	Rim; pink core and surfaces (7.5YR 7/4); fine mineral fabric with occasional fine calcite inclusions; dark brown painted decoration on the exterior surface and on the rim. Rim dm. 8 cm.	T8/1	8	95.5
18	95.15.5.39	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with abundant fine calcite inclusions; black painted decoration on the exterior surface and on the rim. Rim dm. 22 cm.	T8/1	8	95.5
19	95.15.3.2	Rim; gray surfaces (5Y 5/1) and light gray core (5Y 7/2); mineral fabric with abundant coarse grits, calcite and quartz inclusions; burnished surfaces. Rim dm. 24 cm.	T8/3	8	95.3
20	95.15.5.24	Rim; gray surfaces (2.5Y 5/1) and light yellowish brown (2.5Y 6/3); mineral fabric occasional mica and fine calcite inclusions; burnished surfaces. Rim dm. 12 cm.	T8/3	8	95.5
21	95.15.5.22	Rim; light gray exterior surface (5Y 5/1), gray interior surface (5Y 5/1) and dark gray core (2.5Y 4/1); mineral fabric with frequent fine calcite inclusions; burnished surfaces. Rim dm. 18 cm.	T8/3	8	95.5

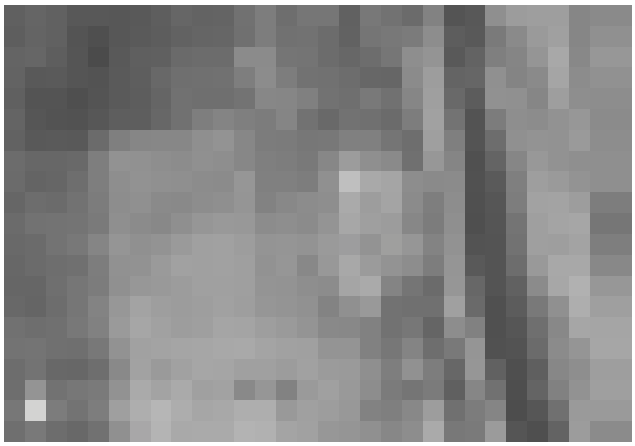
Plate 2

N.	Code	Description	Type	Period	Area
18	95.15.5.39	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with abundant fine calcite inclusions; black painted decoration on the exterior surface and on the rim. Rim dm. 22 cm.	T8/1	8	95.5
19	95.15.3.2	Rim; gray surfaces (5Y 5/1) and light gray core (5Y 7/2); mineral fabric with abundant coarse grits, calcite and quartz inclusions; burnished surfaces. Rim dm. 24 cm.	T8/3	8	95.3
20	95.15.5.24	Rim; gray surfaces (2.5Y 5/1) and light yellowish brown (2.5Y 6/3); mineral fabric occasional mica and fine calcite inclusions; burnished surfaces. Rim dm. 12 cm.	T8/3	8	95.5
21	95.15.5.22	Rim; light gray exterior surface (5Y 5/1), gray interior surface (5Y 5/1) and dark gray core (2.5Y 4/1); mineral fabric with frequent fine calcite inclusions; burnished surfaces. Rim dm. 18 cm.	T8/3	8	95.5
22	95.15.3.7	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 6/6); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T9/0	9	95.3
23	95.15.5.51	Rim; very pale brown exterior surface (10YR 8/3), pink core and interior surface (7.5YR 8/4); mineral fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T9/0	9	95.5
24	95.15.5.61	Rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces; red painted decoration on the exterior surface and on the rim. Rim dm. 16 cm.	T9/0	9	95.5
25	95.15.5.62	Rim; pink exterior surface (7.5YR 7/4), very pale brown interior surface (10YR 7/3) and dark gray core (2.5Y 4/1); mineral fabric with common chaff and frequent fine calcite and grits inclusions; burnished surfaces and burnished decoration on the exterior surface. Rim dm. 16 cm.	T9/0	9	95.5
26	95.15.5.69	Body sherd; pale yellow surfaces (5Y 8/2) and pink core (7.5YR 7/3); mineral fabric with abundant chaff and abundant fine calcite inclusions; incised decoration and rope decoration.	T9/0	9	95.5
27	95.15.2.6	Pot stand; reddish yellow surfaces and core (7.5YR 7/6); mineral fabric with occasional chaff and fine calcite inclusions. Rim dm. 21 cm. (ce ne sono 2, altro 95.15.5.69)	T9/0	9	95.2
28	95.15.3.10	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with no visible mineral inclusions. Rim dm. 12 cm.	T10/5	10	95.3
29	95.15.1.8	Bowl; pale yellow core and surfaces (2.5Y 7/4); fine mineral fabric with rare fine chaff and no visible inclusion; smoothed exterior surface and burnished interior surface. Base dm. 10 cm.	T10/6	9	95.1

Plate 3

N.	Code	Description	Type	Period	Area
30	95.15.5.83	Base; pale yellow exterior surface (2.5Y 8/2), very pale brown interior surface (10YR 7/3) and reddish yellow core (7.5YR 7/6); mineral fabric with frequent fine calcite and grits inclusions. Base dm. 10 cm.	T11/0	11	95.5
31	95.15.2.7	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/2	11	95.2
32	95.15.5.73	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with occasional calcite and grits inclusions; trace of burnishing on the exterior surface. Rim dm. 54 cm.	T11/2	11	95.5
33	95.15.2.9	Rim; pale yellow surfaces (2.5Y 7/2) and very pale brown core (10YR 7/4); mineral fabric with frequent chaff and common fine calcite inclusions. Rim dm. 10 cm.	T11/8	11	95.2
34	95.15.5.80	Rim; reddish yellow core (7.5YR 7/6); mineral fabric with common chaff and frequent fine calcite inclusions; traces of burnishing on the rim. Rim dm. 20 cm.	T11/8	11	95.5
35	95.15.1.9	Rim; light gray surfaces and core (2.5Y 7/2); abundant fine and medium calcite and grits inclusions. Rim dm. 16 cm.	T11/9	11	95.1
36	95.15.5.75	Rim; very pale brown core and surfaces (10YR 6/3); mineral fabric with abundant fine grits inclusions. Rim dm. 20 cm.	T11/12	11	95.5
37	95.15.5.81	Rim; light brownish gray (10YR 6/2) and light yellowish brown (10YR 6/4); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 18 cm.	T11/15	11	95.5
38	95.15.5.85	Rim; pink surfaces (7.5YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with common chaff and abundant fine calcite inclusions. Rim dm. 30 cm.	T12/3	12	95.5
39	95.15.5.86	Rim; reddish yellow surfaces (7.5YR 7/6) and gray core (7.5YR 5/1) with reddish yellow core (7.5YR 7/6); mineral fabric with frequent chaff and fine calcite and grits inclusions; crescent stamped impressed. Rim dm. 34 cm.	T12/8	12	95.5

SITE 96 – Khraba Sheikh Mawalid 3 (A2 sector)



1 - Site 96 in a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 96 in a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)

3- Site 96 from North-East. (2015)

SITE NUMBER	96
LOCAL NAME	Khraba Sheikh Mawalid 3
POSITION	363397; 4052559
AREA	2 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: good.
DAMAGE AND THREATS	Concrete foundations and modern tombs on the top of the mound
COLLECTION AREAS	1-4

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
							0,5	**1**				**2**					**2**
N. fr. TGAS	3						2	5									25
N. fr. LoNAP	7						2	3				1					2

SITE DESCRIPTION

The small, circular and low-mounded site is situated on the right bank of the Gomel, south-west of Zinawa Kahve. The site features a modern cemetery and some concrete foundations on the top of the mound. The settlement was surveyed by the LoNAP team in 2012 (only 1 collection unit) and again in 2015 by the TGAS team (4 collection units). The visibility was high.

SITE BIOGRAPHY

The site was occupied during the entire 3rd millennium BC, and a Neo-Assyrian sherd seems to indicate an ephemeral settlement during this period. The site reached its maximum extension in the Islamic period.

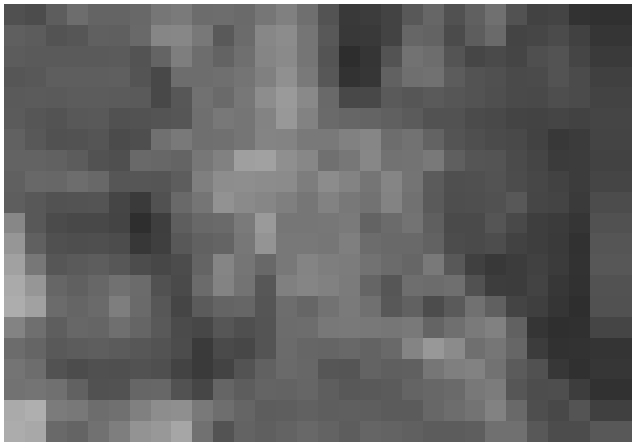
TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4
96	04-05	0	1	1			
96	06	2	1	1			
96	06	6	1	1			
96	07	0	1		1		
96	07	1	1				1
96	07	19	3		1		2
96	21	0	25	5	7	11	2
96	Und.	-	3	2		1	
TOT			**36**	**10**	**9**	**12**	**5**

POTTERY SELECTION
Plate1

N.	Code	Description	Type	Period	Area
1	96.15.1.1	Rim; very pale brown surfaces (10YR 7/4) and grayish brown core (10YR 5/2); mineral fabric with frequent chaff and abundant fine calcite inclusions. Rim dm. ?	T4-5/0	4-5	96.1
2	96.15.1.3	Body sherd; gray surfaces (10YR 6/1) and light gray core (2.5Y 7/1); fine mineral fabric with occasional fine calcite inclusions; burnished exterior surface.	T6/2	6	96.1
3	96.15.1.2	Base; gray core and surfaces (5Y 5/1); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Base dm. 7 cm.	T6/6	6	96.1
4	96.15.2.1	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 22 cm.	T7/0	7	96.2
5	96.15.4.1	Base; pale yellow core and surfaces (5Y 7/4); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 12 cm.	T7/1 Akk.	7	96.4
6	96.15.2.2	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (7.5YR 8/6); mineral fabric with abundant fine calcite inclusions. Rim dm. 18 cm.	T7/19	7	96.2
7	96.15.4.2	Rim; very pale brown core and surfaces (10YR 7/4); fine mineral fabric with common medium calcite inclusions; smoothed surfaces. Rim dm. 13 cm.	T7/19 Akk.	7	96.4
8	96.12.1.1	Rim; pale yellow slipped surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with abundant fine grits, quartz and calcite inclusions. Rim. dm. 9 cm.	T11/0	11	**LoNAP**

SITE 103 – Gir Faqir (B1 sector)



1- Site 103 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 -Site 103 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 103 from South. (2012)

SITE NUMBER	103
LOCAL NAME	Gir Faqir
POSITION	361337 E; 4049813 N
AREA	10 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: very low; 2015: very low
DAMAGE AND THREATS	Modern houses, a modern military fortress and a minefield (cleared)
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
												10					10
N. fr. TGAS																	
N. fr. LoNAP	7											3					9

SITE DESCRIPTION

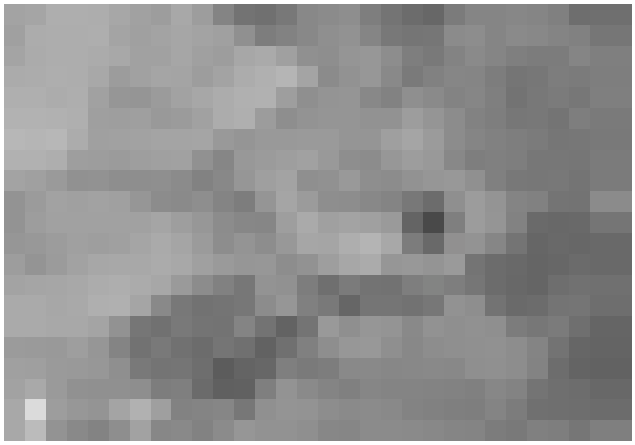
Gir Faqir is a large site obliterated by a modern village. The site is situated 3 km west of Tell Gomel. The 20th century village was completely destroyed by the Iraqi Army during the “Anfal” campaigns. At present the site is buried under the remains of the old village, a “Saddam Fortress” and few recent houses. On the basis of the Corona images, it is possible to estimate the site's area as c. 10 ha. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit). Only the LoNAP team collected a few pottery sherds.

POTTERY SELECTION
Plate 1

N.	Code	Description	Type	Period	Area
1	103.12.1.1	Bowl rim; reddish yellow surfaces (5YR 7/4) and gray core (10YR 6/1) with very pale brown margins (10YR 7/4); mineral fabric with common chaff and occasional fine calcite inclusions; traces of mica; burnished surfaces.	T11/2	11	**LoNAP**
2	103.12.1.2	Bowl rim; very pale brown surfaces (10YR 7/4) and light yellowish brown core (10YR 6/4); mineral fabric with common chaff and abundant fine calcite inclusions; traces of mica; burnished surfaces.	T11/12	11	**LoNAP**

SITE 104

(C1 sector)



1 - Site 104 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 104 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 104 from North. (2015)

SITE NUMBER	104
LOCAL NAME	-
POSITION	362236; 4047796
AREA	3,5 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: very low; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
			1,5	1,5	1,5	1,5		1,5		1,5	3,5	3,5		1,5	3,5		3,5
N. fr. TGAS	36		2	4	7	1		1		3	4	57			7		6
N. fr. LoNAP	14				1			2			2	18		1			

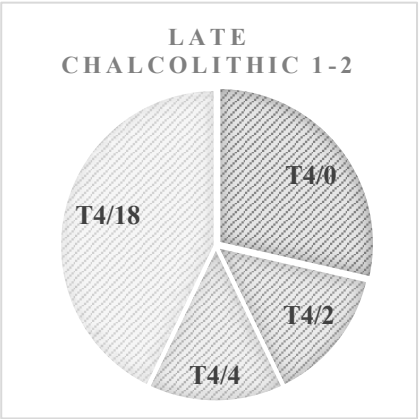
SITE DESCRIPTION

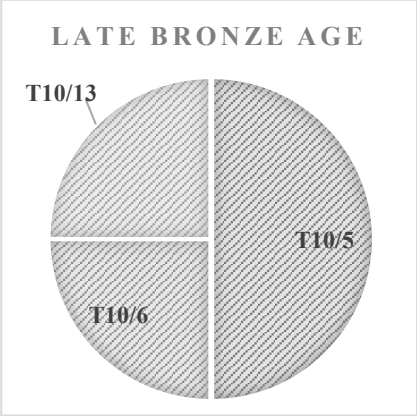
Small high-mounded site with a small circular mound and elongated lower settlement. The site is located north of a small wadi, south-west of Tell Gomel. The site was surveyed in 2012 by the LoNAP team but the visibility was very low due to a thick chaff layer. When the site was investigated again in 2015 by the TGAS team, the visibility was very high. The settlement was covered by two small collection units, one covering the lower settlement and one to survey the mound.

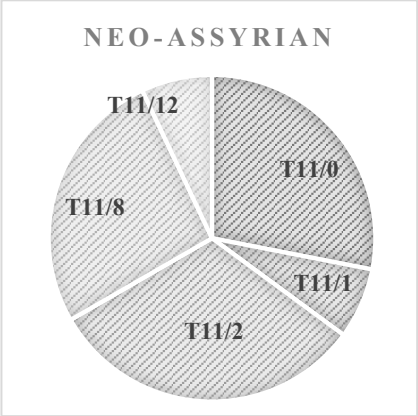
SITE BIOGRAPHY

The small mound hides a Pre- and Proto-historic buried settlement; the few fragments from the Halaf to the Late Chalcolithic 3-5 periods are came from the southern slope of the mound. The settlement also seems to have been limited to the mound during the 3rd millennium BC and the Mitanni period (c. 1.5 ha). The settlement started to expand northwards only during the Middle Assyrian epoch. The maximum peak in occupation is represented by the Neo-Assyrian period (c. 3.5 ha). The site was also settled later during the Hellenistic, Parthian and Islamic epochs.

POTTERY TYPES ATTESTED FOR EACH PERIOD







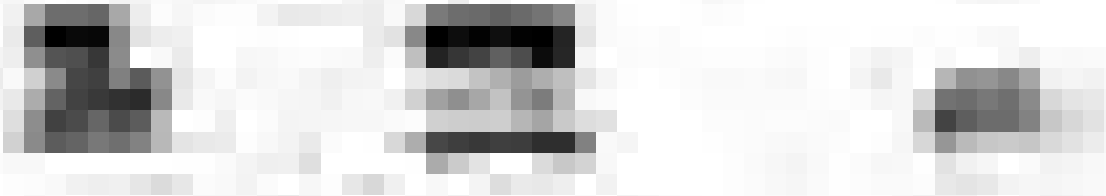
TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
104	02	1	4		4
104	03	1	1		1
104	03	5	1		1
104	04	0	2		2
104	04	2	1		1
104	04	4	1		1
104	04	18	3		3
104	05b	0	1		1
104	07	8	1		1
104	09	0	3		3
104	10	5	2		2
104	10	6	1	1	
104	10	13	1		1
104	11	0	16	14	2
104	11	1	4	3	1
104	11	2	18	13	5
104	11	8	15	2	13
104	11	12	4	1	3
104	14	0	5	2	3
104	14	6	1		1
104	14	7	1		1
104	21	0	6	1	5
104	Und.	-	36	12	24
TOT			**128**	**49**	**79**

POTTERY SELECTION

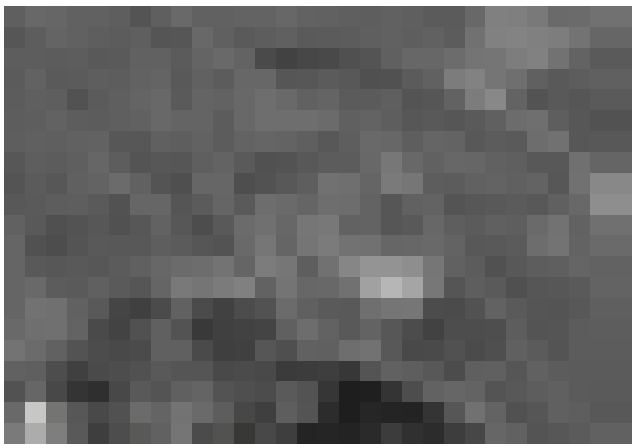
Plate 1

N.	Code	Description	Type	Period	Area
1	104.15.2.1	Rim; reddish yellow exterior surface (7.5YR 6/6) and reddish yellow interior surface and core (7.5YR 7/6); mineral fabric with rare chaff and no visible inclusions; burnished surfaces; dark and reddish brown painted decoration on the interior and exterior surface. Rim dm. 18 cm.	T2/2	2	104.2
2	104.15.2.5	Body sherd; reddish yellow surfaces and core (5YR 7/6); mineral fabric with occasional chaff and occasional fine grits and calcite inclusions; burnished exterior surface; red painted decoration on the exterior surface.	T2/2	2	104.2
3	104.15.2.12	Rim; pale yellow surface and core (2.5Y 7/3); chaff fabric with occasional medium grit and calcite inclusions; burnished rim. Rim dm. 18 cm.	T3/1	3	104.2
4	104.15.2.8	Rim; pink surfaces (7.5YR 7/4) and light reddish brown core (5YR 6/4); mineral fabric with common fine calcite inclusions; burnished exterior surface and rim. Rim dm. 24 cm.	T4/1	4	104.2
5	104.15.2.13	Rim; grayish brown surfaces and core (2.5Y 5/2); mineral fabric with frequent chaff and abundant medium grits, quartz and calcite inclusions; smoothed exterior surface. Rim dm. 25 cm.	T4/2	4	104.2
6	104.15.2.16	Rim; pale yellow slipped surfaces (5Y 8/3) and grayish brown core (2.5Y 5/2); chaff fabric with abundant fine calcite inclusions. Rim dm. 24 cm.	T7/8	7	104.2
7	104.15.2.19	Rim; brown exterior surface (7.5YR 5/4), light brown interior surface and core (7.5YR 6/4); mineral fabric with occasional chaff and common fine-medium calcite inclusions; burnished surfaces. Rim dm. 10 cm.	T9/0	9	104.2
8	104.15.2.17	Rim; Pink surfaces (7.5YR 7/4) and brown core with reddish yellow margins (10YR 5/3, 7.5YR 6/6); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T9/0	9	104.2
9	104.15.2.21	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with common fine grits and calcite inclusions. Rim dm. 14 cm.	T10/5	10	104.2
10	104.15.1.1	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T10/6	10	104.1
11	104.15.1.13	Rim; gray surfaces and core (2.5Y 6/1); mineral fabric with occasional chaff and occasional fine calcite inclusions; burnished exterior surface. Rim dm. 18 cm.	T11/1	11	104.1
12	104.15.1.3	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 6/6); mineral fabric with common very fine calcite inclusions; traces of burnishing on the rim. Rim dm. 20 cm.	T11/1	11	104.1
13	104.15.1.7	Rim; pale yellow surfaces and core (5Y 7/3); very chaffy fabric with occasional fine mineral inclusions; smoothed surfaces. Rim dm. 24 cm.	T11/2	11	104.1
14	104.15.1.29	Rim; pale yellow slipped exterior surface (5Y 8/3) and very pale brown interior surface and core (10YR 7/4); chaff fabric with occasional fine calcite inclusions; burnished rim. Rim dm. 10 cm.	T11/8	11	104.1
15	104.15.1.6	Rim; light brown surfaces (7.5YR 6/4) and dark gray core (2.5Y 4/1) with light yellowish brown margins (10YR 6/4); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T11/12	11	104.1
16	104.15.2.29	Rim; light gray surface (2.5Y 7/2) and grayish brown core (10YR 5/2); mineral fabric with very rare fine chaff and no visible inclusions (only few mica); smoothed exterior surface. Rim dm. 12 cm.	T11/12	11	104.2



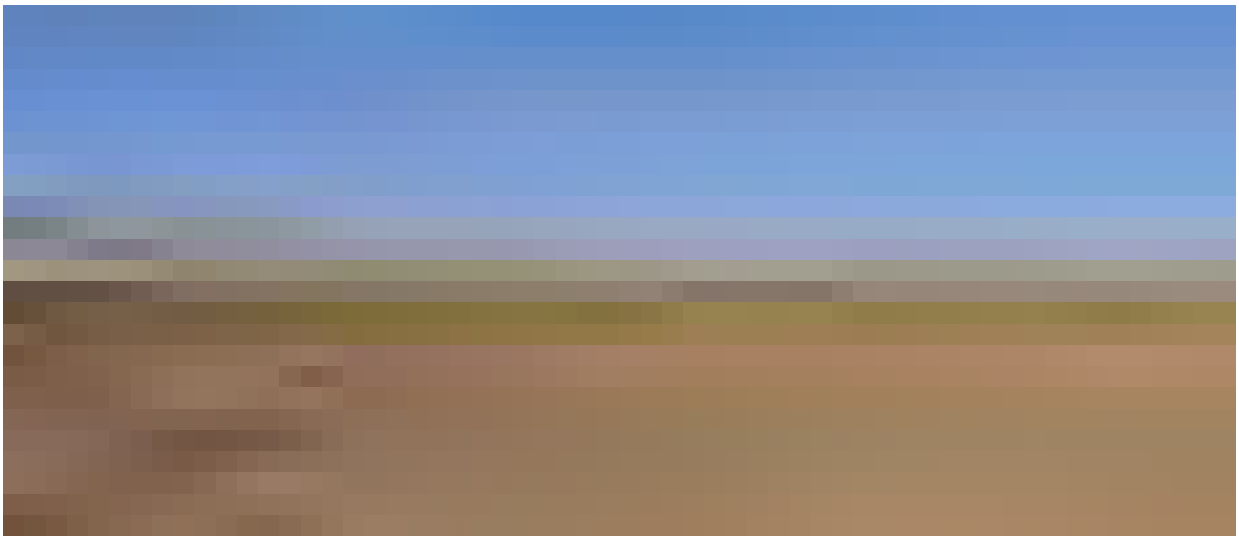
SITE 105

(C2 sector)



1 - Site 105 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 105 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 105 from East. (2015)

SITE NUMBER	105
LOCAL NAME	-
POSITION	363665; 4047447
AREA	4 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**2,5**		**1**	**1,8**	**2,3**		**0,7**			**2,5**	**4**		**2**	**0,7**		**4**
N. fr. TGAS	32	17		1	3	3		1				38		15	1		13
N. fr. LoNAP	8	7		1	2	2		4			2	12		6	1		3

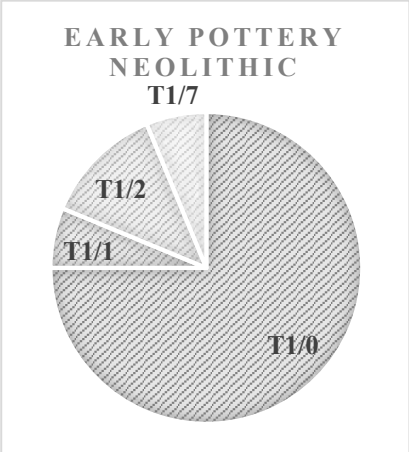
SITE DESCRIPTION

The high-mounded site has a small circular mound with an extended lower town on the north-western side. The site is located close to the left bank of a wadi, 3 km south of Tell Gomel. The site was surveyed in 2012 by the LoNAP (with only 1 collection unit on the mound) and in 2015 by the TGAS team (5 collection units).

SITE BIOGRAPHY

The site was first settled during the Early Pottery Neolithic, when the occupation area was restricted to the mound area (c. 2.5 ha). After this phase the settlement was abandoned until the Ubaid period, when the mound was settled again though in a smaller area (c. 1 ha). The settlement continued to grow during the Late Chalcolithic 1-2 (c. 1.8 ha) and the Late Chalcolithic 3-5 (c. 2.3 ha) periods. There is scanty evidence for an ephemeral occupation of the mound during the second half of the 3rd millennium BC and the Middle Assyrian period. The site flourished again during the Neo-Assyrian epoch, when it extended to the north-west in the lower town (c. 4 ha). The lower town was also occupied during the Hellenistic and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
105	01	0	13	2	6	4	1	
105	01	1	1		1			
105	01	2	2	1			1	
105	01	7	1	1				
105	03	1	1			1		
105	04	0	1					1
105	04	18	2		1	1		
105	05b	0	1				1	
105	07	0	1		1			
105	11	0	9			2		7
105	11	2	9	1			1	7
105	11	8	14		1	4	2	7
105	11	11	1					1
105	11	12	5				1	4
105	13	0	6	2		1	3	
105	13	1	2	1			1	
105	13	2	3			2	1	
105	13	5	2				2	
105	13	9	1				1	
105	13	13	1	1				
105	14	14	1		1			
105	21	0	13	2	4	2	1	4
105	Und.	-	32	4	9	8	4	9
TOT			**126**	**15**	**24**	**25**	**21**	**41**

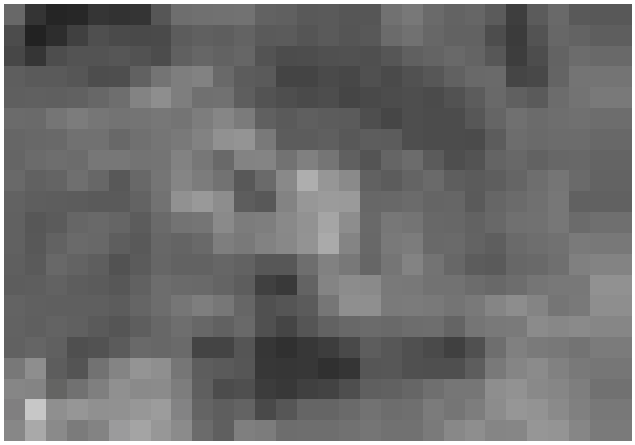
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	105.15.2.2	Linear incised bowl rim; light yellowish brown surfaces and core (10YR 6/4); mineral fabric with abundant fine calcite and mineral inclusions; incisions on the exterior surface. Rim dm. 10 cm.	T1/0	1	105.2
2	105.15.1.2	Linear incised body sherd; pale yellow exterior surface (2.5Y 8/2) and pink interior surface and core (5YR 7/4); mineral fabric with common chaff and abundant grits and calcite inclusions; deep thin incisions on the exterior surface.	T1/0	1	105.1
3	105.15.2.1	Bowl rim; reddish yellow exterior surface (5YR 6/6), pale yellow interior (2.5Y 8/3) and light brown core (7.5YR 6/4); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed interior surface; black painted decoration on the interior surface. Rim dm. 18 cm.	T1/1	1	105.2
4	105.15.4.2	Bowl rim; light brown surfaces (7.5YR 6/4), very dark gray core (7.5YR 3/1); coarse chaff fabric with occasional fine-medium mineral inclusions; large deep grooves on the interior. Rim dm. 14 cm.	T1/2	1	105.4
5	105.15.1.1	Bowl rim; pale brown surfaces and core (10YR 6/3); mineral fabric with fine mineral inclusions; black painted decoration on the exterior surface and on the interior of the rim. Rim dm. 10 cm.	T1/7	1	105.1
6	105.15.3.5	Body sherd; pale yellow surfaces and core (5Y 7/3); chaff fabric with occasional medium calcite inclusions; black painted decoration on the exterior surface.	T3/1	3	105.3
7	105.15.2.7	Bowl rim; reddish yellow surfaces (7.5YR 6/6) and dark gray core (10YR 4/1); chaff fabric with common fine calcite and other minerals inclusions (traces of mica). Rim dm. 14 cm.	T4/18	4	105.2
8	105.15.3.7	Bowl rim; reddish yellow surfaces (5YR 6/6) and dark gray core (10YR 4/1) with reddish yellow margins (5YR 6/6); chaff fabric with common fine mineral inclusions. Rim dm. 14 cm.	T5b/0	5b	105.3
9	105.15.2.8	Jar rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with occasional fine-medium calcite inclusions. Rim dm. 12 cm.	T7/0	7	105.2
10	105.15.3.12	Jar rim; reddish yellow surfaces (5YR 6/6) and reddish yellow core (7.5YR 7/6); chaff fabric with common fine-medium calcite inclusions. Rim dm. 12 cm.	T11/0	11	105.3
11	105.15.3.13	Jar rim; light yellowish brown surfaces and core (10YR 6/4); mineral fabric with common fine grits and calcite inclusions; burnished exterior surface. Rim dm. 14 cm.	T11/0	11	105.3
12	105.15.1.5	Bowl rim; very pale brown slipped surfaces (10YR 7/3) and reddish yellow core (5YR 6/6); mineral fabric with abundant chaff and frequent fine calcite inclusions. Rim dm. 26 cm.	T11/2	11	105.1
13	105.15.2.9	Jar rim; light gray slipped surfaces (10YR 7/2) and reddish yellow core (5YR 6/6); mineral fabric with common fine chaff and abundant fine calcite inclusions. Rim dm. 10 cm.	T11/8	11	105.2
14	105.15.5.12	Bowl rim; light yellowish brown (2.5Y 6/3); mineral fabric with occasional medium calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/12	11	105.5

SITE 106

(C2 sector)



1- Site 106 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 106 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 106 from South-West. (2015)

SITE NUMBER	106
LOCAL NAME	-
POSITION	364056; 4046762
AREA	10 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Building activities on the top of the mound
COLLECTION AREAS	1-6

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**7**	**10**	**1**	**10**	**10**	**0,4**	**7**	**10**		**9**
N. fr. TGAS	42							2	31	10	41	44	1	9	49		36
N. fr. LoNAP	49							12	17	6	17	22		1	6		3

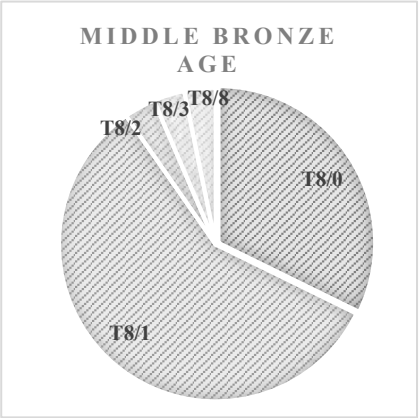
SITE DESCRIPTION

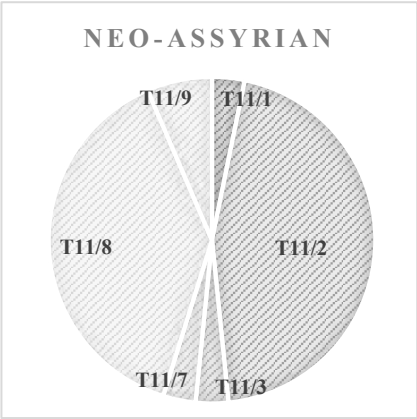
The large high-mounded site has a small circular mound with an extended lower town on its western side. The site is located south of a wadi, 3 km south of Tell Gomel, immediately south-east of site 105. The site was surveyed in 2012 by the LoNAP (with only 1 collection unit on the mound) and in 2015 by the TGAS team (6 collection units).

SITE BIOGRAPHY

The site had an almost continuous occupation from the mid-late 3rd millennium BC until the Islamic epoch; an occupation sequence is missing only during the Sasanian period. The site reached its maximum extension during the Middle Bronze Age, Middle Assyrian, Neo-Assyrian and Parthian periods (10 ha ca.), when it was densely occupied.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6
106	07	19	2		1			1	
106	08	0	10	2	2			6	
106	08	1	18	4	3	4		4	3
106	08	2	1				1		
106	08	3	1				1		
106	08	8	1	1					
106	09	0	10	6	4				
106	10	0	12	2	1	3	1	3	2
106	10	4	4						4
106	10	5	3	2			1		
106	10	9	5	3		1		1	
106	10	10	9	6	2		1		
106	10	11	1	1					
106	10	13	7	2	2	2	1		
106	11	0	8	2	3	2			1
106	11	1	1			1			
106	11	2	14	4	1	3		2	4
106	11	3	1						1
106	11	7	1	1					
106	11	8	12	5	2	1	3	1	
106	11	9	2		1			1	
106	11	10	2	1	1				
106	11	12	3	1		1		1	
106	12	0	1	1					
106	13	0	3					3	
106	13	2	1				1		
106	13	3	2				1	1	
106	13	13	3				1	2	
106	14	0	33	2	8	2	6	10	5
106	14	2	1					1	
106	14	6	1				1		
106	14	7	2			1		1	
106	14	9	1				1		
106	14	14	4	1	2	1			
106	14	15	7		3	1	1	2	
106	21	0	36			15	4	12	5
106	Und.	-	42	4	4	5	5	12	12
TOT			**265**	**51**	**40**	**43**	**30**	**64**	**37**

POTTERY SELECTION

Plate 1

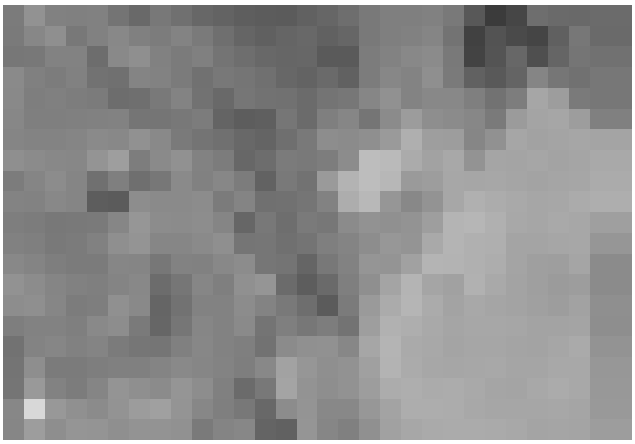
N.	Code	Description	Type	Period	Area
1	106.15.5.1	Rim; brow surfaces (7.5YR 5/4) and grayish brown (10YR 5/2) core with reddish yellow (7.5YR 6/6) margins; mineral fabric with common chaff and fine calcite inclusions; burnished exterior surfaces. Rim dm. 22 cm.	T7/0	7	106.5
2	106.15.2.1	Rim; very pale brown surfaces and core (2.5Y 7/4); mineral fabric with rare fine chaff and common very fine calcite inclusions; burnished exterior surfaces. Rim dm. 16 cm.	T7/19	7	106.1
3	106.15.1.1	Rim; Brown exterior (7.5YR 5/3), light brown interior (7.5YR 6/4), light yellowish brown (10YR 6/4); mineral fabric with frequent quartz and fine calcite inclusions, medium grit; burnished exterior surface. Cooking ware. Rim dm. 18 cm.	T8/0	8	106.1
4	106.15.1.3	Base; Pale yellow surfaces and core (2.5Y 7/3); mineral fabric with occasional chaff and medium calcite inclusions; smoothed surfaces. Base dm. 2,3 cm.	T8/0	8	106.1
5	106.15.5.6	Rim; very pale brown surfaces (10YR 7/3) and grayish brown core (10YR 5/4); mineral fabric with abundant chaff and occasional fine calcite inclusions; traces of burnishing on the rim; red painted decoration on the rim. Rim dm. 26 cm.	T8/1	8	106.5
6	106.15.4.1	Rim; gray surfaces and core (10YR 5/1); mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 22 cm.	T8/3	8	106.4
7	106.15.2.8	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with common chaff and very fine calcite and rare mineral inclusions; smoothed surfaces. Rim dm. 20 cm.	T9/0	9	106.2
8	106.15.1.10	Rim; Pale yellow surfaces and core (5Y 8/2); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces; black painted decoration on exterior surface. Rim dm. 14 cm.	T9/0	9	106.1
9	106.15.1.20	Rim;pale yellow surfaces and core (5Y 8/2); mineral fabric with rare chaff and no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T10/0	10	106.1
10	106.15.1.26	Rim; pale yellow slipped surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with frequent chaff; smoothed surfaces. Rim dm. 14 cm	T10/5	10	106.1
11	106.15.1.28	Base; light gray slipped exterior surface (2.5Y 7/2) and brown interior surface and core (7.5YR 5/4); chaff fabric with rare fine mineral inclusions. Base dm. 10 cm.	T10/9	10	106.1
12	106.15.2.11	Rim; pale yellow slipped surfaces (2.5Y 8/2), very pale brown core (10YR 7/4); mineral fabric with occasional chaff and fine calcite inclusions. Rim dm. 12 cm.	T10/10	10	106.2
13	106.15.1.19	Rim; pale yellow slipped surfaces (2.5Y 8/2) and reddish yellow core (7.5YR 6/6); chaff fabric with frequent fine-medium calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T10/13	10	106.1

Plate 2

N.	Code	Description	Type	Period	Area
14	106.15.1.31	Rim; reddish yellow surfaces and core; mineral fabric with occasional chaff and very fine calcite and grit inclusions. Rim dm. 24 cm.	T11/2	11	106.1
15	106.15.6.22	Base; pale yellow surfaces and core (2.5Y 8/3); chaff fabric with no visible inclusions; smoothed exterior surface. Base dm. 5 cm.	T11/3	11	106.6
16	106.15.1.32	Rim; very pale surfaces and core (10YR 7/4); mineral fabric with common chaff, frequent fine-medium calcite and rare fine grits inclusions. Rim dm. 12 cm.	T11/7	11	106.1
17	106.15.1.36	Rim; Light yellowish surfaces and core (10YR 6/4); mineral fabric with occasional chaff, abundant medium-large grit and calcite inclusions. Rim dm. 16 cm.	T11/8	11	106.1
18	106.15.1.37	Rim; pale yellow exterior surface (2.5Y 8/2) and light brown interior surface and core (7.5YR 6/4); chaff fabric with abundant mineral inclusions (fine calcite, medium grits and rare fine quartz). Rim dm. 14 cm.	T11/10	11	106.1
19	106.15.1.34	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core; mineral fabric with frequent chaff and rare fine calcite inclusions. Rim dm. 26 cm.	T11/12	11	106.1
20	106.15.1.44	Rim; pale yellow exterior surface (2.5Y 7/3) and reddish yellow interior surface and core (5YR 6/6); chaff fabric with coarsy grits and large calcite inclusions. Rim dm. (?)	T12/0	12	106.1

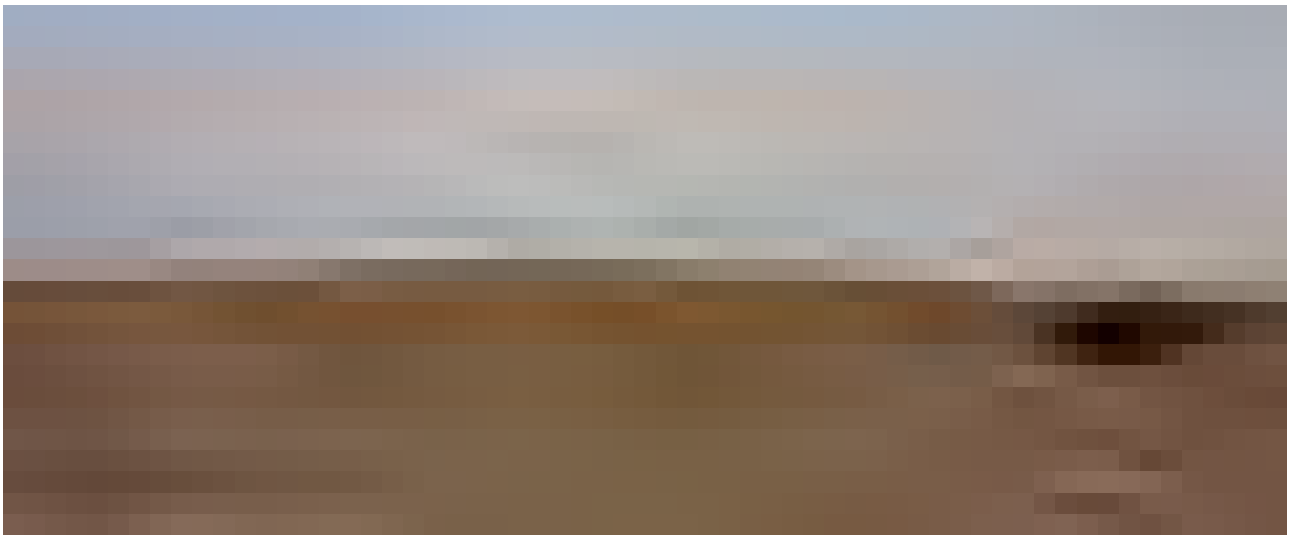
SITE 128

(B1 sector)



1 - Site 128 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 128 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3 - Site 128 from North-East. (2015)

SITE NUMBER	128
LOCAL NAME	-
POSITION	360156 E; 4051273 N
AREA	4,4 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: low; 2015: good.
DAMAGE AND THREATS	-
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**1**				**4,4**	**4,4**	**4,4**	**4,4**	**4,4**	**3,4**
N. fr. TGAS	56							2				66		17	37		6
N. fr. LoNAP	12											13	3	11	3	3	

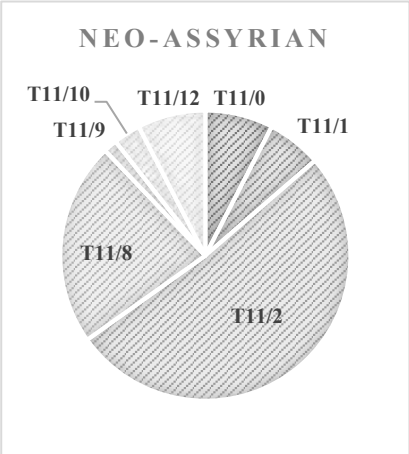
SITE DESCRIPTION

The small and almost circular high-mounded site is located close to a wadi that flows on its western side. The site is only 2 km north of Gir Faqir. The site was surveyed in 2012 by the LoNAP team (with only one collection unit) and in 2015 by the TGAS team (3 collection units).

SITE BIOGRAPHY

Two mid-late 3rd millennium BC sherds seem to suggest a first occupation of the site during this period, although it is possible that a small Early Bronze Age settlement is buried under the later occupation layers. The site was an extensive and densely occupied Neo-Assyrian village (c. 4.4 ha). The subsequent occupation continued until the Islamic period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

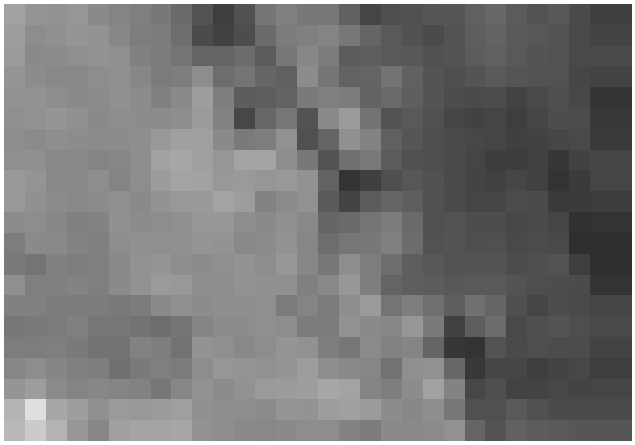
SITE	PERIOD	TYPE	TOTAL	1	2	3
128	07	0	2	2		
128	11	0	5		3	2
128	11	1	4		4	
128	11	2	34	6	16	12
128	11	8	15	6	6	3
128	11	9	1	1		
128	11	10	2	2		
128	11	12	5	2		3
128	13	0	6	4		2
128	13	1	3	2		1
128	13	2	5	4		1
128	13	3	1	1		
128	13	5	1	1		
128	13	7	1	1		
128	14	0	11		1	10
128	14	7	3	3		
128	14	13	1	1		
128	14	14	6	5	1	
128	14	15	16	16		
128	21	0	6		1	5
128	Und.	-	56	17	12	27
TOT			**184**	**74**	**44**	**66**

POTTERY SELECTION

N.	Code	Description	Type	Period	Area
1	128.15.1.1	Rim; pale yellow core and surfaces (2.5Y 8/2); fine mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 12 cm.	T7/0 Post Akk.	7	128.1
2	128.15.1.2	Base; pink core (7.5YR 7/4) and pale yellow surfaces (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 6 cm.	T7/0 Post Akk.	7	128.1
3	128.15.2.15	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 14 cm.	T11/1	11	128.1
4	128.15.1.4	Rim; very pale brown surfaces (10YR 8/2) and very pale brown core (10YR 7/3) with reddish yellow margins (5YR 7/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces with traces of burnishing on the exterior surface. Rim dm. 26 cm.	T11/2	11	128.1
5	128.15.1.5	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 14 cm.	T11/2	11	128.1
6	128.15.1.19	Rim; very pale brown surfaces (10YR 8/2), reddish yellow core (5YR 7/6) and very pale brown margins (10YR 7/3); mineral fabric with frequent fine calcite and grits inclusions. Rim dm. 8 cm.	T11/8	11	128.1
7	128.15.1.7	Rim; very pale brown surfaces and core (10YR 8/3); mineral fabric with frequent calcite and grits inclusions; smoothed exterior surface. Rim dm. 12 cm.	T11/9	11	128.1
8	128.15.1.8	Rim; very pale brown surfaces and core (10YR 7/3); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/10	11	128.1
9	128.15.1.12	Rim; pale yellow core and surfaces (2.5Y 8/2) mineral fabric with common fine orange mineral inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/12	11	128.1
10	128.12.1.14	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with common chaff and frequent fine grits inclusions; grooved rim. Rim dm. 48 cm.	**T12/3**	**12**	**LoNAP**

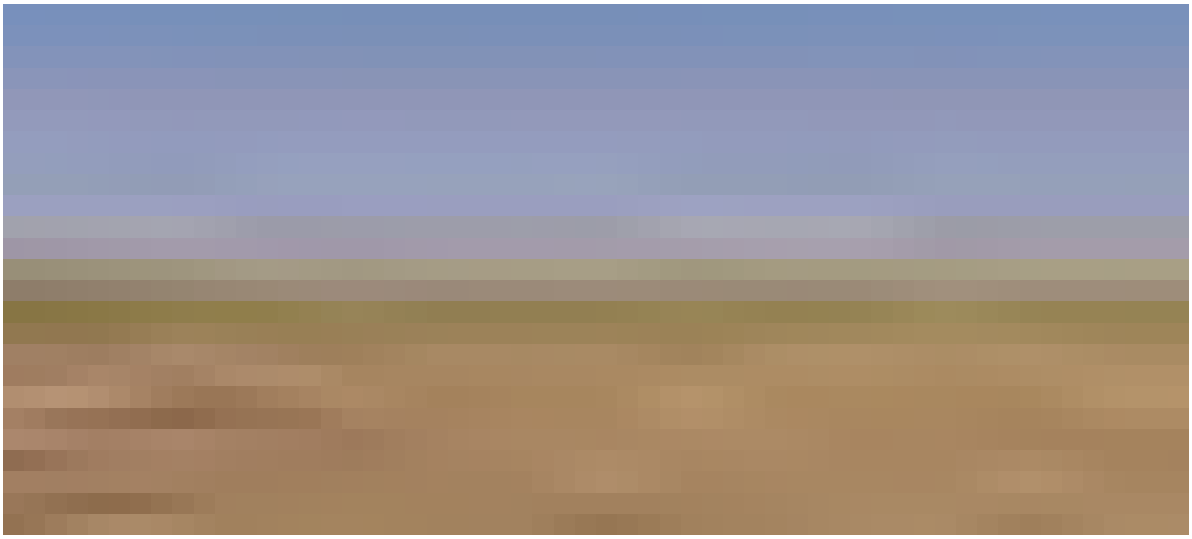
SITE 129

(A1 sector)



1 - Site 129 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 129 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)



3 – Site 129 from East. (2012)

SITE NUMBER	129
LOCAL NAME	-
POSITION	360808; 4054124
AREA	1 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: low.
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1**					**1**
N. fr. TGAS																	
N. fr. LoNAP	3											11					1

SITE DESCRIPTION

Small circular low-mounded site situated close to the road between the villages of Mahad and Gir Faqir. It is one of a group of 5 small circular mounds associated with a dense network of small watercourses. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit). Only the LoNAP team found some pottery sherds.

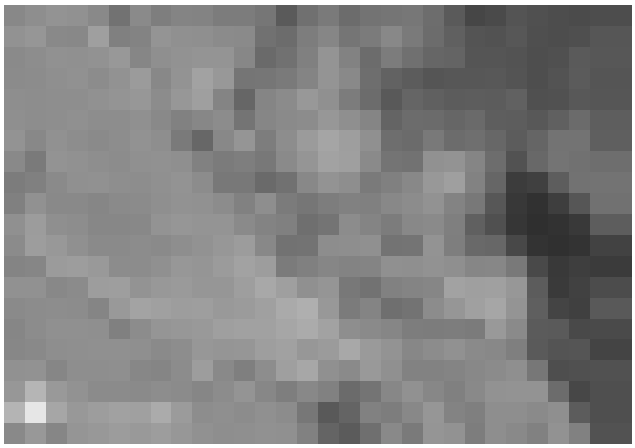
The site seems to be a one-period Neo-Assyrian settlement.

POTTERY SELECTION
Plate 1

N.	Code	Description	Type	Period	Area
1	129.12.1.2	Rim; white slipped surfaces (5Y 8/1) and very pale brown core (10YR 7/4); mineral fabric with abundant fine to large calcite inclusions; smoothed surfaces. Rim. dm. 26 cm.	T11/1	11	**LoNAP**
2	129.12.1.10	Rim; very pale brown surfaces (10YR 8/4) and gray core (10YR 5/1); mineral fabric with frequent chaff and occasional fine calcite inclusions; abundant mica; smoothed surfaces. Rim dm. 32 cm.	T11/2	11	**LoNAP**
3	129.12.1.3	Rim; pink core (7.5YR 7/4) and very pale brown surfaces (10YR 8/2); mineral fabric with frequent fine to medium calcite inclusions; smoothed surfaces. Rim dm. 11 cm.	T11/8	11	**LoNAP**
4	129.12.1.4	Rim; reddish yellow exterior surface (7.5YR 7/6), very pale brown interior surface (10YR 8/2) and gray core (10YR 6/1) with reddish yellow margins (7.5YR 7/6); mineral fabric with frequent fine calcite inclusions; trace of mica; smoothed surfaces. Rim dm. 20 cm.	T11/12	11	**LoNAP**
5	129.12.1.16	Rim; very pale brown core (10YR 8/2) with pale yellow surfaces (2.5Y 8/2); mineral fabric with no visible inclusions; smoothed exterior surfaces; burnished interior surface.	T11/0	11	**LoNAP**

SITE 130

(A1 sector)



1 - Site 130 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 130 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 130 from North. (2012)

SITE NUMBER	130
LOCAL NAME	-
POSITION	360927; 4053888
AREA	0,7 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: good.
DAMAGE AND THREATS	-
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
					0,7			**0,7**		**0,3**	**0,3**	**0,7**	**0,7**		**0,3**		**0,7**
N. fr. TGAS	35									3	2	52			4		20
N. fr. LoNAP	23				1			5			1	22	3		3		1

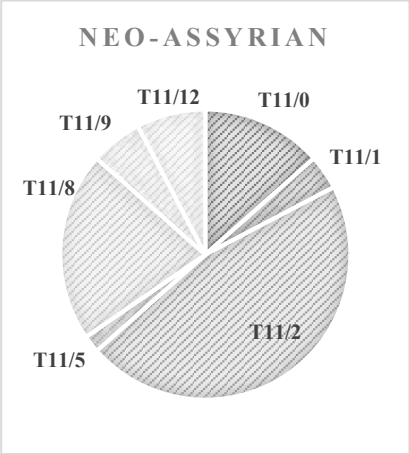
SITE DESCRIPTION

Small circular site crossed by the road between the villages of Mahad and Gir Faqir. It is one of a complex of 5 small circular mounds associated with a dense network of small watercourses. The site was surveyed in 2012 by the LoNAP (with only 1 collection unit) and in 2015 by the TGAS team (3 collection units).

SITE BIOGRAPHY

The survey teams collected sparse evidence of occupation for the periods preceding the Neo-Assyrian epoch, but from the few sherds collected of these periods it possible to hypothesize that the site was already occupied during the Late Chalcolithic 1-2 and the mid-late 3rd millennium BC. After an occupation gap of some centuries, settlement seems to have re-emerged on the top of mound starting from the Mitanni period, but the first period of large-scale occupation was the Neo-Assyrian epoch. After this flourishing period, there is limited evidence of occupation during the Post-Assyrian and Parthian periods. The settlement regrew in the Islamic period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
130	09	0	3	3		
130	10	0	1	1		
130	10	9	1	1		
130	11	0	7	6	1	
130	11	1	2	1	1	
130	11	2	24	11	5	8
130	11	5	1			1
130	11	8	11	9	1	1
130	11	9	3	2	1	
130	11	12	4	4		
130	14	0	3	3		
130	14	7	1	1		
130	14	14	1	1		
130	21	0	20	4	14	2
130	Und.	-	35	24	5	6
TOT			**117**	**71**	**28**	**18**

POTTERY SELECTION

Plate 1

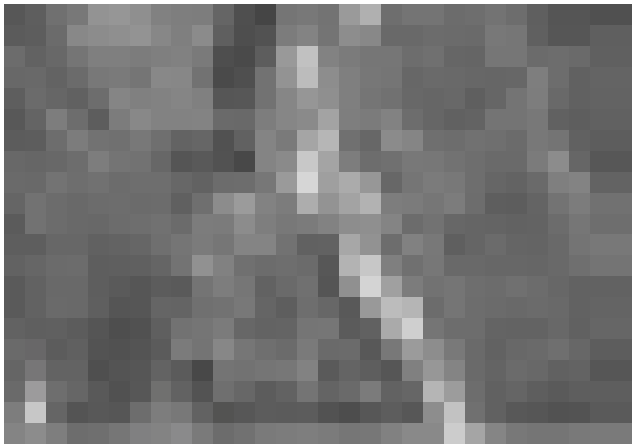
N.	Code	Description	Type	Period	Area
1	130.12.1.30	Rim; brown core and surfaces (7.5YR 5/5); mineral fabric with frequent calcite inclusions; smoothed surfaces. Handmade. Cooking pot. Rim dm. 10 cm.	**T4/2**	**4**	**LoNAP**
2	130.12.1.40	Rim; pink exterior surface (7.5YR 7/4), very pale brown core and interior surface (10YR 7/4); mineral fabric with abundant fine grits and calcite inclusion; smoothed interior surface and burnished exterior surface. Rim dm. 22 cm.	**T4-5b/0**	**4-5b**	**LoNAP**
3	130.12.1.2	Rim; light yellowish brown core and surfaces (10 YR 6/4); mineral fabric with common calcite inclusions. Rim dm. 17 cm.	**T7/14**	**7**	**LoNAP**
4	130.16.1.3	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with occasional fine calcite and grits inclusions; smoothed exterior surface. Rim dm. 20 cm.	T9/0	9	130.1
5	130.16.1.4	Rim; pale yellow slipped surfaces (2.5Y 8/2) and pink core (5YR 7/4); chaff fabric with common fine to medium calcite and grits inclusions; smoothed exterior surface. Rim dm. 58 cm.	T9/0	9	130.1
6	130.16.1.5	Rim; very pale brown exterior surface (10YR 8/2), pink core (7.5YR 7/4) and very pale brown interior surface (10YR 8/2); fine mineral fabric with no visible inclusions; smoothed exterior surface. Base dm. 4 cm.	T9/0	9	130.1
7	130.16.1.2	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions. Rim dm. 11 cm.	T10/0	10	130.1
8	130.16.1.1	Base; very pale brown exterior surface (10YR 8/2), pink core and interior surface (7.5YR 7/4); chaff fabric with abundant fine calcite and quartz inclusions. Base dm. 9 cm.	T10/9	10	130.1

Plate 2

N.	Code	Description	Type	Period	Area
9	130.15.1.8	Rim; pale yellow surfaces (2.5Y 8/2) and core (2.5Y 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/0	11	130.1
10	130.16.1.21	Rim; reddish yellow core and surfaces (7.5YR 7/4); mineral fabric with occasional fine to large inclusions; smoothed interior surface and burnished exterior surface. Rim dm. 21 cm.	T11/1	11	130.1
11	130.16.1.7	Rim; very pale brown exterior surface (10YR 8/3), pink interior surface (7.5YR 7/4) and light brown core (7.5YR 6/3); mineral fabric with frequent fine calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T11/2	11	130.1
12	130.16.1.12	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusion; burnished surfaces.	T11/2	11	130.1
13	130.15.3.10	Base; pale yellow slipped exterior surface (2.5Y 8/2), pink core and interior surface (7.5YR 7/4); chaff fabric with abundant fine calcite and grits inclusions. Base dm. 4 cm.	T11/5	11	130.3
14	130.16.1.22	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with common fine to large calcite inclusions; smoothed surfaces. Rim dm. 23 cm.	T11/8	11	130.1
15	130.16.1.15	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm	T11/9	11	130.1
16	130.16.1.10	Rim; reddish yellow surfaces (5YR 7/6) and gray core (10YR 5/1); chaff fabric with frequent fine calcite inclusions; burnished surfaces. Rim dm. 18 cm	T11/12	11	130.1
17	130.12.1.8	Rim; pink core and surfaces (7.5YR 8/3); chaff fabric with frequent fine calcite inclusions. Rim dm. 20 cm.	**T12/6**	**12**	**LoNAP**

SITE 174

(C2 sector)



1 - Site 174 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 174 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 174 from South. (2015)

SITE NUMBER	174
LOCAL NAME	-
POSITION	364723; 4047951
AREA	0,8 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low Mounded
OBSERVATION CONDITIONS	2012: very low; 2015: very low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
								0,8				0,8	0,8		0,8		0,8
N. fr. TGAS												2			1		30
N. fr. LoNAP	8							5				8	3				44

SITE DESCRIPTION

Small circular low-mounded site located on the left bank of the River Gomel, c. 3 km south of Tell Gomel. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit) and in both instances the visibility was very low due to a thick layer of chaff.

SITE BIOGRAPHY

The site is a very small Islamic village with previous occupation phases during the mid-late 3rd millennium and the Neo-Assyrian, Post-Assyrian and Parthian periods.

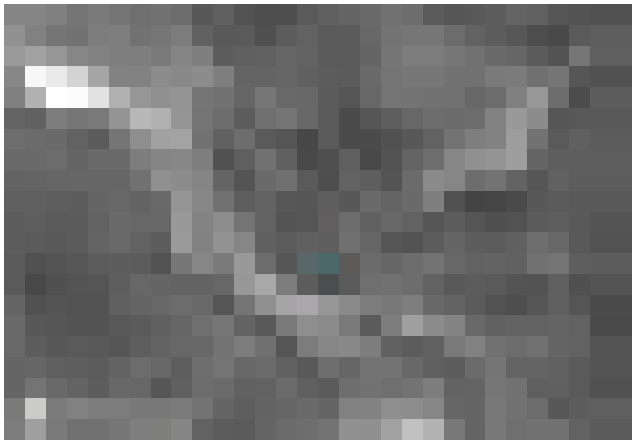
TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
174	11	0	2	2
174	14	0	1	1
174	21	0	30	30
TOT			**33**	**33**

POTTERY SELECTION
Plate 1

N.	Code	Description	Type	Period	Area
1	174.12.1.21	Rim; pale yellow core and surfaces (2.5 Y 8/3); mineral fabric with frequent calcite inclusions; smoothed surfaces. Rim dm. 10 cm.	**T7/0**	**7**	**LoNAP**
2	174.15.1.1	Rim; pale yellow exterior surface (2.5Y 8/3), pink core and interior surface (7.5YR 7/4); mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 16 cm.	T11/0	11	174.1
3	174.15.1.2	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/0	11	174.1
4	174.12.1.17	Rim; very pale yellow core and surfaces (10 YR 8/2); mineral fabric with occasional small grits inclusions; smoothed surfaces. Rim dm. 18 cm.	**T12/3**	**12**	**LoNAP**

SITE 175 – Sheikh Saleh (C3 sector)



1- Site 175 in a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 175 in a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 175 from West. (2012)

SITE NUMBER	175
LOCAL NAME	Sheikh Saleh
POSITION	365830; 4046687
AREA	2 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: very low; 2015 very low
DAMAGE AND THREATS	Modern cemetery
COLLECTION AREAS	1

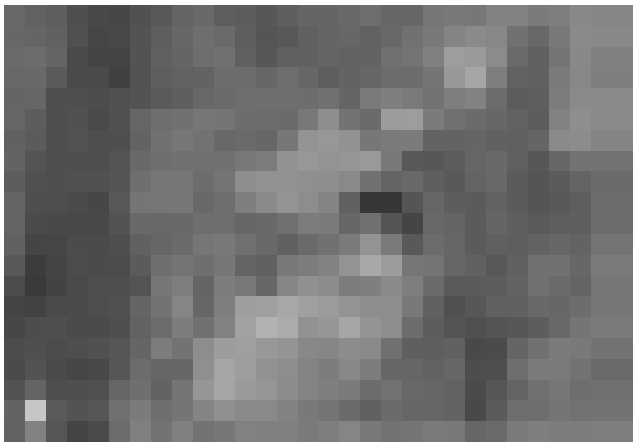
PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
																	2
N. fr. TGAS																	**1**
N. fr. LoNAP																	

SITE DESCRIPTION

The small low-mounded site has an elongated shape. It is located on the left bank of the Gomel, at c. 4 km south of Tell Gomel. On the surface of the site there is a modern cemetery. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit) under very low visibility conditions. Only the TGAS team collected one diagnostic pottery sherd dating to the Islamic period.

SITE 176 – Tell Sheikh Ibrahim (C3 sector)



1 - Site 176 in a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 176 in a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Tell Sheikh Ibrahim from North. (2015)

4 - Tell Sheikh Ibrahim from West. (2012)

5 - The cemetery in collection area 6. (2012)

SITE NUMBER	176
LOCAL NAME	Tell Sheikh Ibrahim
POSITION	367524; 4048382
AREA	4,5 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mound with extended lower town
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Modern cemetery on the lower town
COLLECTION AREAS	1-6

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha							**0,7**	**1,2**	**4,5**	**3,2**	**4,3**	**4,3**		**2**	**4,3**	**2,5**	**4,5**
N. fr. TGAS	39						4	4	26	9	10	34		16	14	1	54
N. fr. LoNAP	16						1	4	4	1	4	11		2		1	5

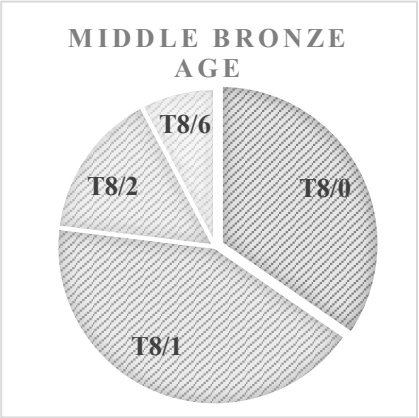
SITE DESCRIPTION

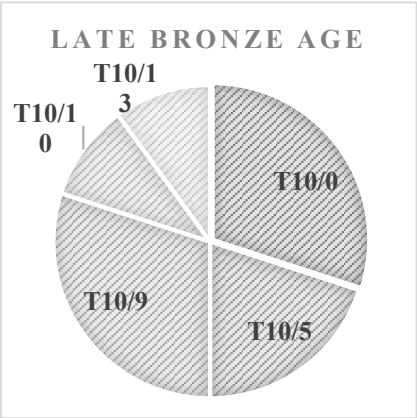
Tell Sheikh Ibrahim features a high mound (ca 25 m) on the eastern border that covers an area of around 2.4 ha. A low city extends from east to west for 3.2 ha and is now covered by a modern cemetery. The site was surveyed in 2012 by the LoNAP team (2 collection units) and in 2015 by the TGAS team. The site was divided by the TGAS team into 6 collection areas: 5 for the mound (areas 1 to 5) and one for the low city (area 6). The extensive area 6 had low visibility due to the presence of the modern tombs, but the mound collection areas all offered conditions of very high visibility. The site is located on the right bank of the River Nardush at the south-eastern edge of the city of Kalakchi, and is threatened by urban development.

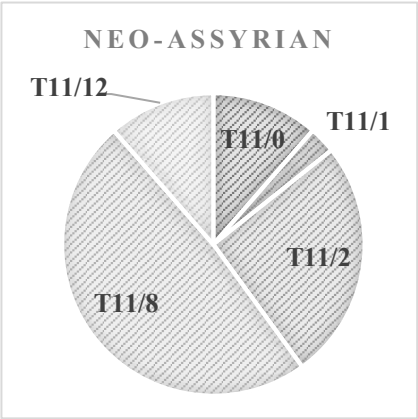
SITE BIOGRAPHY

The settlement developed during the 3rd millennium BC but it underwent the first true expansion during the Middle Bronze Age. During the Neo-Assyrian period it was a large centre (c. 4.5 ha) in the plain and its position on the River Nardush must have been important for its development. The site was also of reasonable size during the Hellenistic and Parthian periods, and again became of primary importance in the Islamic epoch.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6
176	06	0	2		2				
176	06	5	1			1			
176	06	6	1			1			
176	07	0	1	1					
176	07	8	1					1	
176	07	13	1					1	
176	07	14	1			1			
176	08	0	9		4	1		3	1
176	08	1	11	1	1		3	5	1
176	08	2	4		2	1	1		
176	08	6	2			1		1	
176	09	0	9		2	3	2		2
176	10	0	3		1				2
176	10	5	2		1		1		
176	10	9	3					3	
176	10	10	1						1
176	10	13	1		1				
176	11	0	3		1	2			
176	11	1	1		1				
176	11	2	9		2		3	2	2
176	11	8	17			1	2	5	9
176	11	12	4			1		1	2
176	13	0	6				4	2	
176	13	1	2				1	1	
176	13	2	1				1		
176	13	3	4	1	1		1	1	
176	13	5	1				1		
176	13	7	1		1				
176	13	8	1				1		
176	14	0	10		2	3	1	4	
176	14	9	1					1	
176	14	14	2				1		1
176	14	15	1						1
176	16	6	1						1
176	21	0	54	2	12	3	11	9	17
176	Und.	-	39	6	5	4	5	11	8
TOT			**211**	**11**	**39**	**23**	**39**	**51**	**48**

POTTERY SELECTION

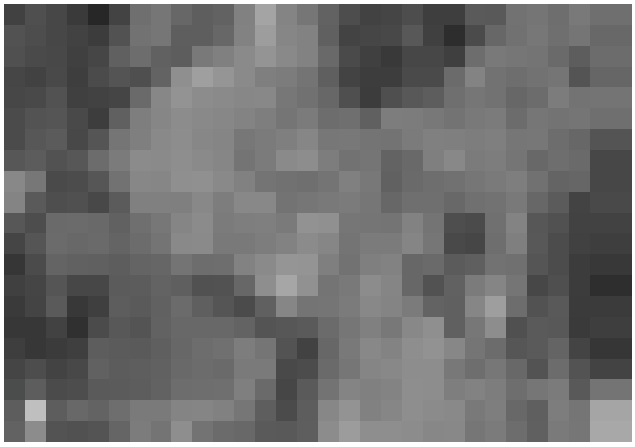
Plate 1

N.	Code	Description	Type	Period	Area
1	176.15.2.1	Body sherd; light gray core and surfaces (5Y 7/1); fine mineral fabric with no visible inclusions; smoothed surfaces.	T6/0 Late N5	6	176.2
2	176.15.3.1	Bowl rim; pink core and surfaces (7.5YR 8/4); fine mineral fabric with frequent fine calcite and mica inclusions; burnished surfaces. Rim dm. 8 cm.	T6/5 Early N5	6	176.3
3	176.15.3.2	Pedestal base; light gray surfaces (5Y 7/1) and gray core (5Y 5/1); fine mineral fabric with occasional calcite inclusions; smoothed surfaces. Base dm. 7 cm.	T6/6 Early N5	6	176.3
4	176.15.1.2	Bowl rim; reddish yellow core and surfaces (5YR 7/6); fine mineral fabric with common very fine calcite inclusions; burnished interior surface and rim. Rim dm. 14 cm.	T7/0	7	176.1
5	176.15.5.2	Jar rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 16 cm.	T7/8	7	176.5
6	176.15.5.1	Bowl rim; gray surfaces (2.5Y 5/1) and grayish brown core (2.5Y 4/2); mineral fabric with occasional fine calcite and mica inclusions. Rim dm. 16 cm.	T7/13	7	176.5
7	176.15.3.3	Jar rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 14 cm.	T7/14	7	176.3
8	176.15.1.1	Bowl rim; pale yellow core and surfaces (2.5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 8 cm.	T7/26	7	176.1
9	176.15.5.4	Bowl rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (5YR 6/6); mineral fabric with frequent chaff and common calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T8/0	8	176.5
10	176.15.5.3	Bowl rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with common chaff and occasional calcite inclusions; burnished rim surface. Rim dm. 18 cm.	T8/0	8	176.5
11	176.15.2.4	Jar rim; pale yellow surfaces (5Y 8/2) and light gray core (10YR 7/2); mineral fabric with common chaff and occasional fine calcite; burnished surfaces. Rim dm. 18 cm.	T8/0	8	176.2
12	176.15.2.8	Body sherd; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with fine calcite inclusions; grooved exterior surface; black painted decoration on the exterior surface.	T8/1	8	176.2
13	176.15.5.11	Body sherd; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with occasional chaff and rare calcite inclusions; smoothed surfaces; black painted decoration on the exterior surface.	T8/1	8	176.5
14	176.15.3.6	Channel base; very pale brown and surfaces (10YR 7/4); mineral fabric with common chaff and occasional fine calcite. Base dm. 12 cm.	T8/6	8	176.3
15	176.15.2.9	Bowl rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with occasional fine calcite inclusions; dark painted decoration on the exterior surface; smoothed surfaces. Rim dm. 16 cm.	T9/0	9	176.2
16	176.15.2.10	Ring base; very pale brow exterior surface (10YR 8/3) and very pale brown core and interior surface (10YR 7/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Base dm. 8 cm.	T9/0	9	176.2
17	176.15.6.4	Bowl rim; light gray surfaces (2.5Y 7/2) and reddish yellow core (7.5YR 7/6); chaff fabric with frequent fine calcite inclusions; Rim dm. 20 cm.	T9/0	9	176.6
18	176.15.3.8	Bowl rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); fine mineral fabric with occasional chaff and frequent fine calcite inclusions. Rim dm. 8 cm.	T9/6	9	176.3
19	176.15.3.7	Bowl rim; pale yellow surfaces (2.5Y 7/3) and yellow core (10YR 7/6); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T9/13	9	176.3

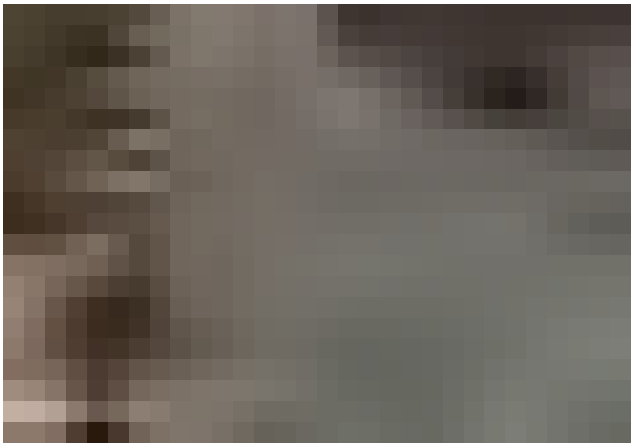
Plate 2

N.	Code	Description	Type	Period	Area
20	176.15.2.12	Jar rim; very pale brown exterior surface (10YR 7/3) and reddish yellow core and interior surface (7.5YR 7/6); mineral fabric with occasional chaff and occasional fine to large calcite inclusions. Rim dm. 16 cm.	T10/5	10	176.2
21	176.15.4.7	Jar rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with rare calcite inclusions. Rim dm. 16 cm.	T10/5	10	176.4
22	176.15.5.14	Ring base; pale brown core and surfaces (10YR 6/3); chaff fabric with occasional fine calcite and grits inclusions. Base dm. 11 cm.	T10/9	10	176.5
23	176.15.6.5	Plate; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (7.5YR 8/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 28 cm.	T10/10	10	176.6
24	176.15.2.11	Bowl rim; very pale brown core (10YR 7/4) and pale yellow surfaces (5Y 8/2); chaff fabric with rare fine grits and calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T10/13	10	176.2
25	176.15.2.18	Jar rim; reddish yellow exterior surface (5YR 6/6), very pale brown interior surface (10YR 7/3) and reddish yellow core (7.5YR 7/6); fine mineral fabric with frequent fine calcite inclusions (occasional mica); smoothed surfaces. Rim dm. 12 cm.	T11/0	11	176.2
26	176.15.2.14	Bowl rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with rare chaff and abundant fine calcite inclusions (occasional mica). Rim dm. 24 cm.	T11/1	11	176.2
27	176.15.4.11	Bowl rim; very pale brown surfaces (10YR 7/3) and light yellowish brown core (10YR 6/4); burnished surfaces. Rim dm. 14 cm.	T11/2	11	176.4
28	176.15.5.21	Jar rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/8	11	176.5
29	176.15.3.10	Jar rim; very pale brown surfaces (10YR 7/3) and light reddish brown (5YR 5/4); mineral fabric with occasional fine calcite inclusions. Rim dm. 12 cm.	T11/8	11	176.3
30	176.15.3.12	Bowl rim; pale yellow surfaces (2.5Y 7/4) and dark gray core (2.5Y 4/1) with light brow margins (7.5YR 6/4); mineral fabric with occasional chaff and no visible mineral inclusions. Rim dm. 14 cm.	T11/12	11	176.3
31	176.15.5.16	Bowl rim; very pale brown (10YR 8/3) and reddish yellow core (7.5YR 8/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 24 cm.	T11/12	11	176.5

SITE 177 – Tell Kalakchi (B3 sector)



1- Site 177 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Top of the mound. (2015)

4 - The slope conditions. (2015)

SITE NUMBER	177
LOCAL NAME	Tell Kalakhchi
POSITION	367913; 4049913
AREA	Between 2,5 and 4 ha ca
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: very low; 2015: very low
DAMAGE AND THREATS	City expansions, new constructions on the mound and on the slope, bulldozer excavations
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha										**2,5**	**2,5**	**2,5**	**2,5**	**2,5**			
N. fr. TGAS	5										3	6		1			
N. fr. LoNAP	4									1		2	1				

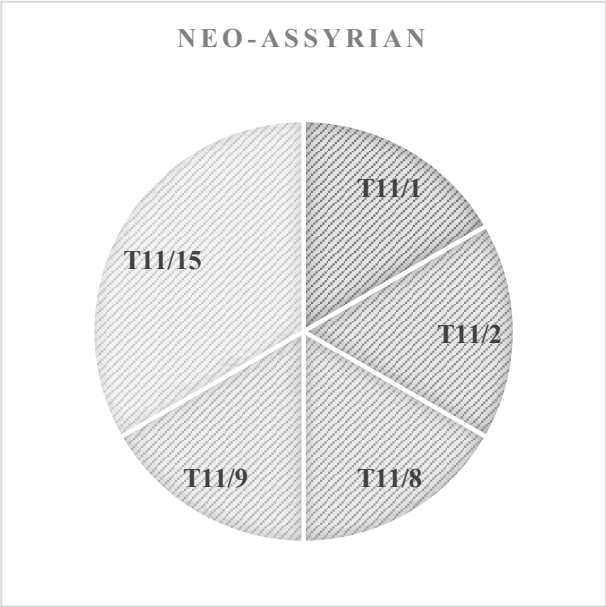
SITE DESCRIPTION

The high-mounded site has been completely swallowed by the modern city of Kalakchi. The site was surveyed in 2012 by the LoNAP and in 2015 by the TGAS team (in both cases with only one collection unit). The visibility conditions were very poor due to the presence of modern buildings and abundant gravel.

SITE BIOGRAPHY

A few diagnostic sherds were collected during the survey; the data collected suggest that the site was continuously settled from the Mitanni to Hellenistic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
177	10	5	1	1
177	10	12	1	1
177	10	13	1	1
177	11	1	1	1
177	11	2	1	1
177	11	8	1	1
177	11	9	1	1
177	11	15	2	2
177	13	11	1	1
177	Und.	-	5	5
TOT			**15**	**15**

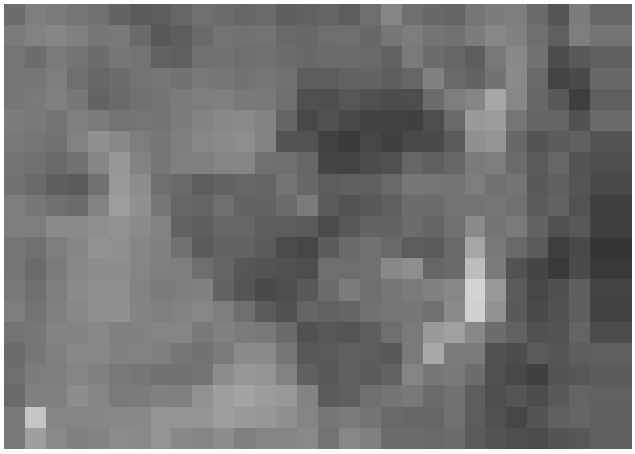
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	177.12.1.2	Rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with occasional calcite inclusions and mica. Rim dm. 14 cm.	T9/0	9	**LoNAP**
2	177.15.1.1	Rim; reddish yellow core (5YR 7/6) and very pale brown slipped surfaces (10YR 7/3); chaff fabric with abundant fine calcite inclusions. Rim dm. 58 cm.	T10/12	10	177.1
3	177.15.1.3	Rim; very pale brown surfaces (10YR 8/2) and reddish yellow core (5YR 6/6); mineral fabric with occasional fine to large calcite inclusions; smoothed exterior surface. Rim dm. 16 cm.	T10/13	10	177.1
4	177.15.1.4	Rim; light brown surfaces (7.5YR 6/4) and light yellowish brown (10YR 6/4); mineral fabric with frequent fine grits and calcite inclusions; burnished surfaces. Rim dm. 26 cm.	T11/1	11	177.1
5	177.15.1.5	Rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 8/2); mineral fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/2	11	177.1
6	177.15.1.6	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions. Rim dm. 12 cm.	T11/8	11	177.1
7	177.15.1.7	Rim; reddish yellow core and surfaces (5YR 6/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 16 cm.	T11/9	11	177.1
8	177.15.1.9	Rim; light gray surfaces (10YR 7/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine calcite and grits inclusions; smoothed exterior surface. Cooking pot. Rim dm. 16 cm.	T11/15	11	177.1
9	177.12.1.8	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 35 cm.	**T12/5**	**12**	**LoNAP**

SITE 178

(B3 sector)



1 - Site 178 on a Corona satellite image (Corona 1039, 28 Feb 1967).

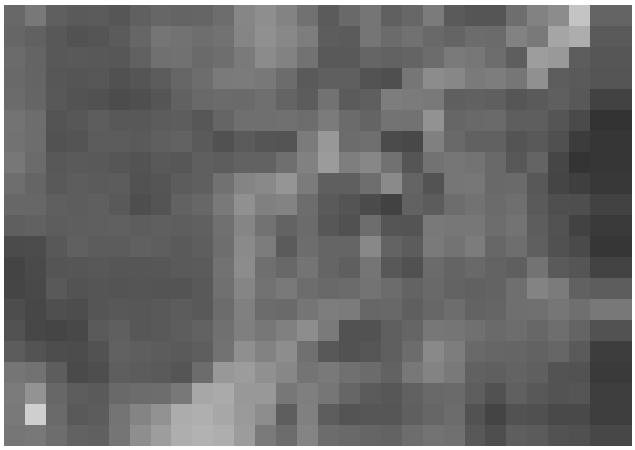
2 - Site 178 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

SITE NUMBER	178
LOCAL NAME	-
POSITION	368565; 4049622
AREA	10 ha ca. (?)
SURVEY YEARS	2012
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Very low
DAMAGE AND THREATS	Completely covered by the modern city of Kalakchi
COLLECTION AREAS	-

SITE DESCRIPTION

The site has been completely covered by the modern city of Kalakchi and it was not possible to carry out the survey due to the presence of new houses.

SITE 179 - Gir-e-Sobashi (B3 sector)



1 - Site 179 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 179 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3- Site 179 from West. (2015)

SITE NUMBER	179
LOCAL NAME	Gir - e -Sobashi
POSITION	367976 E; 4051126 N
AREA	2,3 ha ca
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: low; 2015: low
DAMAGE AND THREATS	Building activities
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**2,3**			**2,3**				**2,3**		**2,3**			**2,3**
N. fr. TGAS	19				2			2				15		1			2
N. fr. LoNAP												2					

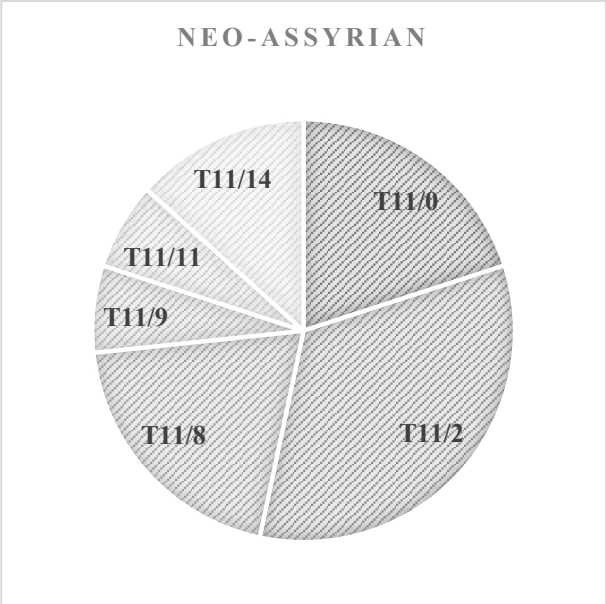
SITE DESCRIPTION

The high-mounded site is located on the right bank of the River Nardush, north of the modern city of Kalakchi. The site perhaps extends under a group of modern houses situated south of the mound. The estimated area is calculated on the basis of the size of the collection unit. A modern house stands on the top of the mound. The site was surveyed in 2012 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). Due to the poor visibility conditions it was difficult to survey the site.

SITE BIOGRAPHY

The site must have been a small Neo-Assyrian village (c. 2 ha), and a few sherds (1-2) seem to suggest that it was also settled, on a smaller scale, during the Late Chalcolithic 1-2, mid-late 3rd millennium BC, and Hellenistic and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

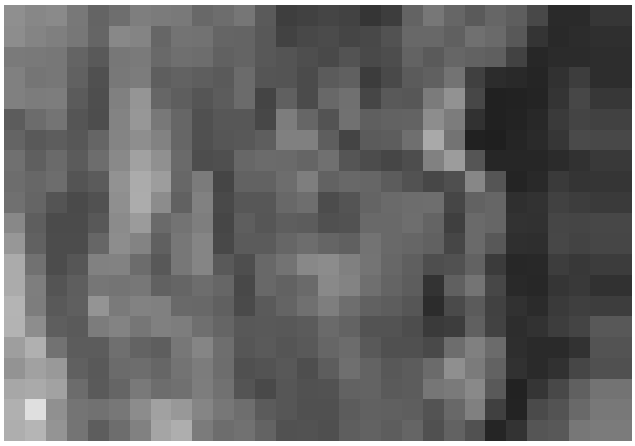
SITE	PERIOD	TYPE	TOTAL	1
179	04	0	2	2
179	07	0	2	2
179	11	0	3	3
179	11	2	5	5
179	11	8	3	3
179	11	9	1	1
179	11	11	1	1
179	11	14	2	2
179	13	2	1	1
179	21	0	2	2
179	Und.	-	19	19
TOT			**41**	**41**

POTTERY SELECTION

N.	Code	Description	Type	Period	Area
1	179.15.1.1	Rim; pink surfaces (7.5YR 7/4) and dark gray core (2.5Y 4/1); mineral fabric with frequent fine calcite inclusions. Rim dm. 22 cm.	T4/0	4	179.1
2	179.15.1.3	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 24 cm.	T7/0	7	179.1
3	179.15.1.4	Rim; reddish yellow core (5YR 7/6) and very pale brown slipped surfaces (10YR 8/3); mineral fabric with frequent chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/0	7	179.1
4	179.15.1.19	Base; pinkish white slipped surfaces (7.5YR 8/2) and reddish yellow core (5YR 7/6); chaff fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Base dm. 2 cm.	T11/0	11	179.1
5	179.15.1.5	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with common chaff and abundant fine calcite inclusions; burnished surfaces. Rim dm. 30 cm.	T11/2	11	179.1
6	179.15.1.14	Rim; very pale brown core (10YR 8/3) and surfaces (10YR 8/2); mineral fabric with occasional chaff and rare fine calcite inclusions. Rim dm 8 cm.	T11/8	11	179.1
7	179.15.1.16	Rim; very pale brown exterior surface (10YR 8/2), reddish yellow core and interior surface (5YR 7/6); mineral fabric with abundant fine calcite and quartz inclusions. Rim dm. 10 cm.	T11/8	11	179.1
8	179.15.1.8	Rim; pink exterior surface (7.5YR 8/4), reddish yellow core and interior surface (7.5YR 7/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces and traces of burnishing on the exterior surface. Rim dm. 14 cm.	T11/12	11	179.1
9	179.15.1.6	Rim; light reddish brown core and surfaces (5YR 6/4); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surfaces and traces of burnishing on the exterior surface and rim. Rim dm. 22 cm.	T11/12	11	179.1

SITE 185

(A3 sector)



1 - Site 185 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 185 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - The mound from North. (2015)

4 - The presence of a well in area (). (2015)

SITE NUMBER	185
LOCAL NAME	-
POSITION	368221 E; 4054149 N
AREA	3 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Bulldozer excavation to create a well
COLLECTION AREAS	1-6

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha				**3**	**1,3**	**2**	**3**	**1,9**	**0,3**	**1**		**1,5**	**3**		**1**	**0,7**	**1,2**
N. fr. TGAS	26				2	16		6	1	4		3			2	2	8
N. fr. LoNAP	13			1		4	1	2	2			9	3		1	6	1

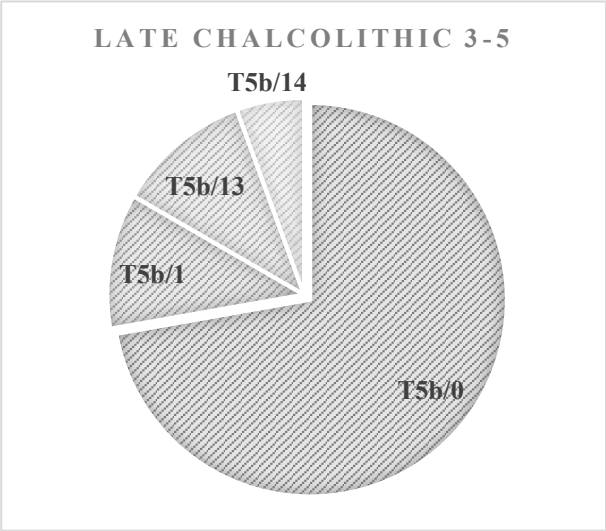
SITE DESCRIPTION

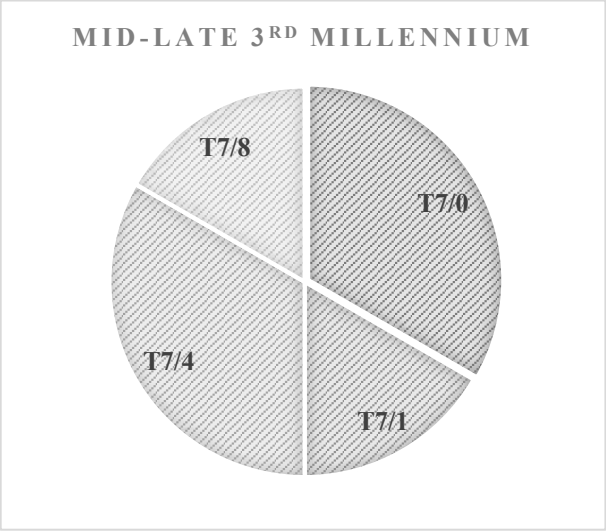
High-mounded site located on the right bank of a deep wadi about 1 km south of the modern city of Chirra. The site was surveyed in 2012 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (six collection units). The site comprises a high mound and a lower area that extends eastwards characterized by light soils and abundant sherds. A modern well has been dug into the northern edge of the slope.

SITE BIOGRAPHY

The site was settled starting from the Late Chalcolithic 1-2 (although a single Obeid sherd may signify the presence of an older settlement) and almost continuously occupied until the Islamic epoch. The only periods not represented in the pottery assemblage collected are the Middle Assyrian and Hellenistic. The peak of the site's occupation was the Late Chalcolithic 3-5, when it was densely occupied. The site also flourished in the Neo-Assyrian period.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6
185	04	0	2		1				
185	04	18	1					1	
185	05b	0	13			2	3	6	
185	05b	1	2				2		
185	05b	13	2		1	1			
185	05b	14	1				1		
185	04-05	0	6				5		
185	07	0	2				1		1
185	07	1	1					1	
185	07	4	2				1	1	
185	07	8	1					1	
185	08	1	1				1		
185	09	0	4		2			2	
185	11	8	2		1				1
185	11	9	1		1				
185	14	0	2						2
185	15	0	1		1				
185	16	1	1			1			
185	21	0	8	3			4	1	
185	Und.	-	26	2	5	4	5	6	4
TOT			**75**	**5**	**12**	**8**	**23**	**19**	**8**

POTTERY SELECTION

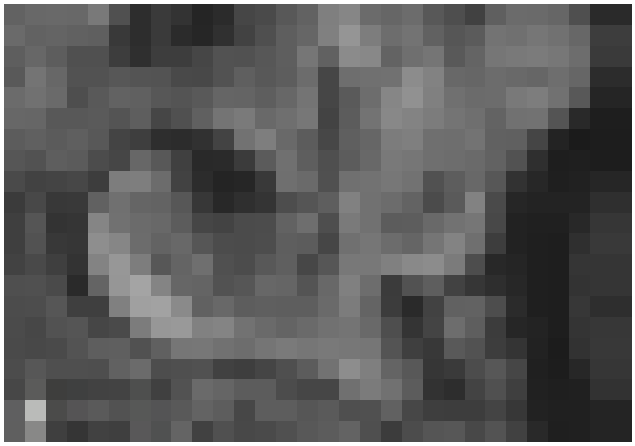
Plate 1

N.	Code	Description	Type	Period	Area
1	185.15.2.7	Rim; very pale brown surfaces (10YR 7/3) and light reddish brown core (5YR 6/4); mineral fabric with frequent chaff and frequent fine calcite inclusions. Rim dm. 20 cm.	T4/0	4	185.2
2	185.15.5.1	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (5Y 4/1); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 12 cm.	T4/18	4	185.4
3	185.15.3.6	Rim; pale yellow surfaces (2.5Y 8/3) and light brownish gray core (10YR 6/2) with reddish yellow margins (5YR 7/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 30 cm.	T5b/0	5b	185.2
4	185.15.4.23	Rim; reddish yellow surfaces (5YR 7/6) and grayish brown core (10YR 5/2) with very pale brown margins (10yr 7/3); mineral fabric with frequent chaff and common fine-medium calcite inclusions. Rim dm. 38 cm.	T5b/0	5b	185.4
5	185.15.5.16	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (2.5Y 4/1); chaff fabric with occasional fine calcite inclusions. Rim dm. 16 cm.	T5b/0	5b	185.5
6	185.15.5.17	Rim; light brown surfaces (7.5YR 6/4) and dark gray core (2.5Y 4/1); chaff fabric with abundant fine-medium calcite and grits inclusions, occasional large mineral inclusions. Rim dm. 20 cm. Rim dm. 20 cm.	T5b/0	5b	185.5
7	185.15.4.13	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (5Y 3/1); chaff fabric with frequent fine calcite inclusions. Rim dm. 22 cm.	T5b/1	5b	185.4
8	185.15.4.18	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (2.5Y 4/1) with light brown margins (7.5YR 6/4); chaff fabric with abundant fine-medium calcite inclusions. Rim dm. 26 cm.	T5b/1	5b	185.4
9	185.15.2.1	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (10YR 4/1) with light yellowish brown margins (10YR 6/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T5b/13	5b	185.2
10	185.15.3.1	Rim; very pale brown surfaces (10YR 7/3) and gray core (2.5Y 6/1); chaff fabric with occasional fine calcite inclusions. Rim dm. 34 cm.	T5b/13	5b	185.2
11	185.15.4.11	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (5Y 4/1); chaff fabric with frequent fine calcite inclusions. Rim dm. 18 cm.	T5b/13	5b	185.4
12	185.15.4.14	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (5Y 4/1) with reddish yellow margins (5YR 6/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 14 cm..	T4-5/0	4-5	185.4
13	185.15.4.21	Rim; pink surfaces (7.5YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and frequent fine calcite inclusions. Rim dm. 16 cm.	T4-5/0	4-5	185.4
14	185.15.4.19	Rim; pink surfaces (5YR 8/4) and light olive gray core (5Y 6/2) with reddish yellow margins (5YR 7/6); mineral fabric with occasional chaff and common fine calcite inclusions. Rim dm. 12 cm.	T4-5/0	4-5	185.4
15	185.12.1.25	Body sherd; pink core and surfaces (7.5 YR 7/3); mineral fabric with no visible inclusions; smoothed interior surface; incised and excised decoration on the exterior surface.	**T6/3**	**6**	**LoNAP**

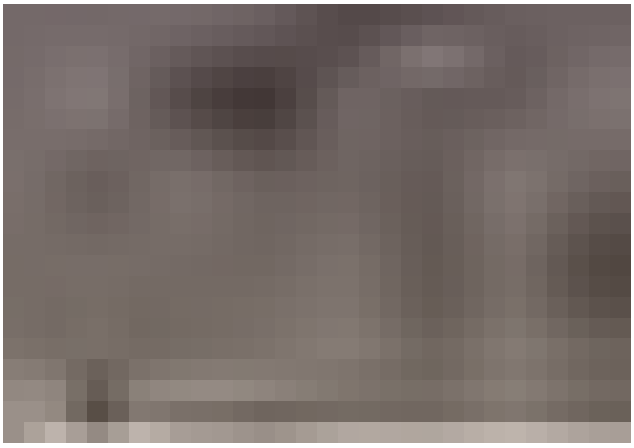
Plate 2

N.	Code	Description	Type	Period	Area
16	185.15.4.2	Body sherd; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR 7/6); fine mineral fabric with no visible inclusions; incised decoration on the exterior surface.	T7/0	7	185.4
17	185.15.5.2	Flat base; pale yellow surface and core (5Y 7/3); fine mineral fabric with rare fine mineral inclusions (mica, calcite and grits); smoothed surfaces. Base dm. 6 cm.	T7/1	7	185.5
18	185.15.4.1	Body sherd; pale yellow surfaces (5Y 7/3) and pale olive core (5Y 6/3); fine mineral fabric with occasional chaff and no visible mineral inclusions; comb incised decoration on the exterior surface.	T7/4	7	185.4
19	185.15.5.4	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with occasional fine calcite inclusions; smoothed exterior surface; comb incised decoration on the exterior surface. Rim dm. 26 cm.	T7/4	7	185.5
20	185.15.5.3	Rim; pale yellow exterior surface (5Y 8/3), reddish yellow interior surface (5YR 6/6) and light red core (2.5YR 6/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 36 cm.	T7/8	7	185.5
21	185.15.4.3	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed exterior surface; fugitive red painted decoration on the rim. Rim dm. ?	T8/1	8	185.4
22	185.15.2.3	Rim; very pale brown core (10YR 7/4) and pale yellow surfaces (2.5Y 7/3); chaff fabric with occasional fine-medium calcite inclusions. Rim dm. 20 cm.	T9/13	9	185.2
23	185.15.2.2	Bowl rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (5YR 7/6); mineral fabric with common chaff and frequent fine calcite inclusions; burnished surfaces. Rim dm. 20 cm.	T9/13	9	185.2
24	185.15.5.5	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces.	T9/13	9	185.5
25	185.15.2.4	Rim; reddish yellow core and surfaces (5YR 6/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 16 cm.	T11/8	11	185.2
26	185.15.2.5	Rim; very pale brown exterior surface (10YR 8/3) and reddish yellow core and interior surface (7.5YR 6/6); mineral fabric with abundant calcite inclusions. Rim dm. 14 cm.	T11/9	11	185.2

SITE 186 – Tell Chirra (A3 sector)



1 *– Site 186 on a Corona satellite image (Corona 1039, 28 Feb 1967).*



2 *- Site 186 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).*

3- Tell Chirra from South-East. (2015)

4 *- The cemetry in area 5. (2015)*

5 *- The acropolis from area 5 (2015).*

SITE NUMBER	186
LOCAL NAME	Tell Chirra
POSITION	368676 E; 4055250 N
AREA	6 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded with an extended lower town
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	Modern cemetery
COLLECTION AREAS	1-9

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha						**4**		**2,7**	**4,7**	**4,7**	**4,7**	**4,7**	**2,5**	**1,7**	**4,2**		**2,6**
N. fr. TGAS	50							21	16	10	9	17	1	3	5		7
N. fr. LoNAP	17					1		10	5	1	2	15		1			2

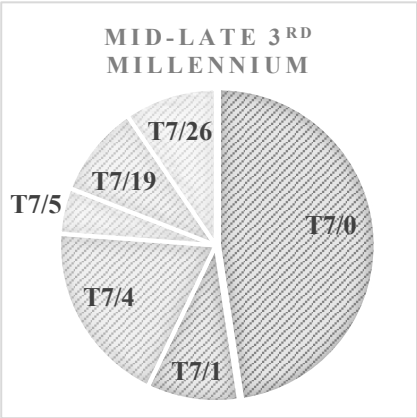
SITE DESCRIPTION

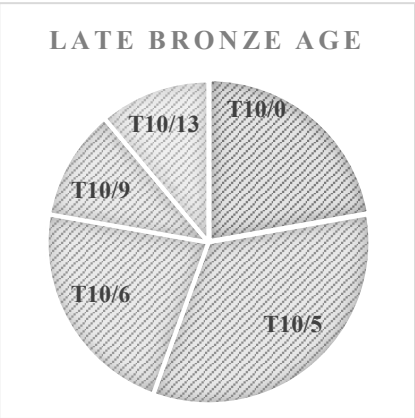
Tell Chirra is located immediately east of the modern city of the same name, on the right bank of a wadi. The site was surveyed in 2013 by the LoNAP team (3 collection units) and in 2015 by the TGAS team (9 collection units). The site features an elevated upper town and an extensive lower town. On top of the acropolis stands the monumental tomb of a local Sheikh and in the lower town there is a modern cemetery. The site extends further east than the lower town (collection units 9 and 6).

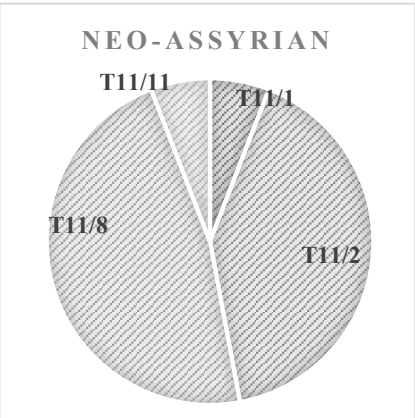
SITE BIOGRAPHY

A single sherd from the Late Chalcolithic 3-5 might signify the presence of a buried proto-historic settlement. The site was almost continuously occupied from the mid-late 3rd millennium BC until the Islamic epoch, with the only gap in its occupation history during the Sasanian period. The settlement's maximum occupation occurred between the mid-late 3rd millennium BC and the Neo-Assyrian epoch.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6	8	9
186	07	0	10	1					6		3
186	07	1	2						1		1
186	07	4	4		1				2		1
186	07	5	1	1							
186	07	19	2			1					1
186	07	26	2			1					1
186	08	0	8		1			4			3
186	08	1	8		2			2		1	3
186	09	0	10			2	1				7
186	10	0	2					1			1
186	10	5	3		1			1		1	
186	10	6	2				2				
186	10	9	1								1
186	10	13	1								1
186	11	1	1					1			
186	11	2	7	1	2			2		2	
186	11	8	8	1				4		3	
186	11	11	1							1	
186	12	3	1					1			
186	13	2	1		1						
186	13	5	1		1						
186	13	13	1								1
186	14	0	3	1				1			1
186	14	7	1					1			
186	14	14	1					1			
186	21	0	7	1				6			
186	Und.	-	50	1	2	1	10	12	1		23
TOT			**139**	**7**	**11**	**5**	**13**	**37**	**10**	**8**	**48**

POTTERY SELECTION

Plate 1

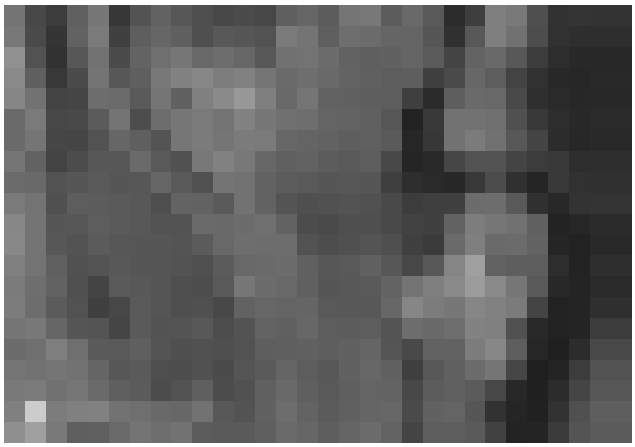
N.	Code	Description	Type	Period	Area
1	**186.12.3.25**	Rim; dark gray core (2.5Y 4/1) and very pale brown surfaces (10YR 7/4); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 36 cm.	**T4-5b/0**	**4-5b**	**LoNAP**
2	186.15.1.2	Rim; very pale brown core and surfaces (10YR 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 10 cm.	T7/0	7	186.1
3	186.15.6.5	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 16 cm.	T7/0	7	186.6
4	186.15.9.5	Base; very pale brown core (10YR 7/4) and black burned surfaces; fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 5 cm.	T7/1	7	186.9
5	186.15.2.1	Body sherd; pale yellow surfaces (5Y 7/3) and gray core (5Y 6/1); fine mineral fabric with no visible inclusions; smoothed surfaces; comb impressed decoration on the exterior surface.	T7/4 Post-Akk.	7	186.2
6	186.15.6.8	Body sherd; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite inclusions; comb-incised decoration on the exterior surface.	T7/4 Akk.	7	186.6
7	186.15.1.1	Rim; gray core and surfaces (2.5Y 5/1) and pale yellow patina on the surfaces (5Y 8/3); fine mineral fabric with occasional fine-medium calcite inclusions; smoothed surfaces; yellow horizontal striations on the surfaces. Rim dm. 10 cm.	T7/5	7	186.1
8	186.15.3.2	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with occasional fine calcite inclusions; burnished exterior surfaces. Rim dm. 8 cm.	T7/19 Akk.	7	186.3
9	186.15.3.1	Rim; pale yellow core and surfaces (5Y 7/4); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/26 Akk.	7	186.3
10	186.15.9.1	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with frequent calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T7/26	7	186.9
11	186.15.5.2	Rim; pale yellow slipped exterior surface (5Y 8/2) and very pale brown core and interior surface (10YR 7/4); chaff fabric with occasional grits inclusions; smoothed surfaces. Rim dm. 16 cm.	T8/0	8	186.5
12	186.15.9.11	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 7/6); mineral fabric with occasional chaff and occasional fine calcite and grits inclusions; burnished exterior surface. Rim dm. 20 cm.	T8/0	8	186.9
13	186.15.2.2	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with common chaff and occasional calcite inclusions; smoothed surfaces; burnished rim. Rim dm. 24 cm.	T8/0	8	186.2
14	186.15.2.3	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces; dark brown painted decoration on the rim. Rim dm. 34 cm.	T8/1	8	186.2
15	186.15.9.12	Rim; pale yellow surfaces (5Y 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with frequent chaff and fine calcite inclusion; smoothed surfaces; black painted decoration on the exterior surface; grooved rim. Rim dm. 22 cm.	T8/1	8	186.9
16	186.15.3.4	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with frequent chaff and abundant fine calcite inclusions. Rim dm. 6 cm.	T9/0	9	186.3
17	186.15.9.14	Rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (7.5YR 7/6); mineral fabric with frequent chaff and frequent calcite inclusions. Rim dm. 14 cm.	T9/0	9	186.9
18	186.15.9.18	Rim; reddish yellow surfaces (7.5YR 6/6) and very dark gray (10 YR 3/1); mineral fabric with frequent calcite inclusions; burnished surfaces. Cooking pot. Rim dm. 20 cm.	T9/0	9	186.9
19	186.15.3.3	Base; yellow exterior surface and core (10YR 8/6) and very pale brown interior surface (10YR 8/3); fine mineral fabric with rare chaff and no visible mineral inclusions; burnished exterior surface. Base dm. 3 cm.	T9/0	9	186.3

Plate 2

N.	Code	Description	Type	Period	Area
20	186.15.5.10	Base; very pale brown surfaces and core (10YR 8/3); chaff fabric with frequent fine mineral inclusions; burnished exterior surface. Base dm. 4 cm.	T10/0	10	186.5
21	186.15.9.21	Base; very pale brown surface and core (10YR 7/4); mineral fabric with abundant chaff and abundant grits, quartz and calcite inclusions; burnished exterior surface. Cooking pot.	T10/0	10	186.9
22	186.15.2.5	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite and grits inclusions. Rim dm. 16 cm.	T10/5	10	186.2
23	186.15.4.2	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (7.5YR 7/6); fine mineral fabric with frequent fine calcite inclusions. Rim dm. 10 cm.	T10/6	9	186.4
24	186.15.9.22	Rim; pale yellow surfaces (2.5Y 8/3) and yellow core (10YR 8/6); chaff fabric with occasional calcite inclusions. Rim dm. 18 cm.	T10/6	10	186.9
25	186.15.9.23	Base; pale yellow surfaces and core (5Y 8/3); chaff fabric with occasional medium calcite inclusions; burnished exterior surface. Base dm. 8 cm.	T10/9	10	186.9
26	186.15.5.14	Rim; pale yellow core and surfaces (5Y 7/4); chaff fabric with rare fine calcite inclusions; smoothed surfaces.	T11/1	11	186.5
27	186.15.5.18	Rim; pale yellow surfaces (2.5Y 7/3) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and abundant fine calcite inclusions. Rim dm. 18 cm.	T11/8	11	186.2
28	186.15.9.26	Rim; reddish yellow surfaces (5YR 6/6) and gray core (10YR 5/1) with reddish yellow margins (5YR 6/6); mineral fabric with abundant grits and calcite inclusions. Rim dim. 8 cm.	T11/8	11	186.2
29	186.15.9.25	Rim; very pale brown (10YR 7/3) and light yellowish brown core (10YR 6/4); mineral fabric with common chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/8	11	186.9
30	186.15.9.29	Rim; reddish yellow surfaces (5YR 6/6) and gray core (2.5Y 5/1) with reddish yellow margins (5YR 6/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 26 cm.	T11/11	11	186.9
31	186.15.5.19	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with occasional chaff and with abundant calcite inclusions; burnished surfaces. Rim dm. 16 cm.	T12/3	12	186.5

SITE 187

(A3 sector)



1- Site 187 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 187 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 187 from East. (2015)

SITE NUMBER	187
LOCAL NAME	-
POSITION	368597 E; 4053815 N
AREA	3,5 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015; good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**3,5**		**2,2**	**0,6**	**0,6**		**2,2**	**3,5**		**0,6**	**3,5**	**3,5**	**1,9**
N. fr. TGAS	33						4	10	1		2	32		5	32		9
N. fr. LoNAP	19				2		2	6	4			13			2	6	2

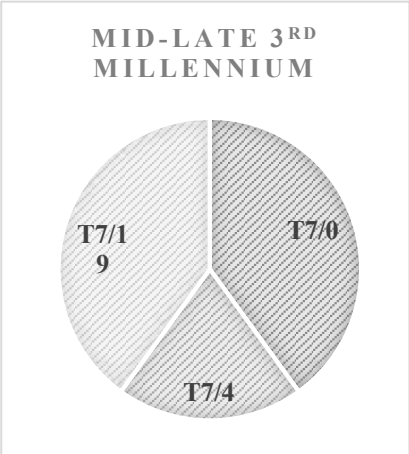
SITE DESCRIPTION

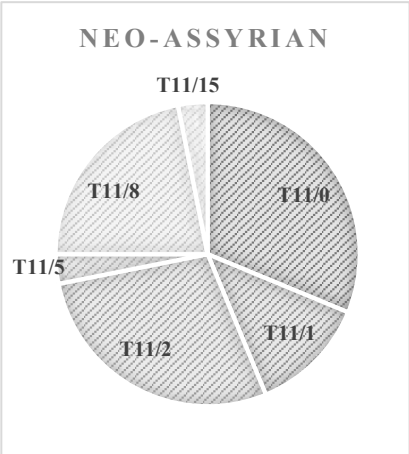
Small high-mounded site located on the left bank of a wadi, c. 1.5 km south of the city of Chirra. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (five collection units). The site features abundant small stones, basalt tool fragments, microliths and ashy soil.

SITE BIOGRAPHY

The site was almost continuously inhabitied from the Late Chalcolithic 1-2 until the Islamic epoch, with a few gaps in the occupation sequence, namely the Late Chalcolithic 3-5, Mitanni and Post-Assyrian periods. The periods of maximum settlement expansion and densest occupation were the Neo-Assyrian and Parthian periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
187	06	1	1		1			
187	06	2	2				2	
187	06	7	1				1	
187	06	8	2				2	
187	06	9	1		1			
187	07	0	1					1
187	07	4	2	1				1
187	07	19	4	1			2	1
187	08	1	1				1	
187	10	6	1		1			
187	10	12	1					1
187	11	0	10		3	2	1	4
187	11	1	4			2		2
187	11	2	9		7		2	
187	11	5	1					1
187	11	8	7		3	2	1	1
187	11	15	1					1
187	13	0	3				3	
187	13	2	1				1	
187	13	9	1				1	
187	14	0	19		1	3	9	6
187	14	7	2		2			
187	14	14	3	1	1			1
187	14	15	8		3	3	1	1
187	21	0	9	2		1	3	3
187	Und.	-	33	3	9	7	4	10
TOT			**128**	**8**	**32**	**20**	**34**	**34**

POTTERY SELECTION

Plate 1

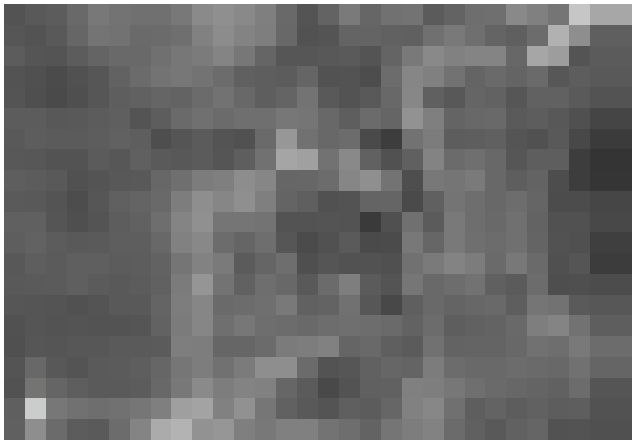
N.	Code	Description	Type	Period	Area
1	**187.12.1.57**	Rim; gray core and surfaces (10YR 5/1); mineral fabric with abundant fine to medium calcite, quartz and grits inclusions; burnished exterior surface. Cooking pot. Rim dm. 12 cm.	**T4/0**	**4**	**LoNAP**
2	187.15.2.1	Base; very pale brown exterior surface (10YR 8/3) and reddish yellow core and interior surface (7.5YR 7/6); mineral fabric with frequent chaff and no visible mineral inclusions; dark brown painted decoration on the exterior surface. Base dm. 4 cm.	T6/1	6	187.2
3	187.15.4.2	Body sherd; gray core and surfaces (2.5Y 6/1); fine mineral fabric with rare chaff and occasional calcite inclusions; burnished exterior surface; incised decoration on the exterior surface.	T6/2	6	187.4
4	187.15.4.1	Body sherd; gray core and surfaces (2.5Y 6/1); fine mineral fabric with rare chaff and occasional calcite inclusions; incised decoration on the exterior surface.	T6/2	6	187.4
5	187.15.4.4	Rim; light gray surface (5Y 7/2) and gray core (5Y 6/1); fine mineral fabric with no visible inclusions. Rim dm. 16 cm.	T6/8	7	187.4
6	187.15.2.2	Holemouth pot; very pale brown exterior surface (10YR 7/4), very dark gray core (2.5Y 3/1) with brownish yellow margin (10YR 6/6); mineral fabric with abundant large grits inclusions; smoothed surfaces. Rim dm. 24 cm.	T6/9	6	187.2
7	187.15.4.5	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 16 cm.	T7/0	7	187.4
8	187.15.1.2	Body sherd; very pale brown surfaces (10YR 7/4) and pale yellow interior surface and core (5Y 8/3); chaff fabric with no visible inclusions; burnished exterior surface; comb incised decoration on the exterior surface.	T7/4 Akk.	7	187.1
9	187.15.1.1	Rim; pale yellow surfaces and core (5Y 7/3); fine mineral fabric with common fine grits inclusions; burnished exterior surface. Rim dm. 14 cm.	T7/19 Akk.	7	187.1
10	187.15.4.8	Rim; reddish yellow surfaces and core (7.5YR 7/6); mineral fabric with abundant fine calcite inclusions; red painted decoration on the rim. Rim dm. 12 cm.	T8/1	8	187.4
11	187.15.2.3	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with common chaff and very fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T10/6	10	187.2
12	187.15.5.4	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible mineral inclusions. Rim dm. 42 cm.	T10/12	10	187.5

Plate 2

N.	Code	Description	Type	Period	Area
13	187.15.3.1	Rim; light gray core and surfaces (2.5Y 7/2); mineral fabric with rare very fine chaff and frequent fine calcite inclusions. Rim dm. 14 cm.	T11/0	11	187.2
14	187.15.2.15	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with occasional chaff and abundant fine calcite inclusions. Rim dm. 18 cm.	T11/0	11	187.2
15	187.15.2.14	Rim; very pale brown surfaces and core (10YR 8/3); mineral fabric with abundant chaff and abundant fine-medium calcite inclusions. Rim dm. 24 cm.	T11/0	11	187.2
16	187.15.2.9	Rim; reddish yellow core and surface (7.5YR 7/6); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 20 cm.	T11/2	11	187.1
17	187.15.5.13	Base; pink surface and core (7.5YR 7/4); mineral fabric with no visible inclusions. Base dm. 3 cm.	T11/5	11	187.5
18	187.15.2.16	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 6/6); mineral fabric with abundant fine and medium grits and calcite inclusions. Rim dm. 10 cm.	T11/8	11	187.2
19	187.15.5.5	Rim; pink surfaces (7.5YR 7/4) and light yellowish brown core (10YR 6/4); mineral fabric with abundant fine grits and calcite inclusions. Rim dm. 16 cm.	T11/15	11	187.5
20	187.15.3.6	Rim; reddish yellow surfaces (5YR 7/6), light gray interior surface (10YR 7/1) and gray core (2.5Y 5/1); mineral fabric with abundant grit, quartz and calcite inclusions. Cooking pot. Rim dm. 14 cm.	T11/15	11	187.2

SITE 232

(B3 sector)



1 - Site 232 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 232 on a DigitalGlobe image (taken on 24 Jun 2010,Sources: Esri, DigitalGlobe).

3 - Site 232 from South. (2015)

4 - Site 232 from North. (2012)

SITE NUMBER	232
LOCAL NAME	-
POSITION	368000 E; 4051353 N
AREA	0,7 ha ca.
SURVEY YEARS	2012 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2012: good; 2015: good.
DAMAGE AND THREATS	Modern cemetery
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,7**				**0,7**		**0,7**	**0,7**		
N. fr. TGAS	5							1				7		1	1		
N. fr. LoNAP	2											4			4		

SITE DESCRIPTION

Small high-mounded site located immediately north of Gir Sobashi on the right bank of the River Nardush. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). There is a small recent cemetery on the top of the mound. The site features an ashy, light grey soil.

SITE BIOGRAPHY

The site shows only four phases of occupation: the mid-late 3rd millennium BC (maybe non-permanent or short-lived settlement), and the Neo-Assyrian, Hellenistic (again, maybe non-permanent or short-lived settlement) and Parthian periods. The Neo-Assyrian phase represents the peak in the site's occupation history.

TYPES ATTESTED

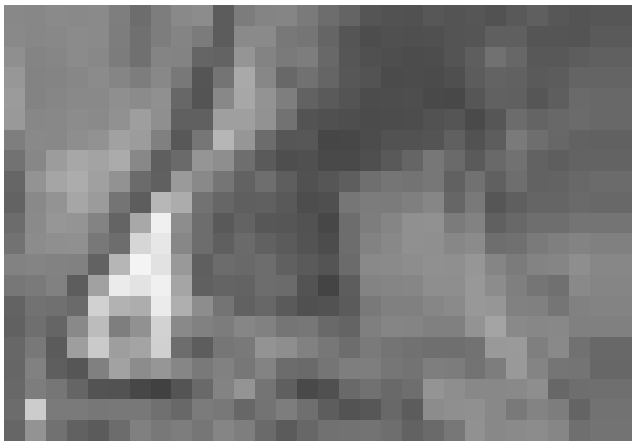
SITE	PERIOD	TYPE	TOTAL	1
232	07	0	1	1
232	11	0	3	3
232	11	2	3	3
232	11	12	1	1
232	13	0	1	1
232	14	7	1	1
232	Und.	-	5	5
TOT			**15**	**15**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	232.15.1.1	Rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with occasional fine grits. Rim dm. 24 cm.	T7/0	7	232.1
2	232.15.1.4	Rim; light yellowish brown (10YR 6/4) and pale yellow core (2.5Y 7/3); chaff fabric with occasional fine, medium and large calcite inclusions. Rim dm. 8 cm.	T11/0	11	232.1
3	232.15.1.3	Rim; very pale brown surfaces (10YR 7/4) and pale brown core (10YR 6/3) with reddish yellow margins (7.5YR 6/6); mineral fabric with occasional fine calcite inclusions; traces of burnishing on the exterior surface. Rim dm. 22 cm.	T11/2	11	232.1
4	232.15.1.5	Rim; very pale brown surfaces (10YR 7/4) and light yellowish brown core (2.5Y 6/4); coarse chaff fabric with very abundant fine and medium grits inclusions. Rim dm. 16 cm.	T11/2	11	232.1
5	232.15.1.2	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 6/6); mineral fabric with occasional chaff and occasional very fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/12	11	232.1

SITE 335 – Gurgum Muhammad Arab (B2 sector)



1- Site 335 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 335 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Gurgum Muhammad Arab from North. (2013)

SITE NUMBER	335
LOCAL NAME	Gurgum Muhammad Arab
POSITION	364140 E; 4049931 N
AREA	4 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: good; 2015; good.
DAMAGE AND THREATS	Building activities on the top of the mound
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								2,2	3,2	3,2			4				2,2
N. fr. TGAS	27							8	20	7							2
N. fr. LoNAP	15							1	11				1				

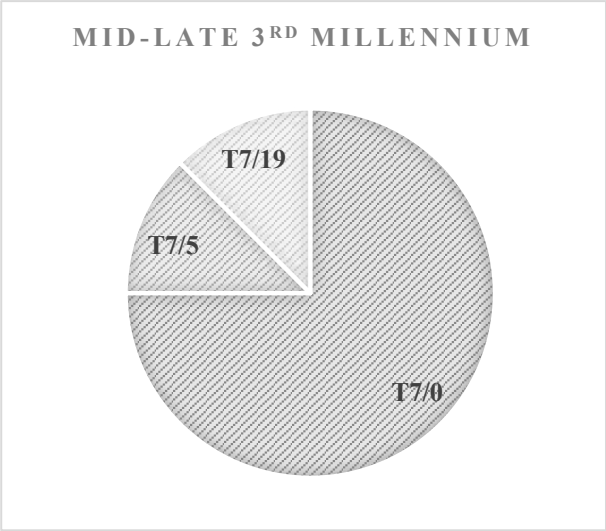
SITE DESCRIPTION

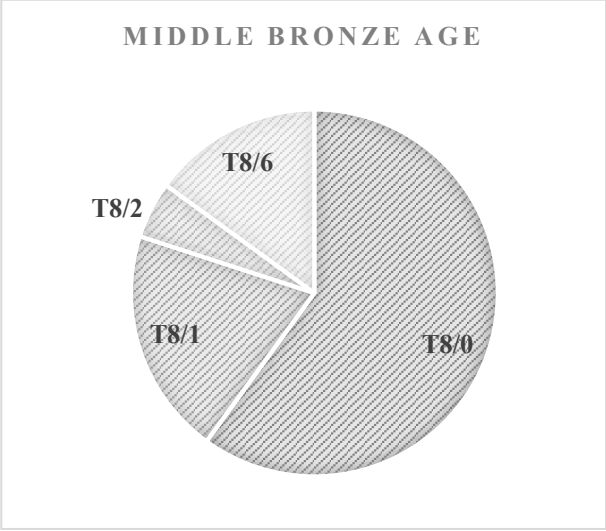
The large circular low-mounded site is located on the left bank of the River Gomel, 300 m south of Tell Gomel. A few modern houses are present on the top of the mound. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (four collection units).

SITE BIOGRAPHY

The site was continuously occupied from the mid-late 3rd millennium BC until the Mitanni period. A Post-Assyirian and an Islamic phase are also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

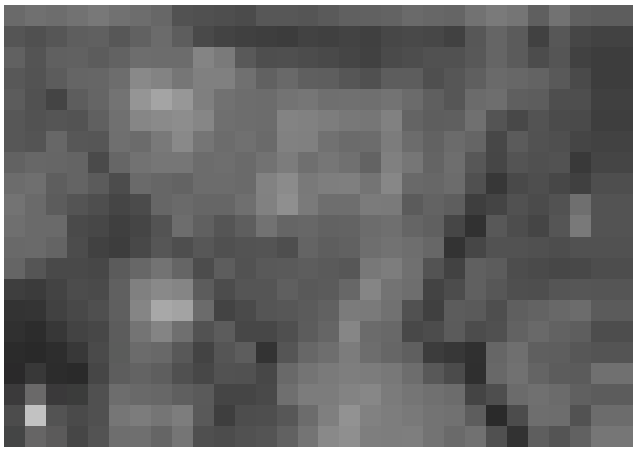
SITE	PERIOD	TYPE	TOTAL	1	2	3
335	07	0	6		6	0
335	07	5	1			1
335	07	19	1		1	
335	08	0	12	2	7	3
335	08	1	4	1	1	2
335	08	2	1			1
335	08	6	3	1	2	
335	09	0	5		5	
335	10	11	2	1	1	
335	21	0	2	1	1	
335	Und.	-	27	8	14	5
TOT			**64**	**14**	**38**	**12**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	335.15.2.4	Rim; reddish yellow exterior surface (5YR 6/6), very pale brown interior surface (10YR 7/4) and pale brown core (10YR 6/3) with reddish yellow margins (7.5YR 6/6); mineral fabric with occasional chaff, occasional fine calcite and frequent large quartz inclusions. Rim dm. 20 cm.	T7/0	7	335.2
2	335.15.2.7	Base; pale yellow surfaces and core (2.5Y 7/3); mineral fabric with very few fine calcite inclusions; smoothed surfaces.	T7/0	7	335.2
3	335.15.3.2	Base; gray surfaces and core (7.5YR 5/1) with a pale yellow streak on the interior surface; fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 4 cm.	T7/5	7	335.3
4	335.15.2.1	Rim; pale yellow surfaces and core (2.5Y 7/3); mineral fabric with common chaff and rare fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	335.2
5	335.15.2.14	Rim; pale yellow surfaces (2.5Y 7/3) and very pale brown core (10YR 7/4); chaff fabric with frequent fine-medium calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T8/0	8	335.2
6	335.15.3.3	Rim; pale olive surfaces and core (5Y 6/4); chaff fabric with common fine and medium calcite inclusions. Rim dm. 34 cm.	T8/0	8	335.3
7	335.15.2.10	Rim; light gray surfaces (5Y 7/2) and very pale brown core (10YR 7/4); chaff fabric with rare fine calcite inclusions; smoothed surfaces; the surfaces are burned (post deposition). Rim dm. 24 cm.	T8/0	8	335.2
8	335.15.1.4	Body sherd; pale yellow slipped exterior surface (5Y 8/3), very pale brown interior surface (10YR 7/4) and brownish yellow core (10YR 6/6); mineral fabric with few chaff, common fine calcite and occasional fine grits inclusions; dark brown painted decoration on the exterior surface.	T8/1	8	335.1
9	335.15.1.3	Base; very pale brown surfaces (10YR 7/4) and reddish yellow core (7.5YR 7/6); mineral fabric with occasional chaff and occasional fine calcite inclusions. Base dm. 8 cm.	T8/6	8	335.1
10	335.15.2.19	Rim; pale yellow surfaces (5Y 7/3) and pink core (7.5YR 7/4); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T9/0	9	352.2
11	335.15.2.18	Rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T9/0	9	335.2
12	335.15.2.20	Rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T9/0	9	335.2
13	336.15.3.9	Rim; very pale brown surfaces and core (10YR 7/4); chaff fabric with common very fine grits and calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T9/0	9	335.3
14	335.15.2.22	Base; light gray exterior surface (5Y 7/2) and very pale brown core and interior surface (10YR 7/3); chaff fabric with common fine grits inclusions. Base dm. 6 cm.	T9/0	9	335.2
15	335.15.3.10	Base; pale yellow surfaces and core (5Y 7/3); chaff fabric with frequent medium grits inclusions; smoothed surfaces. Base dm. 8 cm.	T9/0	9	335.3
16	335.15.1.5	Pot stand; very pale brown surfaces and core (10YR 7/4); mineral fabric with common chaff and frequent fine grits and calcite inclusions. Rim dm. 8 cm.	T9/11	10	335.1

SITE 338 – Tell Sheikh Murad (C3 sector)



1 - Site 338 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 338 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 338 from West. (2015)

SITE NUMBER	338
LOCAL NAME	Tell Sheikh Murad
POSITION	367033 E; 4045833 N
AREA	0,8 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2013: good; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												0,8			0,8		0,8
N. fr. TGAS	18											16			8		6
N. fr. LoNAP	13														2		3

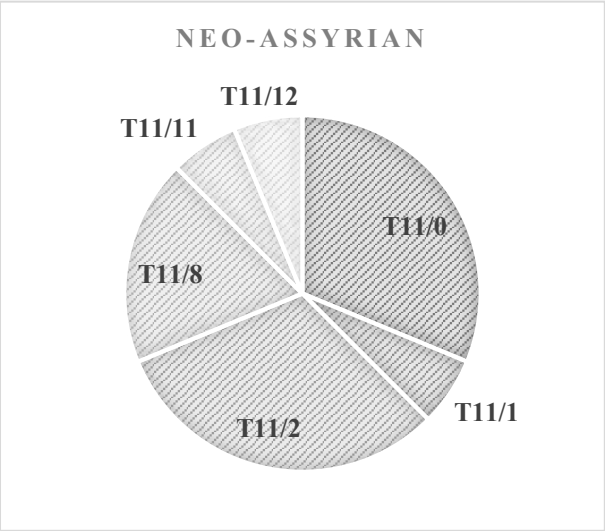
SITE DESCRIPTION

The small low-mounded site is located c. 6 km south-east of Tell Gomel. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (two collection units). The site features ashy soil, abundant stones, and numerous stone tool and baked brick fragments.

SITE BIOGRAPHY

The site had only three phases of occupation: the Neo-Assyrian, Parthian and Islamic periods. The Neo-Assyrian period represents the moment of maximum expansion of the site.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

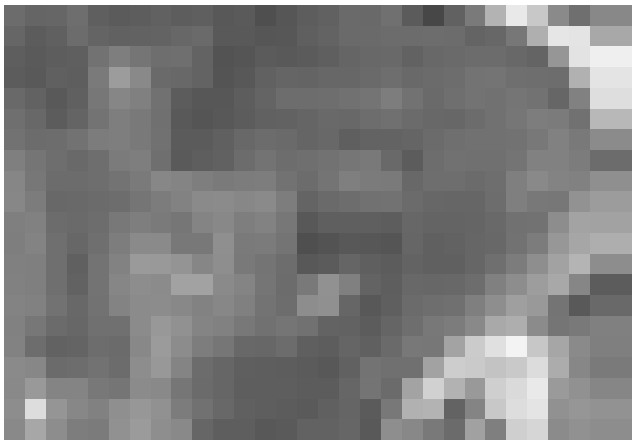
SITE	PERIOD	TYPE	TOTAL	1	2
338	11	0	5	2	3
338	11	1	1	1	
338	11	2	5	4	1
338	11	8	3	1	2
338	11	11	1	1	
338	11	12	1	1	
338	14	0	6	2	4
338	14	7	1	1	
338	14	9	1	1	
338	21	0	6	4	2
338	Und.	-	18	11	7
TOT			**48**	**29**	**19**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	338.15.1.3	Rim; light brown surfaces and core (7.5YR 6/4); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 16 cm.	T11/0	11	338.1
2	338.15.2.3	Rim; pale yellow slipped exterior surface (2.5Y 7/3), reddish yellow interior surface (7.5YR 6/6) and grayish brown core (2.5Y 5/2) with reddish yellow margins (7.5YR 6/6); burnished exterior surface. Rim dm. 14 cm.	T11/0	11	338.2
3	338.15.1.5	Rim; very pale brown (10YR 7/4) and light brown core (7.5YR 7/4); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 18 cm.	T11/1	11	338.1
4	338.15.2.1	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with occasional chaff and common fine and medium calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T11/2	11	338.2
5	338.15.1.1	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with occasional chaff and frequent very fine calcite inclusions; burnished surfaces. Rim dm. 16 cm.	T11/11	11	338.1
6	338.15.1.2	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (7.5YR 6/6); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 28 cm.	T11/12	11	338.1

SITE 339 – Khraba Gird Rashik (B2 sector)



1 - Site 339 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 339 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 339 from North-East. (2015)

SITE NUMBER	339
LOCAL NAME	Khraba Gird Rashik
POSITION	363732 E; 4049208 N
AREA	2,9 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: good; 2015: very low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha			**2,9**		**2,9**	**2,9**	**2,9**	**2,9**				**2,9**			**2,9**	**2,9**	**2,9**
N. fr. TGAS	7		1		1	4	10	2				1			1	1	103
N. fr. LoNAP	5					1						1					30

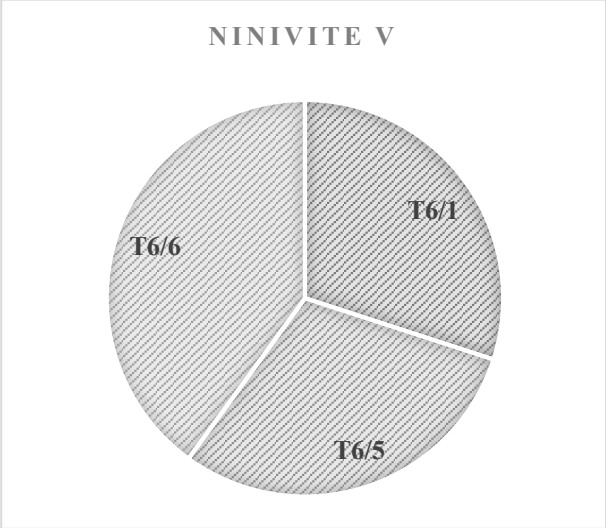
SITE DESCRIPTION

The low-mounded site is located close to a small wadi on the right bank of the River Gomel, about 1.5 km south of Gomel. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). The visibility conditions were very poor during the TGAS investigation.

SITE BIOGRAPHY

The site probably had a first occupation phase during the Halaf period, and subsequently was settled from the Late Chalcolithic 1-2 until the end of the 3rd millennium BC. A few sherds testify to other occupation phases: the Neo-Assyrian, Parthian and Sasanian. The site's greatest occupation was during the Islamic epoch.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

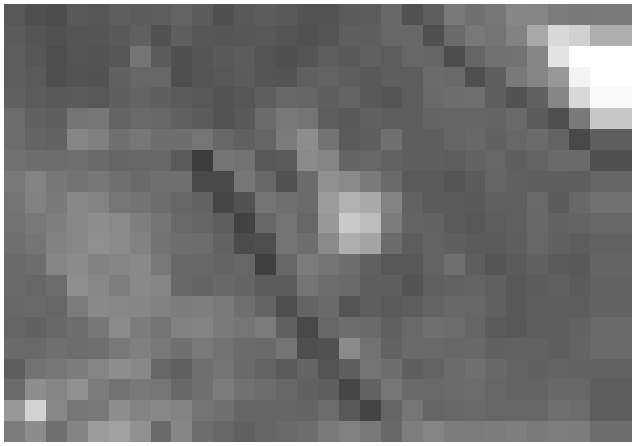
SITE	PERIOD	TYPE	TOTAL	1
339	02	1	1	1
339	04	15	1	1
339	05b	0	1	1
339	05b	11	1	1
339	05b	13	1	1
339	05b	14	1	1
339	06	1	3	3
339	06	5	3	3
339	06	6	4	4
339	07	0	1	1
339	07	19	1	1
339	11	0	1	1
339	14	0	1	1
339	15	0	1	1
339	21	0	103	103
339	Und.	-	7	7
TOT			**131**	**131**

POTTERY SELECTION

N.	Code	Description	Type	Period	Area
1	339.15.1.1	Body sherd; very pale brown surfaces (10YR 7/3) and pink core (7.5YR 7/3) with very pale brown margins (10YR 7/3); mineral fabric with occasional chaff with abundant fine and medium calcite and occasional grits inclusions; red painted decoration on the exterior surface.	T2/1	2	339.1
2	339.15.1.64	Bowl rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR 6/6); chaff fabric with abundant fine and medium calcite inclusions. Rim dm. 26 cm.	T4/15	4	339.1
3	339.15.1.71	Jar rim; reddish yellow exterior surface (7.5YR 7/6), pale yellow interior surface (2.5Y 7/3) and gray core (2.5Y 5/1) with reddish yellow margins (7.5YR 7/6); chaff fabric with common fine and medium mineral inclusions. Rim dm. 26 cm.	T5b/0	5b	339.1
4	339.16.1.1	Jar rim; very pale brown surfaces (10YR 7/3) and dark gray core (2.5Y 4/1); mineral fabric with abundant chaff and occasional fine calcite inclusions; burnished rim. Rim dm. 34 cm.	T5b/11	5b	339.1
5	339.15.1.63	Bowl rim; pale brown surfaces (10YR 6/3) and gray core (10YR 5/1); chaff fabric with abundant fine-medium grits and calcite inclusions; smoothed interior surface. Rim dm. 20 cm.	T5b/13	5b	339.1
6	339.16.1.2	Bowl rim; light yellowish brown surfaces (10YR 6/4) and dark gray core (2.5Y 4/1); chaff fabric with frequent fine-medium calcite inclusions; burnished surfaces. Rim dm. 25 cm.	T5b/14	5b	339.1
7	339.16.1.3	Bowl rim; pale yellow surfaces and core (2.5Y 7/3); fine mineral fabric with occasional chaff and occasional large calcite inclusions; smoothed surfaces; black painted decoration on the exterior surface and on the rim. Rim dm. 15 cm.	T6/1	6	339.1
8	339.15.1.3	Body sherd; pale yellow (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with common chaff and fine calcite and grits inclusions; smoothed surfaces; black painted decoration on the exterior surface.	T6/1	6	339.1
9	339.16.1.5	Bowl rim; light gray surfaces and core (5Y 7/2); fine mineral fabric with few chaff and no visible inclusions. Rim dm. 6 cm.	T6/5	6	339.1
10	339.15.1.5	Body sherd; pale yellow exterior surface (5Y 8/3), light gray interior surface (5Y 7/2) and gray core (2.5Y 6/1); fine mineral fabric with few chaff and no visible inclusions.	T6/5	6	339.1
11	339.15.1.2	Pedestal base; pale yellow surfaces and core (5Y 7/3); mineral fabric with common chaff and abundant calcite and grits inclusions; smoothed surfaces; black painted decoration on the exterior surface. Base dm. 18 cm.	T6/6	6	339.1
12	339.15.1.4	Pedestal base; light gray surface and core (5Y 7/1); mineral fabric with abundant chaff and occasional fine calcite inclusions; smoothed exterior surface.	T6/6	6	339.1
13	339.16.1.10	Base; pale yellow surfaces and core (5Y 8/2); fine mineral fabric with occasional chaff and no visible inclusions. Base dm. 5 cm.	T7/0	7	339.1
14	339.16.1.9	Cup rim; light gray surfaces and core (5Y 7/2) fine mineral fabric with few chaff and no visible inclusions. Rim. dm. 9 cm.	T7/19	7	339.1
15	339.15.1.6	Jar rim; pale yellow surfaces and core (5Y 7/3); mineral fabric with occasional chaff and abundant fine grits inclusions. Rim dm. 24 cm.	T11/0	11	339.1

SITE 340

(C2 sector)



1- Site 340 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 340 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 340 from East. (2013)

SITE NUMBER	340
LOCAL NAME	-
POSITION	364829 E; 4046933 N
AREA	2 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: good; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1**		**1**	**2**		**2**
N. fr. TGAS	9														4		60
N. fr. LoNAP	8											1		1	1		3

SITE DESCRIPTION

Low-mounded site situated on the right bank of the River Gomel, in front of the village of Drishan. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with two collection units).

SITE BIOGRAPHY

The site was discontinuously occupied from the Neo-Assyrian to Islamic periods; the latter represents the peak in settlement expansion.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
340	14	0	4	2	2
340	21	0	60	34	26
340	Und.	-	9	4	5
TOT			**73**	**40**	**33**

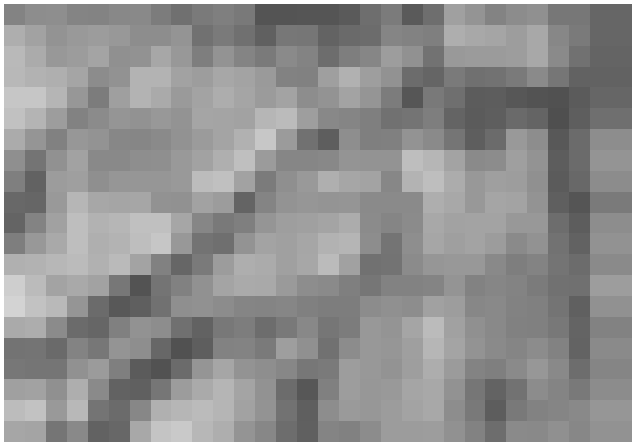
POTTERY SELECTION

Plate 1

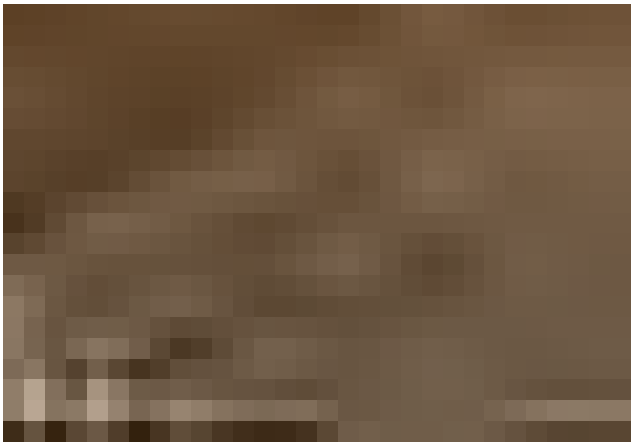
N.	Code	Description	Type	Period	Area
1	340.13.1.1	Rim; reddish yellow surfaces (5YR 7/6) and grayish brown core (10YR 5/2) with pale brown margins (10YR 6/3); chaff fabric with occasional calcite and grits inclusions; traces of burnishing on the exterior surface. Rim dm. 32 cm.	T11/2	11	**LoNAP**

SITE 353 – Barasia 1

(C1 sector)



1- Site 353 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2- Site 353 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 353 (on the left) from South. (2013)

SITE NUMBER	353
LOCAL NAME	Barasia 1
POSITION	359225 E; 4045790 N
AREA	1,4 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: low; 2015: good.
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									1,4							1,4	
N. fr. TGAS	4															2	
N. fr. LoNAP	11								5							1	

SITE DESCRIPTION

The small low-mounded site is located close to a wadi, c. 7 km south-west of Gomel. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). The site features an ashy, light grey soil.

SITE BIOGRAPHY

The few diagnostic sherds collected attest two phases of occupation, during the Middle Bronze Age and the Sasanian period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
353	15	0	1	1
353	15	3	1	1
353	Und.	-	4	4
TOT			**6**	**6**

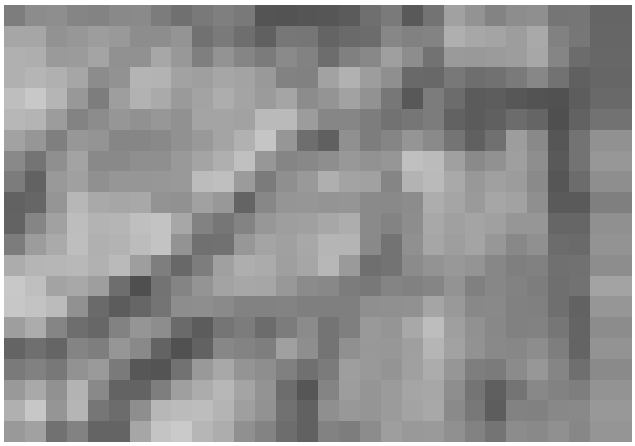
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	353.12.1.4	Rim; very pale brown interior surface (10YR 8/3) and pale yellow exterior surface (2.5Y 8/4); chaff fabric with common fine calcite inclusions; smoothed surface. Rim dm. 18 cm.	**T8/0**	**8**	**LoNAP**
2	353.12.1.8	Rim; pale yellow interior (2.5Y 8/2) and exterior (5Y 8/4 PY) surfaces; chaff fabric with frequent fine calcite inclusions. Rim dm. 28 cm.	**T8/0**	**8**	**LoNAP**
3	353.12.1.7	Rim; reddish yellow core and surfaces (7.5YR 6/6); chaff fabric with frequent fine calcite inclusions. Rim dm. 34 cm.	**T8/0**	**8**	**LoNAP**
4	353.12.1.5	Rim; reddish yellow interior surface (7.5YR 7/6) and very pale brown exterior surface (10YR 8/3); chaff fabric with frequent fine calcite inclusions.	**T8/0**	**8**	**LoNAP**
5	353.12.1.6	Rim; reddish yellow core and surfaces (7.5YR 7/6); chaff fabric with frequent fine calcite inclusions; black painted decoration on the upper part of the rim. Rim dm. 38 cm.	**T8/1**	**8**	**LoNAP**

SITE 354 – Barasia 2

(C1 sector)



1 - Site 354 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 354 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 354 from North. (2015)

SITE NUMBER	354
LOCAL NAME	Barasie 2
POSITION	359367 E; 4045898 N
AREA	0,5 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2013: good; 2015: good
DAMAGE AND THREATS	Buildings on the top of the mound
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**0,5**			**0,5**	**0,5**		**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**
N. fr. TGAS	5				2			1				12			4	3	3
N. fr. LoNAP	27								3		12	15	3	16	21		5

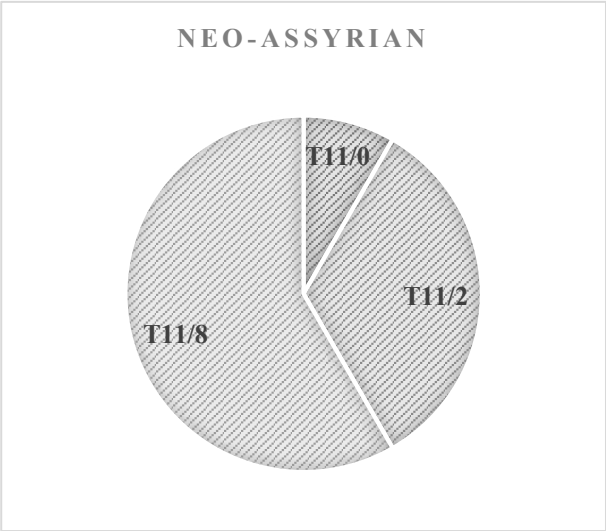
SITE DESCRIPTION

The small mounded site is located close to a wadi, c. 7 km south-west of Gomel. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). A modern house and other small concrete buildings are present on the mound. The site features an ashy, light grey soil, abundant small stones and stone tool fragments.

SITE BIOGRAPHY

Two Late Chalcolithic 1-2 sherds might signify the presence of a buried proto-historic settlement. The site was later settled almost continuously from the mid-late 3rd millennium BC until the Islamic epoch, with a gap in the occupation sequence only during the Mitanni period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
354	04	0	1	1
354	04	0	1	1
354	04	5	1	1
354	07	0	1	1
354	11	0	1	1
354	11	2	4	4
354	11	8	7	7
354	14	0	1	1
354	14	14	1	1
354	14	15	2	2
354	15	0	2	2
354	16	1	1	1
354	21	0	3	3
354	Und.	-	5	5
TOT			**31**	**31**

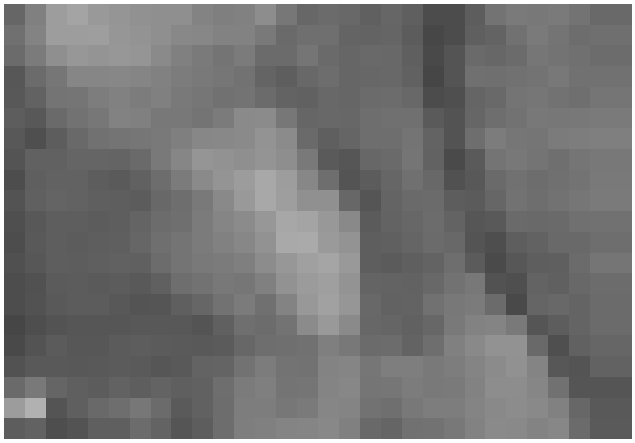
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	354.15.1.2	Rim; pale yellow surfaces and core (5Y 8/2); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T4/0	4	354.1
2	354.15.1.1	Rim; light brown surfaces and core (7.5YR 6/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T4/5	4	354.1
3	354.15.1.3	Base; very pale brown surfaces and core (10YR 7/4); mineral fabric with rare fine chaff and very occasional mineral inclusions. Base dm. 3 cm.	T7/0	7	354.1
4	354.15.1.4	Rim; very pale brown exterior surface (10YR 7/3), pink interior surface (7.5YR 7/4) and reddish yellow core (7.5YR 6/6); mineral fabric with abundant fine grits and calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/0	11	354.1
5	354.15.1.6	Rim; pale yellow surfaces (5Y 8/2) and yellow core (10YR 7/6); mineral fabric with few chaff and frequent fine grits and calcite inclusions. Rim dm. 24 cm.	T11/2	11	354.1
6	354.15.1.5	Rim; very pale brown surfaces (10YR 7/3) and reddish yellow core (7.5YR 6/6); mineral fabric with abundant chaff and occasional fine calcite inclusions. Rim dm. 26 cm.	T11/2	11	354.1
7	354.15.1.11	Rim; pale yellow surfaces (5Y 8/2) and yellow core (10YR 7/6); mineral fabric with frequent fine grits and calcite inclusions. Rim dm. 8 cm.	T11/8	11	354.1
8	354.15.1.13	Rim; pale yellow surfaces (5Y 8/2) and reddish yellow core (7.5YR 6/6); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 26 cm.	T11/8	11	354.1
9	354.12.1.5	Rim; pinkish gray slipped surfaces (7.5 YR 7/2); mineral fabric with frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 25 cm.	**T12/6**	**12**	**LoNAP**

SITE 423

(C3 sector)



1 - Site 423 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 423 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 423 from West. (2015)

SITE NUMBER	423
LOCAL NAME	-
POSITION	367524 E; 4048061 N
AREA	1,8 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**1,8**	**1,8**		**1,8**	**1,8**		**1,8**	**1,8**					
N. fr. TGAS	11				8	12		2			7	6					
N. fr. LoNAP	5							2	1								

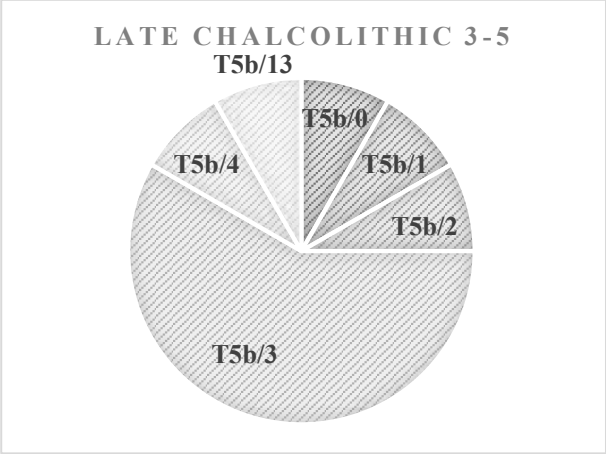
SITE DESCRIPTION

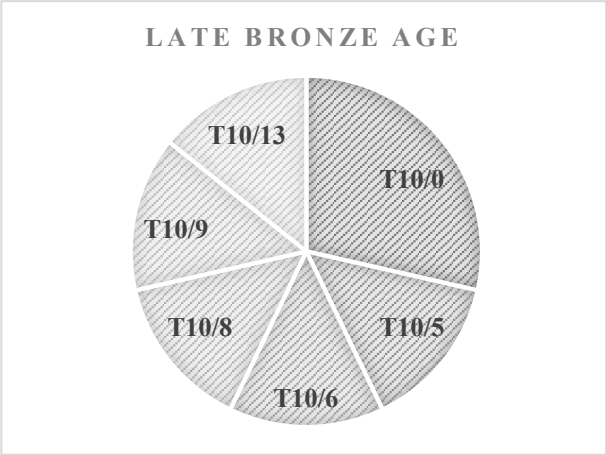
Elongated low-mounded site located immediately south of Tell Sheikh Ibrahim, 500 m south of Kalakchi. The site features an ashy, light grey soil. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit).

SITE BIOGRAPHY

The site had a long occupation history during the Late Chalcolithic period, and afterwards was also occupied during the mid-late 3rd millennium BC and the Middle Bronze Age, but probably not so densely as in the previous epochs. After an occupation hiatus that occurred during the Mitanni period, the site was again settled during the Middle Assyrian and Neo-Assyrian periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
423	04	0	1	1
423	04	5	3	3
423	04	18	4	4
423	05b	0	1	1
423	05b	1	1	1
423	05b	2	1	1
423	05b	3	7	7
423	05b	4	1	1
423	05b	13	1	1
423	07	0	2	2
423	10	0	2	2
423	10	5	1	1
423	10	6	1	1
423	10	8	1	1
423	10	9	1	1
423	10	13	1	1
423	11	0	2	2
423	11	8	4	4
423	Und.	-	11	11
TOT			**46**	**46**

POTTERY SELECTION

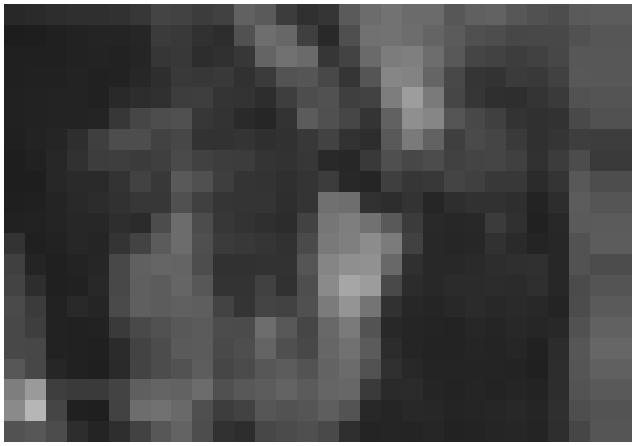
Plate 1

N.	Code	Description	Type	Period	Area
1	423.15.1.8	Rim; light reddish brown surfaces (5YR 5/4) and dark gray core (2.5Y 4/1); mineral fabric with abundant chaff and occasional fine calcite inclusions; burnished exterior surface. Rim dm. 22 cm.	T4/5	4	423.1
2	423.15.1.7	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (2.5Y 4/1); mineral fabric with abundant chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T4/5	4	423.1
3	423.15.1.2	Rim; light yellowish brown surfaces (10YR 6/4) and grayish brown core (10YR 5/2) with light yellowish brown margins (10YR 6/4); mineral fabric with abundant chaff and abundant fine, medium and large grits inclusions. Rim dm. 20 cm.	T4/18	4	423.1
4	423.15.1.3	Rim; light gray surfaces (5Y 7/2) and light yellowish brown core (2.5Y 6/3); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T4/18	4	423.1
5	423.15.1.13	Rim; reddish yellow exterior surface (5YR 6/6), very pale brown interior surface (10YR 7/4) and gray core (10YR 5/1); mineral fabric with frequent chaff with occasional fine calcite inclusions; smoothed surfaces and burnished exterior surface. Rim dm. 20 cm.	T5b/0	5b	423.1
6	423.15.1.19	Rim; light gray surfaces and core (2.5Y 7/2); mineral fabric with abundant chaff frequent calcite e other mineral inclusions. Rim dm. 22 cm.	T5b/1	5b	423.1
7	423.15.1.20	Rim; pale yellow surfaces and core (2.5Y 8/3); mineral fabric with frequent chaff and frequent fine calcite and grits inclusions. Rim dm. 24 cm.	T5b/2	5b	423.1
8	423.15.1.12	Bowl rim; light brownish gray exterior surface (2.5Y 6/2), gray interior surface (2.5Y 5/1) and dark gray core (5Y 4/1); mineral fabric with abundant chaff and occasional calcite inclusions; burnished interior surface. Rim dm. 26 cm.	T5b/3	5b	423.1
9	423.15.1.11	Rim; light olive gray surfaces (5Y 6/2) and dark gray core (5Y 4/1) with light olive gray margins (5Y 6/2); mineral fabric with occasional chaff and rare fine calcite inclusions; burnished interior surface. Rim dm. 26 cm.	T5b/3	5b	423.1
10	423.15.1.18	Rim; very pale brown surfaces (10YR 7/4) and gray core (2.5Y 5/1); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T5b/4	5b	423.1
11	423.15.1.10	Rim; pale yellow interior surface (2.5Y 7/3), reddish yellow exterior surface (5YR 7/6) and gray core (5Y 5/1); chaff fabric with occasional fine calcite inclusions. Rim dm. 20 cm.	T5b/13	5b	423.1
12	423.15.1.21	Rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); mineral fabric with common chaff with common fine grits. Rim dm. 18 cm.	T7/0	7	423.1
13	423.15.1.22	Rim; light brown surfaces and core (7.5YR 6/4); mineral fabric with abundant fine grits and calcite inclusions. Rim dm. 12 cm.	T7/0	7	423.1
14	423.13.1.6	Rim; pale yellow core and surfaces (2.5 Y 7/3); fine mineral fabric with no visible inclusions; dark brown painted decoration on the exterior and interior surfaces.	**T8/1**	**8**	**LoNAP**

Plate 2

N.	Code	Description	Type	Period	Area
15	423.15.1.25	Rim; pale yellow surfaces and core (2.5Y 7/4); mineral fabric with frequent chaff and occasional fine calcite and grits inclusions. Rim dm. 10 cm.	T10/5	10	423.1
16	423.15.1.24	Rim; pale yellow exterior surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with frequent chaff and occasional fine grits inclusions. Rim dm. 26 cm.	T10/6	10	423.1
17	423.15.1.29	Base; reddish yellow surfaces and core (7.5YR 7/6); occasional chaff and occasional medium calcite inclusions. Base dm. 2 cm.	T10/8	10	423.1
18	423.15.1.27	Base; pale yellow exterior surface (2.5Y 8/3) and light brown core (7.5YR 6/4); mineral fabric with occasional medium-large calcite inclusions. Base dm. 5 cm.	T10/9	10	423.1
19	423.15.1.23	Rim; pale yellow surfaces (2.5Y 7/3) and very pale brown core (10YR 7/4); chaff fabric with occasional mineral inclusions; smoothed surfaces. Rim dm. 22 cm.	T10/13	10	423.1
20	423.15.1.34	Rim; pale yellow surfaces and core (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 8 cm.	T11/0	T11	423.1
21	423.15.1.30	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/4); mineral fabric with abundant chaff and frequent calcite inclusions; smoothed exterior surface. Rim dm. 20 cm.	T11/8	T11	423.1
22	423.15.1.31	Rim; very pale brown surfaces and core (10YR 8/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 12 cm.	T11/8	T11	423.1
23	423.15.1.32	Rim; pale yellow surfaces (5Y 8/2) and pale yellow core (2.5Y 7/4); mineral fabric with abundant chaff and occasional calcite inclusions. Rim dm. 19 cm.	T11/8	T11	423.1

SITE 424 – Muhammad Abu (C3 sector)



1- Site 424 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 424 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 424 from North. (2015)

SITE NUMBER	424
LOCAL NAME	Muhammad Abu
POSITION	367308 E; 4046956 N
AREA	0,8 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**0,8**			**0,8**		
N. fr. TGAS	1											8			2		
N. fr. LoNAP												2					

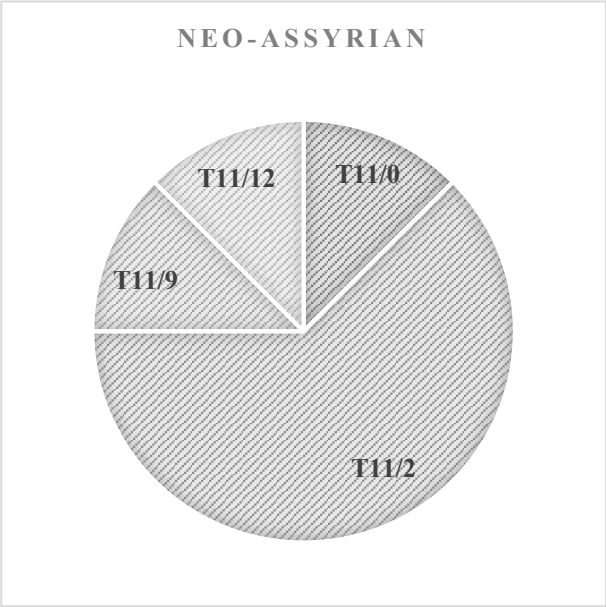
SITE DESCRIPTION

Small circular low-mounded site situated close to a wadi, c. 1.5 km south of Kalakchi. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). The site features abundant small stones.

SITE BIOGRAPHY

The site had only two occupation phases, during the Neo Assyrian and the Parthian periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
424	11	0	1	1
424	11	2	5	5
424	11	9	1	1
424	11	12	1	1
424	14	0	2	2
424	Und.	-	1	1
TOT			**11**	**11**

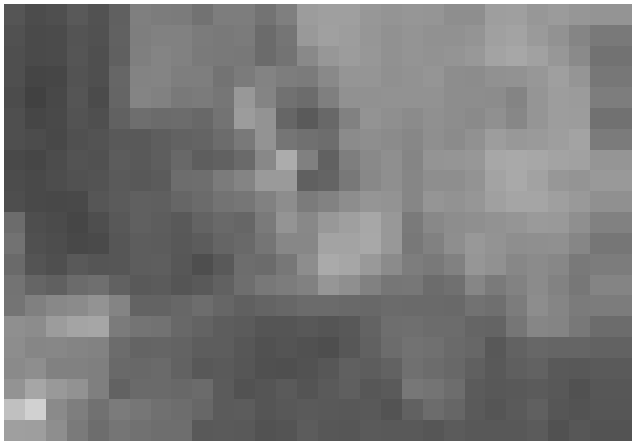
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	424.15.1.8	Rim; pale yellow surfaces and core (5Y 7/4); fine mineral fabric with common very fine calcite inclusions; smoothed surfaces. Rim dm. 8 cm.	T11/0	11	424.1
2	424.15.1.2	Rim; very pale brown surfaces (10YR 8/3) and light brown core (7.5YR6/4); mineral fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/2	11	424.1
3	424.15.1.4	Rim; reddish yellow surfaces and core (7.5YR 7/6); mineral fabric with common chaff and frequent fine calcite and grits inclusions. Rim dm. 20 cm.	T11/2	11	424.1
4	424.15.1.1	Rim; very pale brown surfaces (10YR 7/4) and pinkish gray core with reddish yellow margins (7.5YR 6/2 and 7.5YR 7/6); mineral fabric with common chaff ad occasional fine calcite inclusions. Rim dm. 12 cm.	T11/9	11	424.1
5	424.15.1.5	Rim; pale yellow surfaces (5Y 7/3) and pale olive core (5Y 6/3); mineral fabric with occasional chaff and rare fine grits inclusions. Rim dm. 18 cm.	T11/12	11	424.1

SITE 480

(B2 sector)



1- Site 480 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 480 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 480 from North-West. (2015)

SITE NUMBER	480
LOCAL NAME	-
POSITION	364133; 4051992
AREA	3 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	Building on the top of the mound
COLLECTION AREAS	1-8

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		**3**			**0,2**			**0,1**	**1,4**		**0,9**	**2,5**	**0,1**	**0,4**	**1,3**	**0,5**	**1,3**
N. fr. TGAS	33				1			2	5		2	39	1	2	14	4	11
N. fr. LoNAP	20	2						2	7			45	1		4		

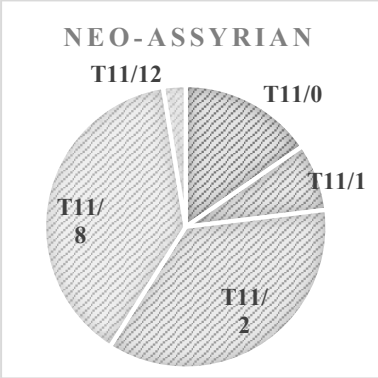
SITE DESCRIPTION

The site is one of a group of five high and low-mounded sites located on a crevasse splay, about 700 m north of Tell Gomel. The site was in a cucumber field at the time of the TGAS survey, and a small concrete building stood on the top of the mound. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (8 collection units).

SITE BIOGRAPHY

The site had short Pre- and Proto-historic occupation periods during the Early Pottery Neolithic and the Late Chalcolithic. Subsequently it was almost continuously settled from the mid-late 3rd millennium until the Islamic epoch, with a gap only during the Mitanni period. The site's maximum occupation density and extension was in the Neo-Assyrian period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6	7
480	04	0	1							1
480	07	0	2	1			1			
480	08	0	3				1	2		
480	08	2	1			1				
480	08	13	1			1				
480	10	5	1					1		
480	10	12	1					1		
480	11	0	6	1	1		1	2	1	
480	11	1	3	1		1		1		
480	11	2	14	2		3	2	5	1	1
480	11	8	15	3	4	1	1	4	2	
480	11	12	1				1			
480	12	1	1	1						
480	13	0	2		2					
480	14	0	10	4	5		0			1
480	14	7	1	1						
480	14	14	3		1		2			
480	15	0	3				1	2		
480	15	2	1				1			
480	21	0	11	2	2	2		3	2	
480	Und.	-	33	8	2	8	1	11		3
TOT			**114**	**24**	**18**	**16**	**12**	**32**	**6**	**6**

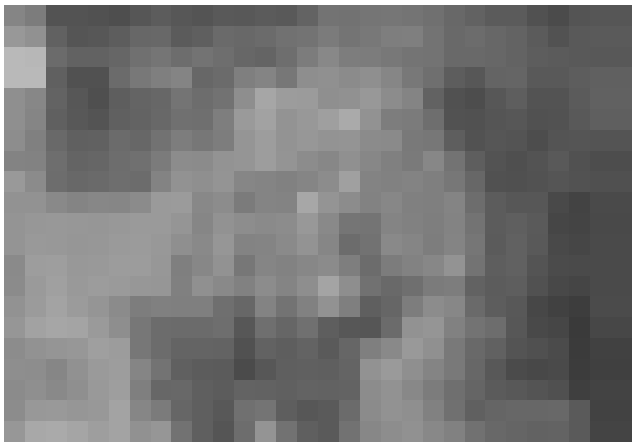
POTTERY SELECTION

Plate 1

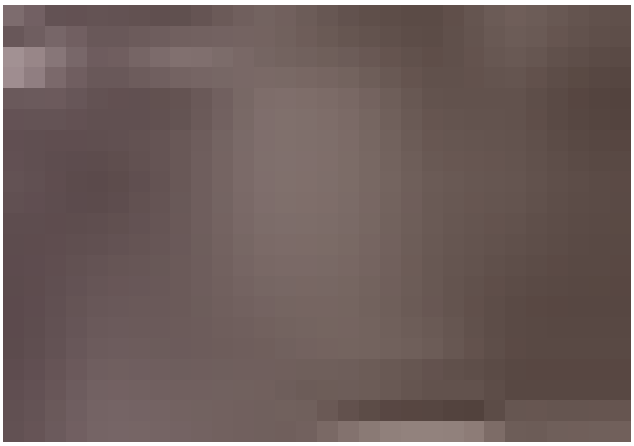
N.	Code	Description	Type	Period	Area
1	480.15.7.1	Rim; light reddish brown surfaces (5YR 6/4) and grayish brown core (10YR 8/2); chaff fabric with occasional fine calcite inclusions; burnished interior surface and exterior surface of the rim. Rim dm. 28 cm.	T4/0	4	480.7
2	480.15.1.1	Rim; pale yellow surface and core (5Y 7/3); fine mineral fabric with occasional fine chaff and rare medium calcite inclusions; smoothed surfaces. Rim dm. 6 cm.	T7/0	7	480.1
3	480.15.3.1	Rim; reddish yellow surfaces and core (7.5YR 7/6); chaff fabric with fine calcite inclusions; smoothed surface. Rim dm. 30 cm.	T8/0	8	480.3
4	480.15.5.1	Rim; very pale brown surfaces (10YR 7/4) and pale yellow core (2.5Y 7/3); mineral fabric with common chaff and frequent fine grits and calcite inclusions; smoothed surfaces. Rim dm. 19 cm.	T8/0	8	480.5
5	480.15.3.3	Rim; very pale brown exterior surface (10YR 8/3) and reddish yellow surfaces and core (7.5YR 7/6); mineral fabric with abundant fine calcite inclusions. Rim dm. 40 cm.	T8/2	8	480.3
6	480.15.5.4	Rim; pale yellow surfaces (5Y 7/3) and light yellowish brown core (2.5Y 6/3); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surface. Rim dm. 19 cm.	T10/5	10	480.5
7	480.15.5.3	Rim; pale yellow slipped exterior surface (2.5Y 8/3), very pale brown interior surface (10YR 7/4) and brown core (7.5YR 5/3) with reddish yellow margins (5YR 6/6); chaff fabric with abundant fine calcite and grits inclusions. Rim dm. 38 cm.	T10/12	10	480.5
8	480.15.3.4	Rim; reddish yellow surfaces (7.5YR 7/6) and light brown core (7.5YR 6/4); mineral fabric with common chaff and common fine calcite inclusions; burnished rim. Rim dm. 27 cm.	T10/13	10	480.3
9	480.15.6.2	Rim; reddish yellow surfaces (7.5Yr 7/6) and dark gray core (10YR 4/1); chaff fabric with rare fine mineral inclusions; burnished exterior surface. Rim dm. 12 cm.	T11/0	11	480.6
10	480.15.4.7	Base; pale yellow exterior surface (5Y 8/3) and reddish yellow interior surface and core (5YR 6/6); mineral fabric with occasional chaff and abundant fine calcite inclusions. Base dm. 3 cm.	T11/0	11	480.4
11	480.15.1.2	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with common fine calcite inclusions; traces of burnishing on the rim and the exterior surface. Rim dm. 17 cm.	T11/1	11	480.1
12	480.15.1.3	Rim; very pale brown exterior surface (10YR 8/3), reddish yellow interior surface and core (7.5YR 7/6); mineral fabric with occasional fine calcite inclusions; burnished interior surface. Rim dm. 24 cm.	T11/2	11	480.1
13	480.15.3.5	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/2	11	480.3
14	480.15.1.5	Rim; reddish yellow surfaces (5YR 7/6) and light yellowish brown core (10YR 6/4); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions. Rim dm. 16 cm.	T11/8	11	480.1
15	480.15.2.5	Rim; pale yellow surfaces and core (5Y 8/3); mineral fabric with frequent chaff with occasional fine calcite inclusions. Rim dm. 9 cm.	T11/8	11	480.2
16	480.15.4.4	Rim; pale yellow exterior surface (5Y 8/1) and very pale brown interior surface and core (10YR 7/4); fine mineral ware with occasional very fine grits; smoothed surfaces. Rim dm. 16 cm.	T11/12	11	480.4
17	480.15.1.3	Rim; pale yellow surface and core (5Y 7/3); mineral fabric with common fine chaff and occasional very fine grits inclusions. Rim dm. 11 cm.	T12/1	12	480.1

SITE 481

(B2 sector)



1– Site 481 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 481 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 481 from North. (2015)

SITE NUMBER	481
LOCAL NAME	-
POSITION	364591; 4052215
AREA	5,7 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	Buildings on the top of the mound
COLLECTION AREAS	1-6

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**5,7**	**2,7**	**5,2**	**2,7**	**0,6**		**2,8**	**3,4**	**2,8**	**0,5**	**5,7**			**2,8**	**0,7**	**5,7**
N. fr. TGAS	28	3	4	9	12				12		4					3	84
N. fr. LoNAP	26	7		3	4	1		2	15	1		3			4	2	22

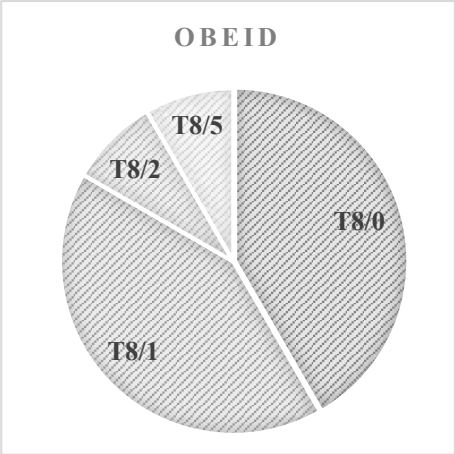
SITE DESCRIPTION

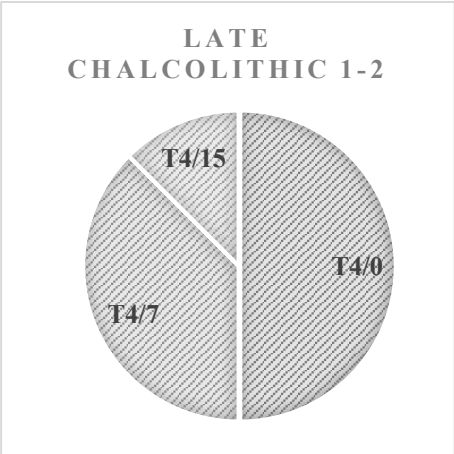
The site is one of a group of five high and low-mounded sites located on a crevasse splay, about 700 m north of Tell Gomel. There is a small concrete building on the top of the mound. The site features an ashy, light grey soil and abundant microliths. The site was surveyed in 2013 by the LoNAP team (two collection units) and in 2015 by the TGAS team (6 collection units).

SITE BIOGRAPHY

The site was occupied continuously during the Pre- and Proto-historic periods, from the beginning of the Ceramic Neolithic to the end of the Late Chalcolithic. The site grew in extension and was especially densely settled during the Ubaid period. Afterwards, the site was occupied from the mid-late 3rd millennium BC until the Neo-Assyrian period. After a gap in the settlement sequence, the site was again occupied from the Parthian to Islamic epochs.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6
481	01	0	3			3			
481	02	0	1	1					
481	02	1	3	1	1	1			
481	03	0	5	1		1			
481	03	1	5	2	1	1		1	
481	03	2	1	1					
481	03	5	1	1					
481	04	0	4	2		1			5
481	04	7	3			3			
481	04	15	1						1
481	04-05	0	1						1
481	08	0	6	1					5
481	08	1	6		2		3		1
481	10	0	3				3		
481	10	10	1				1		
481	15	2	1	1					
481	16	4	1	1					
481	16	6	1	1					
481	21	0	84	18	18	5	8	18	17
481	Und.	-	28	8	2	8	8	2	
TOT			**158**	**39**	**24**	**23**	**23**	**21**	**30**

POTTERY SELECTION

Plate 1

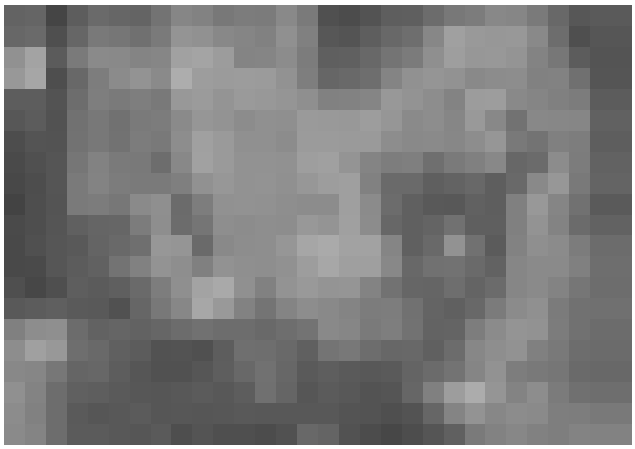
N.	Code	Description	Type	Period	Area
1	481.15.1.2	Rim; pink core and exterior surface (5YR 7/4) and very pale brown interior surface; mineral fabric with common chaff and abundant fine calcite inclusions; burnished interior surface. Rim dm. 22 cm.	T2/0	2	481.1
2	481.15.1.1	Rim; very pale brown surfaces (10YR 7/4) and yellowish red core (5YR 5/6); mineral fabric with occasional fine calcite and grits inclusions; burnished surfaces; black painted decoration on the rim. Rim dm. 26 cm.	T2/1	2	481.1
3	481.15.3.3	Rim; reddish brown surfaces and core (5YR 5/4); mineral fabric with common chaff and abundant very fine calcite inclusions; smoothed interior surface and burnished exterior surface; dark brown painted decoration on the exterior surface and on the rim. Rim dm. 26 cm.	T2/1	2	481.3
4	481.15.1.3	Rim; pale brown surfaces and core (10YR 6/3); mineral fabric with frequent chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T3/0	3	481.1
5	481.15.2.1	Body sherd; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 6/6); chaff fabric with frequent fine-medium calcite and occasional fine grits inclusions; smoothed surfaces; black painted decoration on the exterior surface. Obeid/Trans Halaf?	T3/1	3	481.2
6	481.15.5.1	Rim; pale yellow core and surfaces (5Y 7/4); chaff fabric with frequent fine calcite inclusions; dark painted decoration on the rim. Rim dm. 15 cm.	T3/1	3	481.5
7	481.15.3.8	Rim; light red exterior surface (2.5YR 6/6) and dark gray interior surface and core (10YR 4/1); mineral fabric with common chaff and abundant large mineral inclusions; burnished interior surface. Cooking pot. Rim dm. 37 cm.	T4/0	4	481.3
8	481.15.3.5	Rim; light red surfaces (2.5YR 6/6) and reddish yellow core (7.5YR 6/6); mineral fabric with occasional chaff and frequent fine calcite inclusions; burnished surfaces. Rim dm. 21 cm.	T4/7	4	481.3
9	481.15.6.28	Rim; brown surfaces (7.5YR 5/3) and dark gray core (10YR 4/1) with pale brown margins (10YR 6/3); chaff fabric with no visible inclusions; burnished surfaces. Rim dm. 20 cm.	T4/15	4	481.6
10	481.15.6.31	Rim; reddish yellow surfaces and core (5YR 7/6); chaff fabric with frequent medium grits inclusions; smoothed surfaces. Rim dm. 26 cm.	T4-5/0	4-5	481.6
11	481.13.2.46	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/0	7	**LoNAP**
12	481.15.6.7	Rim; pale yellow core and surfaces (5Y 8/4); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 44 cm.	T8/0	8	481.6
13	481.15.6.5	Rim; very pale brown surfaces (10YR 8/4) and pale brown core (10YR 6/3); chaff fabric with frequent fine calcite and occasional grits inclusions. Rim dm. 39 cm.	T8/0	8	481.6
14	481.15.6.8	Body sherd; very pale brown core and surfaces (10YR 7/4); mineral fabric with common chaff and fine calcite inclusions; smoothed surfaces; dark painted decoration on the exterior surface.	T8/1	8	481.6
15	481.13.2.20	Rim; very pale brown core and surfaces (10YR 7/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 34 cm.	T9/0	9	**LoNAP**

Plate 2

N.	Code	Description	Type	Period	Area
16	481.15.4.4	Rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR 7/6); chaff fabric with common fine calcite inclusions. Rim dm. 15,6 cm.	T10/0	10	481.4
17	481.15.4.7	Rim; very pale brown core (10YR 7/4) and pale yellow surfaces (2.5Y 8/3); chaff fabric with very fine calcite and occasional large calcite inclusions; smoothed surfaces. Rim dm. 40 cm.	T10/0	10	481.4
18	481.15.4.6	Rim; reddish yellow core and surfaces (5YR 6/6); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 38 cm.	T10/10	10	481.4
19	481.13.1.1	Rim; reddish yellow surfaces (5YR 7/6) and gray core (10YR 5/1); chaff fabric with occasional fine calcite inclusions.	T11/0	11	**LoNAP**

SITE 482

(B2 sector)



1 - Site 482 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 482 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 482 from North. (2015)

SITE NUMBER	482
LOCAL NAME	-
POSITION	364441 E; 4051985 N
AREA	4,7 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	Building on the top of the mound
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**0,5**		**3,5**	**1,9**	**2**		**0,5**	**1,3**	**0,5**	**0,7**	**4**	**0,6**		**4,1**	**3,5**	**4,1**
N. fr. TGAS	50	7		14	3			1	3	1	3	10	2		15	7	26
N. fr. LoNAP	7			1	3	1				1		1			4		

SITE DESCRIPTION

It is one of a group of five high and low-mounded sites located on a crevasse splay, about 700 m north of Tell Gomel. The site was surveyed in 2013 by the LoNAP team (two collection units) and in 2015 by the TGAS team (five collection units). The site features abundant stone tool and baked brick fragments, numerous microliths and frequent stones. The site surface was cultivated with cucumbers at the time of the TGAS survey. A small building sits on the top of the mound.

SITE BIOGRAPHY

The site had a long settlement history; it was fairly continuously occupied between the Early Pottery Neolithic and the Islamic epoch, with gaps in the occupation sequence during the Halaf, Ninivite V and Hellenistic periods. The peaks in settlement expansion were in the Ubaid, Neo-Assyrian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
482	01	0	5		4			2
482	01	1	1					1
482	03	1	14			11	2	
482	03	2	1				1	
482	04	0	3			2		
482	04	7	1					1
482	04-05	0	3				3	
482	07	19	1					1
482	08	0	3			3		
482	09	0	1					1
482	10	0	2	2				
482	10	10	1	1				
482	11	0	1		1			
482	11	2	2			1	1	
482	11	8	6		2	2	1	1
482	11	12	1		1			
482	12	0	2		2			
482	14	0	9	1	1	2	5	
482	14	14	1				1	
482	14	15	5	2	2	1		
482	15	0	4			3	1	
482	15	2	3		1		2	
482	21	0	26	13		8	2	3
482	Und.	-	50	14	7	19	8	3
TOT			**144**	**33**	**21**	**52**	**27**	**11**

POTTERY SELECTION

Plate 1

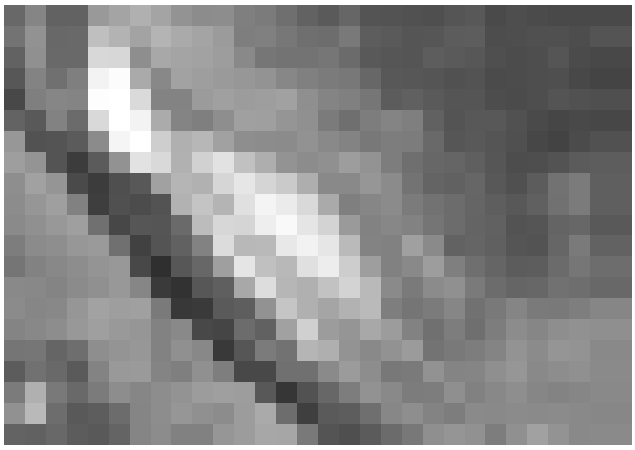
N.	Code	Description	Type	Period	Area
1	482.15.2.4	Body sherd; very pale brown surfaces (10YR 7/4) and grayish brown core (10YR 5/2); chaff fabric with frequent fine calcite inclusions; deep incisions on the exterior surface.	T1/0	1	482.2
2	482.15.2.3	Rim; reddish yellow surfaces (5YR 7/6) and grayish brown core (2.5Y 5/2); chaff fabric with occasional grits, quartz and fine-medium calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T1/0	1	482.2
3	482.15.2.2	Rim; reddish yellow surfaces (5YR 7/6) and grayish brown core (2.5Y 5/2); chaff fabric with occasional mica and fine calcite inclusions; smoothed surfaces. Rim dm. 23 cm.	T1/0	1	482.2
4	482.15.5.2	Rim; reddish yellow core and surfaces (7.5YR 7/6; mineral fabric with common chaff and fine calcite inclusions; smoothed surfaces; red painted decoration on the exterior surface. Rim dm. 15 cm.	T1/1	1	482.5
5	482.15.4.16	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional fine calcite inclusions; black painted decoration on the rim. Rim dm. (?) cm.	T3/0	3	482.4
6	482.15.4.23	Body sherd; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); mineral fabric with occasional chaff and fine calcite inclusions; burnished surfaces on the exterior surface; black painted decoration on the exterior surface.	T3/0	3	482.4
7	482.15.3.34	Body sherd; pale olive core and surfaces (5Y 6/3); chaff fabric with occasional fine and large calcite inclusions; burnished exterior surface; black painted decoration on the exterior surface.	T3/1	3	482.3
8	482.15.4.24	Body sherd; very pale brown surfaces (10YR 8/3) and reddish yellow interior surface and core (5YR 7/6); chaff fabric with frequent fine mineral inclusions; corrugated exterior surface.	T3/2	3	482.4
9	482.15.3.29	Rim; brownish yellow surfaces (10YR 6/6) and dark gray core (2.5Y 4/1) with brownish yellow margins (10YR 6/6); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T4/0	4	482.3
10	482.15.3.24	Rim; reddish yellow surfaces (5YR 7/6) and very pale brown core (10YR 7/4) with reddish yellow (5YR 7/6); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions. Rim dm. 13 cm.	T4/0	4	482.3
11	482.15.5.5	Rim; reddish yellow surfaces and core (7.5YR 6/6); mineral fabric with abundant fine-medium calcite inclusions; burnished rim interior. Rim dm. 17 cm.	T4/7	4	482.5
12	482.15.4.19	Rim; reddish yellow core and surfaces (7.5YR 7/6); chaff fabric with abundant fine-medium calcite inclusions. Rim dm. 25 cm.	T4-5/0	4-5	482.4
13	482.15.5.6	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 17 cm.	T7/19	7	482.5
14	482.15.3.1	Rim; very pale brown surfaces (10YR 7/4) and gray core (10YR 5/1); chaff fabric with abundant fine calcite inclusions. Rim dm. 21 cm.	T8/0	8	482.3

Plate 2

N.	Code	Description	Type	Period	Area
14	482.15.3.1	Rim; very pale brown surfaces (10YR 7/4) and gray core (10YR 5/1); chaff fabric with abundant fine calcite inclusions. Rim dm. 21 cm.	T8/0	8	482.3
15	482.15.5.7	Rim; pale yellow surfaces (5Y 8/3) and very pale brown core (10YR 7/3); chaff fabric with abundant fine calcite and occasional grits inclusions. Rim dm. > 51 cm.	T9/15	9	482.5
16	482.15.1.3	Rim; brownish yellow surfaces and core (10YR 6/6); fine mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 20 cm.	T10/10	10	482.1
17	482.15.2.5	Rim; reddish yellow core and surfaces (7.5YR 7/4); fine mineral fabric with rare fine; smoothed surfaces. Rim dm. 10 cm.	T11/0	11	482.2
18	482.15.3.4	Rim; very pale brown surfaces and core (10YR 7/4); mineral ware with occasional chaff and frequent fine-medium calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T11/2	11	482.3
19	482.15.3.5	Rim; brownish yellow core (10YR 6/6); mineral fabric with abundant chaff and common fine mineral calcite inclusions. Rim dm. 17 cm.	T11/8	11	482.3
20	482.15.5.8	Jar rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with occasional chaff and common fine and large calcite inclusions; smoothed surfaces. Rim dm. 17 cm.	T11/8	11	482.5
21	481.15.2.6	Rim; very pale brown exterior surface (10YR 7/4) and yellowish red interior surface and core (5YR 5/6); chaff fabric with common calcite inclusions. Rim dm. 33 cm.	T11/12	11	482.2
22	482.15.2.9	Rim; light red surfaces and core (2.5YR 6/6); abundant mica and fine calcite and grits inclusions; smoothed surfaces. Rim dm. 25 cm.	T12/0	12	482.2

SITE 483

(B2 sector)



1- Site 483 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 483 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 483 from East. (2015)

SITE NUMBER	483
LOCAL NAME	-
POSITION	363781 E; 4051890 N
AREA	0,8 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	2013: good; 2015: good
DAMAGE AND THREATS	River erosion
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								0,8				0,8			0,8		0,8
N. fr. TGAS																	
N. fr. LoNAP	8							2				4			3		1

SITE DESCRIPTION

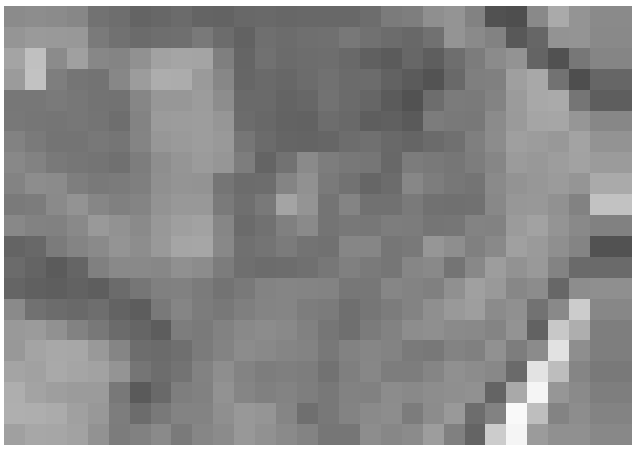
Flat elongated site located on the left bank of the River Gomel river, c. 700 m north of Tell Gomel. The site features grey ashy soil and abundant small stones. The site was probably partially eroded by the river. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit). Only the LoNAP team collected a few diagnostic sherds.

SITE BIOGRAPHY

The site was settled during the mid-late 3rd millennium BC, and the Neo-Assyrian, Parthian and Islamic periods.

SITE 484

(B2 sector)



1 - Site 484 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 484 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 484 from South. (2015)

SITE NUMBER	484
LOCAL NAME	-
POSITION	363499 E; 4051648 N
AREA	2,2 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2012: good; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					**2,2**			**1**	**1**		**2**	**2**			**1**		**2**
N. fr. TGAS	14							1	1		5	16			1		32
N. fr. LoNAP	11				1				1			14					5

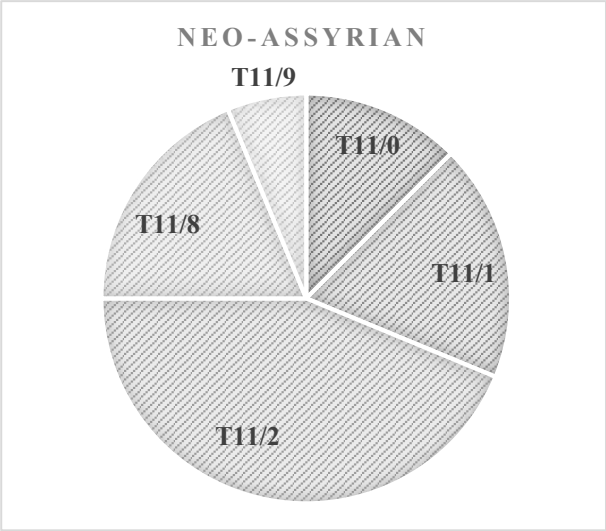
SITE DESCRIPTION

The low-mounded site is located on the right bank of the River Gomel river, c. 500 m north-west of Tell Gomel. The site features an ashy-sandy soil, abundant small to medium stones, numerous fragments of grindstone (one is complete), and a few baked brick fragments. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (two collection units).

SITE BIOGRAPHY

The site was occupied during the mid-late 3rd millennium BC and Middle Bronze Age, but the few sherds collected might signify a non-permanent or short-lived settlement. During the Middle Assyrian and the Neo-Assyrian periods the site was densely settled and reached its maximum expansion. In the Parthian period the site was briefly occupied, but during the Islamic epoch again reached its maximum extension.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
484	07	19	1	1	
484	08	0	1	1	
484	10	0	4	4	
484	10	6	1		1
484	11	0	2		2
484	11	1	3		3
484	11	2	7	4	3
484	11	8	3		3
484	11	9	1	1	
484	14	7	1		1
484	21	0	32	2	30
484	Und.	-	14	6	8
TOT			**70**	**19**	**51**

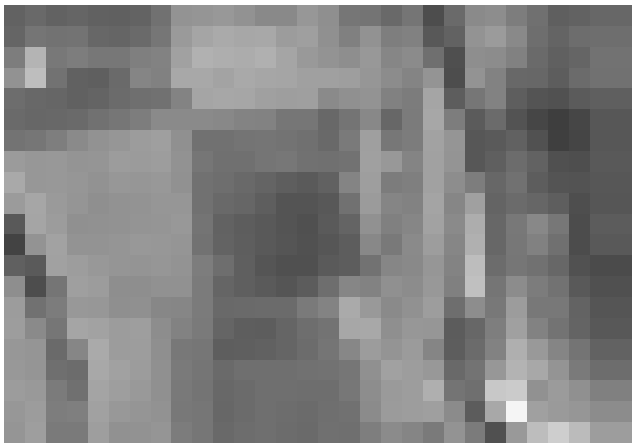
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	484.13.1.22	Rim; pink core (7.5YR 7/4) and reddish yellow surfaces (5YR 7/6); chaff fabric with abundant fine to large calcite inclusions. Rim dm. 56 cm.	T4/0	4	LoNAP
2	484.15.1.1	Rim; pale yellow core ad surfaces (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 13 cm.	T7/19	7	484.1
3	484.15.1.2	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with common chaff and occasional fine calcite inclusions. overfired. Rim dm. 10 cm.	T8/0	8	484.1
4	484.15.1.3	Base; pale yellow core and surfaces (2.5Y 7/3); coarse chaff fabric with frequent fine calcite inclusions. Rim dm. 10 cm.	T10/9	10	484.1
5	484.15.2.1	Rim; pale yellow core and surfaces (5Y 8/2); mineral fabric with occasional fine chaff and no visible inclusions; overfired. Rim dm. 17 cm.	T10/13	10	484.2
6	484.15.2.3	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with occasional chaff and fine calcite and grits inclusions. Rim dm. 25 cm.	T11/1	11	484.2
7	484.15.1.7	Rim; brownish yellow core (10YR 6/6) and pale yellow exterior (10YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; burnished surfaces. Rim dm. 20 cm.	T11/2	11	484.1
8	484.15.2.11	Rim; reddish yellow exterior surface and core (5YR 6/6) and pale yellow interior surface (10YR 8/3); mineral fabric with abundant fine calcite inclusions. Rim dm. 10 cm.	T11/8	11	484.2
9	484.15.1.11	Rim; brownish yellow core (10YR 6/6) and pale yellow exterior (10YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 24 cm.	T11/9	11	484.1

SITE 485

(B2 sector)



1 - Site 485 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 485 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 485 from South. (2013)

SITE NUMBER	485
LOCAL NAME	-
POSITION	363422 E; 4052093 N
AREA	2 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: very low; 2015: good.
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									**1**			**1**			**1**	**1**	**2**
N. fr. TGAS	10								1						1	3	32
N. fr. LoNAP	15											2			5	9	4

SITE DESCRIPTION

The low-mounded site is situated on the right bank of the River Gomel, about 1 km north of Tell Gomel. The site features numerous stone tool and baked brick fragments. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (two collection units).

SITE BIOGRAPHY

The site probably underwent a non-permanent or short-lived occupation during the Middle Bronze Age and the Neo Assyrian period (limited to the mounded area, collection unit 1). Afterwards, the site started to be densely occupied during the Parthian and Sasanian periods, but even so was limited to the mound area (collection unit 1). During the Islamic epoch, period of the site's maximum expansion, the settlement spread into the southern area (collection unit 2).

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
485	08	0	1	1	
485	14	15	1	1	
485	15	5	2	2	
485	16	1	1	1	
485	21	0	32	15	17
485	Und.	-	10	6	4
TOT			**47**	**26**	**21**

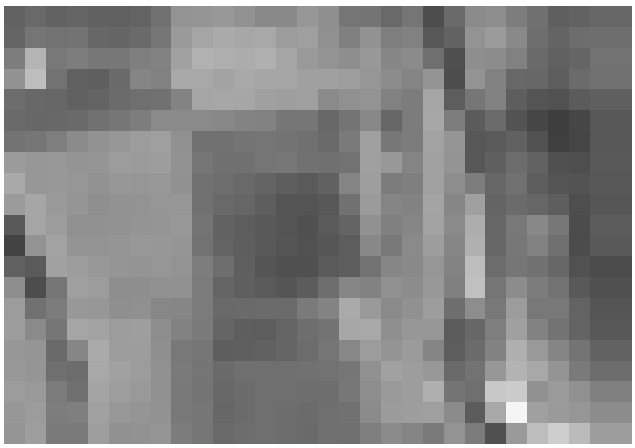
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	485.15.1.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusions. Rim dm. ?	T8/0	8	1
2	485.13.1.1	Rim; reddish yellow surfaces (7.5YR 7/6) and very pale brown core (10YR 7/3); mineral fabric with abundant fine calcite and grits inclusions; smoothed exterior surface. Rim dm. 28 cm.	T11/0	11	LoNAP
3	485.13.1.2	Rim; pale yellow slipped surfaces (2.5Y 8/3) and very pale brown core (10 YR 8/3); mineral fabric with abundant fine calcite and quartz inclusions; burnished surfaces. Rim dm. 28 cm.	T11/2	11	LoNAP

SITE 486

(B2 sector)



1 - Site 486 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 486 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 486 from South. (2015)

SITE NUMBER	486
LOCAL NAME	-
POSITION	363443 E; 4052251 N
AREA	2,8 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: bad; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha										**1,4**		**1,4**		**1,4**	**0,5**	**1,3**	**2,8**
N. fr. TGAS	23														2	4	104
N. fr. LoNAP	9									1		5		2	5	6	3

SITE DESCRIPTION

The low-mounded site is situated on the right bank of the River Gomel, c. 1 km north of Tell Gomel. The site features a sort of small acropolis (the low mound) surrounded by a lower town. The top of the mound was covered by abundant gravel, perhaps a sign of future construction activities. The site was surveyed in 2013 by the LoNAP team (1 collection unit on the mound) and in 2015 by the TGAS team (six collection units).

SITE BIOGRAPHY

The site shows almost continuous occupation from the Mitanni to Islamic epochs, except during the Middle Assyrian and Post-Assyrian periods that are not represented in the pottery assemblage. The peak of settlement expansion was during the Islamic period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
486	14	0	2					2
486	15	3	3	3				
486	16	6	1					1
486	21	0	104	18	11	30	34	11
486	Und.	-	23	11	7		1	4
TOT			**133**	**32**	**18**	**30**	**35**	**18**

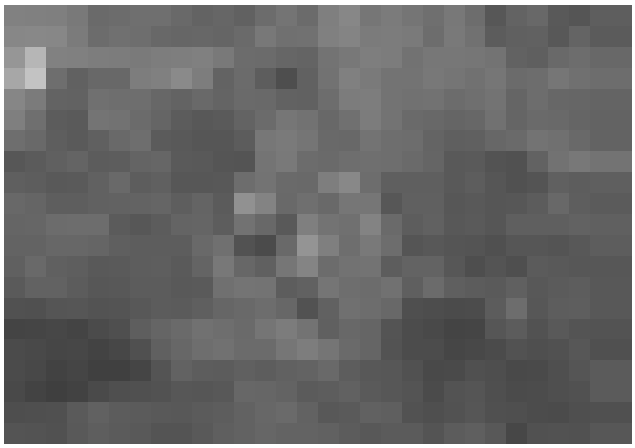
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	486.13.1.24	Rim; yellow surfaces and core (10YR 7/6); mineral fabric with occasional fine chaff and calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T9/0	9	LoNAP
2	486.13.1.12	Rim; pink core and surfaces (7.5YR 7/4); fine mineral fabric with common fine to medium calcite, quartz and grits inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/8	11	LoNAP
3	486.13.1.19	Rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with abundant grits and calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/12	11	LoNAP

SITE 487

(A1 sector)



1- Site on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 487 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 487 from West. (2015)

SITE NUMBER	487
LOCAL NAME	-
POSITION	360700 E; 4053167 N
AREA	4,2 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: very low; 2015: good.
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha												**4,2**			**4,2**	**4,2**	**4,2**
N. fr. TGAS	3											1					44
N. fr. LoNAP	8											3			2	6	19

SITE DESCRIPTION

Low-mounded site located on a wadi, about 2 km south-east of Mahad. The mound is very low and features an ashy, light grey soil. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit).

SITE BIOGRAPHY

The site was first occupied during the Neo-Assyrian period. After a gap in the settlement sequence during the Post-Assyrian and Hellenistic periods, the site was again occupied from the Parthian to Islamic epochs.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
487	11	8	1	1
487	21	0	44	44
487	Und.	-	3	3
TOT			**48**	**48**

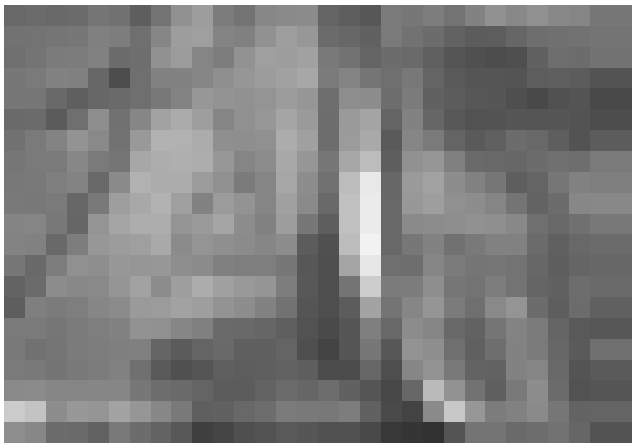
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	487.15.1.1	Rim; pale yellow surfaces (2.5Y 8/2) and light yellowish brown (2.5Y 6/3); mineral fabric with occasional chaff and frequent calcite inclusions. Rim dm. 14 cm.	T11/8	11	1

SITE 488

(A2 sector)



1- Site 488 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 488 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 488 from West. (2015)

SITE NUMBER	488
LOCAL NAME	-
POSITION	363486 E; 4054905 N
AREA	3,5 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	2013: low; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1,7**			**1,7**	**3,5**	**3,5**
N. fr. TGAS	8											1			2		98
N. fr. LoNAP	4											1			2	3	14

SITE DESCRIPTION

Elongated low-mounded site located on the right bank of the Gomel, 500 m south-east of Zinawa Miri. The site features light, ashy soil, with abundant small stones. The site was surveyed in 2013 by the LoNAP team (one collection unit) and in 2015 by the TGAS team (two collection units).

SITE BIOGRAPHY

The site was probably settled during the Neo-Assyrian period, on its northern part. Subsequently, during the Parthian period, the site was occupied again but this time in the southern area. Under Sasanian occupation the settlement started to grow and reached its maximum expansion during the Islamic epoch.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
488	11	2	1	1	
488	14	7	2		2
488	21	0	98	47	51
488	Und.	-	8	8	
TOT			**109**	**56**	**53**

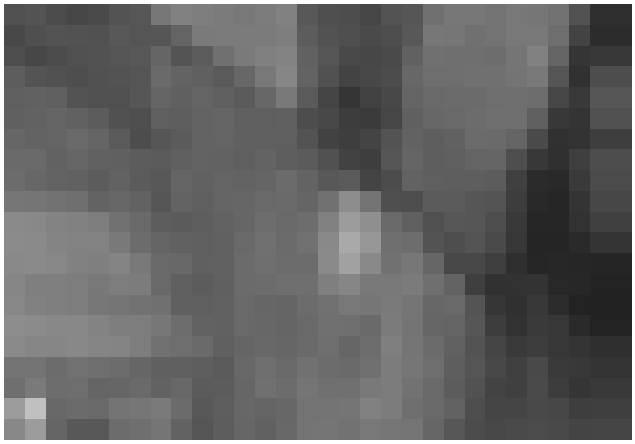
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	488.15.1.1	Rim; pink surfaces (5YR 7/4) and light brown core (7.5YR 6/4); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces.	T11/2	11	1

SITE 489

(A2 sector)



1 - Site on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 489 from East. (2015)

SITE NUMBER	489
LOCAL NAME	-
POSITION	364994 E; 4055124 N
AREA	0,5 ha ca.
SURVEY YEARS	2013 and 2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	2013: good; 2015: good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**0,5**					
N. fr. TGAS	5											5					
N. fr. LoNAP	3											2					

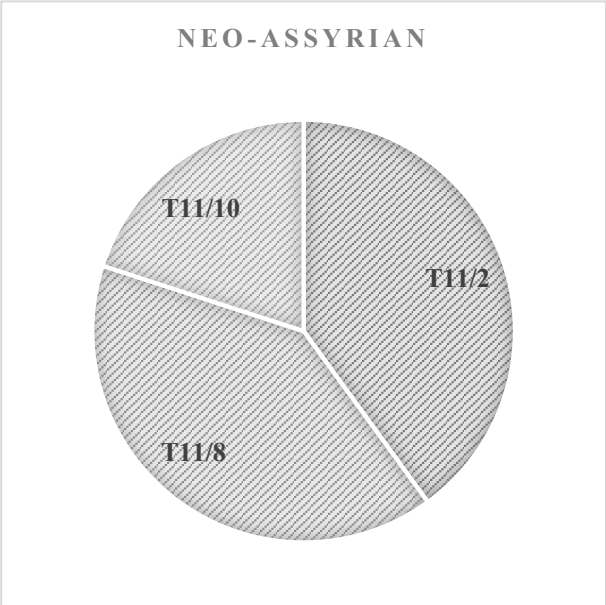
SITE DESCRIPTION

Very small flat site located about 800 m south-east of Zinawa Miri. The site features light grey soil and abundant small to medium stones. The site was surveyed in 2013 by the LoNAP team and in 2015 by the TGAS team (in both cases with only one collection unit).

SITE BIOGRAPHY

Small Neo-Assyrian farm.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
489	11	2	2	2
489	11	8	2	2
489	11	10	1	1
489	Und.	-	5	5
TOT			**10**	**10**

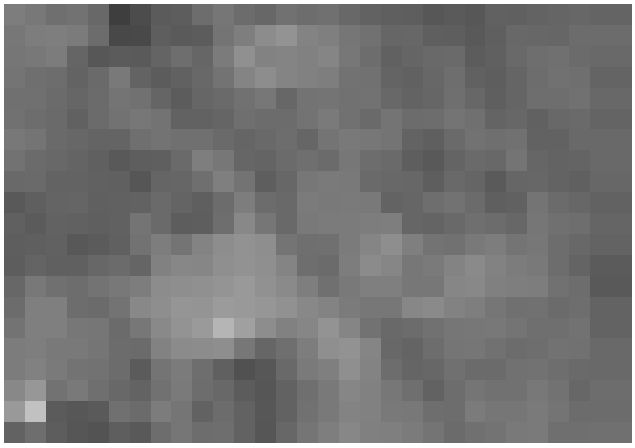
POTTERY SELECTION

Plate 1

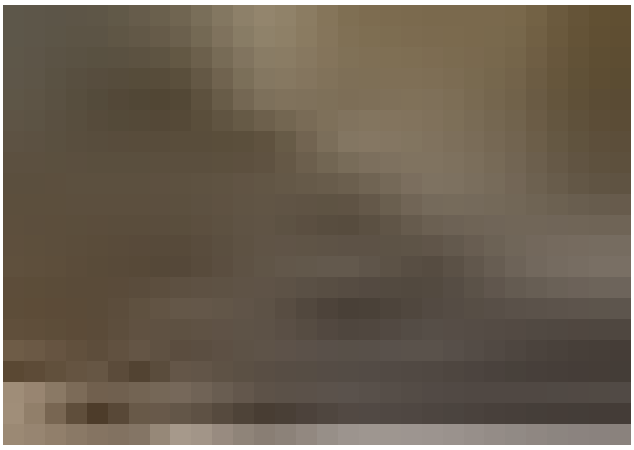
N.	Code	Description	Type	Period	Area
1	489.15.1.3	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with rare fine calcite and grits inclusions. Rim dm. 18 cm.	T11/2	11	1
2	489.15.1.5	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with frequent fine calcite inclusions and fine to large grits. Rim dm. 18 cm.	T11/2	11	1
3	489.15.1.4	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 12 cm.	T11/8	11	1
4	489.15.1.2	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 12 cm.	T11/8	11	1
5	489.15.1.1	Rim; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/3); mineral fabric with occasional fine to medium grits and calcite inclusions.	T11/10	11	1

SITE 560

(B2 sector)



1 - Site 560 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 560 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)

3 - Site 560 from East. (2015)

SITE NUMBER	560
LOCAL NAME	-
POSITION	364618 E; 4050390 N
AREA	0,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					0,3			0,3	0,3		0,3						0,3
N. fr. TGAS	13				1			26	3		2						1

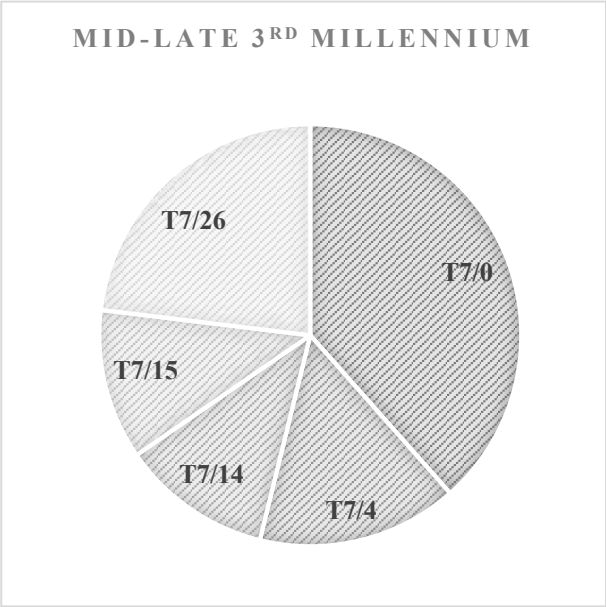
SITE DESCRIPTION

Very small and very-low-mounded site located 250 m west of the edge of Tell Gomel. The site features abundant stones and potsherds, and light-coloured soil.

SITE BIOGRAPHY

A single sherd from the Late Chalcolithic 1-2 might signify the presence of a small proto-historic settlement buried under the subsequent occupation layers. The site was densely occupied and reached its maximum expansion during the mid-late 3rd millennium BC. The settlement continued to be occupied during the Middle Bronze Age but on a smaller scale. Occupation during the Middle Assyrian and Islamic periods is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
560	04	5	1	1
560	04-05	0	2	2
560	07	0	10	10
560	07	4	4	4
560	07	14	3	3
560	07	15	3	3
560	07	26	6	6
560	08	0	1	1
560	08	1	2	2
560	10	0	2	2
560	21	0	1	1
560	Und.	-	13	13
TOT			**48**	**48**

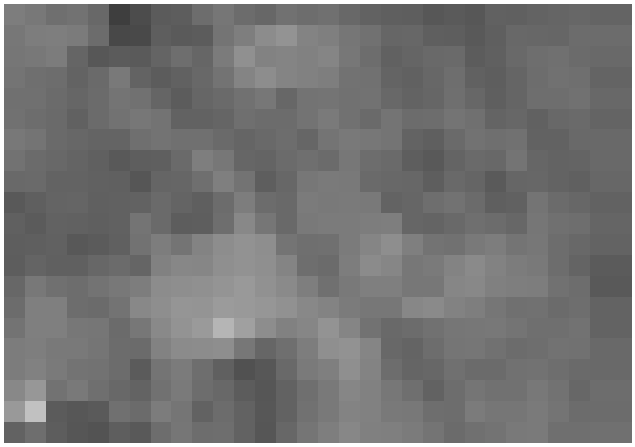
POTTERY SELECTION

Plate 1

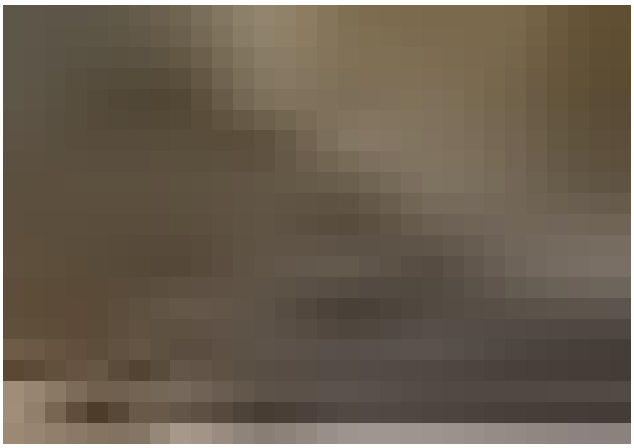
N.	Code	Description	Type	Period	Area
1	560.15.1.5	Rim; reddish yellow surfaces (7.5YR 7/6) and gray core (2.5Y 5/1); chaff fabric with abundant fine to medium calcite inclusions; traces of black painted fading decoration on the exterior surface. Rim dm. 40 cm.	T4/5	4	1
2	560.15.1.6	Rim; reddish yellow exterior surface (7.5YR 7/6), very pale brown interior surface and gray core (2.5Y 5/1); chaff fabric with abundant fine to medium calcite inclusions. Rim dm. 44 cm.	T4-5/0	4-5	1
3	560.15.1.31	Rim; light gray surfaces and core (2.5Y 7/2); fine mineral fabric with occasional chaff and no visible inclusions; burnished surfaces. Rim dm. 20 cm.	T7/0	7 (Akk.)	1
4	560.15.1.37	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with common chaff and no visible inclusions; triangle incised decoration on the exterior surface. Rim dm. 39 cm.	T7/0	7 (Akk.)	1
5	560.15.1.35	Rim; pale yellow core and surfaces (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 14 cm.	T7/0	7 (Post-Akk.)	1
6	560.15.1.39	Base; pale olive core (5Y 6/3) and pale yellow surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; burnished exterior surface and smoothed interior surface. Base dm 7 cm.	T7/1	7 (Akk.)	1
7	560.15.1.46	Rim; pale yellow core (5Y 8/2) and pink surfaces (7.5YR 7/4); chaff fabric with no visible inclusions; traces of bitumen on the interior surface; comb-incised decoration on the exterior surface. Rim dm. 28 cm.	T7/4	7 (Akk.)	1
8	560.15.1.25	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusions; bitumen on the interior surface; rope decoration on the exterior surface. Rim dm. 32 cm.	T7/14	7 (Akk.)	1
9	560.15.1.26	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with rare fine calcite inclusions. Rim dm. 45 cm.	T7/15	7 (Akk.)	1
10	560.15.1.47	Rim; pale yellow core and surface (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 15 cm.	T7/26	7 (Akk.)	1
11	560.15.1.3	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite or quartz inclusions; black painted decoration on the rim and interior surface. Rim dm. 37 cm.	T8/0	8	1
12	560.15.1.11	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T10/0	10	1

SITE 562

(B2 sector)



1 - Site 562 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 562 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe)

3 - Site 562 from South. (2015)

SITE NUMBER	562
LOCAL NAME	-
POSITION	365739 E; 4050448 N
AREA	2,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Excavation of a trench for building a well in area 1
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha					0,5	0,5		2,6	1,6	0,5							1,4
N. fr. TGAS	36				1	1		67	11	5							5

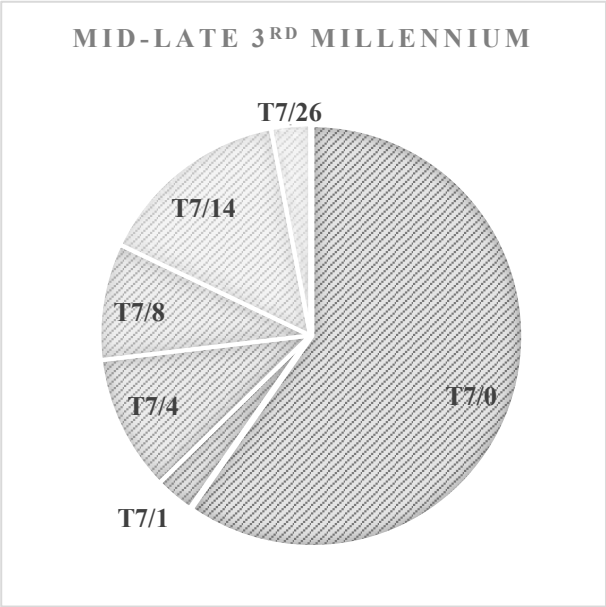
SITE DESCRIPTION

Low-mounded site located 300 m east of Tell Gomel, crossed by the dirt road that connects Tell Gomel with Kalakchi. The site has light-coloured soil, abundant baked bricks and stone tool fragments, many small stones and numerous potsherds. In the area of collection unit 2 a trench had been dug to build a water well and a small concrete building stands nearby. The entire site was covered by a cucumber field.

SITE BIOGRAPHY

A single sherd from the Late Chalcolithic 1-2 might signify the presence of a small proto-historic settlement buried under the subsequent occupation layers. The site was densely occupied and reached its maximum expansion during the mid-late 3rd millennium BC. The settlement continued to be occupied until the Mitanni period but on a smaller scale. Occupation during the Islamic period is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
562	04	0	1	1		
562	05b	0	1	1		
562	07	0	40	21	10	9
562	07	1	2	1	1	
562	07	4	7	6	1	
562	07	8	6	4	1	1
562	07	14	10	5	4	1
562	07	26	2	2		
562	08	0	10	8		2
562	08	1	1	1		
562	09	0	5	5		
562	Und.	-	36	25	9	2
TOT			**121**	**80**	**26**	**15**

POTTERY SELECTION

Plate 1

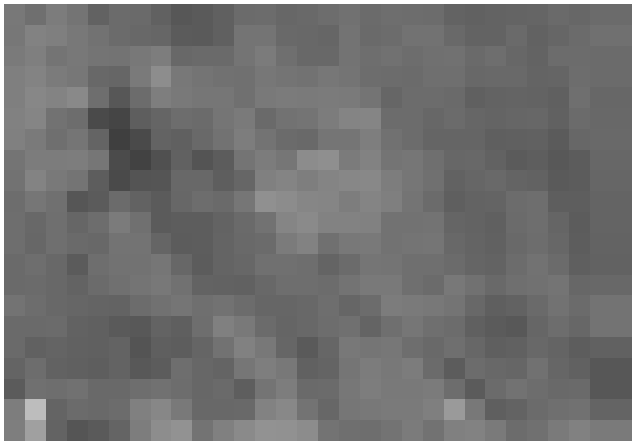
N.	Code	Description	Type	Period	Area
1	562.15.1.49	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (10YR4/1); chaff fabric with frequent fine calcite inclusions. Rim dm. ? cm.	T5b/0	5b	562.1
2	562.15.1.11	Rim; pale yellow core (2.5Y 7/3) and surfaces (2.5Y 8/2); chaff fabric with occasional fine to medium calcite inclusions; smoothed surfaces. Rim dm. 38 cm.	T7/0	7	562.1
3	562.15.1.20	Rim; very pale brown core (10YR 8/3) and surfaces (10YR 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm	T7/0	7	562.1
4	562.15.1.71	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/4); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 37 cm.	T7/0	7	562.1
5	562.15.1.30	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with occasional fine calcite inclusions; incised decoration on the exterior surface. Rim dm. >50 cm.	T7/0 (Akk.)	7	562.1
6	562.15.1.33	Base; pink surfaces (7.5YR 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with no occasional fine calcite inclusions; smoothed surfaces. Base dm. 6 cm.	T7/0 (Akk.)	7	562.1
7	562.15.1.24	Body sherd; pale yellow core and surfaces (5Y 8/4); chaff fabric with occasional fine calcite inclusions; rope incised decoration on the exterior surface.	T7/0 (Akk.)	7	562.1
8	562.15.1.70	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite inclusions; comb-incised decoration on the exterior surface. Rim dm. 70 cm.	T7/4 (Akk.)	7	562.1
9	562.15.1.8	Body sherd; pale yellow core and surfaces (5Y 8/2); chaff fabric with no visible inclusions; traces of bitumen on the interior surface; comb-incised and rope decoration on the exterior surface.	T7/4 (Akk.)	7	562.1
10	562.15.1.28	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with occasional fine to medium calcite inclusions; smoothed surfaces. Rim dm. 38 cm.	T7/8 (Akk.)	7	562.1
11	562.15.1.67	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with occasional chaff; traces of bitumen on the interior surface. Rim dm. 30 cm.	T7/14	7	562.1
12	562.15.1.25	Rim; pale yellow core and surfaces (2.5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/26 (Akk.)	7	562.1

Plate 2

N.	Code	Description	Type	Period	Area
13	562.15.1.35	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with abundant fine mineral inclusions; comb incised and rope decoration on the exterior surface. Rim dm. > 50 cm.	T8/0	8	562.1
14	562.15.1.36	Rim; pale yellow slipped exterior surface (2.5Y 8/2), pink core and interior surface (7.5YR 7/4); chaff fabric with rare fine grits and calcite inclusions. Rim dm. 33 cm.	T8/0	8	562.1
15	562.15.1.42	Rim; very pale brown surfaces (10YR 8/3) and pale brown core (10YR 6/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 36 cm.	T8/0	8	562.1
16	562.15.1.44	Rim; reddish yellow core and surfaces (5YR 7/6); chaff fabric with no visible inclusions; smoothed surfaces. Rim dm. 29 cm.	T9/0	9	562.1
17	562.15.1.43	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 18 cm.	T9/0	9	562.1
18	562.15.1.46	Rim; pink core and surfaces (7.5YR 8/2); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 13 cm.	T9/0	9	562.1

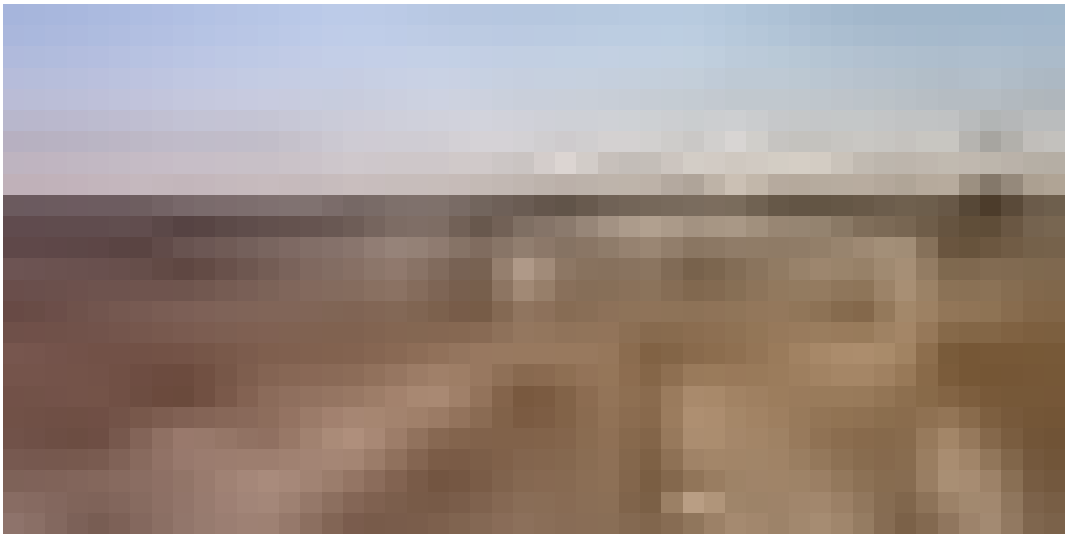
SITE 567

(B2 sector)



1- Site 567 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 567 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 567 from West. (2015)

SITE NUMBER	567
LOCAL NAME	-
POSITION	364662 E; 4050621 N
AREA	0,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								0,6	0,6								0,6
N. fr. TGAS	5							8	4								2

SITE DESCRIPTION

Very small low-mounded site located 250 m east of Tell Gomel, north of the dirt road that connects Tell Gomel with Kalakchi. The site features an ashy light-grey soil and numerous small pottery sherds.

SITE BIOGRAPHY

The site was settled during the mid-late 3rd millennium BC and the Middle Bronze Age. Two Islamic period sherds might indicate that the settlement was also occupied during this period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
567	07	0	5	5
567	07	15	3	3
567	08	0	3	3
567	08	1	1	1
567	21	0	2	2
567	Und.	-	5	5
TOT			**19**	**19**

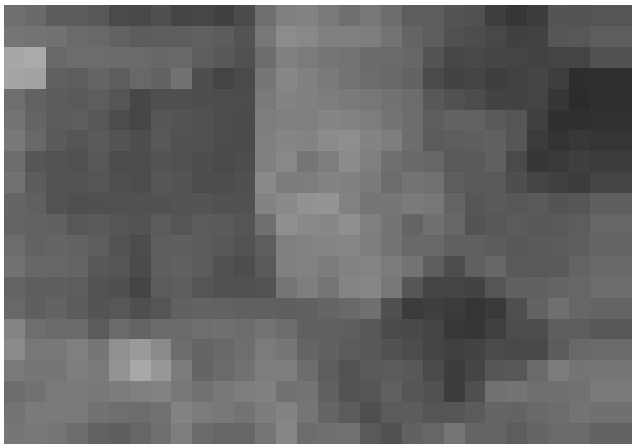
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	567.15.1.4	Rim; pale yellow exterior surface (2.5Y 8/3), very pale brown core and interior surface (10YR 8/3); mineral fabric with no visible inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 28 cm.	T7/0 (Akk.)	7	567.1
2	567.15.1.2	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with no visible inclusions; smoothed surfaces; trace of bitumen on the interior surface. Rim dm. 32 cm.	T7/0 (Akk.)	7	567.1
3	567.15.1.7	Base; pale yellow core and surfaces (5Y 7/6); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 8 cm.	T7/0 (Akk.)	7	567.1
4	567.15.1.1	Rim; very pale brown core and surface (10YR 7/3); mineral fabric with common chaff and occasional medium calcite inclusions; smoothed surfaces. Rim dm. 29 cm.	T7/15 (Akk.)	7	567.1
5	567.15.1.11	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with occasional fine calcite inclusions. Rim dm. ? cm.	T8/0	8	567.1
6	567.15.1.9	Rim; very pale brown core and interior surface (10YR 7/3) and pale yellow exterior surface (2.5Y 7/3); chaff fabric with no visible inclusions; smoothed exterior surface. Rim dm. 21 cm.	T8/0	8	567.1
7	567.15.1.10	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with occasional fine calcite inclusions; black painted decoration on the rim and interior surfaces. Rim dm. 38 cm.	T8/1	8	567.1

SITE 586

(B2 sector)



1- Site on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 586 from North-East. (2015)

SITE NUMBER	586
LOCAL NAME	-
POSITION	364192 E; 4051381 N
AREA	3,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		1,6	1,6	1,6	1,6	1,7		3,3	3,3	1,6					1,7		1,6
N. fr. TGAS	27	2	1	1	2	1		30	8	1					1		3

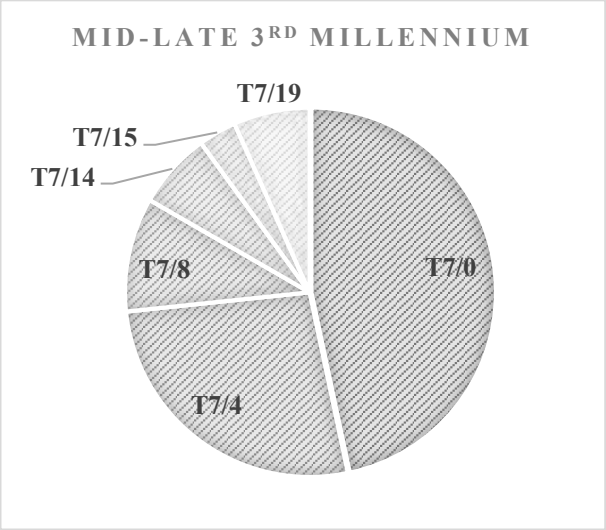
SITE DESCRIPTION

Flat site situated 200 m north of Gomel. The site features numerous pottery fragments, stone tools, baked brick fragments, microliths and abundant small to medium stones.

SITE BIOGRAPHY

The site was initially occupied during the Early Pottery Neolithic, and continuously occupied until the end of the Late Chalcolithic period. After a hiatus in the site's occupation site during the Ninivite V period, it was newly settled during the mid-late 3rd millennium BC (maximum occupation), the Middle Bronze Age and the Mitanni period. A few fragments also attest the settlement's occupation during the Parthian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	Extra
586	01	0	2			2
586	02	0	1			1
586	03	0	1			1
586	04	0	2			2
586	05b	0	1		1	
586	07	0	14	14		
586	07	4	8	7	1	
586	07	8	3	2	1	
586	07	14	2	2		
586	07	15	1	1		
586	07	19	2	1	1	
586	08	0	7	2	5	
586	08	1	1			1
586	09	0	1			1
586	14	15	1		1	
586	21	0	3	3		
586	0	0	27	19	8	
TOT			**77**	**51**	**18**	**8**

POTTERY SELECTION

Plate 1

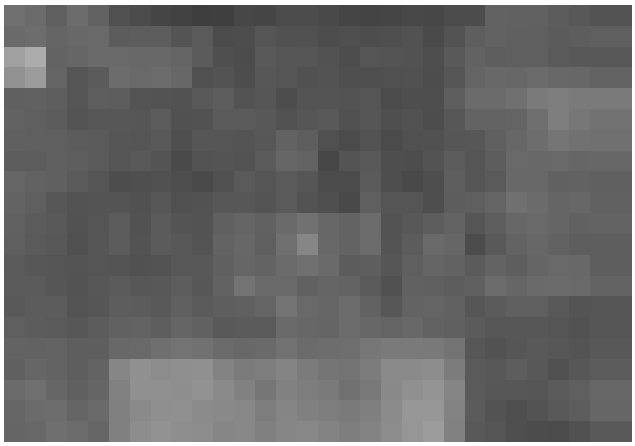
N.	Code	Description	Type	Period	Area
1	586.15.1.1	Rim; red core and surfaces (2.5YR 5/6); mineral fabric with abundant fine to medium grits and calcite inclusions; burnished exterior surface; incised decoration on the rim and on the exterior surface. Cooking pot (?).	T1/0	1	586.1
2	7.2.18	Body sherd; slipped pale yellow exterior surface (2.5Y 8/3), very pale brown interior surface (10YR 8/4) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; incised decoration on the exterior surface.	T1/0	1	Extra (from trans.)
3	7.2.16	Rim; very pale brown surfaces (10YR 7/3) and pink core (7.5YR 7/4); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 15 cm.	T2/0	2	Extra (from trans.)
4	7.2.8	Rim; pale yellow core and surfaces (2.5Y 7/4); fine mineral fabric with abundant chaff and no visible inclusions; smoothed surfaces. Rim dm. 40 cm.	T3/0	3	Extra (from trans.)
5	7.3.2	Rim; reddish yellow surfaces (5YR 7/6) and pink core (7.5YR 7/4); mineral fabric with frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 32 cm.	T4/0	4	Extra (from trans.)
6	7.c.1	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with common chaff and frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 30 cm.	T4/0	4	Extra (from trans.)
7	586.15.2.1	Rim; pink surfaces (7.5YR 7/4) and grayish brown core (10YR 5/2) with light brown margins (7.5YR 6/4); mineral fabric with occasional fine calcite inclusions. Rim dm. > 50 cm.	T5b/0	5b	586.2
8	586.15.1.4	Rim; pale yellow core and surfaces (pale yellow core and surfaces 2.5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surface; incised decoration on the exterior surface.	T7/0 (Post-Akk.)	7	586.1
9	586.15.1.11	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/0	7	586.1
10	586.15.1.38	Rim; pale yellow core and surfaces (5Y 8/4); chaff fabric with no visible inclusions. Rim dm. 12 cm.	T7/0	7	586.1
11	586.15.1.50	Body sherd; pale yellow slipped exterior surface (2.5Y 8/3) and pink core and interior surface (7.5YR 7/4); chaff fabric with no visible inclusions; incised decoration on the exterior surface.	T7/0 (Post-Akk.)	7	586.1
12	586.15.1.14	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surfaces; comb-incised decoration on the exterior surface. Rim dm. 40 cm.	T7/4 (Akk.)	7	586.1
13	586.15.1.16	Rim; pale yellow surfaces (2.5Y 8/3) and core (5Y 7/3); chaff fabric with occasional fine to medium grits inclusions; smoothed surfaces; comb-incised decoration and rope decoration on the exterior surface.	T7/4 (Akk.)	7	586.1
14	586.15.1.23	Body sherd; very pale brown core and surfaces (10YR 7/4); chaff fabric with rare fine calcite inclusions; smoothed surfaces; comb-incised and rope decoration on the exterior surface.	T7/4 (Akk.)	7	586.1
15	586.15.1.20	Body sherd; pale yellow core and surfaces (5Y 7/4); chaff fabric with no visible inclusions; smoothed exterior surface; incised decoration on the exterior surface.	T7/4 (Akk.)	7	586.1
16	586.15.1.12	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible inclusions. Rim dm. 36 cm.	T7/15	7	586.1
17	586.15.1.5	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/19	7	586.1

Plate 2

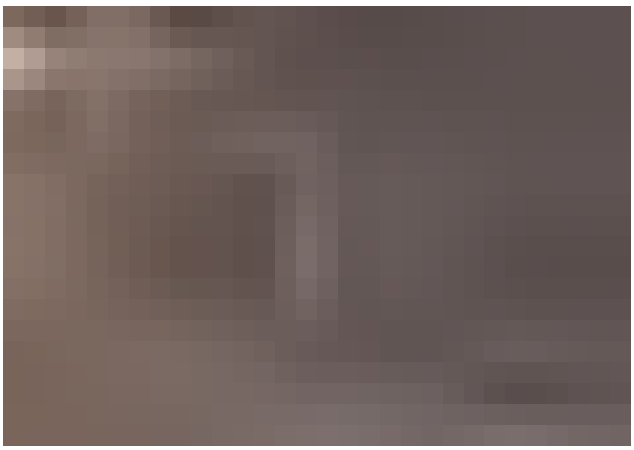
N.	Code	Description	Type	Period	Area
18	586.15.2.9	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible inclusions. Rim dm. 23 cm.	T8/0	8	586.2
19	586.15.2.10	Rim; very pale brown exterior surface (10YR 8/3), pink core and interior surface (7.5YR 7/6); chaff fabric with common fine calcite inclusions. Rim dm. 10 cm.	T8/0	8	586.2
20	7.2.12	Rim; pale yellow core and surface (2.5Y 8/3); mineral fabric with no visible inclusions; smoothed surfaces; black painted decoration on the rim and interior surface. Rim dm. 27 cm.	T8/1	8	Extra (from trans.)
21	7.c.2	Jar rim; pink core and surfaces (7.5YR 7/4); mineral fabric with abundant chaff and frequent fine to medium calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T9/0	9	Extra (from trans.)

SITE 587

(A2 sector)



1 - Site 587 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 587 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 587 from South. (2015)

SITE NUMBER	587
LOCAL NAME	-
POSITION	364236 E; 4052463 N
AREA	0,75 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	4

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**0,2**	**0,4**	**0,5**	**0,4**	**0,6**		**0,2**	**0,6**	**0,5**							**0,5**
N. fr. TGAS	37	2	3	7	4	4		1	5	9							3

SITE DESCRIPTION

Small flat site located 500 m south of the village of Zinawa Khave. The site features a light, ashy soil, numerous stones, microliths, stone tools (complete and fragments) and abundant pottery sherds.

SITE BIOGRAPHY

The site was occupied for a long time during the Pre- and Proto- historic periods, from the Early Pottery Neolithic to the end of the Late Chalcolithic. Later the site was also settled from the mid-late 3rd millennium BC until the Mitanni period, and then again in the Islamic epoch.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	Extra
587	01	0	2		2			
587	02	1	3		2	1		
587	03	0	2	1	1			
587	03	1	5	2			3	
587	04	0	3	1			1	1
587	04	5	1				1	
587	05b	0	3	2	1			
587	05b	14	1			1		
587	04-05	0	5		2	2	1	
587	07	1	1	1				
587	08	0	3		2	1		
587	08	1	2		1	1		
587	09	0	9		6	1	2	
587	21	0	3	1	1		1	
587	Und.	-	37	8	11	13	5	
TOT			**80**	**16**	**29**	**20**	**14**	**1**

POTTERY SELECTION

Plate 1

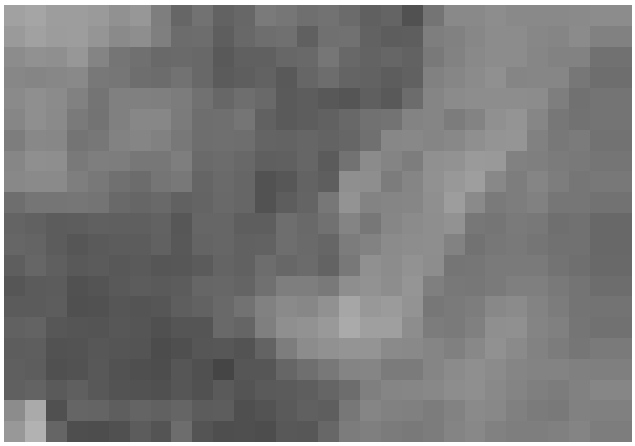
N.	Code	Description	Type	Period	Area
1	587.15.2.15	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with abundant chaff and occasional large calcite inclusions; smoothed surfaces; black painted fading decoration on the exterior surface. Rim dm. 40 cm.	T1/1	1	2
2	587.15.2.19	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with frequent chaff and common fine calcite inclusions; smoothed surfaces; black painted fading decoration on the exterior surface. Rim dm. 28 cm.	T1/1	1	2
3	587.15.2.18	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with frequent chaff and occasional fine to medium calcite inclusions; black painted decoration on the exterior surface. Rim dm. 27 cm.	T2/1	2	2
4	587.15.1.1	Rim; pale yellow surfaces (5Y 8/3) and core (2.5Y 7/3); chaff fabric with occasional fine to medium calcite inclusions; smoothed surfaces. Rim dm. > 50 cm.	T3/0	3	1
5	587.15.2.2	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with occasional chaff and rare fine to large calcite inclusions; smoothed surfaces.	T3/0	3	2
6	587.15.4.1	Rim; very pale brown core (10YR 7/3) and pale yellow surfaces (2.5Y 8/2); chaff fabric with rare fine calcite inclusions; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 24 cm.	T3/1	3	4
7	587.15.4.2	Body sherd; pale yellow slipped exterior surface (5Y 8/2), very pale brown core and interior surface (10YR 8/3); chaff fabric with occasional chaff; smoothed surfaces; black painted decoration on the exterior surface.	T3/1	3	4
8	587.15.1.4	Rim; reddish yellow surfaces (7.5YR 7/6) and brown core (10YR 5/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces; black painted decoration on the surfaces.	T4/0	4	1
9	7.13.1	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with frequent fine calcite inclusions; black painted decoration on the exterior surface and on the rim. Rim dm. 23 cm.	T4/3	4	Extra
10	587.15.2.4	Rim; yellow surfaces (10YR 7/6) and brown core (10YR 5/3); chaff fabric with frequent fine calcite inclusions; slightly grooved exterior surface. Rim dm. 24 cm.	T4/7	4	2

Plate 2

N.	Code	Description	Type	Period	Area
11	587.15.3.3	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite inclusions.	T5b/14	5b	3
12	587.15.2.3	Rim; pink exterior surface (7.5YR 7/4), reddish yellow interior surface (5YR 6/6) and light yellowish brown core (10YR 6/4); chaff fabric with abundant fine to medium calcite inclusions. Rim dm. 40 cm.	T4-5/0	4-5	2
13	587.15.4.11	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 17 cm.	T4-5/0	4-5	4
14	587.15.1.7	Base; pale yellow surfaces (2.5Y 8/3) and core (5Y 7/3; chaff fabric with frequent fine calcite inclusions; severely abraded.	T7/1	7	1
15	587.15.2.7	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine to medium calcite inclusions. Rim dm. 32 cm.	T8/0	8	1
16	587.15.3.17	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite inclusions; black painted decoration on the rim. Rim dm. > 50 cm.	T8/1	8	3
17	587.15.2.14	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 43 cm.	T9/0	9	2
18	587.15.2.9	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with frequent fine calcite inclusions. Rim dm. 11 cm.	T9/0	9	2
19	587.15.2.11	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 34 cm	T9/0	9	2

SITE 597

(B2 sector)



1- Site 597 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 597 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 597 from North. (2015)

SITE NUMBER	597
LOCAL NAME	-
POSITION	364573 E; 4051765 N
AREA	2,8 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Areas 1-3: good; Area 4: very low
DAMAGE AND THREATS	-
COLLECTION AREAS	1-4

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha			**2**	**2**	**1,3**	**2**				**0,7**	**0,7**	**1,4**				**0,7**	**1,4**
N. fr. TGAS	31		5	13	10	9				3	1	2				1	12

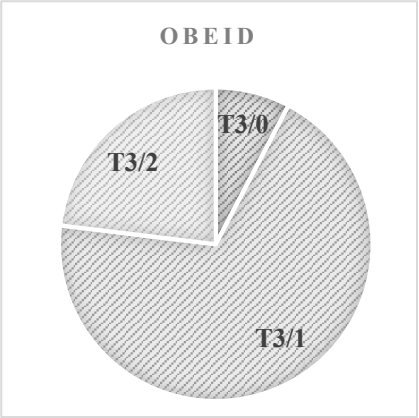
SITE DESCRIPTION

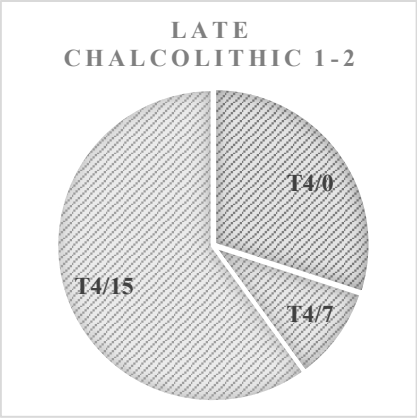
It is one of a group of five high and low-mounded sites located on a crevasse splay, c. 700 m north of Tell Gomel. The site features abundant microliths, numerous basalt tool fragments and many pottery sherds. The soil is sandy and light coloured.

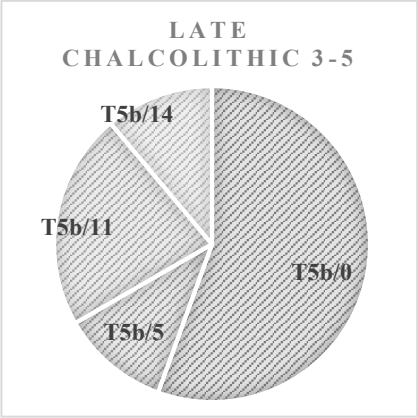
SITE BIOGRAPHY

The site underwent pre- and proto-historic occupation from the Halaf period to the end of the Late Chalcolithic. Subsequently the site was occupied from the Mitanni to the Neo-Assyrian periods, but on a smaller scale. Sasanian and Islamic period occupation is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
597	02	0	1		1	
597	02	1	4	1	2	1
597	03	0	1			1
597	03	1	9	1	3	5
597	03	2	3	1	2	
597	04	0	3		2	1
597	04	7	1		1	
597	04	15	6		2	4
597	05b	0	5	1	2	2
597	05b	5	1			1
597	05b	11	2		2	
597	05b	14	1		1	
597	09	0	3			3
597	10	12	1	1		
597	11	2	2		1	1
597	15	0	1	1		
597	21	0	12	4		8
597	Und.	-	31	10	10	11
TOT			**87**	**20**	**29**	**38**

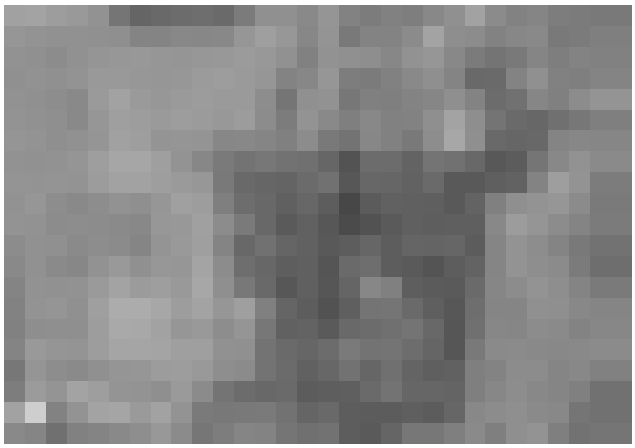
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	597.15.2.1	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (2.5Y 4/1) with reddish yellow margins (5YR 7/6); smoothed surfaces; black painted decoration on the rim. Rim dm. 22 cm.	T2/1	2	1
2	597.15.1.1	Body sherd; pink core (7.5YR 7/4) and very pale yellow surfaces (10YR 8/3); mineral fabric with frequent chaff and abundant fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T2/1	2	1
3	597.15.2.6	Rim; very pale brown core and surfaces (10YR 8/2); mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces; black painted decoration on all the surfaces. Rim dm. 18 cm.	T3/1	3	2
4	597.15.3.33	Rim; very pale brown core and surfaces (10YR 8/2); mineral fabric with occasional fine chaff and common fine calcite inclusions; black painted decoration on the exterior surface.	T3/1	3	3
5	597.15.3.34	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with no visible inclusions; smoothed surfaces; dark brown painted decoration on the exterior surface.	T3/1	3	3
6	597.15.1.2	Body sherd; very pale brown core and surfaces (10YR 7/3); chaff fabric with occasional fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T3/1	3	1
7	597.15.1.3	Body sherd; very pale brown core and surfaces (10YR 8/2); mineral fabric with common chaff and no other visible inclusions; grooved exterior surface.	T3/2	3	1
8	597.15.2.5	Body sherd; pink surface and core (7.5YR 7/6); mineral fabric with rare fine calcite inclusions; grooved and black painted exterior surface.	T3/2	3	2
9	597.15.2.13	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with common chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 10 cm.	T4/7	4	2
10	597.15.2.10	Rim; pink surfaces (7.5YR 7/4) and pale brown core (10YR 7/3) with very pale brown margins (10YR 7/3); chaff fabric with occasional fine calcite inclusions; smoothed interior surface.	T4/15	4	2
11	597.15.3.23	Rim; very pale brown surfaces (10YR 7/4) and gray core (10YR 6/1) with very pale brown core (10YR 7/4); chaff fabric with frequent fine calcite inclusions. Rim dm. 22 cm.	T4/15	4	3
12	597.15.1.5	Rim; red core and surfaces (2.5YR 5/6); mineral fabric with abundant fine to large mineral inclusions; severely abraded.	T5b/1	5b	1
13	597.15.2.18	Rim; light reddish brown surfaces (2.5YR 6/4) and black core (10YR 2/1) with light reddish brown margins (2.5YR 6/4); mineral fabric with common fine to medium calcite and grits inclusions; burnished exterior surface. Rim dm. 16 cm.	T5b/2	5b	2
14	597.15.3.25	Rim; pink surfaces (7.5YR 7/4) and gray core (10YR 5/1) with pink margins (7.5YR 7/4); mineral fabric with abundant fine to medium calcite and grits inclusions. Rim dm. 51 cm.	T5b/5	5b	2
15	597.15.3.26	Rim; dark gray core (7.5YR 4/1) and reddish yellow surfaces (5YR 7/6); mineral fabric with common chaff and abundant fine calcite inclusions. Rim dm. 46 cm.	T9/0	9	3
16	597.15.2.19	Rim; pale yellow core and surfaces (5Y 7/4); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/2	11	2

SITE 600

(B2 sector)



1- Site 600 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 600 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 600 from North. (2015)

SITE NUMBER	600
LOCAL NAME	-
POSITION	364550 E; 4052004 N
AREA	1,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		1,3	1,3	1,3	1,3	1,3			1,3			1,3			1,3	1,3	
N. fr. TGAS	14	3	1	8	7	4			2			2			2	3	

SITE DESCRIPTION

It is one of a group of five high and low-mounded sites located on a crevasse splay, about 700 m north of Tell Gomel. The site features abundant pottery sherds, microliths and a grindstone fragment.

SITE BIOGRAPHY

The site underwent intense pre- and proto-historic occupation from the Early Pottery Neolithic to the end of the Late Chalcolithic. Afterwards the site was also settled during the Middle Bronze Age, and the Neo-Assyrian, Parthian and Sasanian periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
600	01	0	2	2
600	01	5	1	1
600	02	1	1	1
600	03	0	2	2
600	03	1	2	2
600	03	2	4	4
600	04	7	1	1
600	04	15	6	6
600	05b	0	1	1
600	05b	5	1	1
600	05b	11	1	1
600	05b	13	1	1
600	04-05	0	4	4
600	08	0	2	2
600	11	0	1	1
600	11	1	1	1
600	14	0	1	1
600	14	15	1	1
600	15	0	1	1
600	15	2	2	2
600	Und.	-	14	14
TOT			**50**	**50**

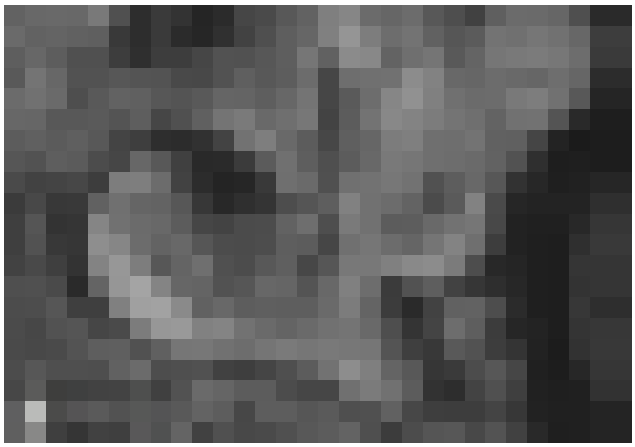
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	600.15.1.1	Rim; very pale brown surfaces (10YR 7/4) and brown core (10YR 5/3); mineral fabric with common chaff and frequent fine calcite inclusions. Rim dm. 43 cm.	T1/0	1	1
2	600.15.1.2	Rim; pink core and surfaces (7.5YR 8/4); mineral fabric with occasional chaff and frequent fine calcite and other minerals inclusions; smoothed surfaces. Rim dm. 20 cm.	T1/0	1	1
3	600.15.1.3	Body sherd; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with occasional fine calcite inclusions; incised exterior surface.	T1/5	1	1
4	600.15.1.4	Body sherd; pink core (7.5YR 7/4) and very pale brown surfaces (10YR 7/4); mineral fabric with rare medium to large calcite inclusions; smoothed surfaces; dark brown painted exterior surface.	T2/1	2	1
5	600.15.1.5	Rim; pink core and exterior surface (7.5YR 7/4), pale yellow slipped interior surface (2.5Y 8/2); mineral fabric with occasional chaff and no visible inclusions.	T3/0	3	1
6	600.15.1.7	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with frequent fine to medium calcite and other minerals inclusions. Rim dm. 17 cm.	T3/0	3	1
7	600.15.1.8	Rm; very pale brown core and surfaces (10YR 7/4); mineral fabric with common fine chaff and occasional fine calcite inclusions; grooved interior surface. Rim dm. 13 cm.	T3/2	3	1
8	600.15.1.50	Body sherd; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with no visible inclusions; grooved and black painted exterior surface.	T3/2	3	1
9	600.15.1.22	Rim; pink surfaces (7.5YR 7/4) and very pale brown core (10YR 7/4) with reddish yellow margins (5YR 6/6); mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 31 cm.	T4/7	4	1
10	600.15.1.16	Rim; very pale brown surfaces (10YR 7/4) and light reddish brown core (5YR 6/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T4/15	4	1
11	600.15.1.25	Rim; reddish yellow surfaces (5YR 7/6) and pink core (7.5YR 7/4); mineral fabric with common fine calcite inclusions; smoothed surfaces; red painted decoration on the rim and exterior surface. Rim dm. 16 cm.	T5b/0	5b	1
12	600.15.1.26	Rim; red surfaces (10R 5/6) and dark gray core (7.5YR 4/1) with red margins (2.5YR 5/6); mineral fabric with abundant fine to large calcite and other mineral inclusions; cooking pot (?). Rim dm. 33 cm.	T5b/5	5b	1
13	600.15.1.23	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (10YR 5/1); chaff fabric with no visible inclusions. Rim dm. 26 cm.	T5b/13	5b	1
14	600.15.1.27	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); chaff fabric with abundant fine to large calcite inclusions. Rim dm. 44 cm.	T8/0	8	1
15	600.15.1.28	Rim; light yellowish brown core and surfaces (10YR 6/4); mineral fabric with common chaff and abundant fine calcite inclusions; smoothed rim and exterior surfaces. Rim dm. 56 cm.	T8/0	8	1
16	600.15.1.29	Rim; pale yellow surfaces (2.5Y 7/3) and gray core (2.5Y 5/1); fine mineral fabric with rare fine calcite inclusions; burnished surfaces. Rim dm. 13 cm.	T11/1	11	1

SITE 604

(A3 sector)



1- Site on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 604 from North. (2015)

SITE NUMBER	604
LOCAL NAME	-
POSITION	368472 E; 4054981 N
AREA	6,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Expansion of the city of Cizre; leveling activities
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**6,6**	**6,6**	**6,6**			**6,6**				**6,6**
N. fr. TGAS	40							34	7	3							
N. fr. LoNAP	32							100	14	5			1				4

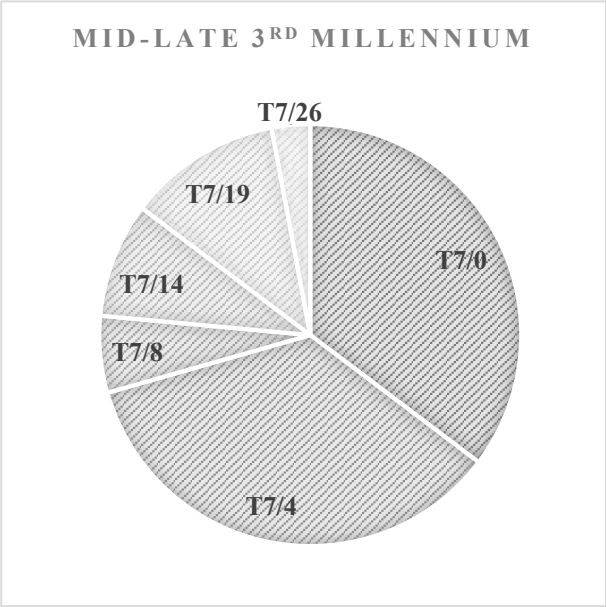
SITE DESCRIPTION

The large flat site is located at the south-eastern edge of the modern city of Chirra. On the older satellite images the site seems to be mounded, but it was probably levelled recently for agricultural purposes. The site features many small to medium stones, grey ashy soils, and a few stone tool and baked brick fragments. The visibility was high overall, although the western limit of the site lay under the modern houses of Chirra.

SITE BIOGRAPHY

The site was a large settlement during the mid-late 3rd millennium and the Middle Bronze Age. A few sherds testify to the site's occupation during the Mitanni, Post-Assyrian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
604	07	0	12	12
604	07	4	12	12
604	07	8	2	2
604	07	14	3	3
604	07	19	4	4
604	07	26	1	1
604	08	0	4	4
604	08	6	3	3
604	09	0	3	3
604	Und.	-	40	40
TOT			**84**	**84**

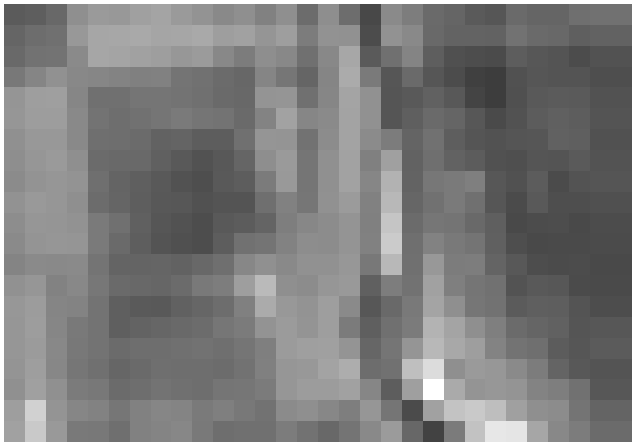
POTTERY SELECTION

Plate 1

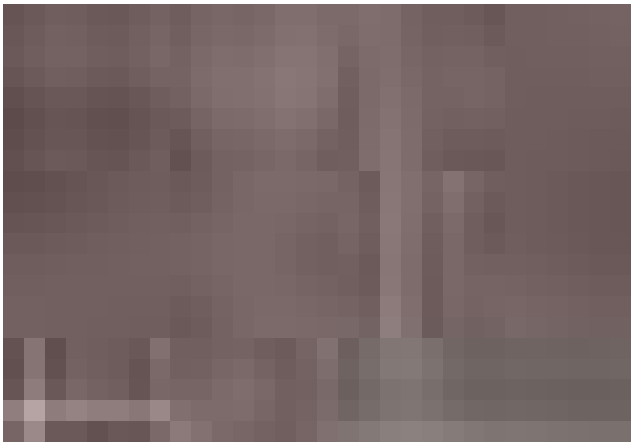
N.	Code	Description	Type	Period	Area
1	186.15.7.22	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with no visible mineral inclusions; incised decoration on the exterior surface. Rim dm. 36 cm.	T7/0 Akk.	7	186.7
2	186.15.7.10	Rim; pale yellow surfaces (5Y 8/4) and gray core (2.5Y 5/1); mineral fabric with frequent chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/0	7	186.7
3	186.15.7.3	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible mineral inclusions; smoothed surfaces. Rim dm. 22 cm.	T7/0	7	186.7
4	186.15.7.6	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with abundant chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/0	7	186.7
5	186.15.7.2	Base; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surface. Base 6 cm.	T7/0	7	186.7
6	186.15.7.29	Body sherd; very pale brown core and surfaces (10YR 8/3); chaff fabric with occasional fine calcite inclusions; incised decoration and rope decoration on the exterior surface.	T7/0 Akk.	7	186.7
7	186.15.7.35	Body sherd; pale yellow exterior surface (2.5Y 8/3) and very pale brown core and interior surface (10YR 7/4); chaff fabric with abundant fine grits and calcite inclusions; incised decoration on the exterior surface.	T7/0 Post-Akk.	7	186.7
8	186.15.7.32	Rim; very pale brown core and surfaces (10YR 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces; comb impressed decoration on the exterior surface. Rim dm. 14 cm.	T7/4 Post-Akk.	7	186.7
9	186.15.7.21	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible mineral inclusions; comb incised decoration on the exterior surface. Rim dm. 36 cm.	T7/4 Akk.	7	186.7
10	186.15.7.24	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible mineral inclusions; smoothed surfaces; comb incised decoration on the exterior surface. Rim dm. 24 cm.	T7/4 Akk.	7	186.7
11	186.15.7.25	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible mineral inclusions; smoothed surfaces; comb incised decoration on the exterior surface. Rim dm. 20 cm.	T7/4 Akk.	7	186.7
12	186.15.7.31	Rim; pale yellow exterior surface (5Y 8/2) and light gray core and interior surface (5Y 7/1); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces; comb impressed decoration on the exterior surface. Rim dm. 16 cm.	T7/4 Post-Akk.	7	186.7
13	186.15.7.33	Body sherd; light gray core and exterior surface (5Y 7/2) and grayish brown interior surface; fine mineral fabric with no visible inclusions; smoothed exterior surface; comb impressed decoration on the exterior surface.	T7/4 Post-Akk.	7	186.7
14	186.15.7.5	Rim; reddish yellow core and surfaces (5YR 7/6); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/8	7	186.7
15	186.15.7.8	Rim; pink surfaces (7.5YR 8/4) and reddish yellow core (5YR 6/6); chaff fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T7/14	7	186.7
16	186.15.7.1	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with occasional fine calcite inclusions. Rim dm. 10 cm.	T7/19	7	186.7
17	186.15.7.18	Rim; pale yellow surfaces and core (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/26 Akk.	7	186.7
18	186.15.7.40	Rim; pale yellow surfaces and core (2.5Y 8/3); chaff fabric with abundant fine calcite inclusions. Rim dm. 20 cm.	T8/0	8	186.7
19	186.15.7.42	Rim; pale yellow surfaces and core (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T8/0	8	186.7
20	186.15.7.41	Rim; reddish yellow surfaces (5YR 6/6) and light yellowish brown core (10YR 6/4); fine mineral fabric abundant fine calcite inclusions; traces of burnishing on the exterior surface. Rim dm. 22 cm.	T8/0	8	186.7
21	186.5.7.37	Base; very pale brown exterior surface (10YR 8/3) and pink core and interior surface (7.5YR 7/4); mineral fabric with abundant chaff ad abundant fine calcite inclusions; smoothed exterior surface. Base dm. 10 cm.	T8/6	8	186.7
22	186.15.7.44	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible inclusions; smoothed surfaces; traces of black painted decoration on the rim. Rim dm. 10 cm.	T9/0	9	186.7
23	186.15.7.43	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible inclusions; smoothed surfaces. Rim dm. 22 cm.	T9/0	9	186.7
24	186.15.7.45	Base; pale yellow core and surfaces (5Y 7/4); chaff fabric with no visible inclusions; smoothed surfaces. Base dm. 12 cm.	T9/0	9	186.7

SITE 656

(B2 sector)



1- Site 656 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2- Site 656 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 656 from North-West. (2015)

SITE NUMBER	656
LOCAL NAME	-
POSITION	363655 E; 4052192 N
AREA	1,4 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha															1,4	1,4	1,4
N. fr. TGAS	6														2	5	31

SITE DESCRIPTION

Small flat site located on the left bank of the River Gomel, c. 1 km from Tell Gomel. The site features numerous grindstone and baked brick fragments, abundant pottery sherds and a light-coloured soil.

SITE BIOGRAPHY

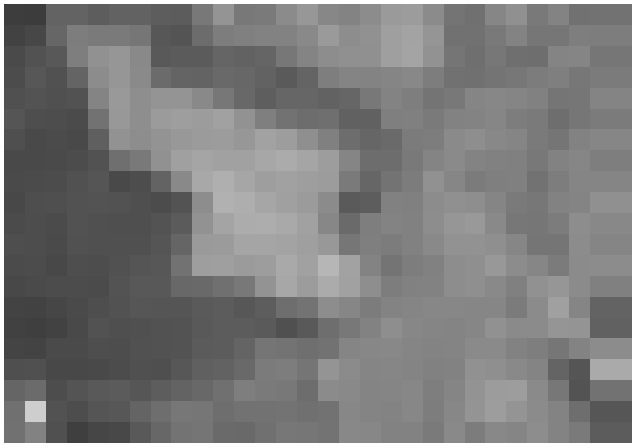
The site was continuously occupied during the Parthian and Sasanian periods, but it had its occupation peak in the Islamic period.

TYPES ATTESTED

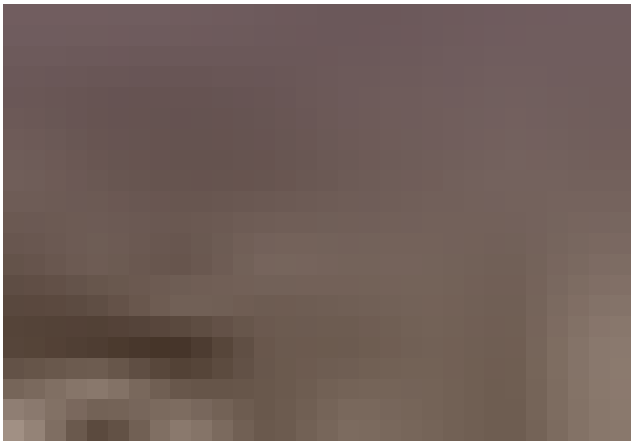
SITE	PERIOD	TYPE	TOTAL	1
656	14	0	1	1
656	14	7	1	1
656	15	0	2	2
656	15	1	1	1
656	16	1	1	1
656	16	10	1	1
656	21	0	31	31
656	Und.	-	6	6
TOT			**44**	**44**

SITE 666

(B2 sector)



1- Site 666 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 666 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 666 from South. (2015)

SITE NUMBER	666
LOCAL NAME	-
POSITION	363239 E; 4051375 N
AREA	3,4 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-4

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									0,8	1,1	1,5	3,4					2,3
N. fr. TGAS	31								1	3	2	55					5

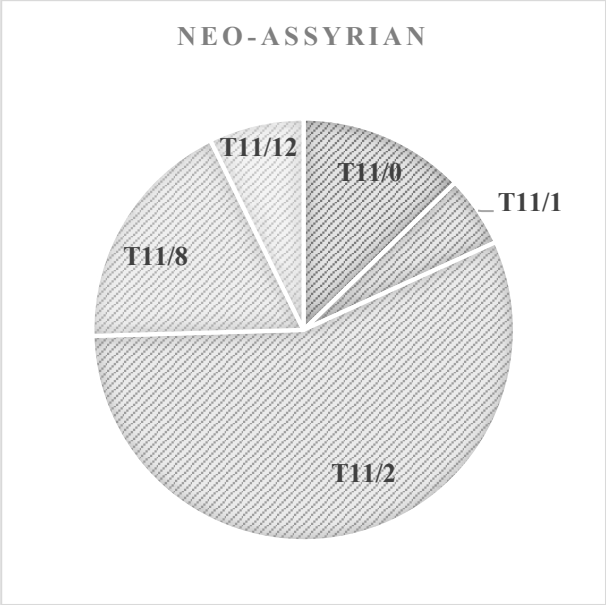
SITE DESCRIPTION

Elliptical low-mounded site situated about 600 m north-west of Tell Gomel on the right bank of the river, close to a wadi. The site features abundant small stones, pottery sherds, and basalt tool and baked brick fragments.

SITE BIOGRAPHY

The site was first settled during the Middle Bronze Age and continued to grow until the Neo-Assyrian period (maximum settlement expansion). An Islamic period occupation is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4
666	08	0	1			1	
666	09	0	3				3
666	10	5	1	1			
666	10	6	1			1	
666	11	0	7		1	1	5
666	11	1	3	1	1		1
666	11	2	31	11	9	10	1
666	11	8	10		1	6	3
666	11	12	4	1	2	1	
666	21	0	5	1	1	3	
666	Und.	-	31	4	16	8	3
TOT			**97**	**19**	**31**	**31**	**16**

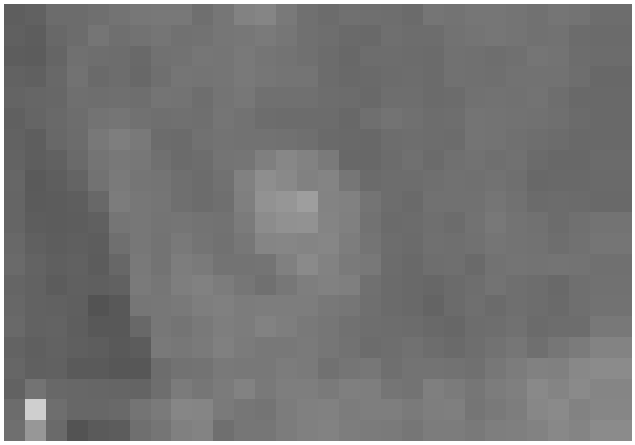
POTTERY SELECTION

Plate 1

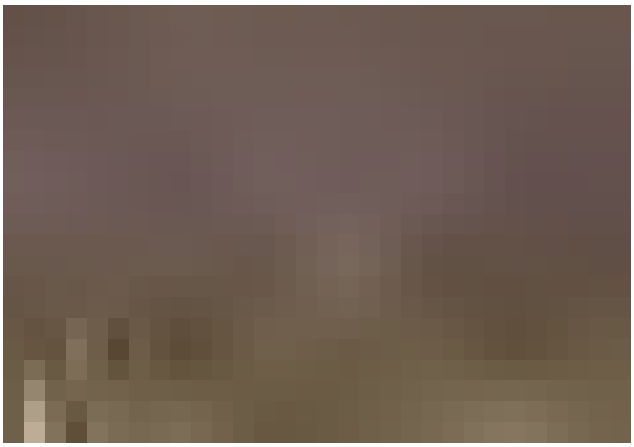
N.	Code	Description	Type	Period	Area
1	666.15.3.1	Rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with frequent fine calcite inclusions. Rim dm. 32 cm.	T8/0	8	666.3
2	666.15.4.2	Rim; pale yellow surfaces (5Y 7/3) and pale olive core (5Y 6/4); mineral fabric with common chaff and fine (occasionally large) calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T9/0	9	666.4
3	666.15.4.3	Rim; pale yellow surfaces (5Y 7/3) and gray core (5Y 5/1); mineral fabric with occasional chaff and fine-medium calcite inclusions. Rim dm. 10 cm.	T9/0	9	666.4
4	666.15.4.1	Base; very pale brown surfaces and core (10YR 7/4); mineral fabric with common chaff and abundant fine calcite inclusions. Rim dm. 8 cm.	T9/0	9	666.4
5	666.15.1.1	Rim; very pale brown surfaces and core (10YR 8/4); chaff fabric with occasional fine and medium calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T10/5	10	666.1
6	666.15.3.2	Rim; very pale brown surfaces (10YR 7/3) and pinkish gray core (7.5YR 6/2); mineral fabric with occasional chaff occasional fine calcite inclusions. Rim dm. 20 cm.	T10/6	10	666.3
7	666.15.3.9	Rim; very pale brown surfaces and core (10YR 8/4); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/0	11	666.3
8	666.15.4.8	Rim; very pale brown surfaces (10YR 7/4) and pale brown core (10YR 7/3); mineral fabric with occasional chaff and abundant fine-medium grits and calcite inclusions. Cooking pot ? Rim dm. 10 cm.	T11/0	11	666.4
9	666.15.4.10	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with rare fine chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/0	11	666.4
10	666.15.1.5	Rim; very pale brown core and surfaces (10YR 8/4); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/1	11	666.1
11	666.15.1.2	Rim; light reddish brown exterior surface (5YR 6/4), very pale brown interior surface (10YR 7/4) and reddish yellow core (5YR 7/4); mineral fabric with common chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T11/2	11	666.1
12	666.15.1.12	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with common fine (and occasional large) calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T11/2	11	666.1
13	666.15.1.10	Rim; very pale brown surfaces (10YR 7/4) and gray core (2.5Y 5/1); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/8	11	666.1
14	666.15.1.11	Rim; pale yellow surfaces and core (2.5Y 7/4); mineral fabric with common chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/8	11	666.1
15	666.15.3.20	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed exterior surface. Rim dm. 16 cm.	T11/8	11	666.3
16	666.15.1.18	Rim; very pale brown core and surfaces (10YR 8/4); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/12	11	666.1
17	666.15.2.6	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with common fine (and occasional large) calcite inclusions; burnished surfaces. Rim dm. 18 cm.	T11/12	11	666.2

SITE 705

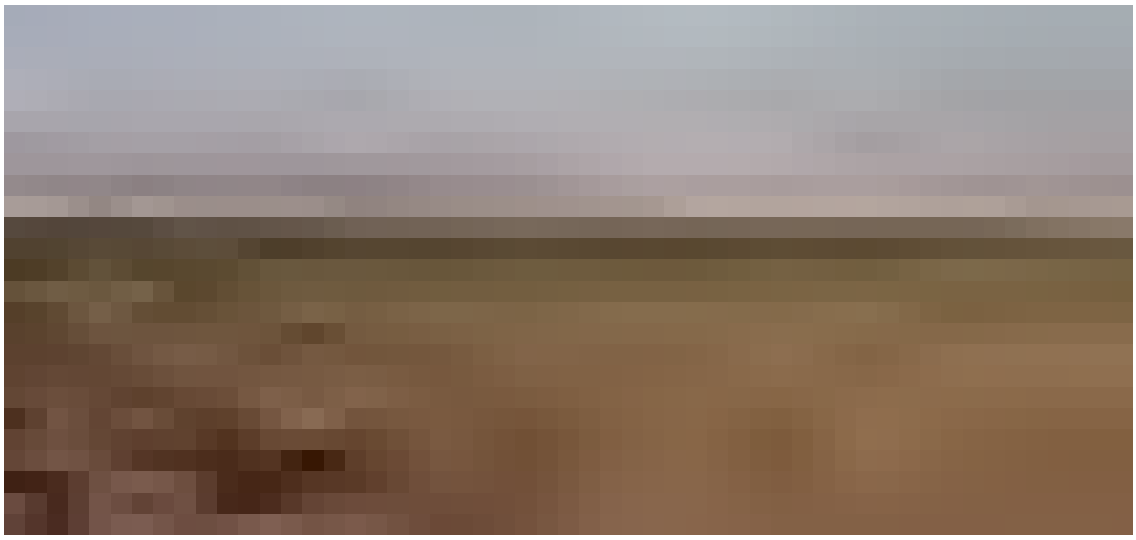
(B1 sector)



1- Site 705 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2- Site 705 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 705 from North. (2015)

SITE NUMBER	705
LOCAL NAME	-
POSITION	360956 E; 4051441 N
AREA	0,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		0,6		0,6					0,6						0,6		0,6
N. fr. TGAS	19	54		2					2						3		5

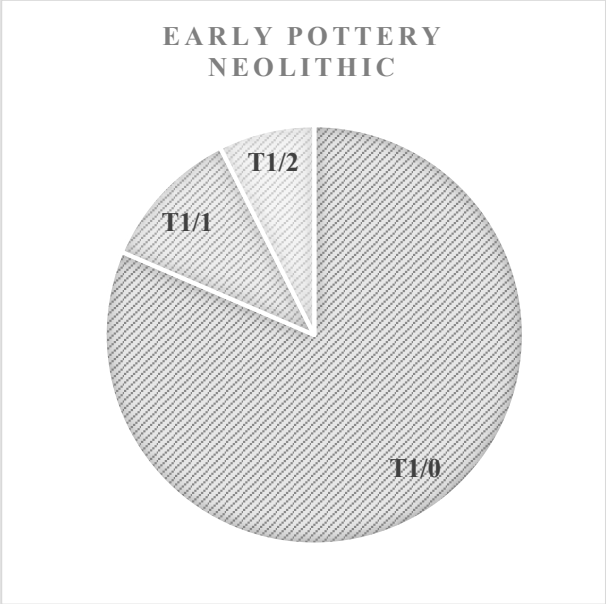
SITE DESCRIPTION

Very small low-mounded site located c. 1 km north of the village of Gir Faqir. The site features abundant small stones and pottery fragments. The soil is ashy and light grey coloured.

SITE BIOGRAPHY

The prehistoric site had a long occupation sequence from the Early Pottery Neolithic to the Ubaid period, but the Early Pottery Neolithic was the settlement's period of maximum expansion. Later the site was occupied (maybe with a non-permanent or short-lived settlement) during the Middle Bronze Age, Parthian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
705	01	0	44	44
705	01	1	6	6
705	01	2	4	4
705	03	0	1	1
705	03	1	1	1
705	08	0	1	1
705	08	1	1	1
705	14	0	3	3
705	21	0	5	5
705	Und.	-	19	19
TOT			**85**	**85**

POTTERY SELECTION

Plate 1

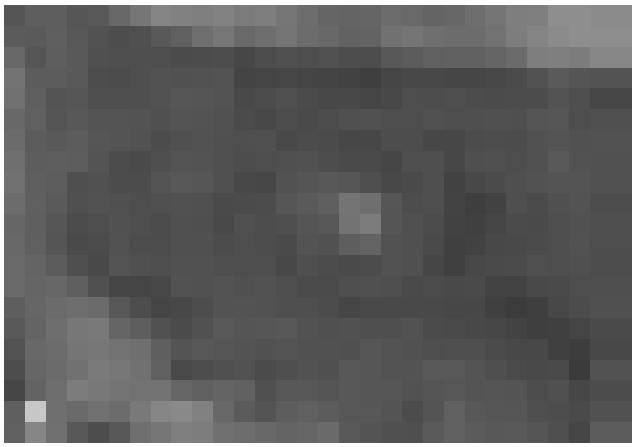
N.	Code	Description	Type	Period	Area
1	705.15.1.16	Rim; pink core and surfaces (7.5YR 8/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 11 cm.	T1/0	1	705.1
2	705.15.1.13	Rim; pale yellow surfaces (2.5Y 8/3); coarse mineral fabric with frequent fine calcite and occasional fine grits; smoothed surfaces. Rim dm. 24 cm.	T1/0	1	705.1
3	705.15.1.67	Rim; reddish yellow surfaces (7.5YR 7/6) and reduced core; chaff fabric with common fine calcite inclusions. Rim dm. 41 cm.	T1/0	1	705.1
4	705.15.1.15	Rim; pink surfaces and core (5YR 8/4); fine mineral fabric with fine calcite and grits inclusions; smoothed surfaces. Rim dm. 21 cm.	T1/0	1	705.1
5	705.15.1.6	Rim; very pale brow surfaces; coarse chaff fabric with abundant calcite inclusions; traces of burnishing on the exterior surface. Rim dm. 54 (?)cm.	T1/0 (EPN ?)	1	705.1
6	705.15.1.5	Rim; pink exterior surface (7.5YR 7/3) and interior surface (5YR 8/4), core reduced; coarse chaff fabric with rare calcite inclusions. Rim dm. 28 cm.	T1/0 (EPN ?)	1	705.1
7	705.15.1.7	Rim; light red surfaces (7.5 R 7/8) and reduced core; mineral fabric with common grits and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 33cm.	T1/0 (EPN ?)	1	705.1
8	705.15.1.8	Rim; reddish yellow surfaces (7.5 YR 7/6) and reduced core; chaff fabric with fine calcite inclusions; smoothed surface. Rim dm. 25 cm.	T1/0 (EPN ?)	1	705.1
9	705.15.1.9	Rim; light brown exterior surface (7.5 YR 6/4) and pink interior surface (7.5 YR 8/4), reduced core; coarse chaff fabric with frequent calcite and grits inclusions; smoothed surfaces. Rim dm. 30 (?) cm.	T1/0 (EPN ?)	1	705.1
10	705.15.1.2	Rim; light red core and surfaces (2.5 YR 6/8); chaff fabric with no visible mineral inclusions. Rim dm. 30 (?) cm.	T1/0	1	705.1

Plate 2

N.	Code	Description	Type	Period	Area
11	705.15.1.4	Rim; light red surfaces (2.5 YR 6/8) and reduced core; coarse chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 45 (?) cm.	T1/0	1	705.1
12	705.15.1.42	Base; light red exterior surface (2.5YR 6/8) and reddish yellow interior surface (5 YR 7/8); chaff fabric with occasional calcite inclusions.	T1/0	1	705.1
13	705.15.1.41	Base; very pale brown surfaces (10YR 7/4) and gray core (10YR 5/1); chaff fabric with frequent fine calcite inclusions; finger impression on the interior surface.	T1/0	1	705.1
14	705.15.1.26	Body sherd; pale yellow surfaces (2.5Y 8/3) and reddish yellow core and interior surface (7.5YR 7/6); mineral fabric with common chaff and fine calcite inclusions; smoothed exterior surface; incised linear decoration on the exterior surface.	T1/0	1	705.1
15	705.15.1.73	Body sherd; very pale brown surfaces and core (10 YR 8/2); mineral fabric with occasional fine calcite inclusions; smoothed surfaces; incised decoration on the exterior surface.	T1/0	1	705.1
16	705.15.1.74	Body sherd; reddish yellow exterior surface (7.5YR 8/6) and light brown interior surface (10YR 6/4); mineral fabric with occasional chaff and calcite inclusions; incised decoration on the exterior surface.	T1/0	1	705.1
17	705.15.1.44	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with abundant fine grits inclusions; burnished or smoothed surfaces; dusky red (10R 3/3) painted decoration on the exterior surface. Rim dm. 24 cm.	T1/1	1	705.1
18	705.15.1.43	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 6/6) with pale yellow margins (2.5Y 8/3); mineral fabric with common chaff and no visible mineral inclusions; smoothed surfaces; red painted decoration on the surfaces. Rim dm. 21 cm.	T1/1	1	705.1
19	705.15.1.32	Body sherd; very pale brown surfaces (10YR 8/3) and light red core (2.5YR 6/6); mineral fabric with abundant fine calcite inclusions; smoothed exterior surface; red painted decoration and incised lines on the exterior surface.	T1/1	1	705.1
20	705.15.1.19	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (5Y 3/1) with reddish yellow margins (7.5YR 7/6); chaff fabric with occasional fine calcite inclusions; smoothed surfaces; incised lines on the interior surface. Rim dm. 27 cm.	T1/2	1	705.1
21	705.15.1.68	Rim; very pale brown (10YR 7/3) and gray core (2.5Y 5/1); chaff fabric with frequent fine calcite inclusions; incised lines on the interior surface.	T1/2	1	705.1
22	705.15.1.47	Body sherd; very pale brown core and surfaces (10YR 7/4); mineral fabric with occasional chaff and occasional fine calcite inclusions; black painted decoration on the exterior surface.	T3/0	2	705.1
23	705.15.1.48	Body sherd; very pale brown core and surfaces (10YR 7/3); mineral fabric with occasional chaff and fine calcite inclusions; grooved exterior surface.	T3/0	2	705.1
24	705.15.1.49	Rim; light yellowish brown surfaces and core (2.5Y 6/4); mineral fabric with occasional chaff and no visible mineral inclusions. Rim dm. 24 cm.	T8/0	8	705.1

SITE 708

(B1 sector)



1- Site 708 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site708 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 708 from East. (2015)

SITE NUMBER	708
LOCAL NAME	-
POSITION	361124 E; 4050588 N
AREA	1,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		1,3		1,3													
N. fr TGAS	5	68		5													

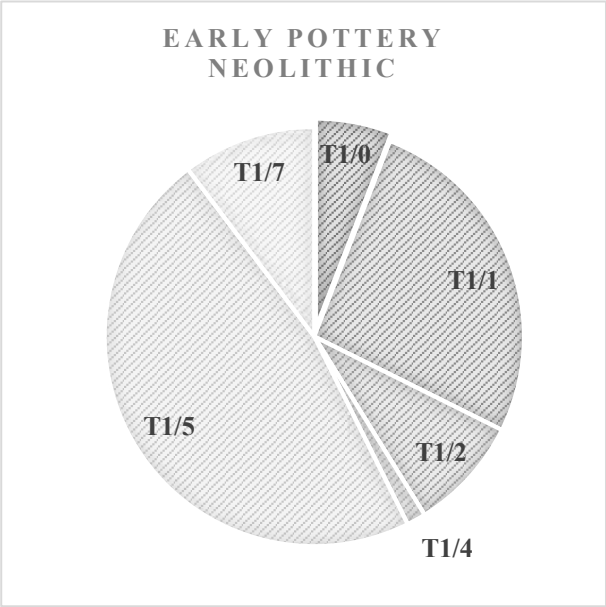
SITE DESCRIPTION

Small low-mounded site located about 500 m north of the village of Gir Faqir. The site features few small stones and abundant pottery fragments.

SITE BIOGRAPHY

The prehistoric site had a long occupation sequence from the Early Pottery Neolithic to the Ubeid period. The Early Pottery Neolithic was the period of maximum expansion of the settlement.

POTTERY TYPES ATTESTED FOR EACH PERIOD



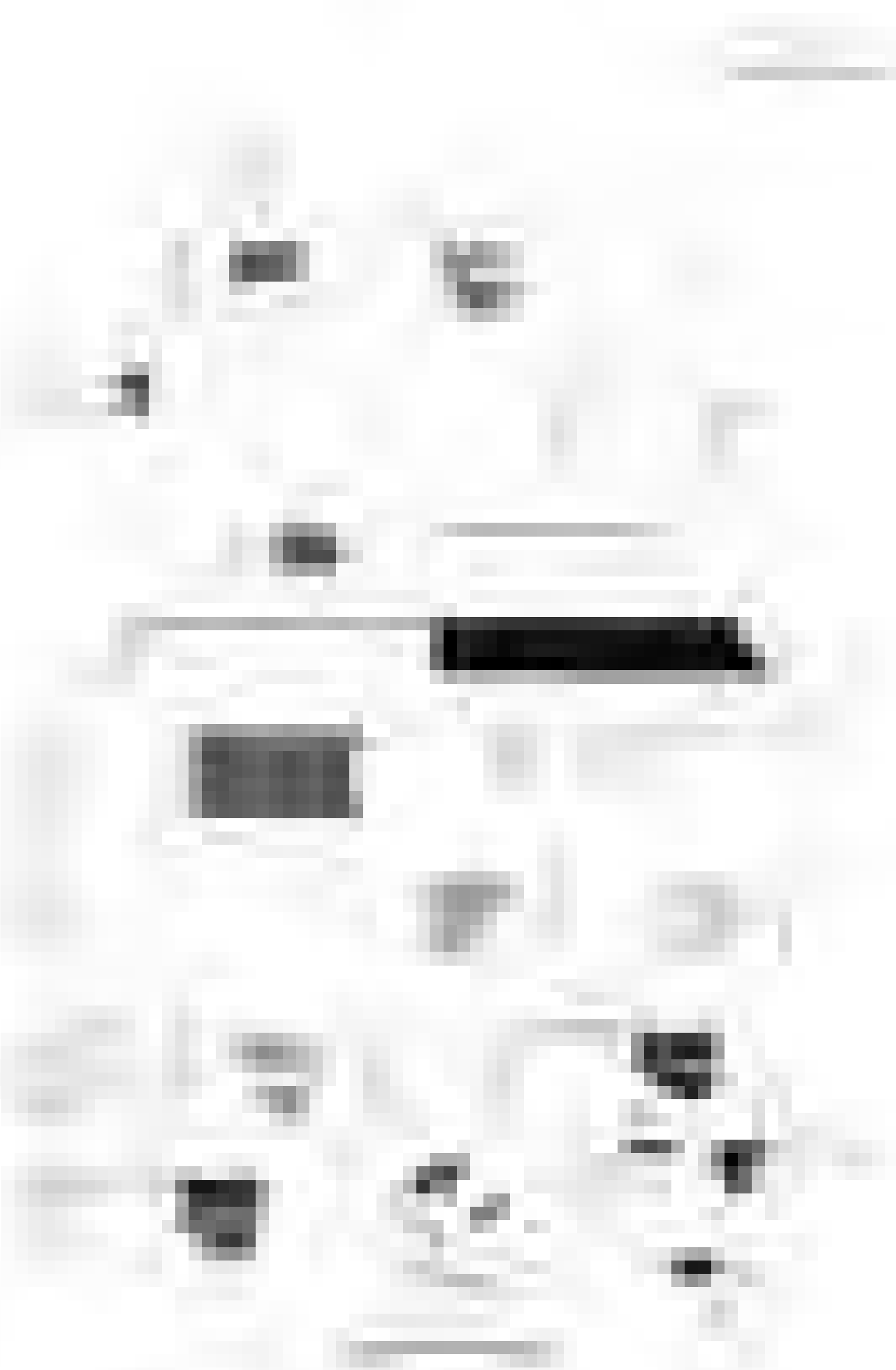
TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
708	01	0	4	4
708	01	1	18	18
708	01	2	6	6
708	01	4	1	1
708	01	5	32	32
708	01	7	7	7
708	03	1	5	5
708	Und.	-	5	5
TOT			**78**	**78**

POTTERY SELECTION

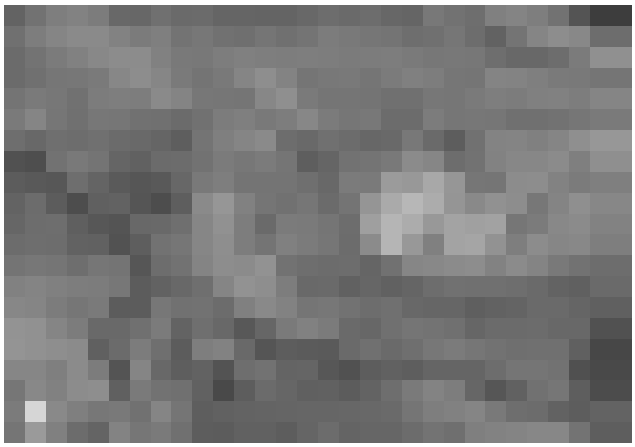
Plate 1

N.	Code	Description	Type	Period	Area
1	708.15.1.2	Rim; very pale brown surfaces (10YR 8/2) and brownish yellow core (10YR 6/6); mineral fabric with abundant chaff and abundant fine calcite and grits inclusions, traces of mica; smoothed surfaces. Rim dm. 24 cm.	T1/0	1	708.1
2	708.15.1.44	Rim; pale yellow surfaces (5Y 8/2) and brownish yellow core (10YR 6/6); mineral fabric with common chaff and fine calcite and grits inclusions; smoothed surfaces; dark brown fugitive painted decoration on both surfaces. Rim dm. 32 cm.	T1/1	1	708.1
3	708.15.1.46	Rim; light gray core and surfaces (10YR 7/2); mineral fabric with rare chaff and fine calcite inclusions; black painted decoration on the surfaces. Rim dm. 22 cm.	T1/1	1	708.1
4	708.15.1.48	Rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with abundant fine calcite inclusions; smoothed surfaces; red painted fugitive decoration on the exterior surface. Rim dm. 10 cm.	T1/1	1	708.1
5	708.15.1.4	Jar rim; pale yellow surfaces and core (2.5Y 7/4); mineral fabric with rare inclusions; black painted decoration on the surfaces; smoothed surfaces. Rim dm. 26 cm.	T1/1	1	708.1
6	708.15.1.39	Rim; pale yellow surfaces (2.5Y 7/4) and brown core (7.5YR 5/3); mineral fabric with abundant fine calcite and grits inclusions; black painted decoration on the exterior surface. Rim dm. 37 cm.	T1/1	1	708.1
7	708.15.1.40	Rim; very pale brown surfaces (10YR 8/3) and light reddish brown core (5YR 6/4); mineral fabric with occasional chaff and abundant fine calcite and grits inclusions; dark red painted decoration on the exterior surface. Rim dm. 21 cm	T1/1 .	1	708.1
8	708.15.1.47	Rim; pale yellow surfaces (2.5YR 8/3) and light brown core (7.5YR 6/4); coarse chaff fabric with occasional calcite inclusions; grooved lines on the interior surface. Rim dm. 27 cm.	T1/2 Hassuna	1	708.1
9	708.15.1.3	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); chaff fabric with common fine calcite inclusions. Rim dm. 21 cm.	T1/4	1	708.1
10	708.15.1.67	Body sherd; pale yellow exterior surface (2.5Y 8/2) and reddish yellow interior surface and core (7.5YR 6/6); mineral fabric with occasional fine chaff and frequent fine calcite inclusions; incised decoration on the exterior surface.	T1/5 Hassuna	1	708.1
11	708.15.1.57	Body sherd; pale yellow exterior surface (2.5Y 8/3) and reddish yellow interior surface and core (5YR 6/6); mineral fabric with occasional fine chaff and frequent fine calcite inclusions; incised decoration on the exterior surface.	T1/5 Hassuna	1	708.1
12	708.15.1.51	Body sherd; very pale brown exterior surface (10YR 8/3), reddish yellow interior surface (7.5YR 7/6) and reddish yellow core (5YR 6/6); mineral fabric with occasional chaff and abundant fine grits and calcite inclusions, traces of mica; incised decoration on the exterior surface.	T1/5 Hassuna	1	708.1
13	708.15.1.5	Body sherd; very pale brown exterior surface (10YR 8/3) and reddish yellow interior surface and core (7.5YR 7/6); coarse chaff fabric with abundant fine-medium grits and calcite inclusions; incised decoration on the exterior surface.	T1/5 Hassuna	1	708.1
14	708.15.1.70	Rim; pale yellow surfaces (5Y 8/2) and light brownish gray core (2.5Y 6/2); mineral fabric with common chaff and frequent fine dark mineral inclusions; smoothed surfaces; dark brown painted decoration on the exterior surface. Rim dm. 16 cm.	T1/7	1	708.1
15	708.15.1.69	Rim; pale yellow surfaces and core (2.5y 8/4); mineral fabric with occasional chaff and frequent fine grits inclusions; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 19 cm.	T1/7	1	708.1
16	708.15.1.72	Body sherd; pale yellow interior surface and core (2.5Y 7/3); mineral fabric with common chaff and abundant fine grits and calcite inclusions; burnished exterior surface; black fugitive painted decoration on the interior surface.	T1/7	1	708.1
17	708.15.1.20	Rim; very pale brown surfaces (10YR 8/2) and light brown core (7.5YR 6/6); mineral fabric with occasional chaff and frequent fine grits and calcite inclusions; smoothed surface; black painted decoration on the exterior surface. Rim dm. 16 cm.	T3/1	3	708.1
18	708.15.1.18	Body sherd; pale yellow surfaces and core (5 Y 8/2); mineral fabric with occasional chaff and occasional fine calcite inclusions, occasional mica; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 13 cm.	T3/1	3	708.1



SITE 709

(C1 sector)



1- Site 709 on a Corona satellite imager (Corona 1039, 28 Feb 1967).

2 - Site 709 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 709 from North. (2015)

SITE NUMBER	709
LOCAL NAME	-
POSITION	362062; 4048967
AREA	2,7 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Complex of mounds
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Modern excavation and leveling activities
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha												**0,5**			**0,8**	**2,7**	**2,7**
N. fr. TGAS	11											3			3	5	120

SITE DESCRIPTION

Group of mounds located circa 1 km south-east of Gir Faqir. The site is located close to a wadi and comprises three low mounds, and featured abundant small stones, grindstone and baked brick fragments, and ashy light-grey soil. The site had been partially devastated by trench digging, levelling activities and earth movement for agricultural purposes.

SITE BIOGRAPHY

The Neo-Assyrian occupation was limited to the southern mound (collection unit 2). Subsequently, the north-eastern mound (collection unit 1) was occupied during the Parthian period. During the Sasanian period the site expanded to all the mounds and during the Islamic period it was densely occupied.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
709	11	0	1		1	
709	11	7	1		1	
709	11	8	1		1	
709	14	0	2	2		
709	14	7	1	1		
709	15	3	1			1
709	16	1	4	2	2	
709	21	0	120	32	61	27
709	Und.	-	11	3	2	6
TOT			**142**	**40**	**68**	**34**

POTTERY SELECTION

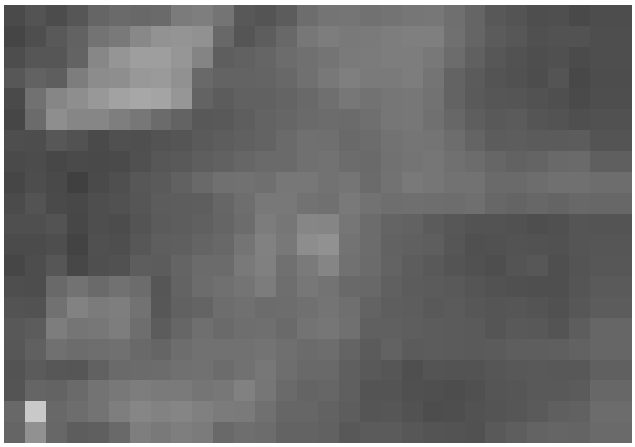
Plate 1

N.	Code	Description	Type	Period	Area
1	709.15.2.1	Rim; pale yellow (2.5Y 8/2) and reddish yellow interior surface and core (5YR 6/6); mineral fabric with common chaff and abundant fine calcite inclusion and frequent grits. Rim dm. 44 cm.	T11/0	11	709.2
2	709.15.2.3	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (7.5YR 6/6); mineral fabric with abundant fine grits and calcite inclusions. Rim dm.10 cm.	T11/7	11	709.2
3	709.15.2.2	Rim; pale yellow core and surfaces (5Y 8/2); mineral fabric with fine rare chaff and no visible mineral inclusions; traces of burnishing on the rim. Rim dm. 7 cm.	T11/8	11	709.2

[illegible]

SITE 710

(B2 sector)



1- Site 710 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 710 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 710 from West. (2015)

SITE NUMBER	710
LOCAL NAME	-
POSITION	362624 E; 4049950 N
AREA	1,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Settled hill (?)
OBSERVATION CONDITIONS	good
DAMAGE AND THREATS	Building on the top of the hill
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									**1,6**								**1,6**
N. fr. TGAS									1								16

SITE DESCRIPTION

Settled hill located between Tell Gomel and Gir Faqir. A few houses are present on the hilltop. Fragments were spread over a large area and it was difficult to define the site boundary.

SITE BIOGRAPHY

The hill was probably settled during the Islamic period. A single Middle Bronze Age period sherd was found, which might indicate the temporary occupation of the site during this period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
710	08	0	1	1
710	21	0	16	16
TOT			**17**	**17**

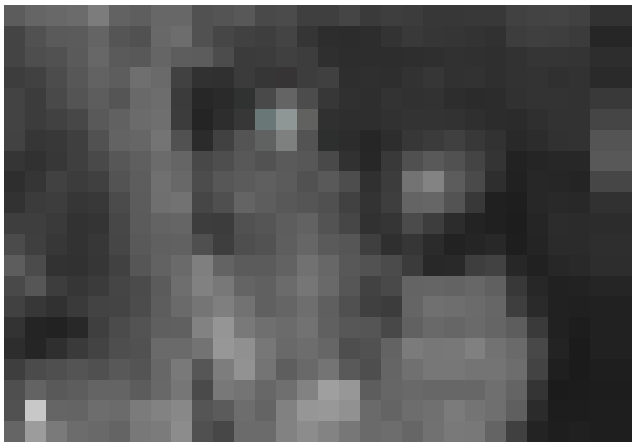
POTTERY SELECTION

Plate 1

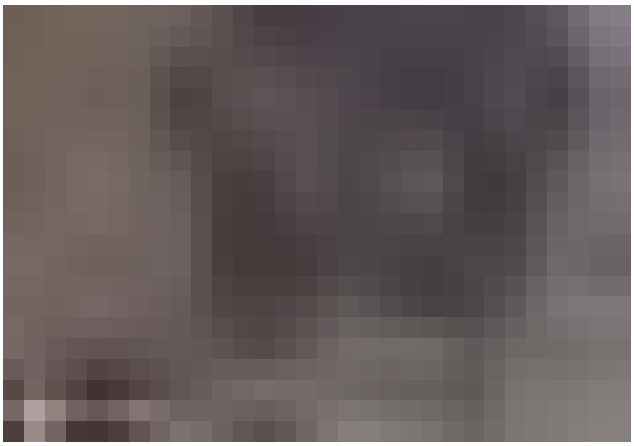
N.	Code	Description	Type	Period	Area
1	710.15.1.1	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with frequent fine mica, calcite and grits inclusions. Rim dm. 30 cm.	T8/0	8	710.1

SITE 713

(A3 sector)



1- Site 713 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2- Site 713 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 713 from East. (2015)

SITE NUMBER	713
LOCAL NAME	-
POSITION	362624; 4049950
AREA	0,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,6**									**0,6**
N. fr. TGAS	20							28									1

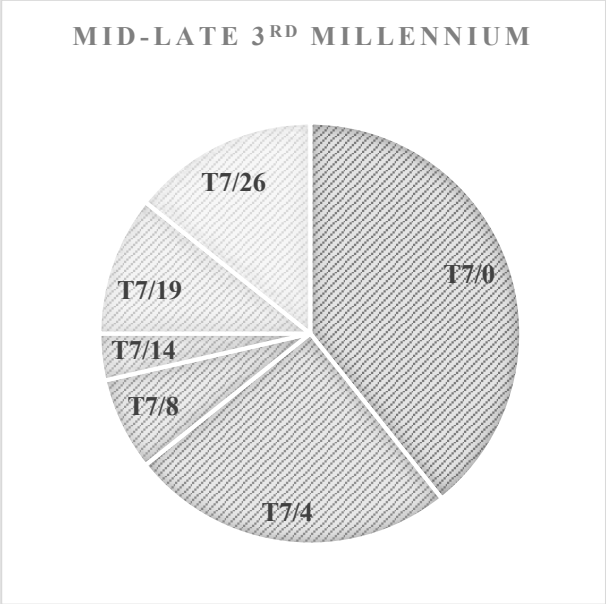
SITE DESCRIPTION

Small flat site located immediately north of the edge of the Tell Chirra site, featuring numerous small stones and numerous pottery sherds.

SITE BIOGRAPHY

The site was a very small mid-late 3rd millennium BC village.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
713	07	0	11	11
713	07	4	7	7
713	07	8	2	2
713	07	14	1	1
713	07	19	3	3
713	07	26	4	4
713	21	0	1	1
713	Und.	-	20	20
TOT			**49**	**49**

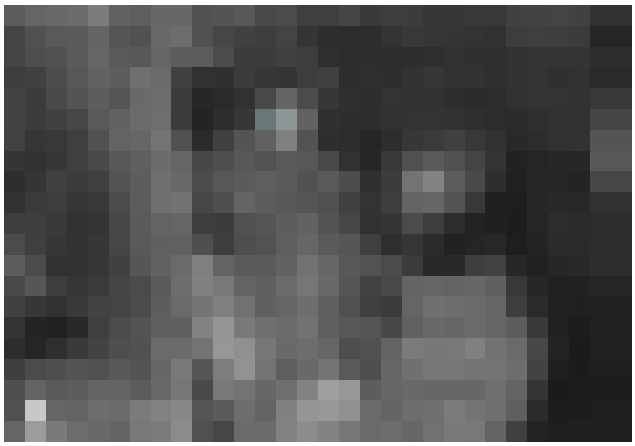
POTTERY SELECTION

Plate 1

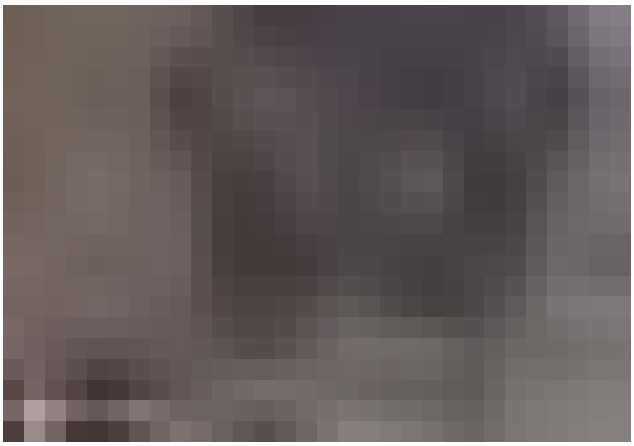
N.	Code	Description	Type	Period	Area
1	713.15.1.11	Rim; pale yellow core and surfaces (5Y 8/4); mineral fabric with frequent fine chaff and no visible inclusions. Rim dm. 26 cm.	T7/0	7	713.1
2	713.15.1.27	Body sherd; pale yellow surfaces (5Y 8/2) and white core (5Y 8/1); mineral fabric with no visible inclusions; bitumen on the interior surface; incised decoration and bitumen decoration on the exterior surface.	T7/0	7	713.1
3	713.15.1.21	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with fine grits and quartz inclusions; incised decoration on the exterior surface. Rim dm. 26 cm.	T7/4 Akk.	7	713.1
4	713.15.1.26	Body sherd; pale yellow surfaces and core (2.5Y 8/3); fine mineral fabric with occasional chaff and occasional fine calcite inclusions; comb incised and comb impressed decoration on the exterior surface.	T7/4	7	713.1
5	713.15.1.28	Body sherd; pale yellow exterior surface (2.5Y 8/3) and pink interior surface and core (7.5YR 7/4); mineral fabric with no visible inclusions; comb incised and comb impressed decoration on the exterior surface.	T7/4	7	713.1
6	713.15.1.12	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with frequent fine calcite and grits inclusions. Rim dm. 20 cm.	T7/8	7	713.1
7	713.15.1.10	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with abundant chaff and common fine calcite inclusions. Rim dm. 20 cm.	T7/14	7	713.1
8	713.15.1.19	Rim; gray surfaces and core (5Y 6/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 8 cm.	T7/19 Akk.	7	713.1
9	713.15.1.15	Rim; pale yellow surfaces (5Y 8/3) and olive gray core (5Y 5/2); fine mineral fabric with occasional fine chaff and calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/26 Akk.	7	713.1

SITE 715

(A3 sector)



1- Site 715 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2- Site 715 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 715 from East. (2015)

SITE NUMBER	715
LOCAL NAME	-
POSITION	368756 E; 4055457 N
AREA	0,8 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								0,8	0,8	0,8							
N. fr. TGAS	8							12	5	2							

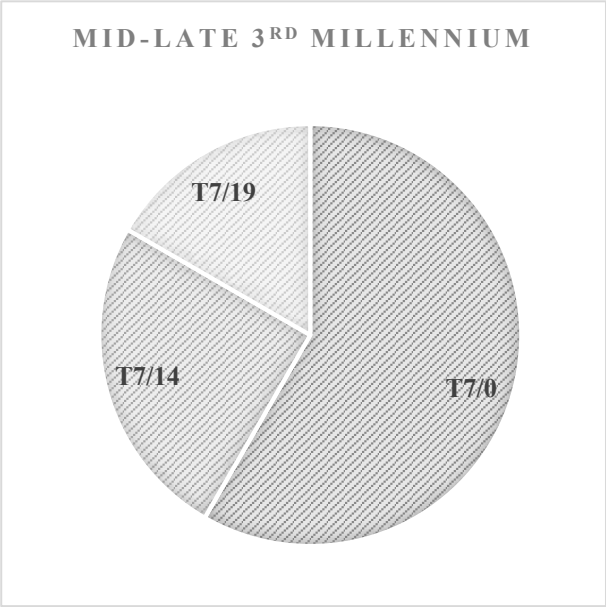
SITE DESCRIPTION

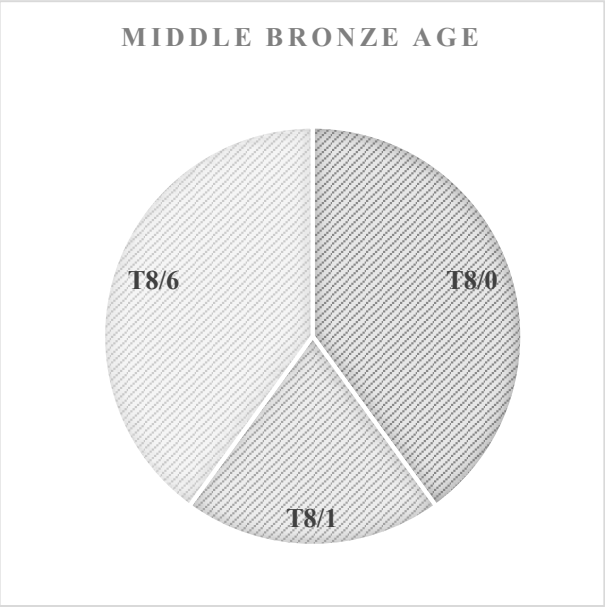
Small flat site located immediately north of the edge of the Tell Chirra site. The site had been levelled by bulldozers and some excavation had probably been carried out. The site features numerous small stones and a few baked brick fragments. The soil colour was light grey. It was difficult to determine the site limits in the field and the borders are defined on the basis of the CORONA image.

SITE BIOGRAPHY

The small site was settled from the mid-late 3rd millennium until the Mitanni period.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
715	07	0	7	7
715	07	14	3	3
715	07	19	2	2
715	08	0	2	2
715	08	1	1	1
715	08	6	2	2
715	09	0	2	2
715	Und.	-	8	8
TOT			**27**	**27**

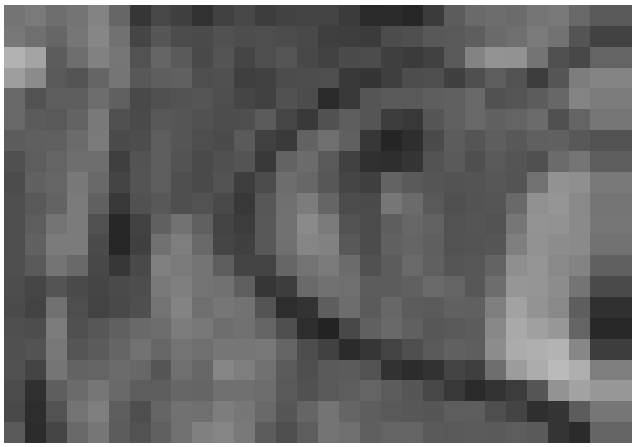
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	715.15.1.1	Rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (5YR 7/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 42 cm.	T7/0	7	715.1
2	715.15.1.4	Rim; pale yellow surfaces (5Y 7/3) and olive gray core (5Y 5/2); fine mineral fabric with occasional fine chaff and occasional fine calcite inclusions. Rim dm. 14 cm.	T7/0 Akk.	7	715.1
3	715.15.1.9	Rim; pale yellow surfaces (5Y 7/3) and olive gray core (5Y 5/2); fine mineral fabric with occasional fine chaff and frequent fine calcite inclusions. Rim dm. 10 cm.	T7/0 Akk.	7	715.1
4	715.15.1.12	Body sherd; pale olive core and surfaces (5Y 6/4); chaff fabric with frequent fine calcite and large mineral inclusions; incised decoration on the exterior surface; overfired.	T7/0 Akk.	7	715.1
5	715.15.1.6	Rim; pale yellow surfaces and core (2.5Y 7/3); mineral fabric with frequent chaff and common fine grits and calcite inclusions; comb incised and rope decoration on the exterior surface. Rim dm. 43 cm.	T7/14 Akk.	7	715.1
6	715.15.1.7	Rim; pale yellow surfaces and core (2.5Y 7/4); chaff fabric with occasional fine calcite inclusions; comb incised decoration on the exterior surface. Rim dm. 24 cm.	T7/14 Akk.	7	715.1
7	715.15.1.8	Rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with common fine calcite and grits inclusions; traces of bitumen on the interior surface; comb incised and fine rope decoration on the exterior surface. Rim dm. 27 cm.	T7/14 Akk.	7	715.1
8	715.15.1.14	Bowl rim; very pale brown surfaces and core (10YR 7/4); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 8 cm.	T8/0	8	715.1
9	715.15.1.13	Rim; reddish yellow surfaces (5YR 7/6) and dark grayish brown core (10YR 4/2); mineral fabric with abundant chaff and common fine calcite inclusions; traces of red painting on the interior and exterior surface. Rim dm. 18 cm.	T8/1	8	715.1
10	715.15.1.17	Base; pale yellow exterior surface (2.5Y 8/2) and pink interior surface and core (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions. Base dm. 12 cm.	T8/6	8	715.1
11	715.15.1.18	Base; pale yellow exterior surface (2.5Y 7/4); chaff fabric with fine calcite inclusions. Base dm. 12 cm.	T9/0	9	715.1
12	715.15.1.19	Rim; pale yellow exterior surface (2.5Y 8/3) and reddish yellow interior surface and core (5YR 6/6); chaff fabric with occasional fine calcite inclusions; traces of bitumen on the interior surface. Rim dm. 44 cm.	T9/12	9	715.1

SITE 719

(A3 sector)



1 - Site on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 719 from South. (2015)

SITE NUMBER	719
LOCAL NAME	-
POSITION	368369 E; 4054397 N
AREA	4 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Levelled by bulldozers (?)
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																**4**	**4**
N. fr. TGAS	13															6	4

SITE DESCRIPTION

This large flat site is located on the left site of a wadi, c. 500 m south of the city of Chirra. The site had probably been completely levelled by bulldozers for agricultural purposes (on the CORONA image the ancient mound may be seen). Notwithstanding the large area and the good visibility conditions, only a few diagnostic sherds were collected.

SITE BIOGRAPHY

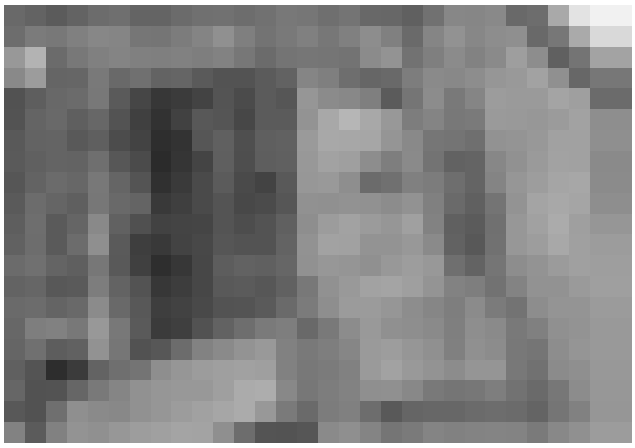
The site shows only Sasanian and Islamic period occupation.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
719	15	0	2	2
719	15	3	1	1
719	15	4	1	1
719	16	6	2	2
719	21	0	4	4
719	Und.	-	13	13
TOT			**23**	**23**

SITE 722

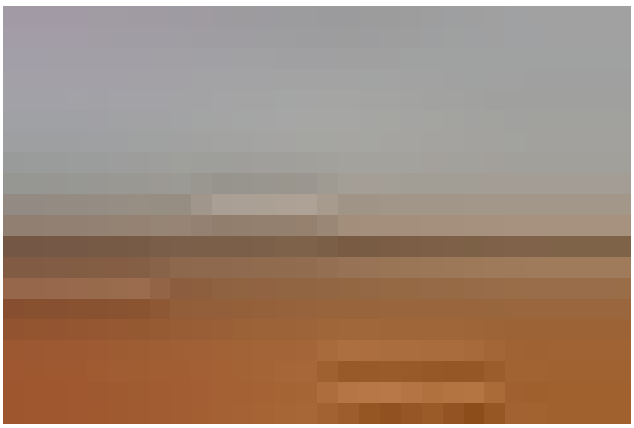
(B2 sector)



1- Site 722 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 722 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 722 from East. (2015)



4 - Site 722 from North-East. (2015)

SITE NUMBER	722
LOCAL NAME	-
POSITION	363490 E; 4050877 N
AREA	8,7 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Excavation for a well in area 4 and construction activities in area 5
COLLECTION AREAS	1-5

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha							3,4	8,7	7,3	2,9	3,3	4,4			0,9		4,4
N. fr. TGAS	76						1	78	16	11	2	18			2		24

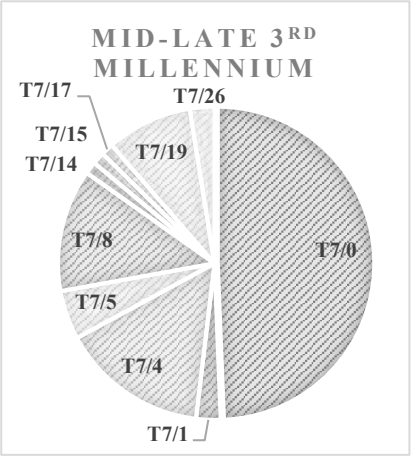
SITE DESCRIPTION

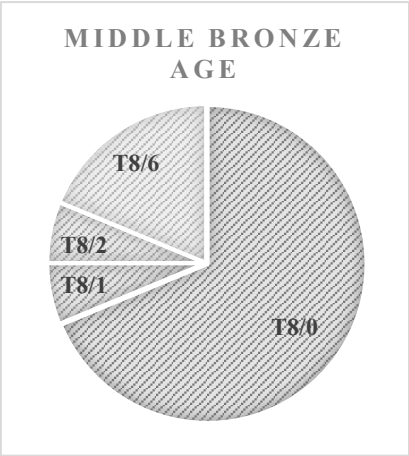
Large flat site, with only a low-mounded area (collection unit 1), located on the right bank of the River Gomel in front of Tell Gomel. The site features light-grey soil, abundant small to large stones, and basalt tool and baked brick fragments. On the mound there were several heaps of stones, perhaps resulting from the removal of stones to improve the agricultural soil. A modern trench for the construction of a water well had been dug in collection unit 3; the abundant large fragments collected from the trench were assigned to a new collection unit (4). In collection unit 5, on the other side of the dirt road that connects Gomel to Gir Faqir, a small building and another deep trench are present. It was very difficult to determine the limits of the site; they were decided on the basis of soil colour and artefact density. At present this area is often occupied by nomadic camps.

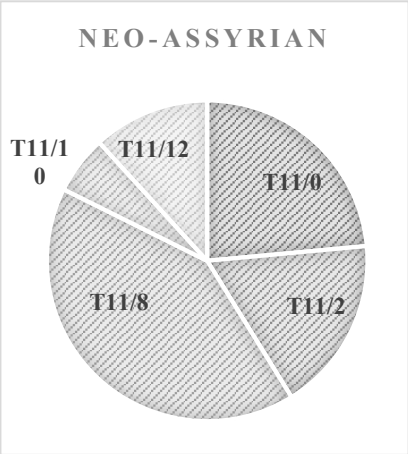
SITE BIOGRAPHY

A single Ninivite V period sherd might indicate the presence of a small settlement during that period. The mid-late 3rd millennium BC was the period of the site's maximum expansion, during which it was densely occupied. The site was contemporary with neighbouring sites 751 and 741. After the end of the 3rd millennium the site continued to be settled, although on a smaller scale, until the Neo-Assyrian period. A few sherds seem to indicate the short-lived and limited occupation of the site during the Parthian period. The site was again densely settled during the Islamic period.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5
722	06	2	1				1	
722	07	0	38	6	4	17	8	3
722	07	1	2	1			1	
722	07	4	12	2		1	4	5
722	07	5	4	2	1			1
722	07	8	10	1	2	3	2	2
722	07	14	1				1	
722	07	15	1		1			
722	07	17	1				1	
722	07	19	7	2	2		3	
722	07	26	2		1			1
722	08	0	11	1	5	1	1	3
722	08	1	1					1
722	08	2	1				1	
722	08	6	3		1		1	1
722	09	0	11	2	4			5
722	10	0	1			1		
722	10	13	1			1		
722	11	0	5	1	1		1	2
722	11	2	3	1	1			1
722	11	8	7	2	3		1	1
722	11	10	1	1				
722	11	12	2				1	1
722	14	7	2	2				
722	21	0	29	24	3		1	1
722	Und.	-	76	16	17	9	10	24
TOT			**233**	**64**	**46**	**33**	**38**	**52**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	722.15.4.15	Body sherd; gray surfaces (5Y 6/1) and dark gray core (5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces; incised decoration on the exterior surface.	T6/2	6	722.4
2	722.15.2.1	Rim; light gray core and surfaces (2.5Y 7/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 19 cm.	T7/0	7	722.2
3	722.15.4.10	Rim; light gray core and surfaces (5Y 7/1); fine mineral fabric with very rare chaff and no visible inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/0 Akk.	7	722.4
4	722.15.4.8	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T7/0 Akk.	7	722.4
5	722.15.4.7	Base; very pale brown surface (10YR 7/4) and pink core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces.	T7/0	7	722.4
6	722.15.3.18	Body sherd; white surfaces (5Y 8/1) and greenish gray core (Gley 1 5/5GY); incised decoration on the exterior surface.	T7/0 Akk.	7	722.3
7	722.15.1.13	Body sherd; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with fine calcite inclusions; smoothed exterior surface; incised decoration on the exterior surface.	T7/0 Post-Akk.	7	722.1
8	722.15.4.37	Base; bluish gray exterior surface (GLEY 2 6/1 5B) with pale yellow horizontal streaks (5Y 8/3), pale yellow interior surface and gray core (2.5Y 5/1); fine mineral fabric with no visible inclusions; burnished exterior surface, smoothed interior surface. Base dm. 12 cm.	T7/1 Akk.	7	722.4
9	722.15.5.8	Rim; pale yellow surfaces (5Y 8/3) and pink core (7.5YR 7/4); chaff fabric with occasional fine calcite inclusions; comb incised decoration on the exterior surface. Rim dm. 26 cm.	T7/4	7	722.5
10	722.15.5.10	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with abundant chaff and occasional fine calcite and grits inclusions; comb incised decoration on the exterior surface. Rim dm. 54 cm.	T7/4	7	722.5
11	722.15.1.8	Rim; pale yellow surfaces and core (5Y 8/3); mineral fabric with frequent chaff and occasional fine calcite inclusions; comb incised decoration on the exterior surface. Rim dm. 22 cm.	T7/4 Akk.	7	722.1
12	722.15.4.13	Rim; pale yellow surfaces (5Y 8/3) and light olive gray core (5Y 6/2); fine mineral fabric with no visible inclusions; comb impressed decoration on the exterior surface. Rim dm. 10 cm.	T7/4 Post-Akk.	7	722.4
13	722.15.3.20	Body sherd; pale yellow surfaces (5Y 7/3) and gray core (5Y 6/1); fine mineral fabric with no visible inclusions; comb impressed and comb incised decoration on the exterior surface.	T7/4 Post-Akk.	7	722.3
14	722.15.1.7	Base; pale yellow horizontal streak on the interior surface (5Y 8/) and gray exterior surface and core (5Y 5/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 6 cm.	T7/5 Akk.	7	722.1
15	722.15.5.9	Rim; light gray core and surfaces (5Y 7/1); chaff fabric with no visible inclusions; rope decoration on the exterior surface; smoothed surfaces. Rim dm. 54 cm.	T7/8	7	722.5
16	722.15.2.8	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with fine calcite inclusions; smoothed/burnished surfaces. Rim dm. 20 cm.	T7/8	7	722.2
17	722.15.4.6	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/3); mineral fabric with frequent chaff and common fine calcite inclusions. Rim dm. 20 cm.	T7/14	7	722.4
18	722.15.4.5	Cooking pot; light olive brown core (2.5Y 5/3) and reddish yellow surfaces (5YR 6/6); mineral fabric with abundant fine-medium calcite and grits inclusions. Rim dm. 30 cm.	T7/17	7	722.4
19	722.15.3.19	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	722.3
20	722.15.1.6	Rim; pale yellow core (2.5Y 7/3) and surfaces (5Y 8/2); mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/19 Akk.	7	722.1
21	722.15.4.9	Rim; light gray core and surfaces (5Y 7/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/19 Akk.	7	722.4
22	722.15.1.10	Rim; pale yellow core (2.5Y 7/3) and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; burnished exterior surface; incised decoration on the exterior surface. Rim dm. 8 cm.	T7/19 Post-Akk.	7	722.1
23	722.15.2.6	Rim; pale yellow exterior surface (2.5Y 8/2) and pink interior surface and core (7.5YR 7/4); mineral fabric with common chaff and no visible inclusions; smoothed surfaces. Rim dm. 20 cm.	T7/26	7	722.2

Plate 2

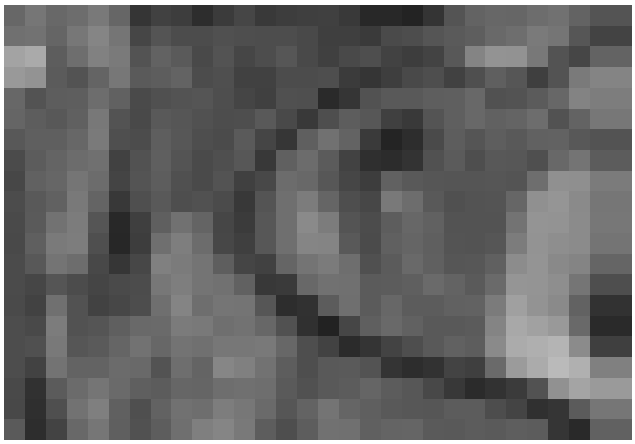
N.	Code	Description	Type	Period	Area
16	722.15.2.8	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with fine calcite inclusions; smoothed/burnished surfaces. Rim dm. 20 cm.	T7/8	7	722.2
17	722.15.4.6	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/3); mineral fabric with frequent chaff and common fine calcite inclusions. Rim dm. 20 cm.	T7/14	7	722.4
18	722.15.4.5	Cooking pot; light olive brown core (2.5Y 5/3) and reddish yellow surfaces (5YR 6/6); mineral fabric with abundant fine-medium calcite and grits inclusions. Rim dm. 30 cm.	T7/17	7	722.4
19	722.15.3.19	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	722.3
20	722.15.1.6	Rim; pale yellow core (2.5Y 7/3) and surfaces (5Y 8/2); mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/19 Akk.	7	722.1
21	722.15.4.9	Rim; light gray core and surfaces (5Y 7/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/19 Akk.	7	722.4
22	722.15.1.10	Rim; pale yellow core (2.5Y 7/3) and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; burnished exterior surface; incised decoration on the exterior surface. Rim dm. 8 cm.	T7/19 Post-Akk.	7	722.1
23	722.15.2.6	Rim; pale yellow exterior surface (2.5Y 8/2) and pink interior surface and core (7.5YR 7/4); mineral fabric with common chaff and no visible inclusions; smoothed surfaces. Rim dm. 20 cm.	T7/26	7	722.2
24	722.15.1.14	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 24 cm.	T8/0	8	722.1
25	722.15.2.15	Rim; reddish yellow core and surfaces (5YR 6/6); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 36 cm.	T8/0	8	722.2
26	722.15.2.13	Rim; light yellowish brown surfaces and core (2.5Y 6/4); mineral fabric with common chaff and abundant fine calcite inclusions. Rim dm. 28 cm.	T8/0	8	722.2
27	722.15.2.17	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with fine calcite inclusions. Rim dm. 16 cm.	T8/0	8	722.2
28	722.15.5.17	Rim; reddish yellow surfaces (7.5YR 8/6) and gray core (5Y 5/1); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 28 cm.	T8/0	8	722.5
29	722.15.5.19	Body sherd; pale yellow core and surfaces (5Y 8/2); mineral fabric with common chaff and no visible inclusions; black painted decoration on the exterior surface.	T8/1	8	722.5
30	722.15.4.22	Rim; very pale brown surfaces (10YR 7/3) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and abundant very fine calcite inclusions. Rim dm. 22 cm.	T8/2	8	722.4
31	722.15.2.12	Base; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with frequent fine grits and calcite inclusions. Base dm. 10 cm.	T8/6	8	722.2
32	722.15.5.22	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/4); mineral fabric with frequent chaff and common fine calcite inclusions; smoothed surfaces; fugitive painted decoration on the exterior surface. Rim dm. 12 cm.	T9/0	9	722.5
33	722.15.5.20	Rim; reddish yellow core and surfaces (5YR 7/6); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T9/0	9	722.5
34	722.15.2.17	Pot stand; very pale brown surfaces and core (10YR 7/3); mineral fabric with common chaff and occasional grits and calcite inclusions. Rim dm. 16 cm.	T9/11	9	722.2
35	722.15.1.15	Rim; pale yellow core and surfaces (5Y 8/4); mineral fabric with occasional chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 18 cm.	T9/13	9	722.1
36	722.15.3.23	Rim; pale yellow core and surface (5Y 7/3); mineral fabric with occasional fine calcite inclusions. Rim dm. 16 cm.	T10/0	10	722.3
37	722.15.3.22	Rim; pale yellow core and surface (5Y 8/3); chaff fabric with occasional fine calcite inclusions. Rim dm. 22 cm.	T10/13	10	722.3

Plate 3

N.	Code	Description	Type	Period	Area
38	722.15.1.18	Rim; very pale brown (10YR 8/3); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/2	11	722.1
39	722.15.5.25	Rim; very pale brown surfaces (10YR 8/6) and gray core (2.5Y 6/1) with pink margins (5YR 7/4); mineral fabric with occasional fine calcite inclusions; burnished surfaces. Rim dm. 30 cm.	T11/2	11	722.5
40	722.15.1.19	Rim; pale yellow surfaces (5Y 8/3) and light reddish brown (2.5YR 7/4); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T11/8	11	722.1
41	722.15.4.26	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with common chaff and frequent fine grit and calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T11/12	11	722.4
42	722.15.5.26	Rim; pale yellow exterior surface (5Y 8/2) and very pale brown core and interior surface (10YR 7/3); chaff fabric with no visible inclusions; smoothed surfaces. Rim dm. 22 cm.	T11/12	11	722.5

SITE 726

(A3 sector)



1- Site 726 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site726 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 726 from South-East. (2015)

SITE NUMBER	726
LOCAL NAME	-
POSITION	368191 E; 4054270 N
AREA	1,6 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha			**0,6**	**1,6**	**1,6**	**1,6**			**0,6**	**0,6**							**0,4**
N. fr. TGAS	16		3	7	22	48			3	2							1

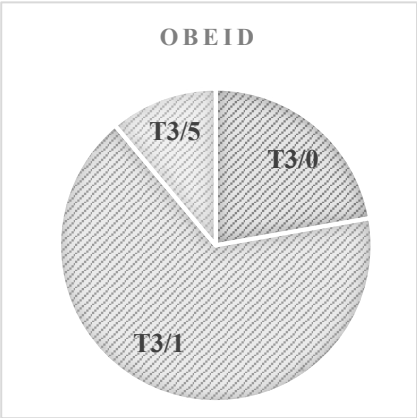
SITE DESCRIPTION

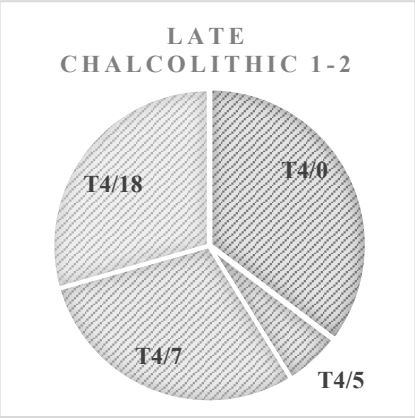
Small circular site located 500 m south of the city of Chirra, on the right bank of a wadi. The site had light-grey soil, with abundant microliths, basalt tools and baked brick fragments.

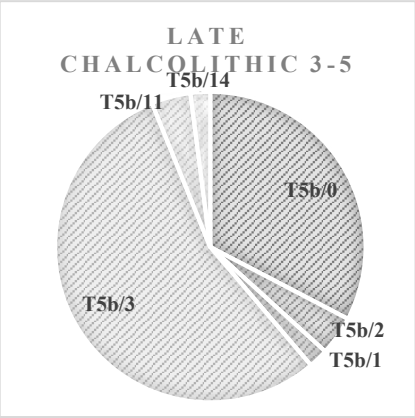
SITE BIOGRAPHY

The site was continuously occupied from the Early Pottery Neolithic to the end of the Late Chalcolitic; the latest phases of the Late Chalcolithic coincide with its maximum expansion. After a gap in the site's occupation during the 3rd millennium BC, it was one more time occupied during the Middle Bronze Age and the Mitanni period. A last Islamic period occupation is attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
726	02	1	3			3
726	03	0	2		1	
726	03	1	6		3	3
726	03	5	1			
726	04	0	6	3	4	4
726	04	5	1		1	
726	04	7	5	4	1	
726	04	18	5	4	1	
726	05b	0	16	6	8	2
726	05b	1	2	2		
726	05b	2	1	1		
726	05b	3	27	7	15	5
726	05b	11	2		2	
726	05b	14	1		1	
726	08	1	3			3
726	09	0	2			2
726	21	0	1	1		
726	Und.	-	16	10	4	4
TOT			**103**	**38**	**41**	**24**

POTTERY SELECTION

Plate 1

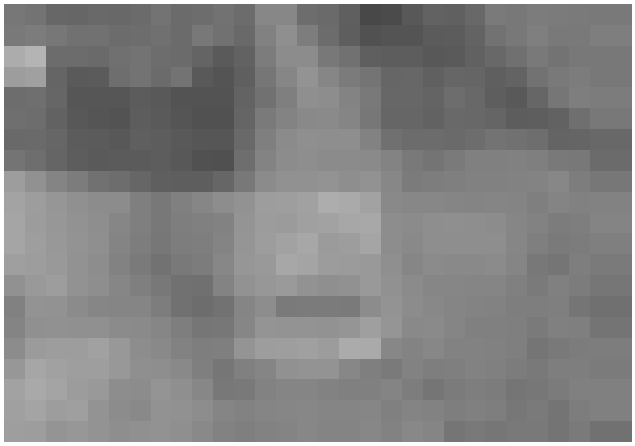
N.	Code	Description	Type	Period	Area
1	726.15.3.4	Rim; reddish yellow surfaces (7.5YR 7/6) and grayish brown core (10YR 5/2) with reddish yellow margins (5YR 7/6); mineral fabric with abundant fine calcite inclusions; smoothed surfaces; black painted fading decoration on the surfaces. Rim dm. 28 cm.	T2/1	2	3
2	726.15.3.2	Body sherd; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces; red painted decoration on the exterior surface.	T2/1	2	3
3	726.15.3.1	Body sherd; very pale brown core and surfaces (10YR 8/3); mineral fabric with occasional fine red mineral inclusions; red-brown painted decoration on the exterior surface.	T2/1	2	3
4	726.15.2.11	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T3/0	3	726.2
5	726.15.3.10	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with occasional fine calcite inclusions; black painted decoration on the rim and interior surface. Rim dm. 20 cm.	T3/1	3	726.3
6	726.15.3.24	Body sherd; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with frequent fine calcite and grits inclusions; concave and painted decoration on the exterior surface.	T3/1	3	726.3
7	726.15.1.24	Rim; reddish yellow core (7.5YR 7/6) and pale yellow surfaces (2.5Y 8/3); mineral fabric with frequent fine-medium calcite inclusions; smoothed interior surface. Rim dm. 30 cm.	T3/5	3	726.1
8	726.15.2.14	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with abundant chaff and frequent fine calcite inclusions; burnished surfaces.	T4/0	4	726.2
9	726.15.1.34	Rim; reddish yellow core (5YR 7/6) and very pale brown surface (10YR 8/3); mineral fabric with rare chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T4/0	4	726.1
10	726.15.3.6	Rim; pink surfaces (7.5YR 7/4) and pale brown core (10YR 6/3); chaff fabric with rare fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T4/0	4	726.3
11	726.15.2.2	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (10YR 4/1) with reddish yellow margins (5YR 7/6); mineral fabric with occasional chaff and abundant fine calcite inclusions; smoothed surfaces with traces of burnishing. Rim dm. 24 cm.	T4/5	4	726.2
12	726.15.1.19	Rim; reddish yellow core (7.5YR 7/6) and very pale brown core (10YR 7/3); mineral fabric with abundant chaff and frequent fine calcite inclusions; smoothed exterior surface. Rim dm. 28 cm.	T4/7	4	726.1
13	726.15.1.33	Rim; gray core (2.5Y 6/1) and pink surfaces (5YR 8/4); chaff fabric with common fine calcite inclusions; burnished exterior surface and smoothed interior surface. Rim dm. 14 cm.	T4/7	4	726.1
14	726.15.1.4	Rim; very pale brown exterior surface (10YR 7/3), gray interior surface (2.5Y 5/1) and brown core (10YR 5/3); mineral fabric with common chaff and fine calcite and grits inclusions; smoothed surfaces. Rim dm. 18 cm.	T4/18	4	726.1
15	726.15.1.1	Rim; reddish yellow core (7.5YR 6/6) and pale yellow surfaces (2.5Y 8/2); mineral with frequent chaff and abundant fine-medium calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T4/18	4	726.1

Plate 2

N.	Code	Description	Type	Period	Area
16	726.15.1.13	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T5b/0	5b	726.1
17	726.15.1.27	Rim; light brownish gray surfaces (10YR 6/2) and dark gray core (2.5Y 5/1) with light brownish gray margins (10YR 6/2); mineral fabric with frequent fine-medium calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T5b/0	5b	726.1
18	726.15.1.18	Rim; dark gray core (5Y 4/1) and light gray core (5Y 7/2); mineral fabric with frequent fine-medium calcite inclusions; smoothed surfaces with traces of burnishing. Rim dm. 28 cm.	T5b/1	5b	726.1
19	726.15.1.12	Rim; dark gray core (2.5Y 4/1) and very pale brown surfaces (10YR 7/3); mineral fabric with frequent fine-medium calcite inclusions; smoothed surfaces. Rim dm. 32 cm.	T5b/3	5b	726.1
20	726.15.1.5	Rim; very pale brown surfaces (10YR 7/3) and dark gray core (2.5Y 4/1); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 36 cm.	T5b/3	5b	726.1
21	726.15.1.2	Rim; very pale brown surfaces (10YR 7/3) and dark gray core (2.5Y 4/1); chaff fabric with abundant fine calcite inclusions; smoothed surfaces. Rim dm. 34 cm.	T5b/3	5b	726.1
22	726.15.2.19	Rim; grayish brown surfaces (2.5Y 5/1) and dark gray core (2.5Y 4/1); mineral fabric with frequent chaff and occasional fine to medium calcite and other minerals inclusions; burnished surfaces. Rim dm. 30 cm.	T5b/3	5b	726.2
23	726.15.3.16	Rim; mineral fabric with common fine calcite inclusions; smoothed surfaces; brown to red painted decoration on the rim and exterior surface.	T8/1	8	726.3
24	726.15.3.21	Rim; pink core and exterior surface (7.5YR 7/3); smoothed surfaces; traces of red fading painted decoration on the rim and exterior surface.	T9/0	9	726.3

SITE 730

(A1 sector)



1- Site 730 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3- Site 730 from East. (2015)

SITE NUMBER	730
LOCAL NAME	-
POSITION	359821 E; 4053584 N
AREA	1,9 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	1,9
N. fr. TGAS	1																28

SITE DESCRIPTION

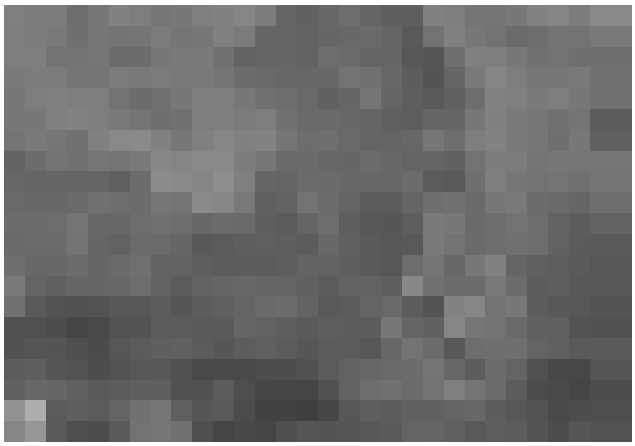
Flat site located 1.5 km south of the village of Mahad. The site had ashy, light-grey coloured soil, with grindstone and baked brick fragments. It was difficult to define the limits of the site.

SITE BIOGRAPHY

The site was an Islamic period village.

SITE 731

(A1 sector)



1 - Site 731 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 731 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 731 from East. (2015)

SITE NUMBER	731
LOCAL NAME	-
POSITION	360266 E; 4053349 N
AREA	3,5 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	3,5
N. fr. TGAS	1																40

SITE DESCRIPTION

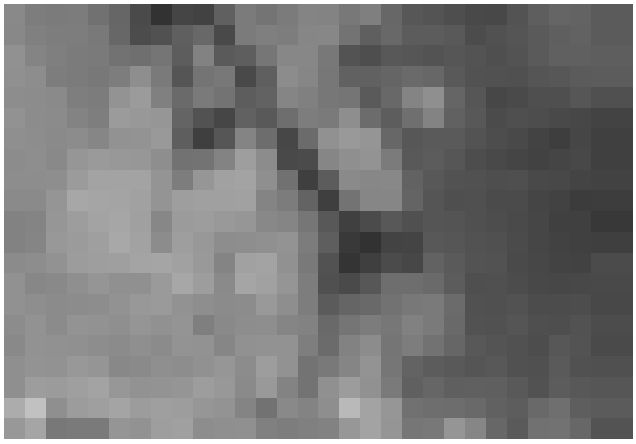
Large almost flat site located 1.5 km south of the village of Mahad. The site had ashy and light-grey coloured soil, grindstone and baked brick fragments, and abundant pottery sherds.

SITE BIOGRAPHY

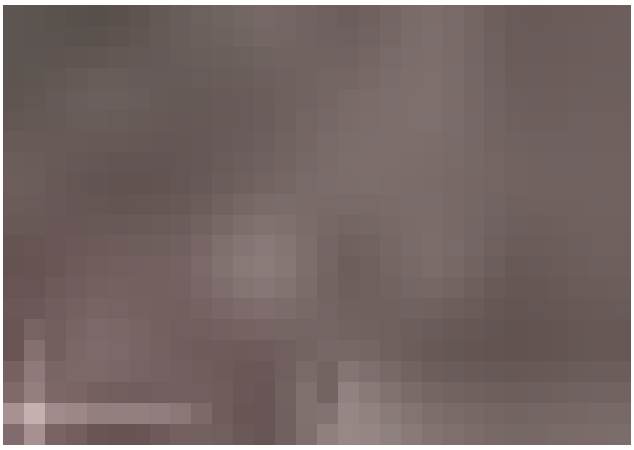
The site was an Islamic village.

SITE 732

(A1 sector)



1 - Site 732 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 732 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 730 from North-East. (2015)

SITE NUMBER	732
LOCAL NAME	-
POSITION	36083; 405401
AREA	0,8 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,8**				**0,8**			**0,8**		**0,8**
N. fr. TGAS	22							2				28			2		2

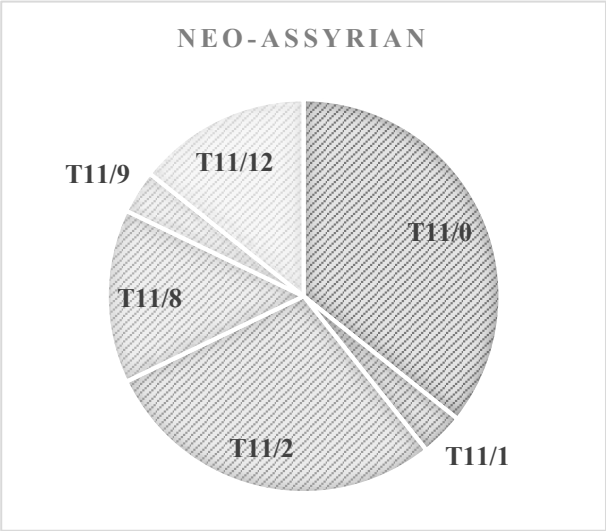
SITE DESCRIPTION

Small elliptical low-mounded site situated close to the road between the villages of Mahad and Gir Faqir. It is one of a group of 5 small circular mounds associated with a dense network of small watercourses. The site features pieces of slag and grindstone and baked brick fragments.

SITE BIOGRAPHY

The site shows a prominent Neo-Assyrian occupation phase and was also settled during the mid-late 3rd millennium and Parthian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
732	07	19	1	1	
732	07	26	1	1	
732	11	0	10	6	4
732	11	1	1	1	
732	11	2	8	5	3
732	11	8	4	4	
732	11	9	1	1	
732	11	12	4	2	2
732	14	0	2		2
732	21	0	2	2	0
732	Und.	-	22	6	16
TOT			**56**	**29**	**27**

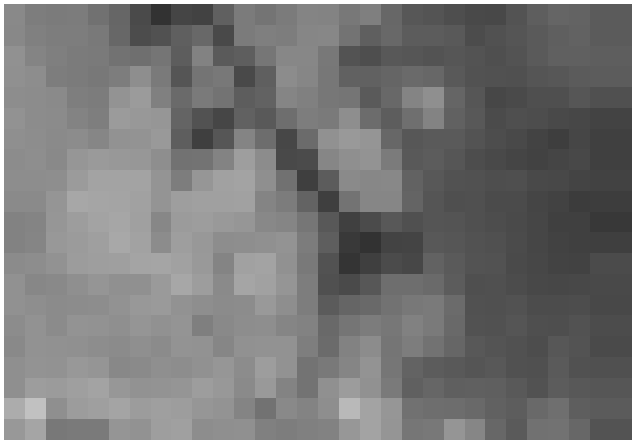
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	732.15.1.2	Rim; pale yellow core and surfaces (2.5Y 8/4); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 10 cm.	T7/19 Akk.	7	732.1
2	732.15.1.1	Rim; light gray (5Y 7/2); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/26 Akk.	7	732.1
3	732.15.2.2	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with frequent chaff and abundant fine-medium calcite inclusions. Rim dm. 18 cm.	T11/0	11	732.2
4	732.15.1.19	Rim; pale yellow surfaces (5Y 8/4) and gray core (5Y 5/1); mineral fabric with frequent chaff and abundant fine calcite inclusions; grooved decoration on the neck. Rim dm. 18 cm.	T11/0	11	732.1
5	732.15.2.6	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with common chaff and abundant fine calcite and grits inclusions. Rim dm. 14 cm.	T11/0	11	732.2
6	732.15.1.3	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/1	11	732.1
7	732.15.1.5	Rim; pale yellow exterior surface (2.5Y 8/3), pink core and interior surface (7.5YR 7/4); mineral fabric with occasional chaff and common fine calcite and grits inclusions; smoothed surfaces. Rim dm. 24 cm.	T11/2	11	732.1
8	732.15.2.1	Rim; reddish yellow core (5YR 7/6) and pink surfaces (7.5YR 8/4); mineral fabric with abundant very fine calcite, mica and grit inclusions. Rim dm. 16 cm.	T11/2	11	732.2
9	732.15.1.10	Rim; light gray core and surfaces (5Y 7/2); mineral fabric with rare chaff and common fine calcite inclusions. Rim dm. 18 cm.	T11/8	11	732.1
10	732.15.1.9	Rim; light brownish gray core and surfaces (2.5Y 6/2); mineral fabric with rare chaff and common fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/9	11	732.1
11	732.15.1.4	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/12	11	732.1
12	732.15.2.5	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with abundant chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T11/12	11	732.2

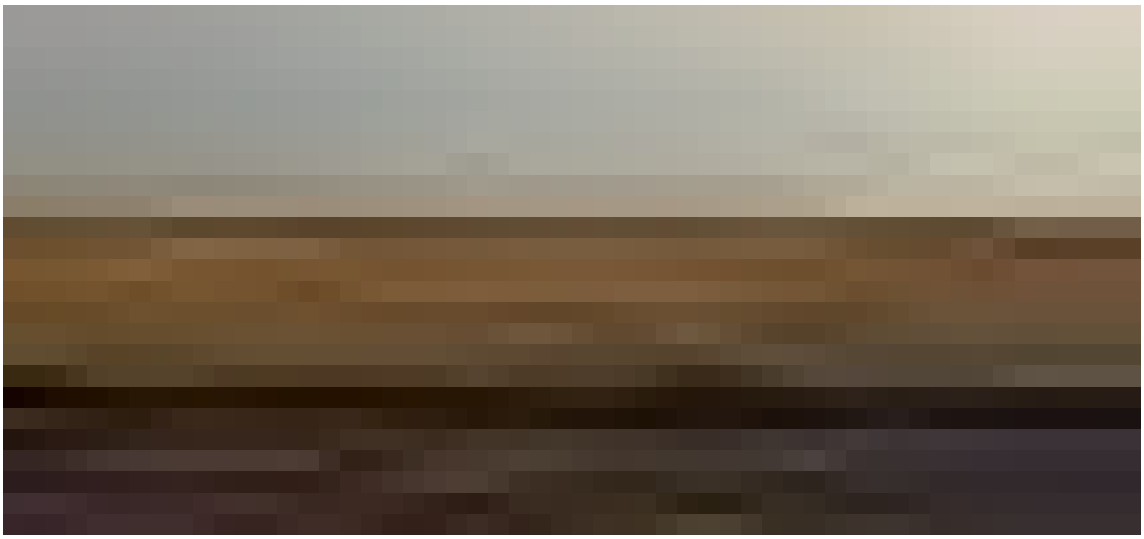
SITE 733

(A1 sector)



1 - Site 733 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 733 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 733from West. (2015)

SITE NUMBER	733
LOCAL NAME	-
POSITION	361008 E; 4054169 N
AREA	1,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1,3**					
N. fr. TGAS	2											6					

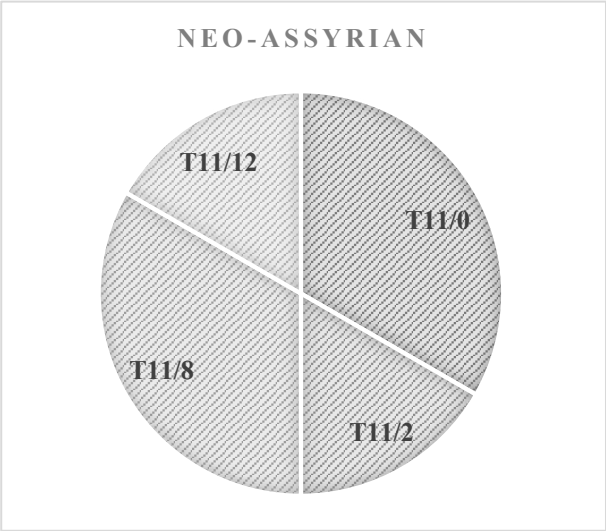
SITE DESCRIPTION

The small flat site is located on the east side of the road between Mahad and Gir Faqir. It is one of a group of 5 small sites associated with a dense network of small watercourses. The visibility was low due to the presence of yellow chaff on the surface. The site features numerous pottery fragments and a few baked brick fragments.

SITE BIOGRAPHY

The site had only a Neo-Assyrian occupation phase.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
733	11	0	2	2
733	11	2	1	1
733	11	8	2	2
733	11	12	1	1
733	Und.	-	2	2
TOT			**8**	**8**

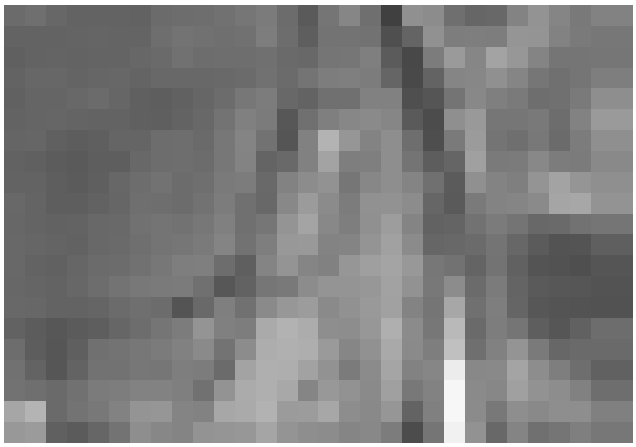
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	733.15.1.3	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/3) with very pale brown surfaces (10YR 7/3); mineral fabric with abundant chaff and common fine calcite inclusions. Rim dm. 26 cm.	T11/2	11	733.1
2	733.15.1.2	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with abundant chaff and occasional fine calcite inclusions. Rim dm. 26 cm.	T11/8	11	733.1
3	733.15.1.5	Rim; reddish yellow surfaces (7.5YR 7/6) and grayish brown core (2.5Y 5/2) with reddish yellow margins (7.5YR 7/6); mineral fabric with abundant chaff and frequent fine calcite inclusions. Rim dm. 22 cm.	T11/8	11	733.1
4	733.15.1.1	Rim; pale yellow slipped surfaces (5Y 8/2) and reddish yellow core (5YR 7/6); fine mineral fabric with rare chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/12	11	733.1

SITE 736

(A2 sector)



1- Site 730 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 732 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 736 from North. (2015)

SITE NUMBER	736
LOCAL NAME	-
POSITION	363497 E; 4055210 N
AREA	2 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Small modern cemetery on the top of the mound
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha							2	2								2	2
N. fr. TGAS	13						2	4								5	2

SITE DESCRIPTION

Small elongated low-mounded site crossed by a dirt road, situated on the right bank of the River Gomel in front of Tell Zinawa Miri. The site features abundant stones, and pottery, grindstone and baked brick fragments.

SITE BIOGRAPHY

The site was settled during the 3rd millennium BC and later during the Sasanian and Islamic periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
736	06	6	2	2
736	07	0	3	3
736	07	8	1	1
736	15	0	1	1
736	15	1	1	1
736	15	2	2	2
736	15	3	1	1
736	21	0	2	2
736	Und.	-	13	13
TOT			**26**	**26**

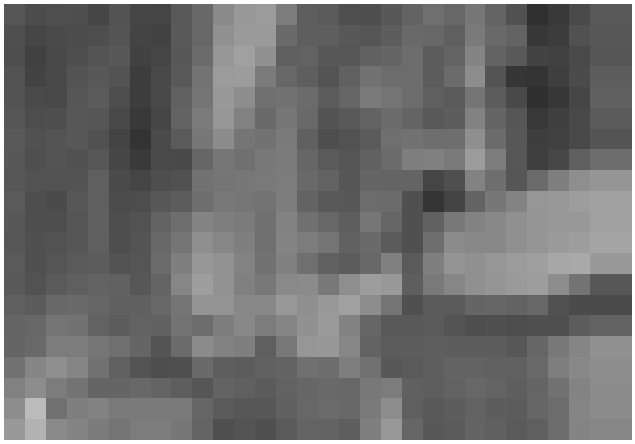
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	736.15.1.1	Base; very pale brown exterior surface (10YR 8/3), reddish yellow core and interior surface (5YR 7/6); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Base dm. 10 cm.	T6/6	6	736.1
2	736.15.1.2	Base; pink surfaces (7.5YR 7/4) and pale brown core (10YR 6/3); chaff fabric with frequent fine calcite inclusions; burnished surfaces.	T6/6	6	736.1
3	736.15.1.3	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); mineral fabric with frequent chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T7/0	7	736.1
4	736.15.1.5	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); mineral fabric with frequent chaff and frequent fine calcite inclusions. Rim dm. 18 cm.	T7/0	7	736.1
5	736.15.1.6	Body sherd; pale yellow exterior surface (5Y 8/2) and very pale brown core and interior surface (10YR 7/4); chaff fabric with abundant fine calcite inclusions.	T7/0 Akk.	7	736.1
6	736.15.1.4	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 8/4); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T7/8	7	736.1

SITE 741

(B2 sector)



1 - Site 741 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 741 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 741 from East. (2015)

SITE NUMBER	741
LOCAL NAME	-
POSITION	363023 E; 4050542 N
AREA	3,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								3,3									
N. fr. TGAS	4							35									

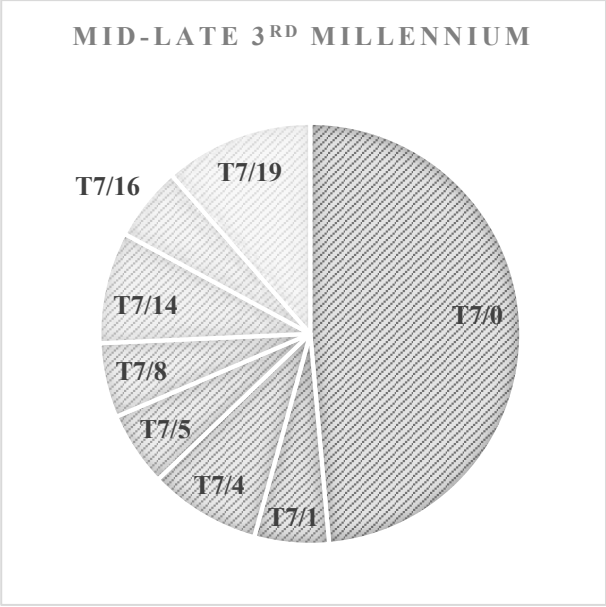
SITE DESCRIPTION

Flat and elongated site located on the right bank of the River Gomel, about 1 km west of Tell Gomel. The site is crossed by the dirt road that connects Tell Gomel with Gir Faqir. The visibility was low, but abundant pieces of slag could be seen on the surface (especially in collection unit 1), as well as basalt tool fragments and stones.

SITE BIOGRAPHY

The site was a mid-late 3rd millennium village; the presence of numerous slag fragments in collection unit 1 might signify that the site was of an industrial nature. No other occupation phases are attested. The site is contemporary with the adjacent site 751; perhaps they were a single large village (5.3 ha).

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

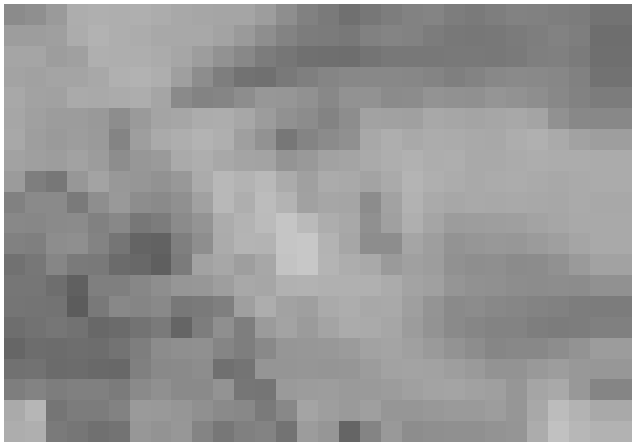
SITE	PERIOD	TYPE	TOTAL	1	2
741	07	0	17	11	6
741	07	1	2	2	
741	07	4	3	2	1
741	07	5	2	2	
741	07	8	2	2	
741	07	14	3	2	1
741	07	16	2		2
741	07	19	4	3	1
741	Und.	-	4	4	
TOT			**39**	**28**	**11**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	741.15.1.5	Rim; dark gray core and surfaces (5Y 4/1); fine mineral fabric with no visible inclusions; burnished surfaces. Rim dm. 12 cm.	T7/0	7	741.1
2	741.15.1.3	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with abundant fine grits and calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T7/0	7	741.1
3	741.16.2.1	Rim; very pale brown surfaces (10YR 7/3) and gray core (2.5Y 5/1) with reddish yellow margins (5YR 7/6); chaff fabric with frequent fine calcite inclusions; burnished exterior surface and smoothed exterior surface. Rim dm. 31 cm.	T7/0	7	741.2
4	741.16.2.6	Rim; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/3); chaff fabric with occasional fine-medium calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T7/0	7	741.2
5	741.16.2.11	Base; pale yellow surfaces (5Y 7/3) and light olive gray core (5Y 7/2); mineral fabric with no visible inclusions; smoothed exterior surface.	T7/0	7	741.2
6	741.15.1.22	Base; pale yellow surfaces (5Y 7/3) and olive gray core (5Y 5/2); mineral fabric with no chaff and no mineral inclusions; smoothed surfaces. Base dm. 8 cm.	T7/1 Akk.	7	741.1
7	741.16.2.9	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 19 cm.	T7/4	7	741.2
8	741.15.1.24	Body sherd; pale yellow core and surfaces (5Y 8/3); chaff fabric with occasional fine calcite inclusions; comb incised decoration on the exterior surface.	T7/4 Akk.	7	741.1
9	741.15.1.17	Rim; gray exterior surfaces (5Y 6/1), pale yellow patina on the interior surface (5Y 8/4) and dark gray core (5Y 4/1); fine mineral fabric with very rare fine calcite inclusions; smoothed surfaces. Rim dm. 6 cm.	T7/5 Akk.	7	741.1
10	741.15.1.4	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with frequent fine grits inclusions; smoothed surfaces. Rim dm. 24 cm.	T7/8	7	741.1
11	741.15.1.1	Rim; pale yellow surfaces (8/3) and pale olive core (5Y 6/3); chaff fabric with abundant fine grits and calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T7/14	7	741.1
12	741.16.2.3	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with no visible mineral inclusions; smoothed surfaces. Rim dm. 25 cm.	T7/14	7	741.2
13	741.16.2.4	Rim; pale yellow core and surface (2.5Y 8/3); mineral fabric with common chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 19 cm.	T7/16	7	741.2
14	741.16.2.8	Rim; pale yellow patina on the surfaces (2.5Y 7/3) and dark gray core (5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	741.2
15	741.15.1.18	Rim; pale yellow surfaces (5Y 8/3) and dark gray core (5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19 Akk.	7	741.1

SITE 742 – Tell Abbas (B1 sector)



1- Site 730 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 742 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 742 from East. (2015)

SITE NUMBER	742
LOCAL NAME	Tell Abbas
POSITION	359499 E; 4049185 N
AREA	5,9 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Excellent
DAMAGE AND THREATS	Bulldozers activity
COLLECTION AREAS	1-7

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha							**1,2**	**2,7**	**5,9**	**4,5**	**3,3**	**4,5**	**3,2**				**4,6**
N. fr. TGAS	67						1	11	74	35	63	22	10				13

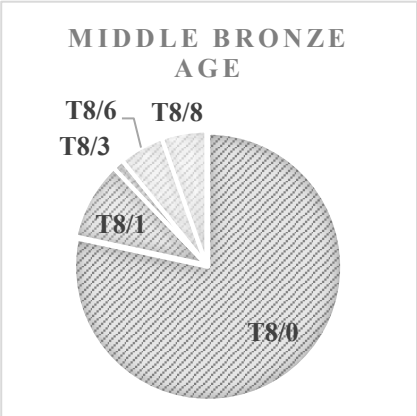
SITE DESCRIPTION

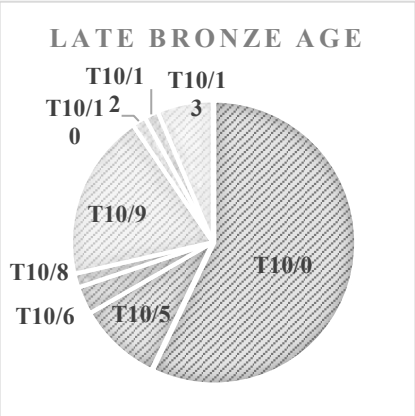
The site is apparently located on a hill, and so is not really high-mounded. It is situated close to a wadi, about 4.8 km west of Tell Gomel. The site features light-grey coloured soil, abundant stones from small to large, and many baked brick, grindstone and slag fragments (especially in collection unit 2). The site had been levelled for agricultural purposes by a bulldozer. The owner of the field containing the site sits told the survey team that a stone structure was removed from the top of the tell during the bulldozing work. He showed us the remains of this stone structure (several limestone blocks) that had been thrown near the wadi.

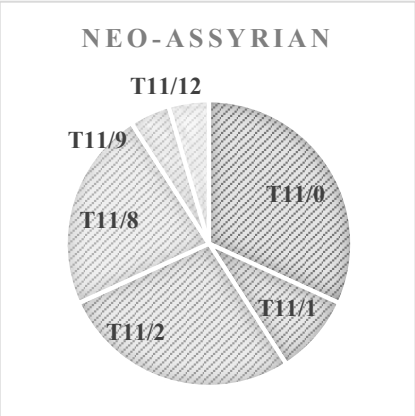
SITE BIOGRAPHY

The site was initially occupied during the first half of the 3rd millennium BC. Subsequently the site continued to grow until the Middle Bronze Age, that represents the maximum expansion of the site. The site continued to be settled until the end of the Post-Assyrian epoch. There is evidence only of Islamic occupation afterwards.

POTTERY TYPES ATTESTED FOR EACH PERIOD







TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3	4	5	6	7
742	06	6	1	1						
742	07	0	10	6	3			1		
742	07	14	1			1				
742	08	0	58	23	9	6	6	4	6	4
742	08	1	7	5		1		1		
742	08	3	1						1	
742	08	6	4	2	1				1	
742	08	8	4	2			1		1	
742	09	0	35	17	2	2	5	5		4
742	10	0	36	22	3	4	4	3		
742	10	5	6	2	4					
742	10	6	2	2						
742	10	8	1	1						
742	10	9	12	6	4	2				
742	10	10	1	1						
742	10	12	1	1						
742	10	13	4	3		1				
742	11	0	7	3	2		2			
742	11	1	2	1	1					
742	11	2	6	4		1				1
742	11	8	5	2		2		1		
742	11	9	1				1			
742	11	12	1				1			
742	12	3	8	6		1				1
742	12	4	1	1						
742	12	6	1	1						
742	21	0	13	8	2		1		1	1
742	0	0	67	16	26	9	2	5	2	7
TOT			**296**	**136**	**57**	**30**	**23**	**20**	**12**	**18**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	742.15.1.155	Base; light brownish gray surfaces (10YR 6/2) and gray core (10YR 5/1); mineral fabric with frequent chaff and occasional fine calcite inclusion; smoothed surfaces.	T6/6	6	1
2	742.15.1.4	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/0	7	1
3	742.15.1.1	Rim (?); light gray core (2.5Y 7/2) and pale yellow surfaces (2.5Y 8/3); mineral fabric with abundant chaff and common fine calcite and grits inclusions. Rim dm. 42 cm.	T7/0	7	1
4	742.15.2.3	Base; light gray surfaces (2.5Y 7/2) and gray core (2.5Y 6/1); mineral fabric with abundant fine calcite inclusions; smoothed surfaces. Base dm. 3 cm.	T7/0	7	2
5	742.15.1.156	Body sherd; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; rope decoration on the exterior surface.	T7/0 (Akk.)	7	1
6	742.15.3.1	Rim; pale yellow core and surfaces (5Y 7/4); chaff fabric with rare fine calcite inclusions. Rim dm. 22 cm.	T7/14	7	3
7	742.15.1.78	Rim; pale yellow core (5Y 7/3) and surfaces (5Y 8/2); chaff fabric with common fine calcite, quartz and grits inclusions; grooved rim. Rim dm. 40 cm.	T8/0	8	1
8	742.15.1.62	Rim; very pale brown surfaces (10YR 8/2) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and common fine calcite inclusions. Rim dm. 42 cm.	T8/0	8	1
9	742.15.3.5	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with common fine calcite inclusions; black painted fading decoration on the exterior surface. Rim dm. 28 cm.	T8/1	8	3
10	742.15.1.85	Base; pink exterior surface (7.5YR 7/4), light red core and interior surface (2.5YR 6/6); chaff fabric with frequent fine to large calcite inclusions; smoothed surfaces. Base dm. 16 cm.	T8/6	8	1
11	742.15.4.7	Base; very pale brown surfaces (10YR 8/3) and light brown core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 2,6 cm.	T8/8	8	4
12	742.15.1.16	Rim; very pale brown surfaces (10YR 8/3) reddish yellow core (5YR 7/6); chaff fabric with common fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T9/0	9	1

Plate 2

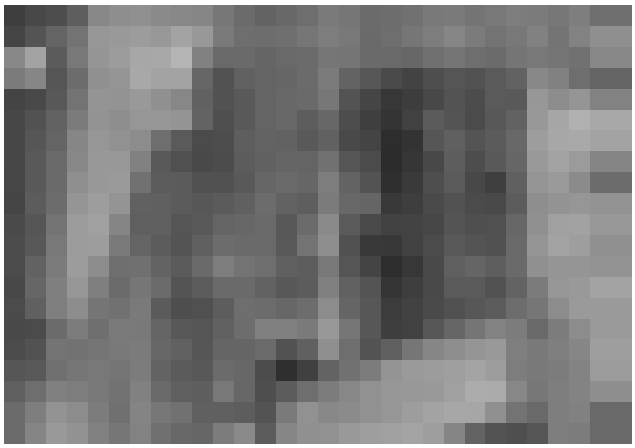
N.	Code	Description	Type	Period	Area
13	742.15.1.18	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 48 cm.	T9/0	9	1
14	742.15.1.95	Rim; pale yellow core (2.5Y 7/4) and surfaces (2.5Y 8/2); chaff fabric with no visible inclusions; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 14 cm.	T9/0	9	1
15	742.15.2.22	Pot stand; pale yellow core and surfaces (5Y 7/3); chaff fabric with abundant fine calcite inclusions. (Pie crust) Diam. 14 cm.	T9/0	9	1
16	742.15.2.26	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with occasional chaff and common fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T10/5	10	2
17	742.15.1.104	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with no visible inclusions. Rim dm. 16 cm.	T10/6	10	1
18	742.15.1.129	Base; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. (Nipple base).	T10/8	10	1
19	742.15.1.128	Base; pink surfaces (7.5YR 7/4) and reddish yellow core (5YR 6/6); mineral fabric with frequent chaff and occasional fine calcite inclusions. Base dm. 10 cm.	T10/9	10	1
20	742.15.1.101	Rim; pale yellow exterior surface (2.5Y 8/2) and light brown core (7.5YR 6/4); mineral fabric with frequent chaff and common fine calcite inclusions. Rim dm. 30 cm	T10/13	10	1
21	742.15.1.137	Rim; reddish yellow surfaces (7.5YR 7/6) and light brown core (7.5YR 7/6); mineral fabric with common chaff and abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/2	11	1
22	742.15.3.20	Rim; pale yellow exterior surface (2.5Y 8/2) and pink core and interior surface (7.5YR 7/4); chaff fabric with common fine calcite inclusions. Rim dm. 12 cm.	T11/8	7	3
23	742.15.4.17	Rim; pale yellow surfaces (2.5Y 7/3) and light brownish gray core (2.5Y 6/2); chaff fabric with abundant fine calcite and grits inclusions; overfired. Rim dm. 20 cm.	T11/9	11	4
24	742.15.4.18	Rim; pink surfaces (7.5YR 7/4), light brown core (7.5YR 6/6) with pink margins (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions. Rim dm. 34 cm.	T11/12	11	4

Plate 3

N.	Code	Description	Type	Period	Area
25	742.15.1.33	Rim; pink core (7.5YR 7/4) and pale yellow surfaces (2.5Y 8/3); mineral fabric with occasional fine calcite inclusions; notched and grooved rim; rope and incised decoration on the exterior surface. Rim dm. 64 cm.	T12/3	12	1
26	742.15.1.144	Rim; pale brown core (10YR 6/3) and reddish yellow surfaces (5YR 7/8); chaff fabric with abundant fine to medium calcite inclusions; notched exterior and incised decoration on the top of the rim. Rim dm. 48 cm.	T12/4	12	1
27	742.15.1.30	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 8/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T12/6	12	1

SITE 751

(B2 sector)



1- Site 751 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2- Site 751 on a Corona satellite image (Corona 1039, 28 Feb 1967).

3 - Site 751 from East. (2015)

SITE NUMBER	751
LOCAL NAME	-
POSITION	363190; 4050727
AREA	2 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Medium
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								2		2		2					2
N. fr. TGAS	16							50		1		10					2

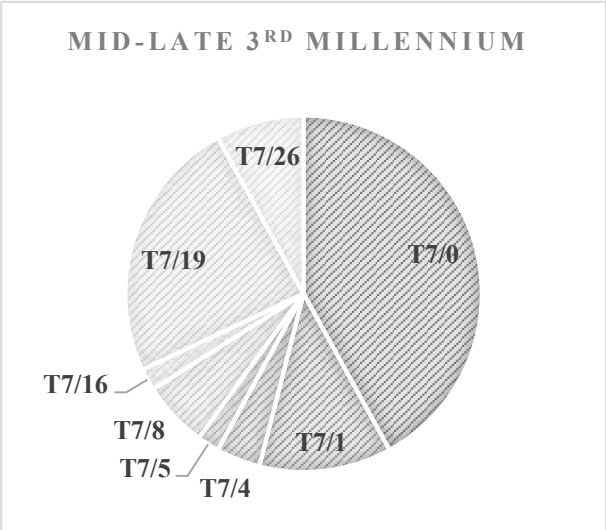
SITE DESCRIPTION

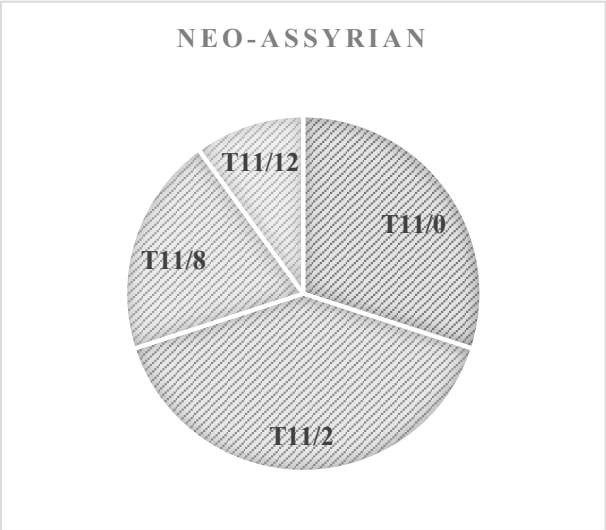
Flat site located on the right bank of the Gomel, 700 m west of Tell Gomel. The site is located just north of a dirt road connecting Tell Gomel with Gir Faqir.

SITE BIOGRAPHY

The site was a small mid-late 3rd millennium village. Later it housed a non-permanent or short-lived settlement during the Mitanni period and then a longer-lasting Neo-Assyrian period occupation. A subsequent Islamic occupation is also recorded. The site was contemporary to the adjacent site 741 during the mid-late 3rd millennium; perhaps they were a single large village (5.3 ha).

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
751	07	0	21	21
751	07	1	6	6
751	07	4	2	2
751	07	5	1	1
751	07	8	3	3
751	07	16	1	1
751	07	19	12	12
751	07	26	4	4
751	09	0	1	1
751	11	0	3	3
751	11	2	4	4
751	11	8	2	2
751	11	12	1	1
751	21	0	2	2
751	Und.	-	16	16
TOT			**79**	**79**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	751.15.1.46	Rim; gray core and surfaces (5Y 5/1); fine mineral fabric with no visible inclusions. Rim dm. 8 cm.	T7/0 Akk.	7	751.1
2	751.15.1.65	Rim; white core and exterior surface (5Y 8/1) and light brownish gray (2.5Y 6/2); fine mineral fabric with no visible inclusions; smoothed surfaces; bitumen decoration on the exterior surface. Rim dm. 12 cm.	T7/0 Post-Akk.	7	751.1
3	751.15.1.4	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 20 cm.	T7/0	7	751.1
4	751.15.1.17	Body sherd; pale yellow core and surfaces (5Y 7/4); chaff fabric with occasional fine calcite inclusions; incised decoration on the exterior surface.	T7/0 Post-Akk.	7	751.1
5	751.15.1.41	Base; very pale brown core and surface (10YR 8/3); fine mineral fabric with occasional fine grits inclusions; smoothed surfaces; red horizontal streaks. Base dm. 6 cm.	T7/1	7	751.1
6	751.15.1.16	Base; light gray surfaces (GLEY1 7/N) and gray core (GLEY1 6/N); mineral fabric with no visible inclusions; smoothed exterior surfaces. Base dm. 6 cm.	T7/1 Akk.	7	751.1
7	751.15.1.64	Body sherd; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with abundant fine calcite and gray grits inclusions; comb incised decoration on the exterior surface.	T7/4 Akk.	7	751.1
8	751.15.1.53	Rim; dark gray exterior surface (5Y 4/1), gray interior surface (2.5Y 6/1) and light gray (10YR 7/1); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Metallic ware? Rim dm. 12 cm.	T7/5 Akk.	7	751.1
9	751.15.1.14	Rim; pale yellow exterior surface (2.5Y 8/4) and pink core and interior surface (7.5YR 8/3); mineral fabric with frequent fine calcite inclusions. Rim dm. 20 cm.	T7/8 Akk.	7	751.1
10	751.15.1.39	Rim; pale yellow surfaces (2.5Y 8/4) and light olive gray core (5Y 6/2); mineral fabric with occasional fine calcite inclusions. Rim dm. 18 cm.	T7/8	7	751.1
11	751.15.1.36	Rim; pale yellow surfaces (2.5Y 7/4) and very dark gray core (5Y 4/1); mineral fabric with mica inclusions. Rim dm. 14 cm.	T7/16	7	751.1
12	751.15.1.9	Rim; pale yellow core (2.5Y 7/3) and surfaces (5Y 8/3); fine mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19 Akk.	7	751.1
13	751.15.1.45	Rim; pale yellow surfaces (5Y 8/4) and gray core (5Y 5/1); fine mineral fabric with no visible inclusions. Rim dm. 12 cm.	T7/26 Akk.	7	751.1
14	751.15.1.68	Pot stand; pale yellow core and surfaces (2.5Y 7/4); mineral fabric with common chaff and occasional very fine grits inclusions.	T9/11	9	751.1
15	751.15.1.24	Rim; pale yellow exterior surface (5Y 8/3) and pink core and interior surface (7.5YR 8/4); mineral fabric with common chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T11/8	11	751.1

SITE 759

(B1 sector)

1- Site 759 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 759 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 759 from East. (2015)

SITE NUMBER	759
LOCAL NAME	-
POSITION	359965; 4048962
AREA	4,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	High mounded
OBSERVATION CONDITIONS	Excellent
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha										4,3	4,3	4,3			4,3	4,3	4,3
N. fr. TGAS	24									1	9	38			7	1	9

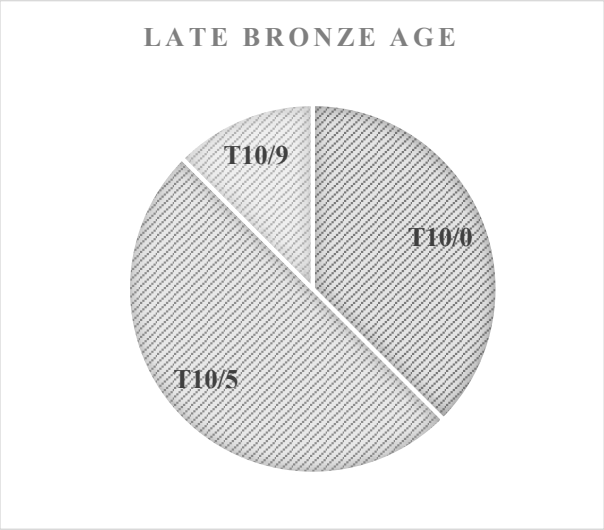
SITE DESCRIPTION

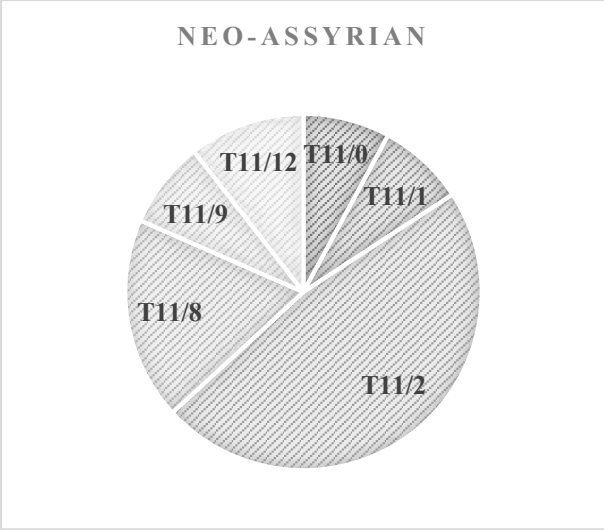
High-mounded site located c. 1.5 km west of the village of Gir Faqir. The site features two mounds separated by a depression, and features an ashy light-grey soil, many stones and several baked brick fragments. The site had been recently ploughed at the time of the survey and visibility was very high.

SITE BIOGRAPHY

The site was probably initially occupied during the Mitanni period; in the Middle Assyrian period it started to expand, reaching its maximum expansion during the Neo-Assyrian period. Subsequently, after a hiatus in occupation during the Post-Assyrian and Hellenistic periods, the site was settled continuously again from the Parthian to Islamic epochs.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
759	09	0	1	1
759	10	0	4	4
759	10	5	4	4
759	10	9	1	1
759	11	0	3	3
759	11	1	3	3
759	11	2	18	18
759	11	8	7	7
759	11	9	3	3
759	11	12	4	4
759	14	0	6	6
759	14	15	1	1
759	16	6	1	1
759	21	0	9	9
759	Und.	-	24	24
TOT			**89**	**89**

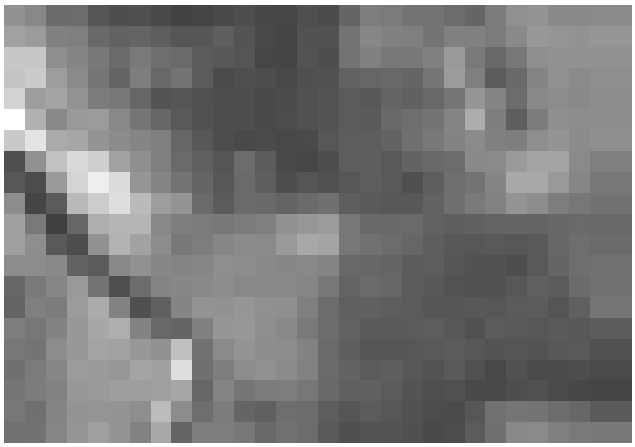
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	759.15.1.10	Rim; reddish yellow surfaces (5YR 6/6) and reddish brown core (7.5YR 7/6); mineral fabric with common fine calcite and grits inclusions; burnished surfaces. Rim dm. 20 cm.	T9/13	9	759.1
2	759.15.1.1	Rim; very pale brown surfaces (10YR 7/3) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and common fine calcite inclusions. Rim dm. 14 cm.	T10/0	10	759.1
3	759.15.1.7	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and common fine calcite inclusions. Rim dm. 8 cm.	T10/0	10	759.1
4	759.15.1.4	Base; pale yellow exterior surfaces (2.5Y 8/2) and pink core and interior surface (7.5YR 7/4); mineral fabric with common chaff and common fine calcite inclusions. Base dm. 8 cm.	T10/0	10	759.1
5	759.15.1.3	Base; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine grits and calcite inclusions. Base dm. 10 cm.	T10/0	10	759.1
6	759.15.1.8	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and common fine-medium calcite inclusions; Rim dm. 14 cm.	T10/5	10	759.1
7	759.15.1.34	Rim; pale yellow surfaces (5Y 8/2) and light gray core (2.5Y 7/2); mineral fabric with rare chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/0	11	759.1
8	759.15.1.14	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/1	11	759.1
9	759.15.1.16	Rim; pale yellow surfaces (5Y 8/2) and reddish yellow core (7.5YR 8/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T11/2	11	759.1
10	759.15.1.17	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with rare chaff and occasional fine calcite inclusions; burnished surfaces. Rim dm. 22 cm.	T11/2	11	759.1
11	759.15.1.12	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional chaff and common fine-medium calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/12	11	759.1
12	759.15.1.33	Rim; pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 8/4); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/9	11	759.1
13	759.15.1.42	Rim; pale yellow surface (2.5Y 8/2) and pink core (7.5YR 7/3); mineral fabric with common chaff and frequent fine calcite inclusions. Rim dm. 32 cm.	T11/8	11	759.1
14	759.15.1.46	Rim; pink surfaces (7.5YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with abundant fine to large grits and calcite inclusions; trace of burnishing on the exterior surface. Rim dm. 14 cm.	T11/8	11	759.1

SITE 763

(B2 sector)



1- Site 763 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 763 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 763 from North-East. (2015)

SITE NUMBER	763
LOCAL NAME	-
POSITION	363948; 4051851
AREA	0,4 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								0,4	0,4						0,4		0,4
N. fr. TGAS	5							1	2						5		1

SITE DESCRIPTION

Very small almost circular site on the left bank of the River Gomel, 700 m north of Tell Gomel on the western side of a dirt road that connects Zinawa Khave with Tell Gomel. The site lies in a cucumber field, but overall the visibility conditions were good. The site featured many medium stones, and basalt tool and baked brick fragments.

SITE BIOGRAPHY

Small settlement occupied during the mid-late 3rd millennium and the Middle Bronze Age. Subsequently, the site was also settled during the Parthian and Islamic periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
763	07	0	1	1
763	08	1	2	2
763	14	0	4	4
763	14	14	1	1
763	21	0	1	1
763	Und.	-	5	5
TOT			**14**	**14**

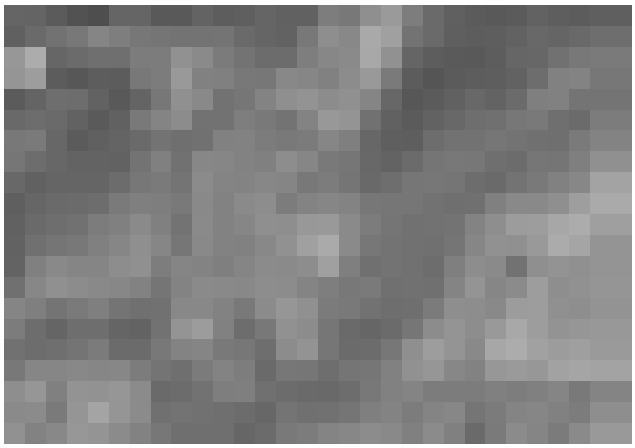
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	763.15.1.1	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with no visible inclusions. Rim dm. 12 cm.	T7/0	7	763.1
2	763.15.1.2	Body sherd; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/4); chaff fabric with occasional fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T8/1	8	763.1
3	763.15.1.3	Body sherd; pale yellow surfaces and core (5Y 8/2); chaff fabric with occasional fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T8/1	8	763.1
4	763.15.1.4	Rim; pink surfaces (7.5YR 7/4) and light brown core (7.5YR 6/4); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 22 cm.	T11/7	11	763.1

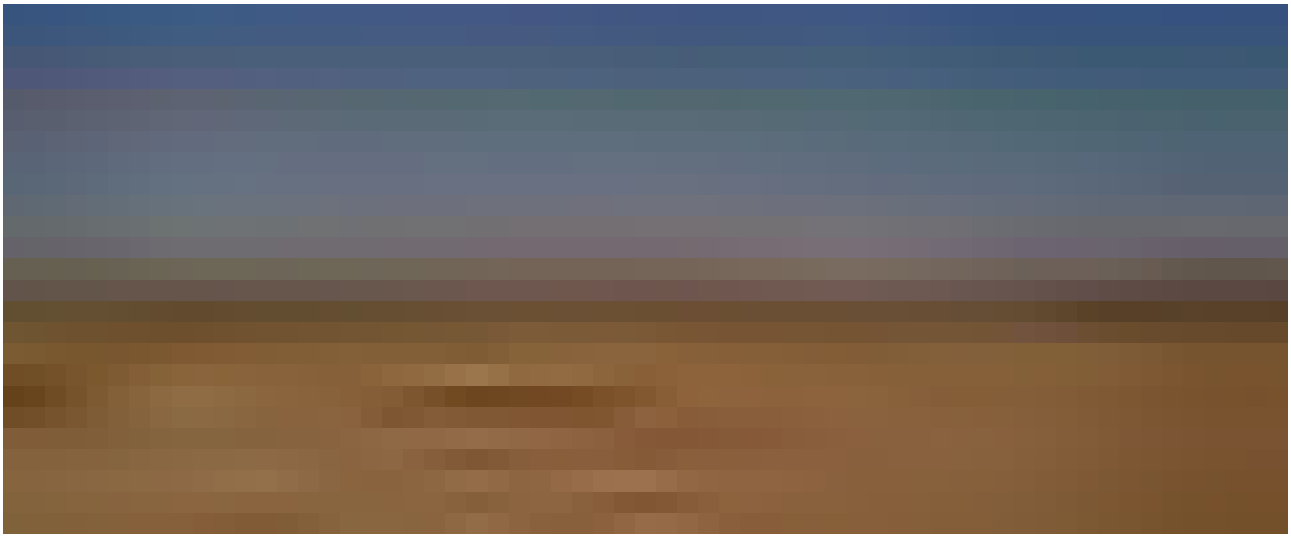
SITE 764

(C1 sector)



1- Site 764 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 764 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 764 from South. (2015)

SITE NUMBER	764
LOCAL NAME	-
POSITION	361545 E; 4046356 N
AREA	2,6
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												2,6			2,6	2,6	
N. fr. TGAS	6											1			5	33	

SITE DESCRIPTION

Small low-mounded site located c. 4.5 km south-west of Tell Gomel. The site is situated in an apparently quite isolated area close to a wadi. The visibility was high and many stones of different sizes were present on the surface.

SITE BIOGRAPHY

A single Neo-Assyrian sherd might testify to the non-permanent or short-lived occupation during this period. The site was settled later, during the Parthian and Sasanian periods. The latter represents the phase of maximum expansion.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
764	11	0	1	1
764	14	0	5	5
764	15	0	18	18
764	15	2	3	3
764	15	3	6	6
764	16	1	6	6
764	Und.	-	6	6
TOT			**45**	**45**

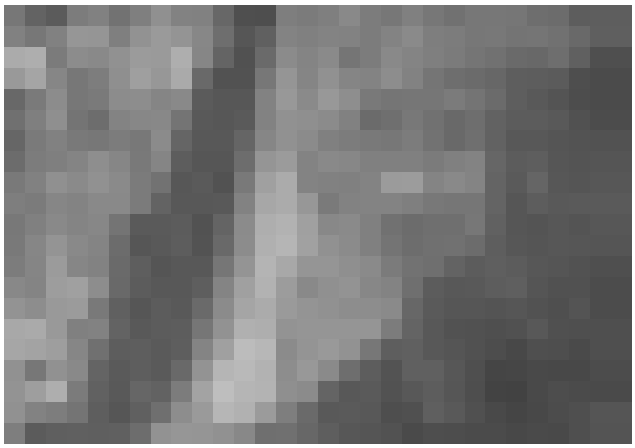
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	764.15.1.1	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with abundant fine calcite and grits inclusions; burnished surfaces.	T11/0	11	764.1

SITE 769

(B2 sector)



1- Site 769 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 769 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 769 from West. (2015)

SITE NUMBER	769
LOCAL NAME	-
POSITION	364097 E; 4050238 N
AREA	1 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								1	1								1
N. fr. TGAS	8							2	6								2

SITE DESCRIPTION

Very small low-mounded site located immediately south of the southern border of Tell Gomel.

SITE BIOGRAPHY

Occupation of this site is attested during the mid-late 3rd millennium BC, the Middle Bronze Age and the Islamic period. I could perhaps have been a small farm, outside the ancient settlement limits of Tell Gomel.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
769	07	0	1	1
769	07	4	1	1
769	08	0	1	1
769	08	1	5	5
769	21	0	2	2
769	Und.	-	8	8
TOT			**18**	**18**

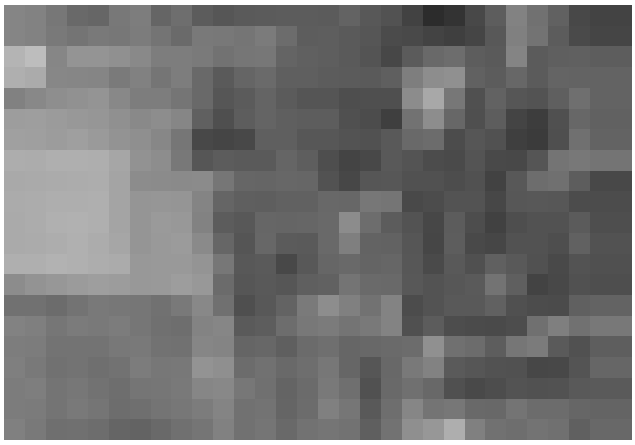
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	769.15.1.2	Base; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with no visible mineral inclusions; smoothed surfaces. Base dm. 3 cm.	T7/0 Akk.	7	769.1
2	769.15.1.1	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); mineral fabric with abundant fine calcite and grits inclusions; comb incised decoration on the exterior surface. Rim dm. 38 cm.	T7/4 Akk.	7	769.1
3	769.15.1.5	Rim; very pale brown exterior surface (10YR 8/3) and very pale brown core and interior surface (10YR 7/4); mineral fabric with occasional chaff and common fine to large calcite inclusions. Rim dm. 24 cm.	T8/0	8	769.1
4	769.15.1.3	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with occasional fine calcite and grits inclusions; black painted decoration on the exterior surface. Rim dm. 12 cm.	T8/1	8	769.1
5	769.15.1.4	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 8/4); mineral fabric with occasional chaff and common fine calcite inclusions; black painted decoration on the exterior surface. Rim dm. 12 cm.	T8/1	8	769.1

SITE 771

(A2 sector)



1- Site 771 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 771 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 771 from North. (2015)

SITE NUMBER	771
LOCAL NAME	-
POSITION	363409 E; 4052977 N
AREA	1,2 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									**1,2**						**1,2**		**1,2**
N. fr. TGAS	8								2						5		41

SITE DESCRIPTION

Small circular very-low-mounded site located on the right bank of the River Gomel, in front of the modern village of Zinawa Kahve. The site was partially covered by crops.

SITE BIOGRAPHY

The site is a small Islamic period village, with previous occupation phases during the Middle Bronze Age and the Parthian period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
771	08	1	2	2
771	14	0	5	5
771	21	0	41	41
771	0	0	8	8
TOT			**56**	**56**

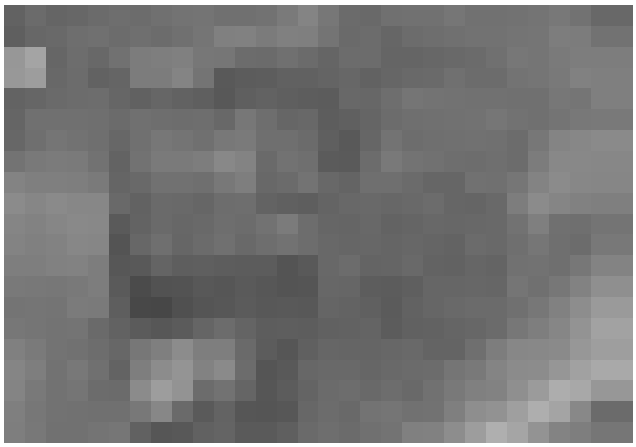
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	771.15.1.1	Bowl rim; very pale brown surfaces (10YR 7/4) and reddish yellow core (5YR 6/6) with very pale brown margins (10YR 7/4); mineral fabric with common chaff and frequent fine calcite inclusions; red fugitive painted decoration on the rim and the exterior surface. Rim dm. 24 cm.	T8/1	8	771.1
2	771.15.1.2	Jar rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with abundant fine calcite and mica inclusions; smoothed surfaces; black painted decoration on the exterior surface and on the rim. Rim dm. 14 cm.	T8/1	8	771.1

SITE 777

(B2 sector)



1 - Site 777 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

2 - Site 777 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 777 from South. (2015)

SITE NUMBER	777
LOCAL NAME	-
POSITION	364051; 4049322
AREA	1,2 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	1,2
N. fr. TGAS	3																39

SITE DESCRIPTION

Small flat circular site located 1 km south of Tell Gomel on the right bank of the River Gomel. The site features ashy light-grey soil. Numerous stones of different sizes, and baked brick and basalt tool fragments were present on the surface.

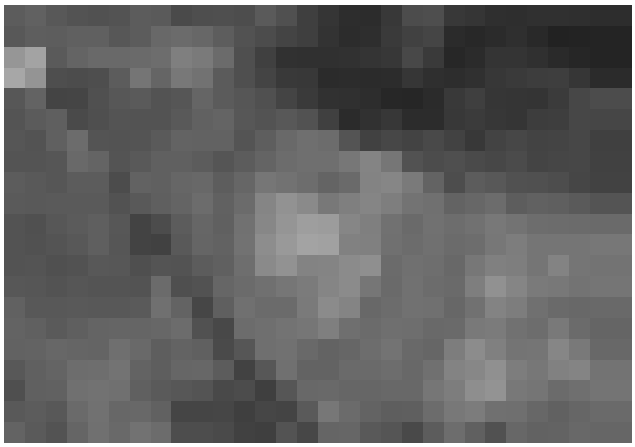
SITE BIOGRAPHY

The site was probably a small Islamic period village.

SITE	PERIOD	TYPE	TOTAL	1
777	21	0	39	39
777	Und.	-	3	3
TOT			**42**	**42**

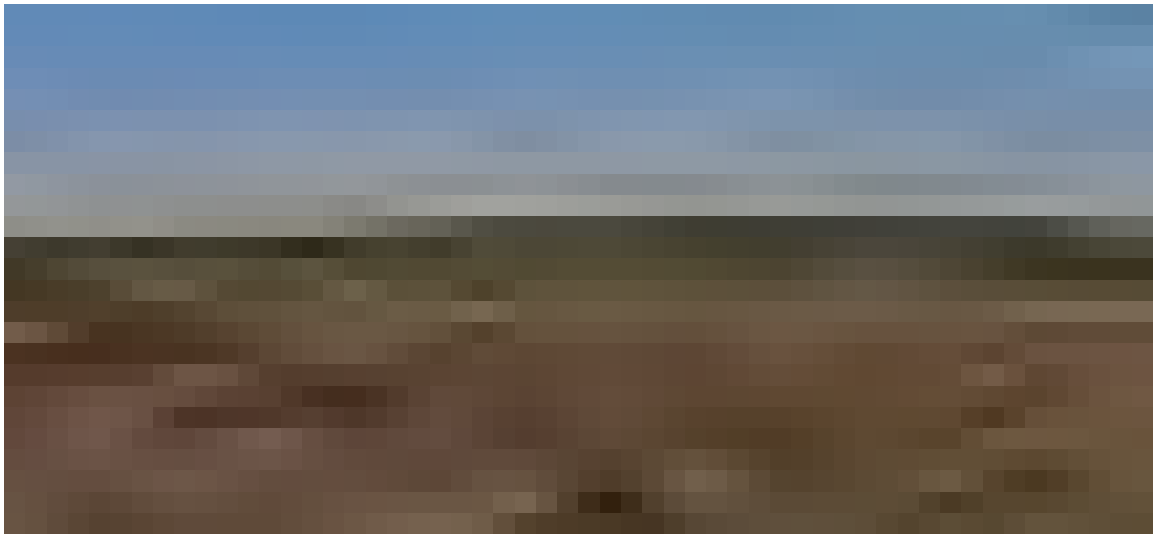
SITE 789

(C3 sector)



1- Site 789 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 789 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 789 from Est. (2015)

SITE NUMBER	789
LOCAL NAME	-
POSITION	367045 E; 4046161 N
AREA	3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**3**	**3**							**3**	**3**	**3**			**3**		**3**
N. fr. TGAS	30	2	3							2	4	55			3		4

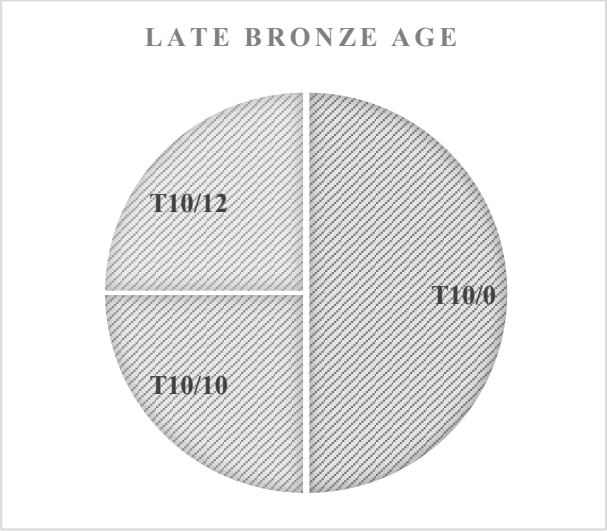
SITE DESCRIPTION

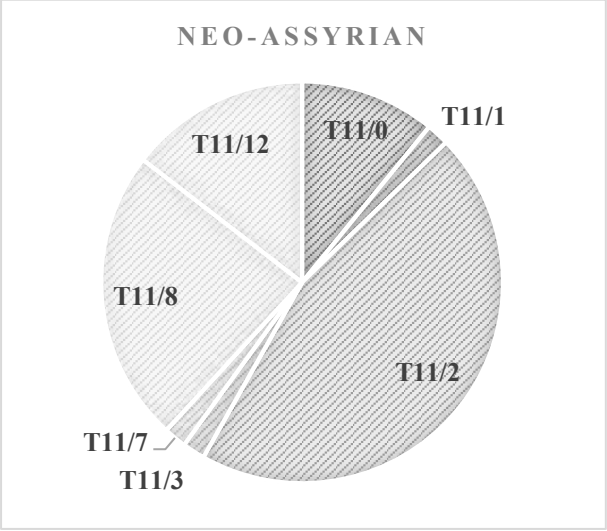
The low-mounded site is located 2.5 km south of Kalakchi on the southern bank of a wadi. The site's good visibility conditions permitted the recording of abundant microliths, grindstone and baked brick fragments.

SITE BIOGRAPHY

The settlement was first occupied during the Early Pottery Neolithic and Halaf periods. After a hiatus of several millennia, it was occupied again during the Mitanni, Middle Assyrian and Neo-Assyrian periods. The latter represents the maximum occupation of the settlement. The site was also subsequently occupied during the Parthian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
789	01	0	2	2
789	02	1	3	3
789	09	0	2	2
789	10	0	2	2
789	10	10	1	1
789	10	12	1	1
789	11	0	6	6
789	11	1	1	1
789	11	2	25	25
789	11	3	1	1
789	11	7	1	1
789	11	8	13	13
789	11	12	8	8
789	14	0	2	2
789	14	7	1	1
789	21	0	4	4
789	Und.	-	30	30
TOT			**103**	**103**

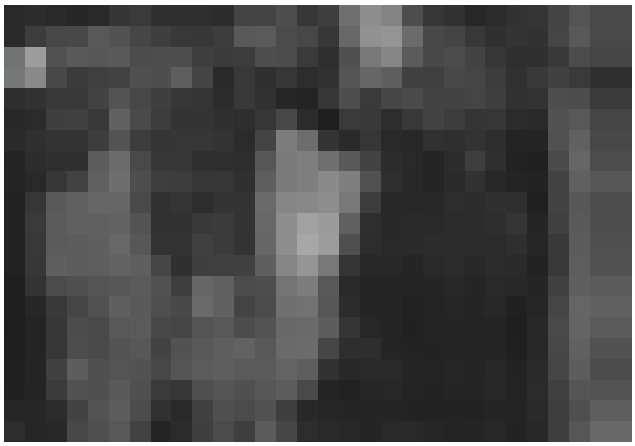
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	789.15.1.103	Rim; very pale brown surfaces (10YR 7/2) pink core (7.5YR 7/4); mineral fabric with occasional chaff and rare mineral inclusions; smoothed surfaces. Rim dm. 16 cm.	T1/0 ?	1 ?	789.1
2	789.15.1.3	Body sherd; very pale brown exterior surface (10YR 8/4), reddish yellow interior surface (5YR 7/6) and very pale brown core (10YR 8/4) with reddish yellow margins (5YR 6/6); mineral fabric with occasional chaff and occasional fine calcite inclusions; burnished exterior surface; red fugitive painted decoration on the exterior surface.	T2/1	2	789.1
3	789.15.1.1	Body sherd; very pale brown surfaces (10YR 8/4) and pink core (7.5YR 7/4); mineral fabric with common fine calcite inclusions; burnished exterior surface; black painted decoration on the exterior surface.	T2/1	2	789.1
4	789.15.1.4	Rim; light yellowish brown surfaces and core (10YR 6/4); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T9/14	9	789.1
5	789.15.1.7	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine calcite and occasional grits inclusions. Rim dm. 16 cm.	T10/0	10	789.1
6	789.15.1.6	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 28 cm.	T10/10	10	789.1
7	789.15.1.9	Rim; pale yellow surfaces (5Y7/3) and light brown core (7.5YR 6/4); chaff fabric with abundant calcite inclusions (fine, medium and large). Rim dm. >38 cm.	T10/12	10	789.1
8	789.15.1.11	Rim; pale yellow surfaces (5Y 8/2) and pale brown core (10YR 6/3); mineral fabric with common chaff and calcite inclusions. Rim dm. 20 cm.	T11/2	11	789.1
9	789.15.1.37	Rim; white slipped surfaces (5Y 8/1) and reddish yellow core (7.5YR 6/6); mineral fabric with occasional chaff and common fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T11/2	11	789.1
10	789.15.1.93	Base; pale yellow exterior surface (2.5Y 8/2) and reddish yellow interior surface and core (7.5YR 7/6); chaff fabric with abundant fine calcite inclusions. Base dm. 3,5 cm	T11/3	11	789.1
11	789.15.1.26	Rim; reddish yellow surfaces (5YR 7/6) and dark gray core (5Y 4/1) with reddish yellow margins (5YR 7/6); mineral fabric with frequent chaff and frequent fine calcite inclusions. Rim dm. 28 cm.	T11/7	11	789.1
12	789.15.1.54	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (7.5YR 7/6); fine mineral ware with occasional chaff and common fine calcite inclusions. Rim dm. 10 cm.	T11/8	11	789.1
13	789.15.1.53	Rim; very pale brown surfaces and core (10YR 7/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 14 cm.	T11/8	11	789.1
14	789.15.1.13	Rim; light gray core and surfaces (5Y 7/2); fine mineral fabric with occasional chaff and fine calcite inclusions; burnished surfaces. Rim dm. 16 cm.	T11/12	11	789.1
15	789.15.1.14	Rim; reddish yellow core and surfaces (7.5YR 7/6); fine mineral fabric with very rare calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/12	11	879.1

SITE 791

(C3 sector)



1- Site 730 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 791 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 791 from South. (2015)

SITE NUMBER	791
LOCAL NAME	-
POSITION	367262 E; 4046724 N
AREA	2,5 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha									2,5			2,5			2,5		2,5
N. fr. TGAS	8								1			6			1		3

SITE DESCRIPTION

Elongated low-mounded site located about 2 km south of Kalkchi. The site had poor visibility conditions due to the presence of grass, but the presence of several stones, and basalt tool and baked brick fragments was recorded.

SITE BIOGRAPHY

The site was occupied discontinuously during the Middle Bronze Age and the Neo-Assyrian, Parthian and Islamic periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
791	08	1	1	1
791	11	1	1	1
791	11	2	2	2
791	11	8	2	2
791	11	10	1	1
791	14	0	1	1
791	21	0	3	3
791	Und.	-	8	8
TOT			**19**	**19**

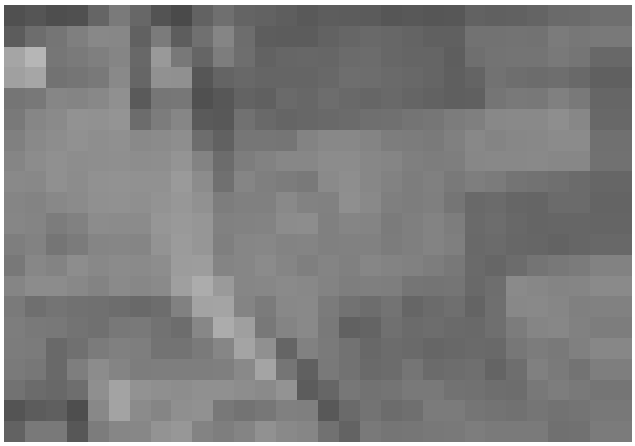
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	791.15.1.1	Body sherd; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/4) with pale yellow margin (2.5Y 8/3); fine mineral fabric with occasional chaff and no visible inclusions; smoothed interior surface and burnished exterior surface; red painted decoration on the exterior surface.	T8/1	8	791.1
2	791.15.1.3	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with common chaff and no visible inclusions; smoothed surfaces. Rim dm. ?	T11/1	11	791.1
3	791.15.1.2	Rim; light brown core (7.5YR 6/4) and pink surfaces (7.5YR 8/4); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surfaces. Rim dm. 30 cm.	T11/2	11	791.1
4	791.15.1.4	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); chaff fabric with abundant fine to large calcite inclusions. Rim dm. 28 cm.	T11/2	11	791.1
5	791.15.1.5	Rim; pale yellow slipped exterior surface (2.5Y 8/2) and very pale brown core (10YR 7/4) with reddish yellow margins (5YR 7/6); mineral fabric with abundant fine-medium calcite and grits inclusions. Rim dm. 18 cm.	T11/8	11	791.1
6	791.15.1.6	Rim; very pale brown surfaces (10YR 8/3) and light yellowish brown core (2.5Y 6/3); mineral fabric with occasional chaff and abundant fine to large grits inclusions. Rim dm. 10 cm.	T11/8	11	791.1
7	791.15.1.7	Rim; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T11/10	11	791.1

SITE 792

(B2 sector)



1- Site 792 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 792 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 792 from North-West. (2015)

SITE NUMBER	792
LOCAL NAME	-
POSITION	364484 E; 4049919 N
AREA	2,4 ha
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low to good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**2,4**				**2,4**					**2,4**
N. fr. TGAS	3							18				1					2

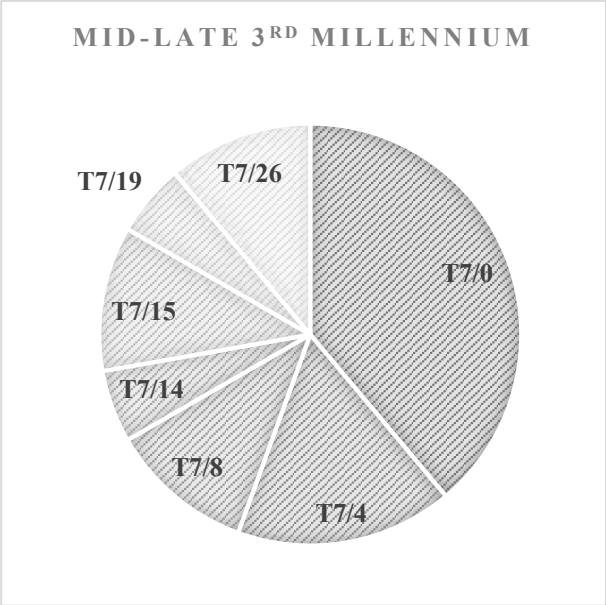
SITE DESCRIPTION

Low-mounded site located 500 m south of Tell Gomel. The site features a grey soil and abundant fine to large stones on the surface. It was difficult to define the limits of the site due to the changing visibility conditions of the surface.

SITE BIOGRAPHY

The site was densely settled during the mid-late 3rd millennium BC. A single sherd testifies to the perhaps ephemeral occupation of the site during the Neo-Assyrian period. The site was also settled during the Islamic period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
792	07	0	7	7
792	07	4	3	3
792	07	8	2	2
792	07	14	1	1
792	07	15	2	2
792	07	19	1	1
792	07	26	2	2
792	11	0	1	1
792	21	0	2	2
792	Und.	-	3	3
TOT			**24**	**24**

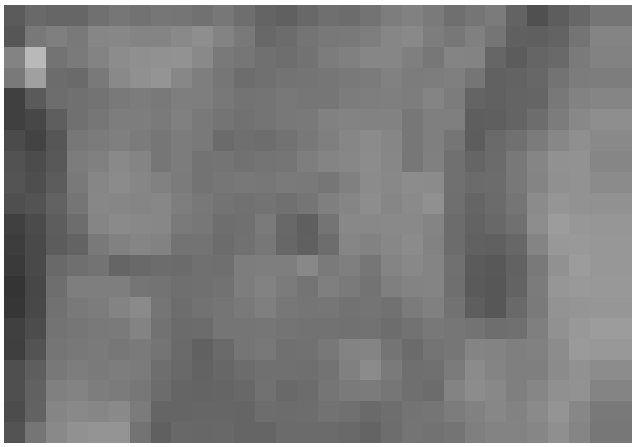
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	792.15.1.14	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces; comb incised decoration on the exterior surface. Rim dm. 12 cm.	T7/0 Akk.	7	792.1
2	792.15.1.8	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T7/0	7	792.1
3	792.15.1.16	Body sherd; very pale brown core and interior surface (10YR 7/4) and pale yellow exterior surface (5Y 8/3); chaff fabric with occasional fine calcite inclusions; incised decoration on the exterior surface.	T7/0 Akk.	7	792.1
4	792.15.1.18	Body sherd; pale yellow exterior surface (2.5Y 8/2) and pink core and interior surface (7.5YR 8/3); chaff fabric with frequent fine calcite inclusions; smoothed surfaces; comb incised and rope decoration on the exterior surface.	T7/4 Akk.	7	792.1
5	792.15.1.9	Rim; reddish yellow core (5YR 7/6) and pale yellow surfaces (5Y 8/2); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 26 cm.	T7/8	7	792.1
6	792.15.1.7	Rim; pink core (5YR 7/4) and pale yellow surfaces (2.5Y 8/2); chaff fabric with frequent fine calcite and grits inclusions. Rim dm. 20 cm.	T7/15	7	792.1
7	792.15.1.2	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T7/19	7	792.1
8	792.15.1.12	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/26 Akk.	7	792.1
9	792.15.1.19	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/0	11	792.1

SITE 793

(C3 sector)



1- Site 793 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 793 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 793 from North-West. (2015)

SITE NUMBER	793
LOCAL NAME	-
POSITION	367618; 4047667
AREA	2 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha															**2**	**2**	
N. fr. TGAS	7														2	1	

SITE DESCRIPTION

Flat and elongated site located 1 km south of the city of Kalakchi. The site features a very ashy and light-grey soil with abundant small to medium stones; numerous pottery fragments were present but it was possible to collect only a few diagnostic sherds.

SITE BIOGRAPHY

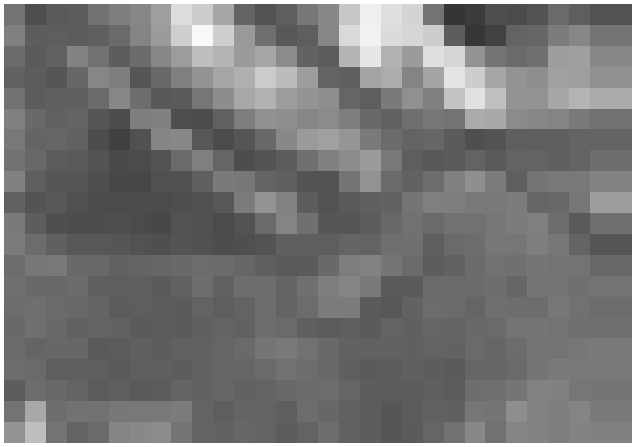
The site was settled during the Parthian and Sasanian periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
793	14	0	2	2
793	15	0	1	1
793	Und.	-	7	7
TOT			**10**	**10**

SITE 796

(C2 sector)



1- Site 796 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 796 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 796 from North-East. (2015)

SITE NUMBER	796
LOCAL NAME	-
POSITION	364232; 4048536
AREA	1,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha								**1,3**				**1,3**					**1,3**
N. fr. TGAS	16							1				25					8

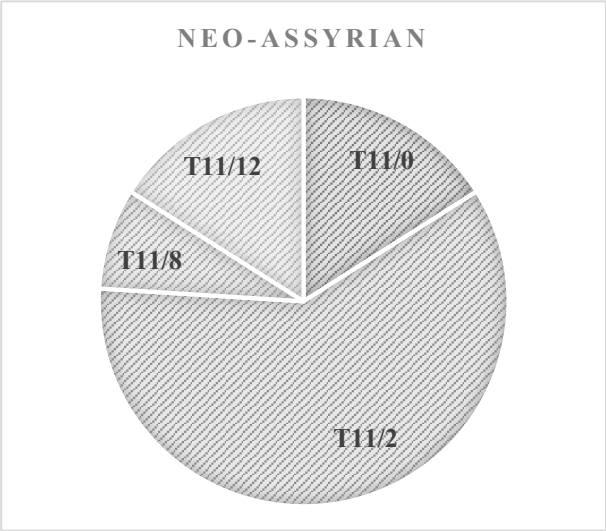
SITE DESCRIPTION

Small flat and elongated site eroded on its northern edge by the River Gomel. The site is located c. 2 km south from Tell Gomel on the right bank of the river. The surface had perhaps been levelled with a bulldozer for agricultural purposes.

SITE BIOGRAPHY

A single mid-late 3rd millennium fragment might signify an ephemeral occupation of the site during this period. The site was later densely settled during the Neo-Assyrian period, and also had an Islamic period occupation phase.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
796	07	8	1	1
796	11	0	4	4
796	11	2	15	15
796	11	8	2	2
796	11	12	4	4
796	21	0	8	8
796	Und.	-	16	16
TOT			**50**	**50**

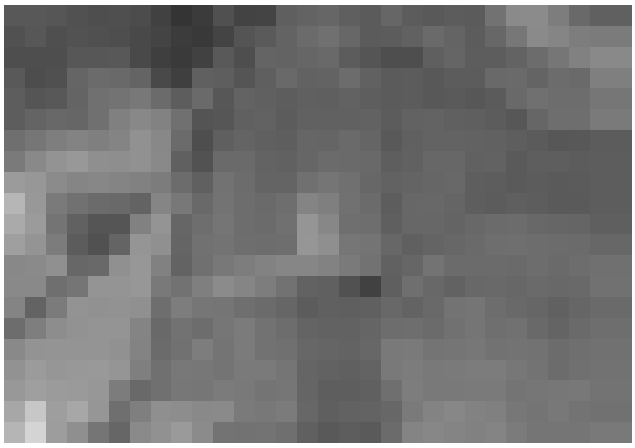
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	796.15.1.1	Rim; pale yellow exterior surface (5Y 8/2), pink core and interior surface (7.5YR 7/3); chaff fabric with abundant fine calcite and frequent fine grits inclusions. Rim dm. 20 cm.	T7/8	7	796.1
2	796.15.1.5	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (7.5YR 8/6); mineral fabric with abundant fine calcite inclusions; burnished exterior surface and smoothed interior surface. Rim dm. 20 cm.	T11/0	11	796.1
3	796.15.1.2	Rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 8/4); mineral fabric with rare chaff and rare fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/0	11	796.1
4	796.15.1.26	Rim; reddish yellow exterior surface (5YR 7/6), very pale brown interior surface (10YR 7/4) and pale brown core (10YR 6/3); mineral fabric with abundant fine medium calcite and grit inclusions; burnished exterior surface. Rim dm. 14 cm.	T11/0	11	796.1
5	796.15.1.23	Rim; pink exterior surface (7.5YR 8/4), reddish yellow core and interior surface (7.5YR 8/6); mineral fabric with frequent chaff and occasional fine calcite inclusions; burnished exterior surface. Rim dm. 26 cm.	T11/0	11	796.1
6	796.15.1.7	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with abundant fine-medium calcite, mica and grits inclusions. Rim dm. 18 cm.	T11/2	11	796.1
7	796.15.1.25	Rim; pale yellow core (2.5Y 7/3), very pale brown interior surface (10YR 8/3) and reddish yellow exterior surface (7.5YR 6/6); mineral fabric with abundant fine-medium grits inclusions; trace of burnishing on the exterior surface. Rim dm. 12 cm.	T11/8	11	796.1
8	796.15.1.20	Rim; very pale brown exterior surface (10YR 8/4), reddish yellow core and interior surface (5YR 7/6); mineral fabric with rare chaff and common fine-medium calcite inclusions. Rim dm. 22 cm.	T11/12	11	796.1
9	796.15.1.6	Rim; pale yellow core and surface (2.5Y 8/3); mineral fabric with frequent chaff and no other visible inclusion; burnished exterior surface.	T11/12	11	796.1

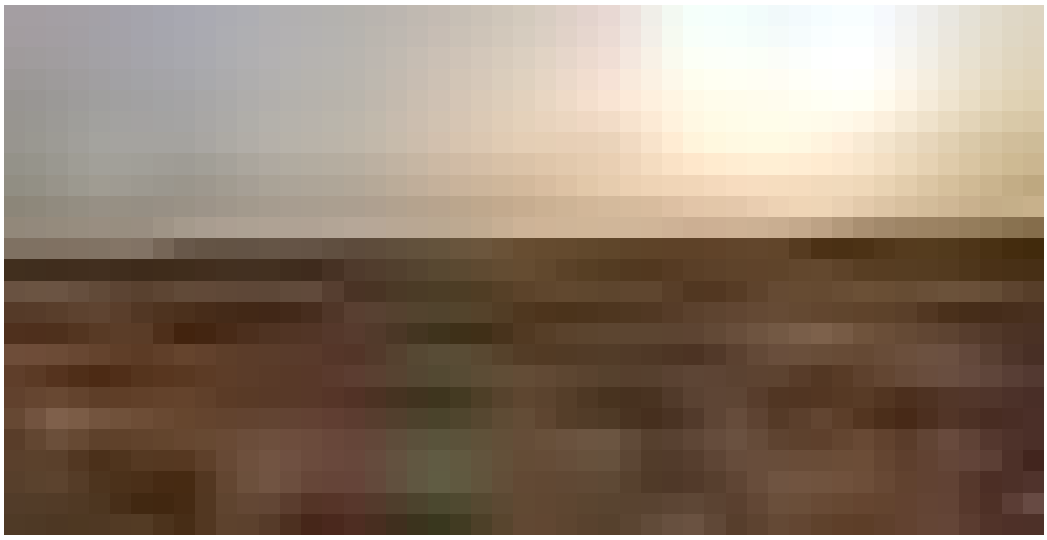
SITE 801

(B1 sector)



1- Site 801 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 801 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 801 from West. (2015)

SITE NUMBER	801
LOCAL NAME	-
POSITION	361263 E; 4049280 N
AREA	0,8 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		0,8				0,8	0,8	0,8									0,8
N. fr. TGAS	21	5				2	19	2									2

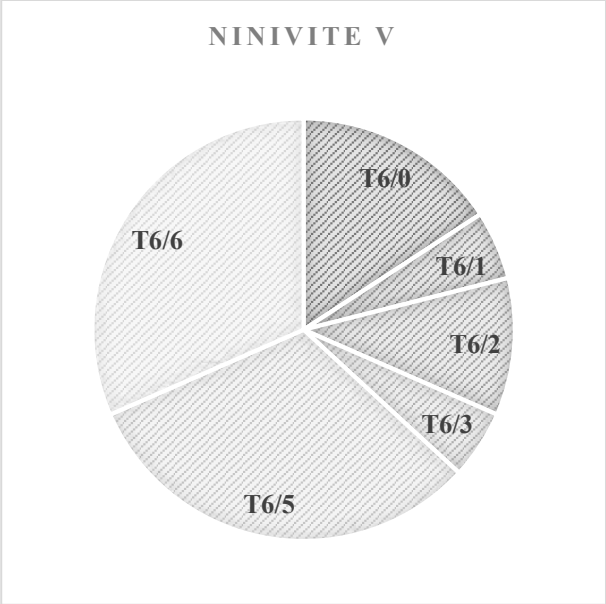
SITE DESCRIPTION

Very small circular flat site situated 250 m south of the village of Gir Faqir. The site featured many pottery fragments and microliths.

SITE BIOGRAPHY

The site was densely occupied during the Ninivite V period, that represents the peak of the settlement sequence of the site. A few fragments testify to a previous occupation of the site in the Early Pottery Neolithic. Other periods – the Late Chalcolithic 3-5, the mid-late 3rd millennium and the Islamic – are each represented by only 1-2 sherds.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

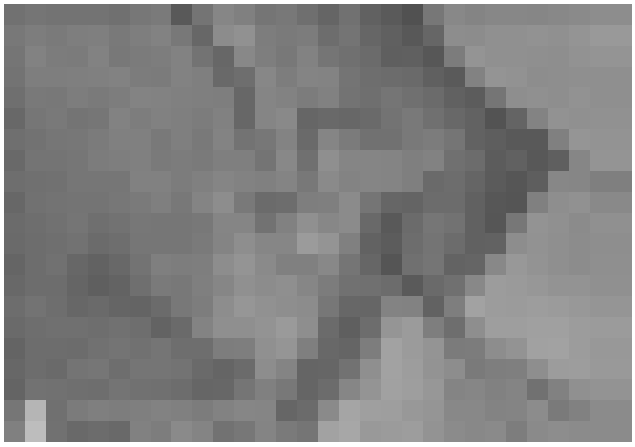
SITE	PERIOD	TYPE	TOTAL	1
801	01	0	5	5
801	05b	0	2	2
801	06	0	3	3
801	06	1	1	1
801	06	2	2	2
801	06	3	1	1
801	06	5	6	6
801	06	6	6	6
801	07	0	1	1
801	07	19	1	1
801	21	0	2	2
801	Und.	-	21	21
TOT			**50**	**50**

POTTERY SELECTION

Plate 1

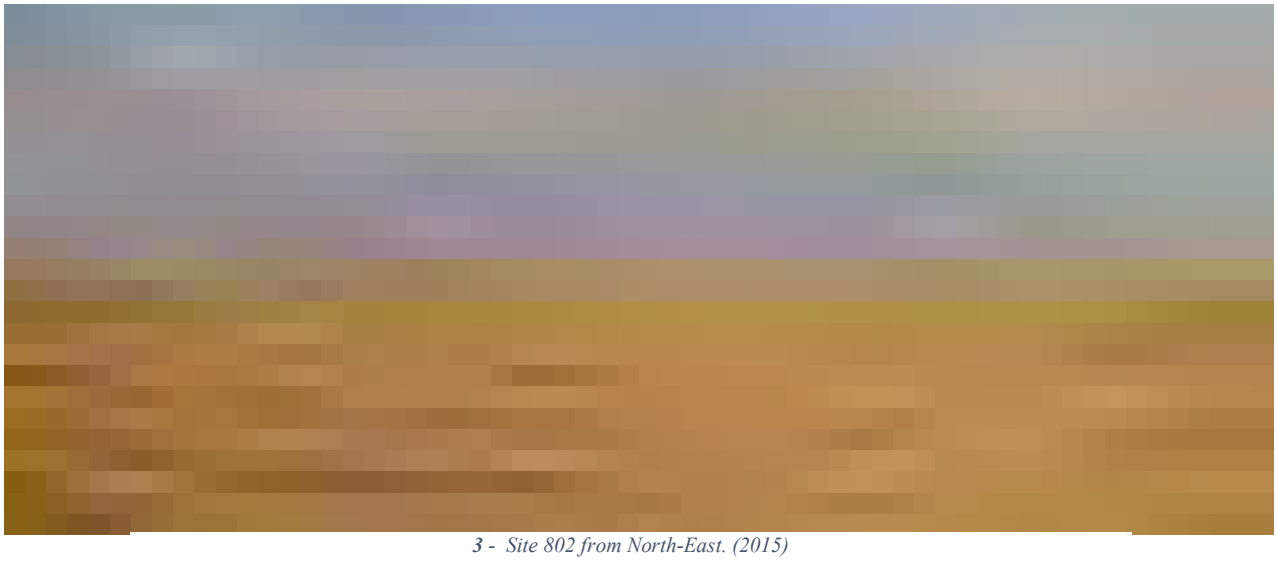
N.	Code	Description	Type	Period	Area
1	801.16.1.3	Rim; light reddish brown surfaces (5YR 6/4) and dark gray core (5Y 4/1) with light yellowish margins (10YR 6/4); mineral fabric with occasional fine calcite inclusions. Rim dm. ca 52 cm. (?)	T1/0	1	801.1
2	801.16.1.1	Rim; very pale brown exterior surface (10YR 8/4), pale yellow interior surface (2.5Y 7/4) and grayish brown core (2.5Y 5/2); coarse mineral fabric with abundant chaff and frequent fine calcite and mica inclusions; burnished exterior surface. Rim dm. 15 cm.	T1/0	1	801.1
3	801.15.1.3	Rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with occasional calcite inclusions; traces of burnishing on the exterior surface. Rim dm. 24 cm.	T5b/0	5b	801.1
4	801.16.1.11	Rim; pale yellow core and surfaces (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 10 cm.	T6/0 Late N5	6	801.1
5	801.15.1.8	Rim; pale yellow exterior surface (2.5Y 8/3), light gray interior surface (5Y 7/2) and light brownish gray core (2.5Y 6/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T6/0 Late N5	6	801.1
6	801.16.1.8	Perforated lug; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with frequent fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T6/1 Early N5	6	801.1
7	801.16.1.9	Rim; light gray core and surfaces (5Y 7/1); fine mineral fabric with no visible inclusions; incised decoration on the exterior surface. Rim dm. 10 cm.	T6/2 Early N5	6	801.1
8	801.16.1.18	Body sherd; light gray core and surfaces (5Y 7/1); fine mineral fabric with no visible inclusions; burnished exterior surface; incised decoration on the exterior surface.	T6/2 Late N5	6	801.1
9	805.15.1.11	Body sherd; gray core and surfaces (2.5Y 6/1); fine mineral fabric with smoothed surfaces.	T6/3 Late N5	6	801.1
10	801.16.1.12	Rim; light gray core and surfaces (5Y 7/2); fine mineral fabric with occasional chaff and no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T6/5 Late N5	6	801.1
11	801.15.1.7	Base; pink interior surface (7.5YR 7/4), very pale brown core and exterior surface (10YR 8/4); mineral fabric with frequent chaff and occasional fine calcite inclusions; black painted decoration on the exterior surface.	T6/6 Early N5	6	801.1
12	801.15.1.10	Base; gray core and surfaces (2.5Y 6/1); chaff fabric with occasional fine calcite inclusions. Base dm. 6 cm.	T6/6 Late N5	6	801.1
13	801.16.1.20	Rim; very pale brown surfaces (10YR 8/3), gray int. (2.5Y 6/1) and very pale brown ext. (10YR 8/4) core; fine mineral fabric with occasional fine calcite and grits inclusions; traces of burnishing on the surfaces. Rim dm. 14 cm.	T7/19	7	801.1
14	801.16.1.19	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 10 cm.	T7/20	7	801.1

SITE 802 (C2 sector)



1- Site 802 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 802 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 802 from North-East. (2015)

SITE NUMBER	802
LOCAL NAME	-
POSITION	362555; 4048360
AREA	0,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	0,3
N. fr. TGAS																	19

SITE DESCRIPTION

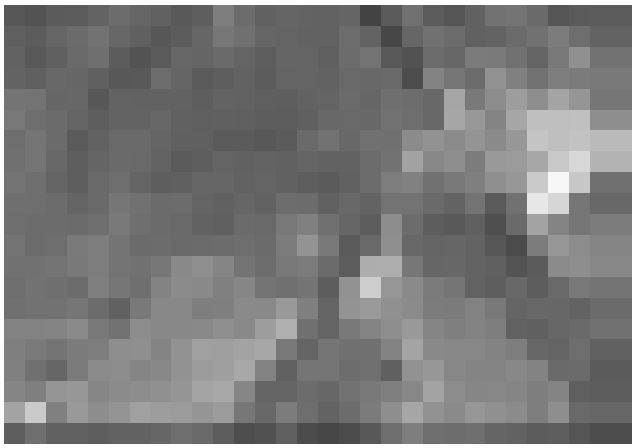
Very small and flat site located close to a wadi, about 2.5 km south-west of Tell Gomel. The site features a grey soil and abundant medium to large stones.

SITE BIOGRAPHY

The site had only one phase of occupation, during the Islamic period.

SITE 803

(C2 sector)



1- Site 803 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 732 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 803 from North. (2015)

SITE NUMBER	803
LOCAL NAME	-
POSITION	365691 E; 4046260 N
AREA	0,5 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha					**0,5**	**0,5**	**0,5**	**0,5**									
N. fr. TGAS	10				1	3	13	5									

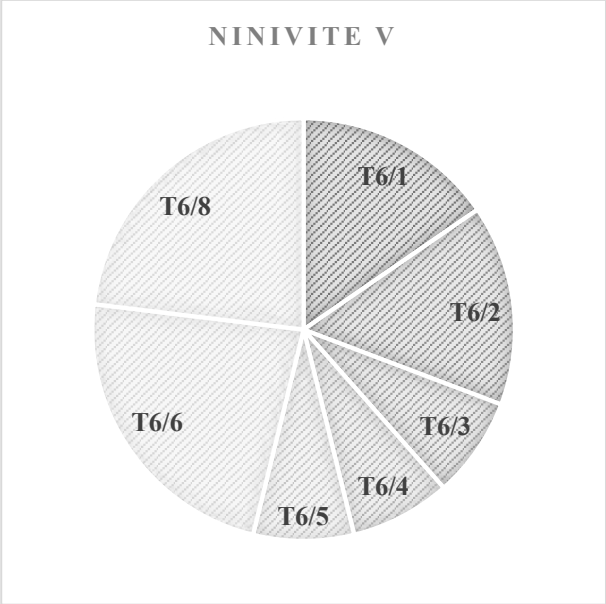
SITE DESCRIPTION

Very small flat and almost circular site located on the right bank of the River Gomel, c. 4.5 km south of Tell Gomel. The site features a very distinctive ashy, light-coloured soil, with small to large stones, several microliths and basalt tool fragments.

SITE BIOGRAPHY

The site was occupied continuously from the onset of the Late Chalcolithic to the end of 3rd millennium BC, with a peak in the Ninivite V period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
803	04	18	1	1
803	05b	13	3	3
803	04-05	0	1	1
803	06	1	2	2
803	06	2	2	2
803	06	3	1	1
803	06	4	1	1
803	06	5	1	1
803	06	6	3	3
803	06	8	3	3
803	07	0	3	3
803	07	8	1	1
803	07	26	1	1
803	Und.	-	10	10
TOT			**33**	**33**

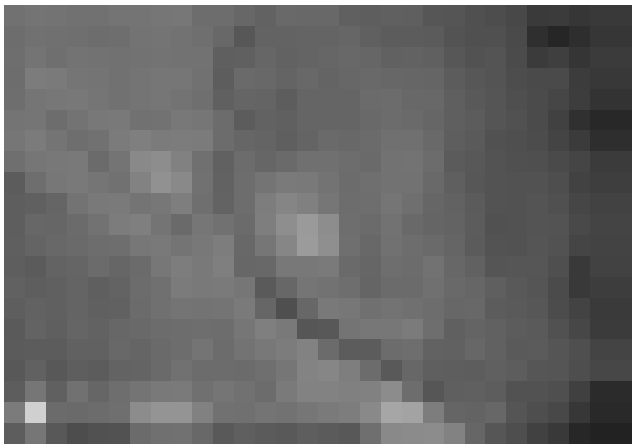
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	803.15.1.1	Rim; reddish yellow surfaces (7.5YR 7/6) and gray core (2.5Y 5/1) with reddish yellow margins (5YR 7/6); chaff fabric with common fine calcite inclusions. Rim dm. 26 cm.	T4-5/0	4-5	803.1
2	803.15.1.2	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (2.5Y 4/1) with very pale brown margins (10YR 7/4); chaff fabric with occasional fine to large calcite inclusions. Rim dm. 14 cm.	T4/18	4	803.1
3	803.15.1.4	Rim; reddish yellow exterior surface (5YR 7/6), very pale brown interior surface (10YR 7/4) and black core (2.5Y 2.5/1) with very pale brown margins (10YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 18 cm.	T5b/13	5b	803.1
4	803.15.1.10	Body sherd; pale yellow core and surfaces (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T6/1	6	803.1
5	803.15.1.20	Body sherd; light gray surfaces (5Y 7/2) and gray core (2.5Y 6/1); mineral fabric with abundant chaff and occasional fine calcite inclusions; incised decoration on the exterior surface.	T6/2	6	803.1
6	803.15.1.21	Body sherd; pale yellow surfaces (5Y 8/2) and gray core (5Y 6/1); fine mineral fabric with no visible inclusions; incised ad excised decoration on the exterior surface.	T6/3	6	803.1
7	803.15.1.19	Body sherd; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces; vertical grooves on the exterior surface.	T6/4	6	803.1
8	803.15.1.12	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral fabric with rare chaff and occasional calcite inclusions; smoothed surfaces. Rim dm. 10 cm.	T6/5	6	803.1
9	803.15.1.9	Base; pale yellow exterior surface (2.5Y 8/3), white interior surface (5Y 8/1) and pink core (7.5YR 7/3); chaff fabric with common fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface. Base 8 cm.	T6/1	6	803.1
10	803.15.1.16	Base; gray surfaces (2.5Y 6/1) and pale brown core (10YR 6/3); mineral fabric with rare chaff and occasional fine calcite inclusions; smoothed exterior surface.	T6/6	6	803.1
11	803.15.1.13	Rim; pale yellow core and surfaces (2.5Y 7/3); fine mineral fabric with rare chaff and no visible mineral inclusions; smoothed exterior surface. Rim dm. 8 cm.	T6/8	6	803.1
12	803.15.1.22	Rim; pale yellow exterior surface (5Y 8/2) and very pale brown core and interior surface (10YR 8/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 36 cm.	T7/0	7	803.1
13	803.15.1.26	Rim; pale yellow core and surfaces (5Y 8/3); chaff fabric with rare fine calcite inclusions; smoothed surfaces. Rim dm. 10 cm.	T7/0	7	803.1
14	803.15.1.24	Lid; very pale brown surfaces (10YR 8/4) and dark gray core (5Y 4/1); chaff fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T7/0	7	803.1
15	803.15.1.25	Rim; pale yellow exterior surface (5Y 8/2), very pale brown core and interior surface (10YR 7/4); mineral fabric with abundant chaff and frequent fine calcite inclusions. Rim dm. 26 cm.	T7/8	7	803.1
16	803.15.1.28	Rim; pale yellow core and surfaces (5Y 8/3); mineral fabric with abundant chaff and no visible mineral inclusions; smoothed surfaces.	T7/26	7	803.1

SITE 811

(B2 sector)



1- Site 811 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 811 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 811 from South. (2015)

SITE NUMBER	811
LOCAL NAME	-
POSITION	365333 E; 4049995 W
AREA	1 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Excavation of a trench for building a well
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		1	1	1													
N. fr. TGAS	6	7	13	3													

SITE DESCRIPTION

The small circular low-mounded site is located c. 1 km south-east of Tell Gomel. The site contained abundant microliths and grindstone fragments, and a few baked brick fragments in a grey ashy soil. On the northern edge of the site a trench had been excavated to build a well.

SITE BIOGRAPHY

The site shows lengthy and continuous prehistoric occupation. The site was first settled during the Early Pottery Neolithic and it continued to grow in the Half period. During the final occupation phase, the Ubaid period, the site was no longer densely occupied.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
811	01	0	5	5
811	01	1	2	2
811	02	0	5	5
811	02	1	8	8
811	03	1	3	3
811	Und.	-	6	6
TOT			**29**	**29**

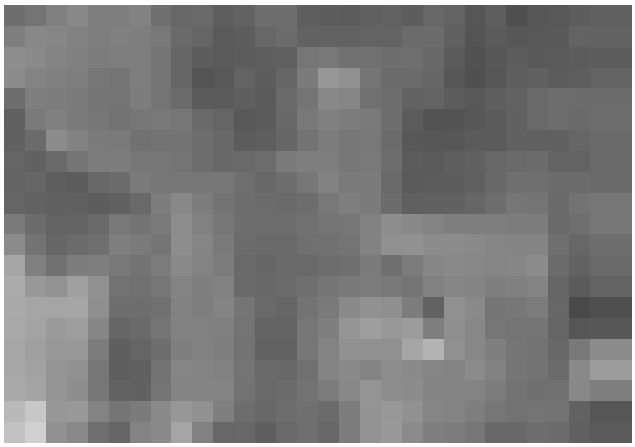
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	811.15.1.1	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 22 cm.	T1/0	1	811.1
2	811.15.1.22	Rim; pale yellow core and surfaces (2.5Y 8/2) and mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T1/0	1	811.1
3	811.15.1.2	Rim; light olive gray surfaces (5Y 6/2) and dark gray core (5Y 4/1); fine mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Overfired? Rim dm. 12 cm.	T1/0	1	811.1
4	811.15.1.6	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces; traces of red painted decoration on the surfaces. Rim dm. 20 cm.	T1/1	1	811.1
5	811.15.1.13	Body sherd; very pale brown core and surface (10YR 8/3); mineral fabric with occasional fine calcite inclusions; smoothed surfaces; red painted decoration on the exterior surface.	T2/1	2	811.1
6	811.15.1.12	Base; pink core and surfaces (7.5YR 7/3); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces. Base dm. 16 cm.	T2/1	2	811.1
7	811.15.1.10	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with occasional chaff and calcite inclusions; smoothed surface; red painted decoration on the exterior surface. Rim dm. 18 cm.	T2/1	2	811.1
8	811.15.1.7	Rim; pale yellow surfaces (2.5Y 8/3) and pink core (7.5YR 7/4); mineral fabric with occasional fine chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 22 cm.	T2/1	2	811.1
9	811.15.1.8	Rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 8/4); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces; black painted decoration on the interior surface. Rim dm. 14 cm.	T2/1	2	811.1
10	811.15.1.9	Rim; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (5YR 7/6); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T2/1	2	811.1
11	811.15.1.16	Body sherd; reddish yellow core and interior surface (5YR 7/6) and pale yellow exterior surface (2.5Y 8/3); mineral fabric with no visible inclusions; burnished exterior surface; red painted decoration on the exterior surface.	T2/1	2	811.1
12	811.15.1.18	Body sherd; reddish yellow core and interior surface (5YR 7/6) and very pale brown exterior surface; mineral fabric with occasional fine calcite inclusions; smoothed surfaces; white (?) painted decoration on the exterior surface.	T2/1	2	811.1
13	811.15.1.21	Rim; pale yellow surfaces (2.5Y 8/2) and pale brown core (10YR 6/3); mineral fabric with occasional grits inclusions; smoothed surfaces; black painted decoration on the exterior surface.	T3/1	3	811.1
14	811.15.1.20	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with occasional chaff and no visible mineral inclusions; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 10 cm.	T3/1	3	811.1
15	811.15.1.19	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (5YR 7/6) with very pale brown margins (10YR 8/3); mineral fabric with frequent fine calcite inclusions; smoothed surfaces; black painted decoration on the exterior surface. Rim dm. 10 cm.	T3/1	3	811.1

SITE 818

(B2 sector)



1- Site 818 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 818 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 818 from West. (2015)

SITE NUMBER	818
LOCAL NAME	-
POSITION	363622 E; 4049499 E
AREA	0,8 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,8**				**0,8**			**0,8**		**0,8**
N. fr. TGAS	5							2				6			9		7

SITE DESCRIPTION

Very small circular low-mounded site situated on the right bank of the River Gomel 1 km south-west of Tell Gomel. The site visibility was low because it was covered by yellow chaff. The site features light coloured soil and numerous small to medium stones.

SITE BIOGRAPHY

The earliest occupation evidence regards the mid-late 3rd millennium BC (non-permanent or short-lived occupation). Later the site was settled during the Neo-Assyrian, Parthian and Islamic periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
818	07	0	1	1
818	07	1	1	1
818	11	0	2	2
818	11	8	3	3
818	11	12	1	1
818	14	0	6	6
818	14	15	3	3
818	21	0	7	7
818	Und.	-	5	5
TOT			**29**	**29**

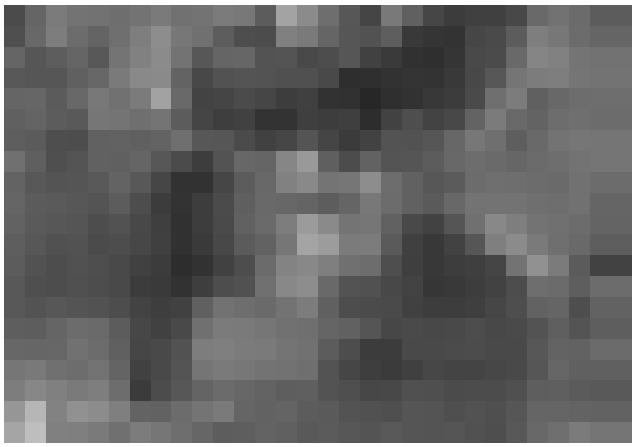
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	818.15.1.1	Rim; pale yellow core and surfaces (5Y 7/4); mineral fabric with occasional chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T7/0	7	818.1
2	818.15.1.2	Base; gray core and surfaces (5Y 5/1); fine mineral fabric with frequent fine calcite inclusions; burnished exterior surface. Base dm. 2 cm.	T7/1	7	818.1
3	818.15.1.6	Rim; reddish yellow core and surfaces (7.5YR 6/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 20 cm.	T11/0	11	818.1
4	818.15.1.7	Rim; reddish yellow core (5YR 7/6), pale yellow exterior surface (2.5Y 8/3) and very pale brown interior surface (10YR 7/4); mineral fabric with abundant chaff and frequent fine calcite and grits inclusions. Rim dm. 32 cm.	T11/8	11	818.1
5	818.15.1.3	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with frequent fine calcite and grits inclusions. Rim dm. 10 cm.	T11/8	11	818.1
6	818.15.1.8	Base; very pale brown surfaces (10YR 7/4) and light yellowish brown core (10YR 6/4); mineral fabric with abundant grits and calcite inclusions; smoothed surfaces.	T11/12	11	818.1

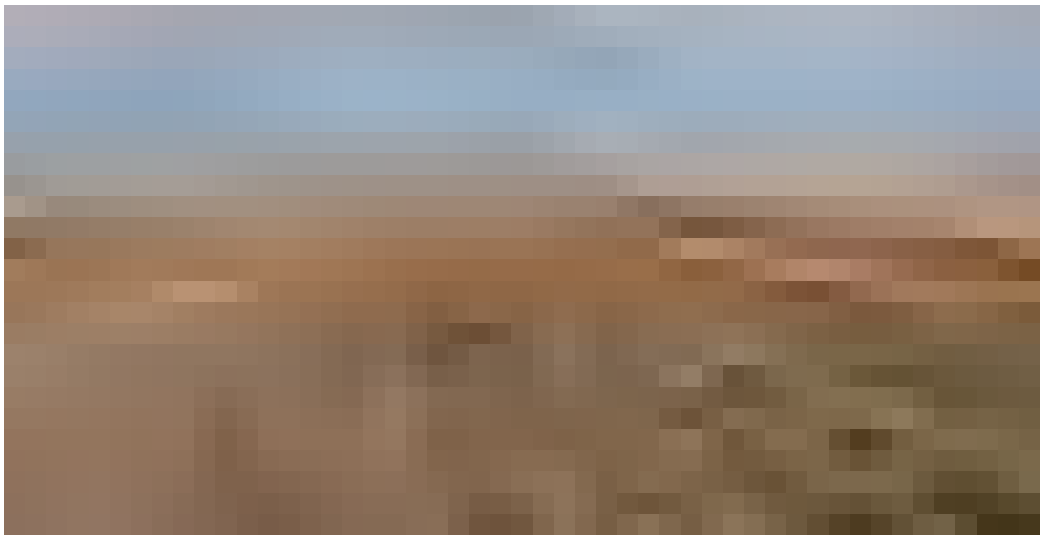
SITE 828

(A2 sector)



1- Site 828 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 828 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 828 from West. (2015)

SITE NUMBER	828
LOCAL NAME	-
POSITION	364105 E; 4052775 N
AREA	4,3 ha ca.
SURVEY YEARS	2015
TYPE OF SITE	Settled hill
OBSERVATION CONDITIONS	Low (south half), Good (north half)
DAMAGE AND THREATS	Trench excavated for building a well
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**4,3**				**4,3**			**4,3**		
N. fr. TGAS	1							2				2			2		

SITE DESCRIPTION

The settled hill is situated close to the southern edge of the modern village of Zinawa Khave. The site featured light grey soils and abundant small stones were present on the surface, although unfortunately the southern half was covered by a thick layer of straw. It was possible to collect only a few diagnostic sherds. Due to the low number of sherds visible on the surface, the site borders were determined using the CORONA image.

SITE BIOGRAPHY

The site was probably a non-permanent settlement, or underwent short-lived occupations during the mid-late 3rd millennium and the Neo-Assyrian and Islamic periods.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
828	07	0	2	2
828	11	2	2	2
828	14	7	1	1
828	14	14	1	1
828	Und.	-	1	1
TOT			**7**	**7**

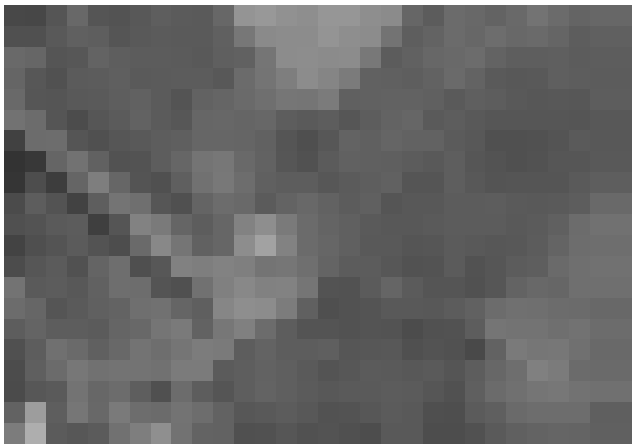
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	828.15.1.1	Rim; pale yellow exterior surface (2.5Y 8/2) and very pale brown core and interior surface (10YR 7/4); mineral fabric with rare chaff and frequent fine calcite and occasional grits inclusions. Rim dm. 12 cm.	T7/0	7	828.1
2	828.15.1.2	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with rare chaff and rare fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T7/0	7	828.1
3	828.15.1.4	Rim; light gray core (2.5Y 7/2) and reddish yellow surfaces (5YR 7/6); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 22 cm.	T11/2	11	828.1

SITE 836

(C2 sector)



1 - Site 836 on a Corona satellite (Corona 1039, 28 Feb 1967).

2 - Site 836 on a DigitalGlobe (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

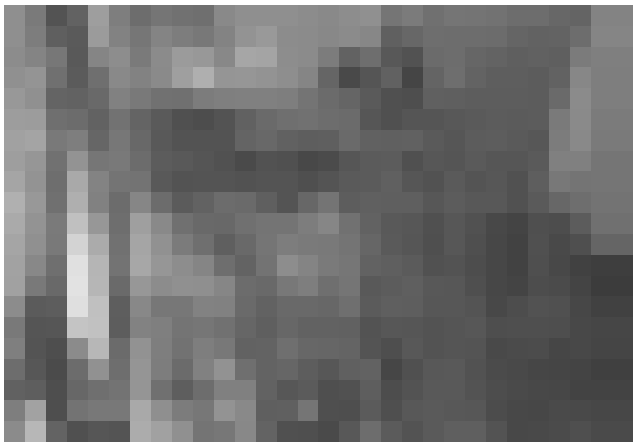
SITE NUMBER	836
LOCAL NAME	-
POSITION	363971; 4047183
AREA	0,7 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

SITE DESCRIPTION

The small flat site is located close to a wadi, about 3 km south of Tell Gomel, and was situated in an onion field. The visibility was very low, so the borders were defined by soil colour and sherd density. Unfortunately, notwithstanding the large number of small pottery sherds, no diagnostic pottery was found.

SITE 838

(A2 sector)



1- Site 838 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 838 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 838 from North. (2016)

SITE NUMBER	838
LOCAL NAME	-
POSITION	363912; 4053995
AREA	4,5 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha											**3,2**	**3**	**1,2**		**3**		**3**
N. fr. TGAS	1										2	5	1		2		4

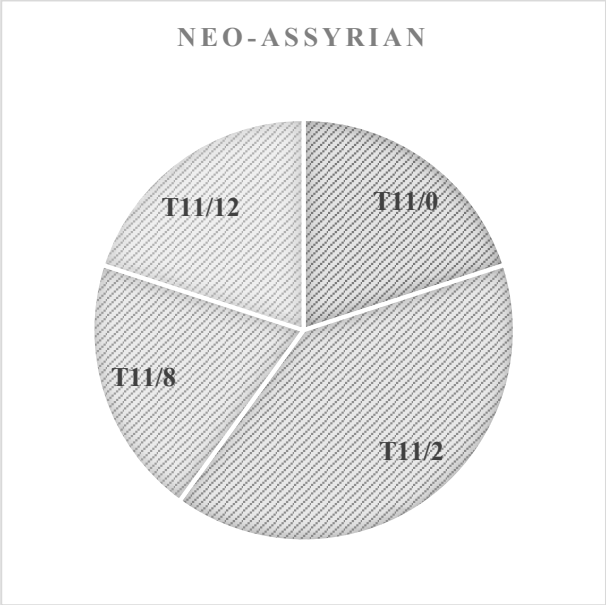
SITE DESCRIPTION

Low-mounded elliptical site close to the southern edge of the Zinawa Miri site. Overall the visibility was low, but in collection unit 1 it was very low. The site featured many small to medium stones, pottery fragments and basalt tool fragments.

SITE BIOGRAPHY

The few diagnostic fragments collected suggest a continuous occupation from the Middle Assyrian to Post-Assyrian periods. The site was also settled during the Parthian and Islamic periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
838	10	0	2	1		1
838	11	0	1			1
838	11	2	2		1	1
838	11	8	1		1	
838	11	12	1			1
838	12	0	1		1	
838	14	0	2			2
838	21	0	4		3	1
838	Und.	-	1		1	
TOT			**15**	**1**	**7**	**7**

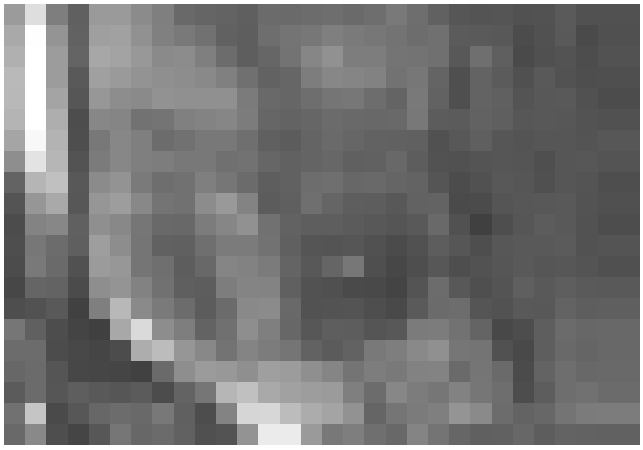
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	838.16.3.1	Base; very pale brown exterior surface (10YR 7/4) and dark grayish brown interior surface and yellowish brown core (10YR 5/4); mineral fabric with abundant chaff and abundant fine calcite inclusions. Base dm. 9 cm.	T10/0	10	838.3
2	838.16.3.3	Rim; very pale brown surfaces (10YR 7/4) and light brownish gray core (2.5Y 6/2) with very pale brown margins (10YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions.	T11/2	11	838.3
3	838.16.2.2	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with occasional chaff and frequent fine calcite inclusions. Rim dm. 34 cm.	T11/2	11	838.2
4	838.16.2.1	Rim; pale brown surfaces (10YR 6/3) and brown core (10YR 5/3); mineral fabric with occasional fine calcite inclusions; burnished surfaces. Rim dm. 5 cm.	T11/8	11	838.2
5	838.16.3.2	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric with frequent fine calcite inclusions. Rim dm. 21 cm.	T11/12	11	838.3
6	838.16.2.3	Rim; pale yellow surfaces (2.5Y 7/4) and yellow core (10YR 7/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 37 cm.	T12/0	12	838.2

SITE 839

(A2 sector)



1 - Site 839 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 839 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 839 from South-East. (2016)

SITE NUMBER	839
LOCAL NAME	-
POSITION	363887 E; 4054762 N
AREA	1,5 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1,5**	**1,5**	**1,5**	**1,5**		**1,5**
N. fr. TGAS	7											6	1	15	3		2

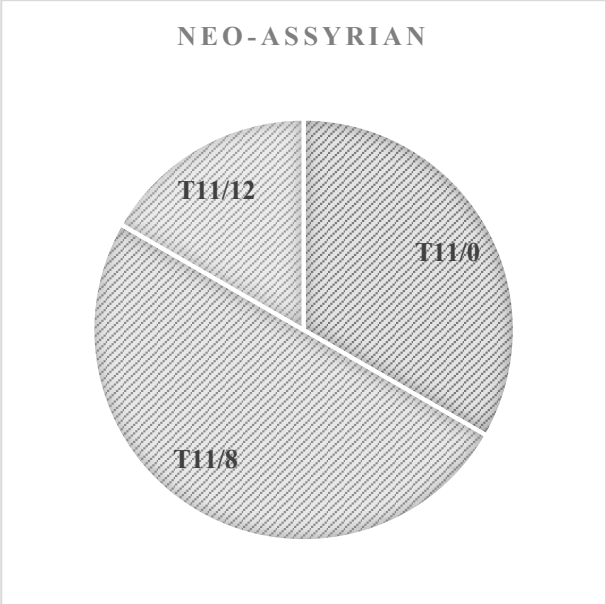
SITE DESCRIPTION

Small circular very-low-mounded site located on the left bank of the Gomel, 200 m south of Tell Zinawa Miri. The visibility was low due to a thick straw layer.

SITE BIOGRAPHY

The site was settled from the Neo-Assyrian to Islamic periods, with maximum occupation during the Hellenistic period and a gap in settlement during the Sasanian epoch.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
839	11	0	2	2
839	11	8	3	3
839	11	12	1	1
839	12	6	1	1
839	13	0	14	14
839	13	2	1	1
839	14	0	1	1
839	14	8	1	1
839	14	14	1	1
839	21	0	2	2
839	Und.	-	7	7
TOT			**34**	**34**

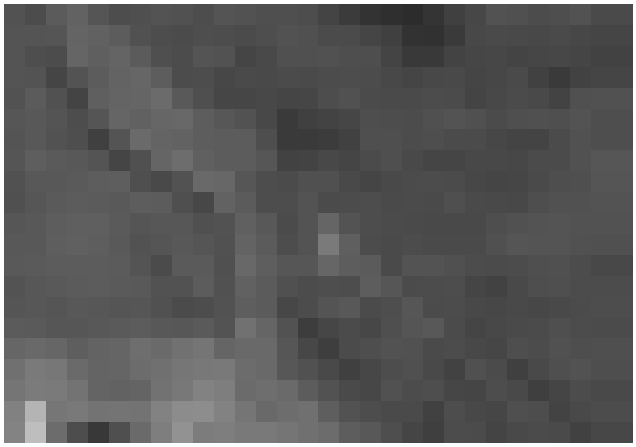
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	839.16.1.3	Rim; pale yellow exterior surface (5Y 8/3) and very pale brown interior surface and core (10YR 7/4); mineral fabric with frequent chaff and fine-medium calcite and grits inclusions. Rim dm. 22 cm.	T11/0	11	839.1
2	839.16.1.6	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 22 cm.	T11/0	11	839.1
3	839.16.1.4	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent fine-medium calcite, quartz and grits inclusions. Rim dm. 10 cm.	T11/8	11	839.1
4	839.16.1.5	Rim; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/3); mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces. Rim dm. 9 cm.	T11/8	11	839.1
5	839.16.1.2	Rim; pale yellow surfaces (5Y 8/3) and reddish yellow core (7.5YR 7/6); mineral fabric with occasional chaff and abundant fine calcite inclusions; smoothed surfaces. Rim dm. 14 cm.	T11/8	11	839.1
6	839.16.1.1	Rim; very pale brown surfaces (10YR 7/4) and light brown core (7.5YR 6/4); mineral fabric with frequent chaff and fine calcite inclusions; burnished surfaces. Rim dm. 26 cm.	T11/12	11	839.1
7	839.16.1.7	Rim; reddish yellow core (5YR 7/6); mineral fabric with abundant fine calcite inclusions, occasional large calcite inclusions and frequent fine grits inclusions. Rim dm. 13 cm.	T12/6	12	839.1

SITE 847

(A1 sector)



1 - Site 847 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 847 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 847 from West. (2016)

SITE NUMBER	847
LOCAL NAME	-
POSITION	362000 E; 4052529 N
AREA	0,6 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha								**0,6**	**0,6**								
N. fr. TGAS	1							11	3								

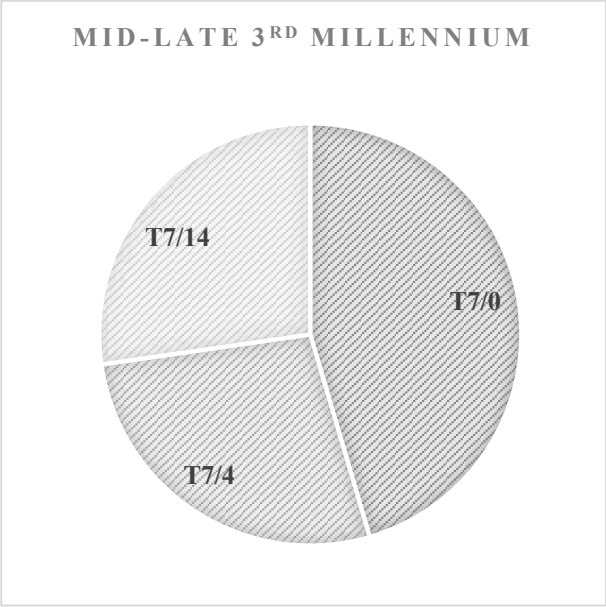
SITE DESCRIPTION

Very small flat and circular site located 2 km west of Zinawa Kahve. The site lies in a potato field and features a light-grey soil. Numerous pottery fragments and small-medium stones were visible on the surface. The borders were defined by soil colour and sherd density.

SITE BIOGRAPHY

The site was settled during the mid-later 3rd millennium and the Middle Bronze Age.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
847	07	0	5	5
847	07	4	3	3
847	07	14	3	3
847	08	0	3	3
847	Und.	-	1	1
TOT			**15**	**15**

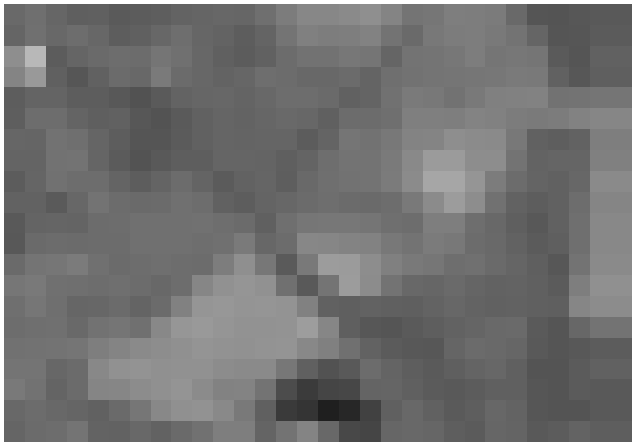
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	847.16.1.5	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with frequent fine calcite inclusions.	T7/0 Akk.	7	847.1
2	847.16.1.9	Body sherd; pale yellow core and surfaces (5Y 8/3); chaff fabric with occasional fine calcite inclusions; incised decoration and rope applied decoration on the exterior surface.	T7/0 Akk.	7	847.1
3	847.16.1.3	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral with no visible inclusions; smoothed surfaces; incised decoration on the exterior surface. Rim dm. 9 cm.	T7/0 Post - Akk.	7	847.1
4	847.16.1.1	Rim; very pale brown exterior surface (10YR 7/3) and light reddish brown interior surface and core (5YR 6/6); mineral fabric with abundant chaff with fine calcite inclusions; comb incised decoration. Rim dm. 30 cm.	T7/4 Akk.	7	847.1
5	847.16.1.8	Body sherd; pale yellow surfaces and core (5Y 8/3); chaff fabric with frequent fine calcite inclusions.	T7/4 Akk.	7	847.1
6	847.16.1.11	Body sherd; pale yellow exterior surface (2.5Y 8/2), pink interior surface (7.5YR 8/4) and pink core (7.5YR 7/4); chaff fabric with no visible mineral inclusions; comb incised decoration on the exterior surface.	T7/4 Akk.	7	847.1
7	847.16.1.6	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with no visible inclusions. Rim dm. 25 cm.	T7/14 Akk.	7	847.1
8	847.16.1.4	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 34 cm.	T7/14 Akk.	7	847.1
9	847.16.1.12	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with abundant fine calcite inclusions. Rim dm. 24 cm.	T8/0	8	847.1
10	847.16.1.13	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with abundant fine calcite inclusions. Rim dm. 15 cm.	T8/0	8	847.1
11	847.16.1.14	Body sherd; pale yellow surfaces (5Y 7/3) and olive yellow core (5Y 6/6); mineral fabric with frequent chaff and abundant fine grits and calcite inclusions; rope decoration on the exterior surface.	T8/0	8	847.1

SITE 851

(C3 sector)



1 - Site 851 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 851 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 951 from North. (2016)

SITE NUMBER	851
LOCAL NAME	-
POSITION	367551 E; 4048548 N
AREA	0,2 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,2**			**0,2**						
N. fr. TGAS	4							1			14						

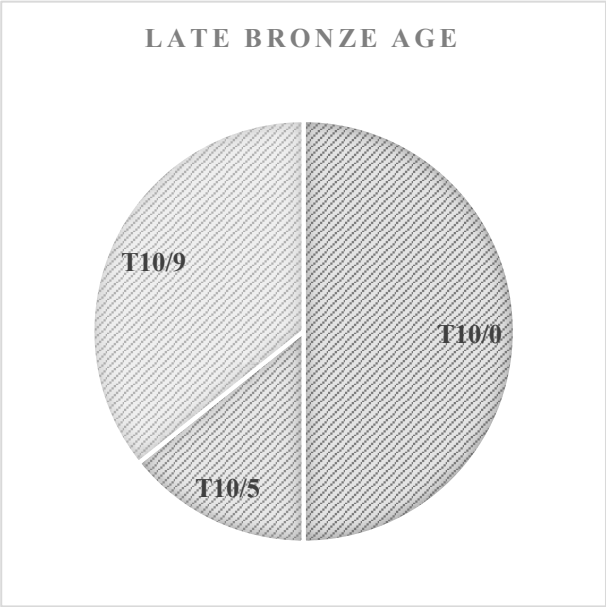
SITE DESCRIPTION

Small flat site located immediately north of Tell Sheikh Ibrahim. The site was clearly visible on a U2 image.

SITE BIOGRAPHY

Small Middle Assyrian settlement. A single mid-late 3rd millennium BC fragment might indicate an ephemeral occupation of the site during this period.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
851	07	19	1	1
851	10	0	7	7
851	10	5	2	2
851	10	9	5	5
851	Und.	-	4	4
TOT			**19**	**19**

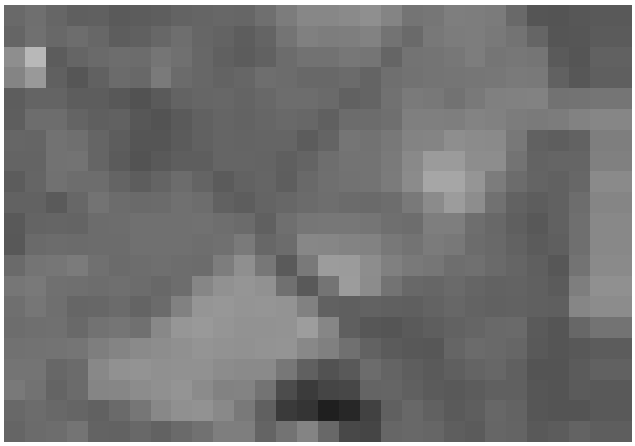
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	851.16.1.1	Rim; pale yellow core and surfaces (2.5Y 7/4); fine mineral ware with no visible inclusions; smoothed surfaces. Rim dm. 13 cm.	T7/19	7	851.1
2	851.16.1.2	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with occasional fine calcite and mica inclusions; smoothed surfaces.	T10/0	10	851.1
3	851.15.1.4	Rim; pale yellow surfaces and core (5Y 8/2); chaff fabric with occasional large calcite inclusions and frequent fine calcite and grits inclusions. Rim dm. 25 cm.	T10/0	10	851.1
4	851.16.1.7	Rim; pale yellow exterior surface (5Y 8/2), pale brown interior surface (10YR 6/3) and brown core (10YR 5/3); chaff fabric with frequent fine calcite inclusions and occasional grits inclusions. Rim dm. 16 cm.	T10/0	10	851.1
5	851.16.1.6	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 6/6); mineral fabric with frequent chaff and common fine calcite and grits inclusions; smoothed surfaces. Rim dm. 16 cm.	T10/0	10	851.1
6	851.16.1.8	Rim; pale yellow surfaces (2.5Y 8/3) and reddish yellow core (5YR 6/6); mineral fabric with common chaff and occasional fine calcite inclusions. Rim dm. 18 cm.	T10/0	10	851.1
7	851.16.1.5	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with occasional mica inclusions. Rim dm. 10 cm.	T10/5	10	851.1
8	851.16.1.16	Base; very pale brown exterior surface (10YR 7/3) and reddish yellow core and interior surface (5YR 7/6); mineral fabric with common chaff with occasional fine calcite inclusions; smoothed exterior surface. Base dm. 10 cm.	T10/9	10	851.1
9	851.16.1.11	Base; pale yellow exterior surface (2.5Y 8/2), very pale brown interior surface (10YR 7/3) and light reddish brown core (5YR 6/4); chaff fabric with occasional fine calcite inclusions. Base dm. 11 cm.	T10/9	10	851.1

SITE 853

(C3 sector)



1 - Site 853 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 851 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 853, top of the low mound. (2016)

4 - Site 853, top of the low mound. (2016)

SITE NUMBER	853
LOCAL NAME	-
POSITION	367660 E; 4048595 N
AREA	0,3 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Very low
DAMAGE AND THREATS	Completely damaged by building and farming activities
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha		**0,3**															
N. fr. TGAS		11															

SITE DESCRIPTION

Small circular low-mounded site situated at the southern edge of the city of Kalakchi, close to Tell Sheikh Ibrahim. The site's eastern slope has been destroyed by the construction of a *dokan*. The top of the mound has been destroyed by the excavation of a pond for duck breeding, and by other building and farming activities.

SITE BIOGRAPHY

The site is a small Hassuna village.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
853	01	0	8	8
853	01	2	3	3
TOT			**11**	**11**

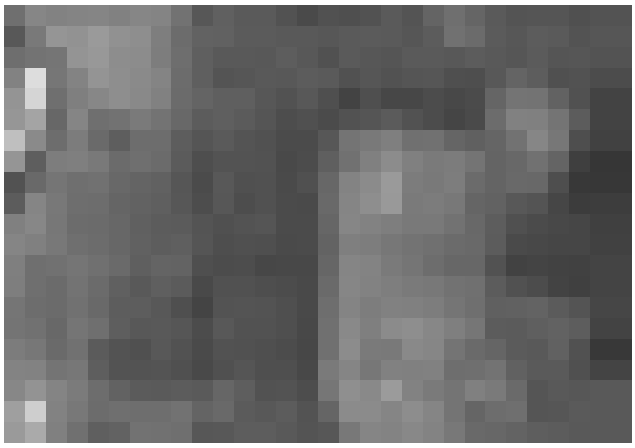
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	853.16.1.1	Rim; very pale brown surfaces (10YR 8/4) and pale brown core (10YR 6/3) with pink margins (7.5YR 7/4); mineral fabric with abundant fine calcite inclusions; smoothed surface. Rim dm. 9 cm.	T1/0	1	853.1
2	853.16.1.4	Body sherd; very pale brown exterior surface (10YR 8/3) and very dark gray core (2.5Y 3/1); chaff fabric with frequent fine calcite inclusions; lines incised on the exterior surface.	T1/0	1	853.1
3	853.16.1.11	Body sherd; very pale brown surfaces (10YR 8/4) and dark gray core (2.5Y 4/1); chaff fabric with fine grits inclusions.	T1/0	1	853.1
4	853.16.1.2	Body sherd (flat base?); very pale brown core (10YR 8/4) and reddish yellow core (5YR 6/6); chaff fabric with common fine calcite inclusions; grooved lines on the interior surface.	T1/2	1	853.1
5	853.16.1.6	Body sherd; yellow interior interior surface (10YR 8/6), reddish yellow exterior surface (5YR 6/6) and very dark gray (10YR 3/1); chaff fabric with occasional calcite inclusions; grooved lines on the interior surface.	T1/2	1	853.1
6	853.16.1.9	Body sherd; brownish yellow exterior surface (10YR 6/6), very pale brown interior surface (10YR 7/4) and light brownish gray core (2.5Y 6/2); chaff fabric with abundant fine calcite inclusions; grooved lines on the interior surface.	T1/2	1	853.1

SITE 856

(B2 sector)



1 - Site 818 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 818 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 856 from North. (2016)

SITE NUMBER	856
LOCAL NAME	-
POSITION	364193 E; 4051591 N
AREA	1,5 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1-2

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
		0,6		0,6	1,5	1,5				0,6							
N. fr. TGAS	12	2		4	10	5				1							

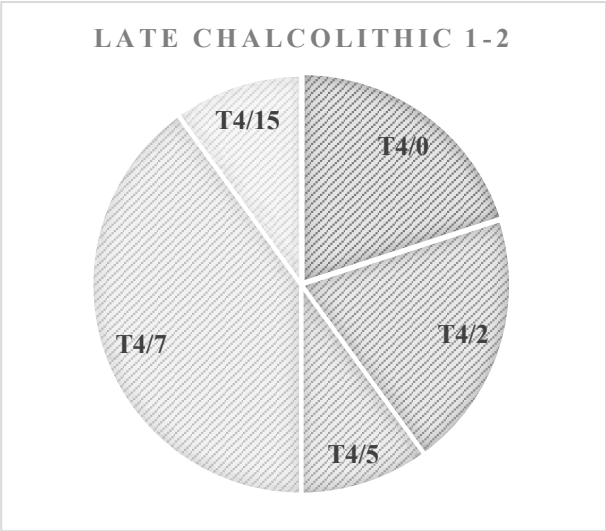
SITE DESCRIPTION

Small circular flat site less than 0.5 km north of Tell Gomel. The site featured abundant microliths, a grindstone fragment and many stones of various sizes.

SITE BIOGRAPHY

The site was first occupied during the Early Pottery Neolithic and subsequently, after a settlement gap the during the Halaf period, from the Ubaid to the end of the Late Chalcolithic. The Late Chalcolithic phases seem to coincide with the maximum expansion of the site. A single sherd from the Mitanni period might indicate a non-permanent occupation during this phase.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2
856	01	0	2		2
856	03	0	3		3
856	03	2	1		1
856	04	0	2		2
856	04	2	2	1	1
856	04	5	1	1	
856	04	7	4	1	3
856	04	15	1		1
856	05b	0	5	2	3
856	09	0	1		1
856	Und.	-	12	4	8
TOT			**34**	**9**	**25**

POTTERY SELECTION

Plate 1

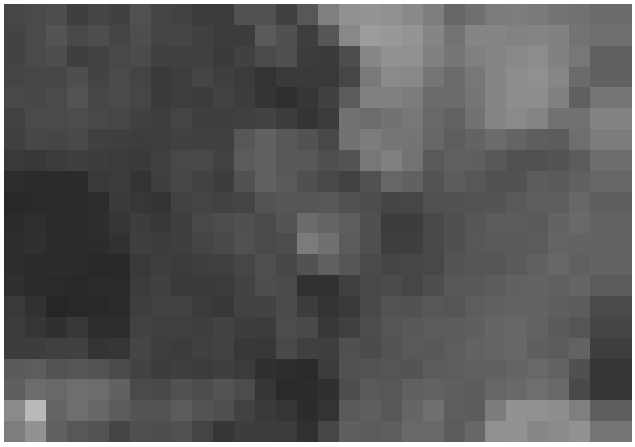
N.	Code	Description	Type	Period	Area
1	856.16.2.1	Rim; reddish yellow exterior surface (7.5YR 7/6), very pale brown interior surface and light yellowish brown (10YR 6/4); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed surface. Rim dm. 18 cm.	T1/0	1	856.2
2	856.16.2.2	Rim; reddish yellow surfaces and core (5YR 7/6); mineral fabric with common chaff and rare fine calcite inclusions; smoothed surface. Rim dm. 24 cm.	T1/0	1	856.2
3	856.16.2.3	Rim; pale yellow exterior surface (2.5Y 8/2) and very pale brown interior surface and core (10YR 7/4); mineral fabric with occasional chaff and occasional fine calcite inclusions; smoothed surface. Rim dm. 10 cm.	T3/0	3	856.2
4	856.16.2.5	Body sherd; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with common chaff and abundant fine calcite inclusions.	T3/0	3	856.2
5	856.16.2.6	Body sherd; very pale brown surfaces (7/4) and gray core (5Y 5/1); chaff fabric with no visible inclusions.	T3/2	3	856.2
6	856.16.2.7	Rim; very pale brown surfaces (10YR 7/3) and brown core (10YR 5/2); chaff fabric with occasional calcite inclusions; smoothed surfaces. Rim dm. 24 cm.	T4/0	4	856.2
7	856.16.2.11	Rim; reddish yellow surfaces (7.5YR 7/6) and gray core (2.5Y 5/1); mineral fabric with abundant fine and large calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T4/0	4	856.2
8	856.16.1.3	Cooking pot; reddish yellow exterior surface (7.5YR 6/6) and very dark gray interior surface and core (2.5Y 3/1); mineral fabric and abundant large grits; smoothed surfaces.	T4/2	4	856.1

Plate 2

N.	Code	Description	Type	Period	Area
9	856.16.1.1	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/3); mineral fabric with common chaff and rare large calcite inclusions; smoothed surfaces. Rim dm. 37 cm.	T4/5	4	856.1
10	856.16.1.2	Rim; red surfaces and core (2.5YR 5/6); mineral fabric with abundant large grits inclusions; burnished surfaces. Rim dm. 25 cm.	T4/7	4	856.1
11	856.16.2.8	Rim; light brown surfaces and core (7.5YR 6/4); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 24 cm.	T4/15	4	856.2
12	856.16.1.5	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with common chaff and no visible mineral inclusions; very eroded. Rim dm. 42 cm.	T5b/0	5b	856.1
13	856.16.2.14	Rim; very pale brown surfaces (10YR 8/2) and pink core (7.5YR 7/3); chaff fabric with no visible inclusions.	T5b/0	5b	856.2
14	856.16.1.4	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with occasional chaff and abundant fine calcite inclusions.	T5b/0	5b	856.1
15	856.16.2.15	Rim; reddish yellow surfaces (7.5YR 6/6) and dark gray core (10YR 4/1) with reddish yellow margins (7.5YR 6/6); chaff fabric with abundant fine calcite and mica inclusions. Rim dm. 13 cm.	T5b/0	5b	856.2
16	856.16.2.16	Body sherd; very pale brown surfaces (10YR 7/4) and brownish yellow core (10YR 6/6); mineral fabric with fine calcite inclusions; fine incision on the exterior surface.	T5b/0	5b	856.2
17	856.16.2.17	Pot stand; pale yellow surfaces (2.5Y 8/2) and reddish yellow core (7.5YR 8/6); chaff fabric with occasional fine calcite inclusions. Base dm. 7 cm.	T9/0	9	856.2

SITE 864

(A3 sector)



1 - Site 864 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 864 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 864 from West. (2016)

SITE NUMBER	864
LOCAL NAME	-
POSITION	366049 E; 4052583 N
AREA	0,4 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		0,4						0,4									
N. fr. TGAS	6	23						1									

SITE DESCRIPTION

The very small flat site is situated c. 2 km north-east of Tell Gomel. It was in the middle of a cereal field, recently ploughed at the time of the survey. The borders were defined by soil colour (light grey) and sherd density.

SITE BIOGRAPHY

The site is a small Hassuna village. A single mid-late 3rd millennium sherd might indicate a non-permanent occupation during this period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
864	01	0	20	20
864	01	2	3	3
864	07	19	1	1
864	Und.	-	6	6
TOT			**30**	**30**

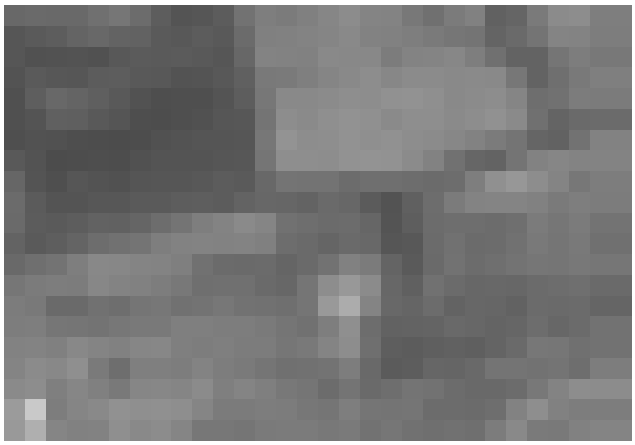
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	864.16.1.4	Bowl rim; reddish yellow surfaces (7.5YR 7/6) and dark gray core (5Y 4/1); chaff fabric and frequent fine-medium calcite and fine grits inclusions.	T1/0	1	864.1
2	864.16.1.3	Bowl rim; reddish yellow exterior surface (5YR 5/6), very pale brown interior surface (10YR 7/3) and dark gray core (5Y 4/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
3	864.16.1.1	Bowl rim; pale yellow surfaces (2.5Y 7/4) and dark gray core (2.5Y 4/1); chaff fabric with occasional medium-large calcite inclusions. Rim dm. 15 cm.	T1/0	1	864.1
4	864.16.1.5	Bowl rim; very pale brown surfaces (10YR 7/6) and dark gray core (2.5Y 4/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
5	864.16.1.7	Jar rim; reddish yellow exterior surface (5YR 5/6), very pale brown interior surface (10YR 7/3) and dark gray core (5Y 4/1); chaff fabric and frequent fine-medium calcite inclusions. Rim dm. 7 cm.	T1/0	1	864.1
6	864.16.1.13	Flat base; reddish yellow surfaces (7.5YR 7/6) and dark gray core (2.5Y 4/1); chaff fabric with common fine calcite inclusions. Base dm. 16 cm.	T1/0	1	864.1
7	864.16.1.14	Flat base; reddish yellow surfaces (7.5YR 7/6) and dark gray core (2.5Y 4/1); chaff fabric with common fine calcite inclusions.	T1/0	1	864.1
8	864.16.1.18	Flat base; very pale brown exterior surface (10YR 7/6), reddish yellow interior surface (7.5YR 7/6) and very dark gray core (2.5Y 3/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
9	864.16.1.16	Flat base; very pale brown surfaces (10YR 7/6) and very dark gray core (2.5Y 3/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
10	864.16.1.20	Flat base; very pale brown surfaces (10YR 7/6) and very dark gray core (2.5Y 3/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
11	864.16.1.15	Flat base; very pale brown interior surface (10YR 7/6), reddish yellow exterior surface (7.5YR 7/6) and very dark gray core (2.5Y 3/1); chaff fabric and frequent fine-medium calcite inclusions.	T1/0	1	864.1
12	864.16.1.21	Body sherd; very pale brown surfaces (10YR 7/6) and very dark gray core (2.5Y 3/1); chaff fabric and occasional fine-medium calcite inclusions; incised lines on the exterior surface.	T1/0	1	864.1
13	864.16.1.2	Bowl rim; reddish yellow surfaces (7.5YR 7/6) and light olive brown core (2.5Y 5/3); chaff fabric and frequent fine-medium calcite inclusions; large grooved lines on the interior surface. Rim dm. 50 cm.	T1/2	1	864.1
14	864.16.1.6	Bowl rim; reddish yellow surfaces (7.5YR 7/6) and dark gray core (5Y 4/1); chaff fabric and frequent fine-medium calcite inclusions; large grooved lines on the interior surface. Rim dm. 34 cm.	T1/2	1	864.1
15	864.16.1.23	Body sherd; very pale brown surfaces (10YR 7/4) and dark gray core (5Y 4/1); chaff fabric and frequent fine-medium calcite and fine grits inclusions; large grooved lines on the interior surface.	T1/2	1	864.1
16	864.16.1.24	Bowl rim; pale yellow surfaces (2.5Y 8/4) and gray core (5Y 5/1); fine mineral fabric with no visible inclusions. Rim dm. 12 cm.	T7/19 Akk.	7	864.1

SITE 874

(C1 sector)



1 - Site 874 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 874 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 874 from North. (2016)

SITE NUMBER	874
LOCAL NAME	-
POSITION	360520 E; 4048890 N
AREA	1 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha		1	1	1		1	1	1									1
N. fr. TGAS	18	3	7	8		5	9	1									3

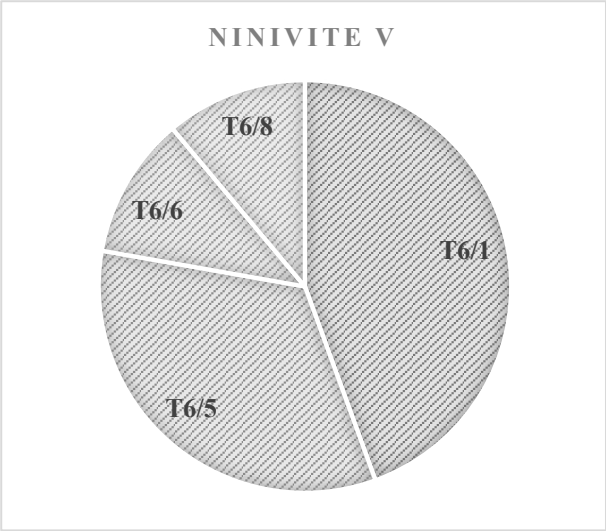
SITE DESCRIPTION

Small flat site about 1 km south-west of the village of Gir Faqir. The site was covered by a cucumber field, but overall the visibility was high. A water well is positioned at the centre of the site. The site featured abundant small stones and microliths, a few grindstone fragments and a large number of pottery fragments.

SITE BIOGRAPHY

The site seems to have been continuously occupied from the Early Pottery Neolithic to the end of the 3rd millennium BC, with a hiatus in the occupation sequence only during the Late Chalcolithic 1-2. Islamic period occupation is also attested.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
874	01	0	3	3
874	02	0	1	1
874	02	1	6	6
874	03	1	8	8
874	05b	0	2	2
874	05b	3	2	2
874	05b	4	1	1
874	05b	13	1	1
874	06	1	4	4
874	06	5	3	3
874	06	6	1	1
874	06	8	1	1
874	7	19	1	1
874	21	0	3	3
874	Und.	-	18	18
TOT			**55**	**55**

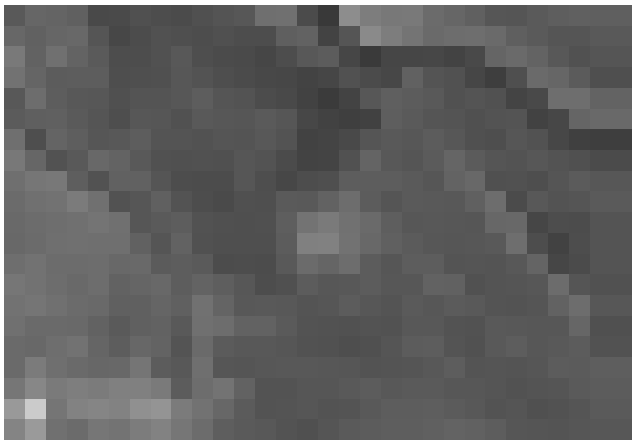
POTTERY SELECTION

Plate 1

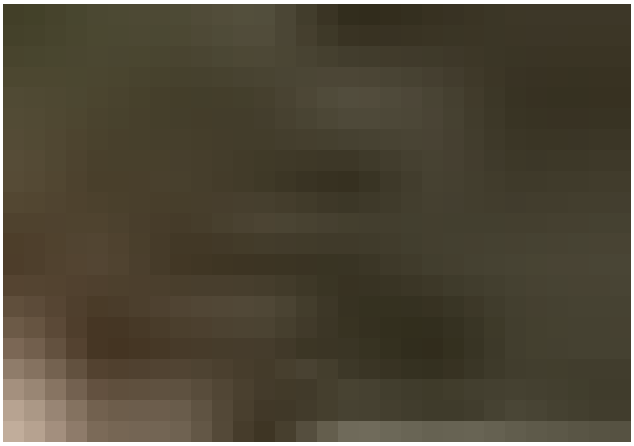
N.	Code	Description	Type	Period	Area
1	874.16.1.3	Rim; very pale brown exterior surface (10YR 8/3), reddish yellow interior surface (5YR 6/6) and dark gray core (10YR 4/1); chaff fabric with occasional fine calcite inclusions. Rim dm. 15 cm.	T1/0	1	874.1
2	874.16.1.2	Rim; very pale brown surfaces (10YR 7/4) and dark gray core (10YR 4/1); chaff fabric with abundant fine calcite and quartz inclusions. Rim dm. 14 cm.	T1/0	1	874.1
3	874.16.1.5	Rim; light yellowish brown core (10YR 6/4) and very pale brown surfaces (10YR 8/4); fine mineral fabric with no visible inclusions; burnished exterior surface and smoothed interior surface; red painted decoration on the exterior surface. Rim dm. 21 cm.	T2/1	2	874.1
4	874.16.1.6	Rim; reddish yellow core (5YR 7/6) and very pale brown slipped surfaces (10YR 8/2); fine mineral fabric with no visible inclusions; burnished surfaces; black fugitive painted decoration on the surfaces. Rim dm. 26 cm.	T2/1	2	874.1
5	874.16.1.9	Rim; very pale brown surfaces (10YR 8/3) and reddish yellow core (5YR 6/6) with very pale brown margins (10YR 8/3); fine mineral fabric with occasional chaff and no visible mineral inclusions; smoothed surfaces; traces of black painted decoration on the exterior surface. Rim dm. 25 cm	T2/1	2	874.1
6	874.16.1.10	Rim; very pale brown core and surfaces (10YR 8/3); fine mineral fabric with no visible inclusions; burnished surfaces; black fugitive painted decoration on the exterior surface.	T2/1	2	874.1
7	874.16.1.13	Rim; pale yellow core and surfaces (2.5Y 8/3); chaff fabric and frequent fine calcite and grits inclusions; traces of black painted decoration on the rim. Rim dm. 15 cm.	T3/1	3	874.1
8	874.16.1.18	Rim; light yellowish brown (2.5Y 6/3) and pale yellow surfaces (2.5Y 8/2); mineral fabric with occasional chaff and fine calcite inclusions; painted decoration on the surfaces.	T3/1	3	874.1
9	874.16.1.17	Rim; pink core (7.5YR 7/3) and pale yellow surfaces (2.5Y 8/2); mineral fabric with no visible inclusions; burnished exterior surface and smoothed interior surface; traces of black painted decoration on the surfaces. Rim dm. 23 cm.	T3/1	3	874.1
10	874.16.1.11	Body sherd; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional fine grits inclusions; smoothed surfaces; black painted decoration on the exterior surface.	T3/1	3	874.1
11	874.16.1.20	Bowl rim; light brownish gray surfaces (2.5Y 6/2) and dark gray core (5Y 4/1); chaff fabric with occasional fine calcite and grits inclusions; smoothed surfaces. Rim dm. 25 cm.	T5b/3	5b	874.1
12	874.16.1.19	Rim; reddish yellow core and surfaces (7.5YR 6/6); chaff fabric with no visible mineral inclusions; smoothed surfaces. Rim dm. 30 cm.	T5b/4	5b	874.1
13	874.16.1.21	Rim; very pale brown surfaces (10YR 7/3) and reddish yellow core (5YR 6/6) with very pale brown margins (10YR 7/4); chaff fabric with abundant fine-medium calcite and grits inclusions. Rim dm. 34 cm.	T5b/13	5b	874.1
14	874.16.1.23	Body sherd; pale yellow core and surfaces (2.5Y 7/4); mineral fabric with common chaff and no visible mineral inclusions; smoothed surfaces; black painted decoration on the exterior surface.	T6/1 N5 early	6	874.1
15	874.16.1.25	Body sherd; pale yellow exterior surface (2.5Y 8/2), light brownish gray (2.5Y 6/2) and very pale brown core (10YR 7/4) with pale yellow margins (2.5Y 7/3); mineral fabric with abundant chaff and occasional fine calcite inclusions; smoothed exterior surface; black painted decoration on the exterior surface.	T6/1 N5 early	6	874.1
16	874.16.1.27	Rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 7/4); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces; traces of red painted decoration on the exterior surface. Rim dm. 13 cm.	T6/8 N5 early	6	874.1
17	874.16.1.33	Pot stand (?); pale yellow surfaces (5Y 8/2) and very pale brown core (10YR 7/4); chaff fabric with frequent fine or large calcite inclusions; smoothed surfaces. Base dm. 19,5 cm.	T7/0	7	874.1
18	874.16.1.31	Rim; very pale brown exterior surface (10YR 7/4) and reddish yellow interior surface and core (5YR 6/6); fine mineral fabric with frequent fine calcite inclusions. Rim dm. 16 cm.	T7/19	7	874.1
119	874.16.1.32	Rim; pale yellow core and surfaces (2.5Y 8/3); fine mineral fabric with frequent fine grits and calcite inclusions. Rim dm. 15 cm.	T7/19	7	874.1

SITE 877

(C3 sector)



1 - Site 877 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 877 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 877 from South. (2016)

SITE NUMBER	877
LOCAL NAME	-
POSITION	366490 E; 4046328 N
AREA	0,9 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	**Und.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**21**
Ha																**0,9**	**0,9**
N. fr. TGAS	2															5	8

SITE DESCRIPTION

Flat site not far from the left bank of the River Gomel. It was covered by burnt chaff and the visibility was low. On the surface baked brick fragments, a grindstone fragment and numerous small pottery fragments were present.

SITE BIOGRAPHY

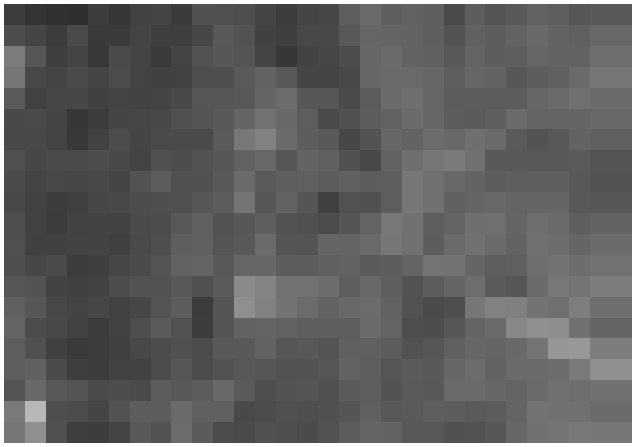
Small Sasanian and Islamic period village.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
877	15	0	4	4
877	15	3	1	1
877	21	0	8	8
877	Und.	-	2	2
TOT			**15**	**15**

SITE 882

(C3 sector)



1 - Site 882 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 882 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 882 from North-East. (2016)

SITE NUMBER	882
LOCAL NAME	-
POSITION	367954 E; 4046295 N
AREA	5 ha ca. (0,4 ha surveyed)
SURVEY YEARS	2016
TYPE OF SITE	Flat
OBSERVATION CONDITIONS	Very low
DAMAGE AND THREATS	Modern village cover the site
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	**5**
N. fr. TGAS	1																5

SITE DESCRIPTION

Almost flat site largely covered by a small modern village. It was possible to survey only a small part of the settlement.

SITE BIOGRAPHY

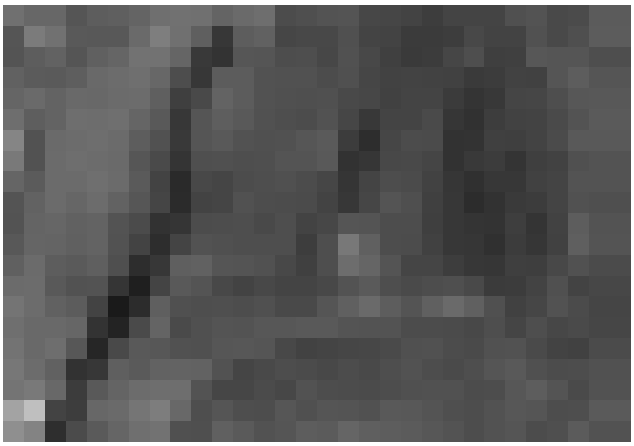
Only a few Islamic period sherds were collected; perhaps the settlement was a small village of that period.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
882	21	0	5	5
882	Und.	-	1	1
TOT			**6**	**6**

SITE 884

(C3 sector)



1 - Site 884 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 884 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 884 from South. (2016)

SITE NUMBER	884
LOCAL NAME	-
POSITION	367702 E; 4045962 N
AREA	0,3 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	**0,3**
N. fr. TGAS																	12

SITE DESCRIPTION

Very small circular and low-mounded site located 2 km south of the city of Kalakchi. The site features light grey soil and abundant pieces of stone.

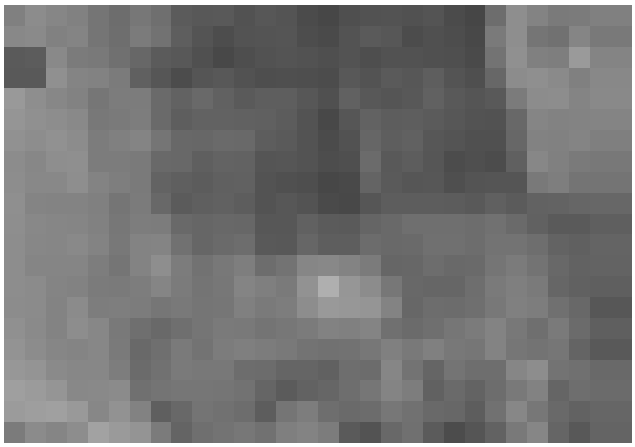
SITE BIOGRAPHY

Only Islamic pottery was collected on site. Due to the small size, it could have been a small farm.

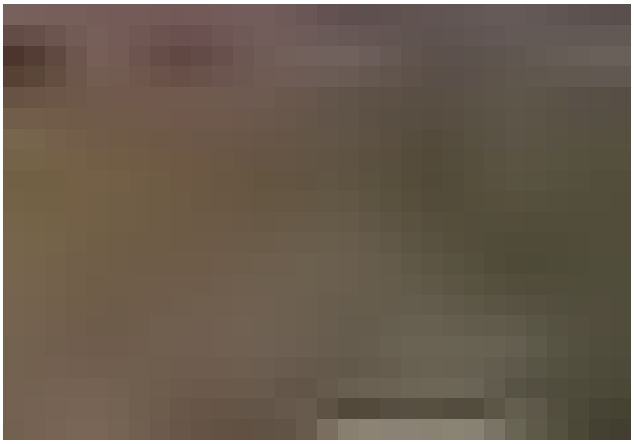
SITE	PERIOD	TYPE	TOTAL	1
884	21	0	12	12
TOT			**12**	**12**

SITE 927

(B2 sector)



1 - Site 927 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 927 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

SITE NUMBER	927
LOCAL NAME	-
POSITION	363985 E; 4051187 N
AREA	0,4 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha															**0,4**	**0,4**	**0,4**
N. fr. TGAS	12														11	5	14

SITE DESCRIPTION

Small circular and very-low-mounded site situated close to the northern edge of Tell Gomel. The site features a light-grey coloured soil. Several baked brick fragments, a grindstone fragment, abundant stones some of large size) and pottery fragments were recorded.

SITE BIOGRAPHY

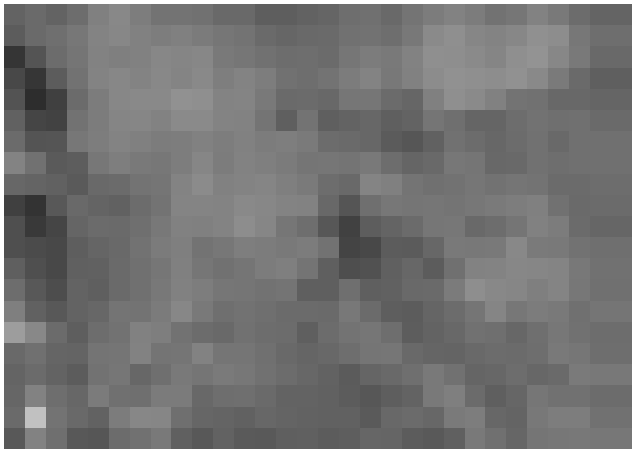
The site was continuously occupied from the Parthian to Islamic periods.

TYPES ATTESTED

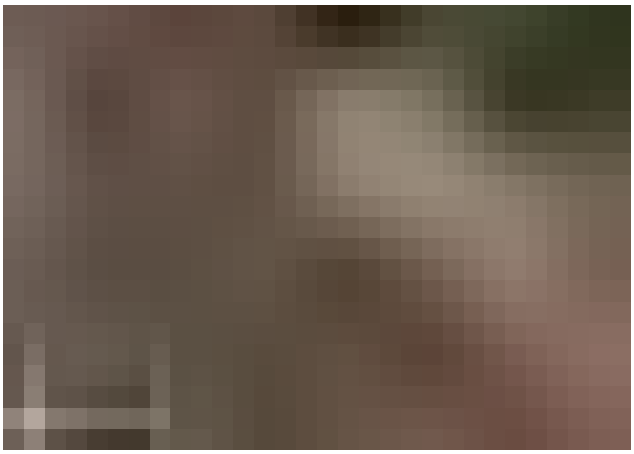
SITE	PERIOD	TYPE	TOTAL	1
927	14	0	8	8
927	14	3	2	2
927	14	7	1	1
927	15	0	4	4
927	15	3	1	1
927	21	0	14	14
927	Und.	-	12	12
TOT			**42**	**42**

SITE 944

(B2 sector)



1 - Site 944 on a Corona satellite image (Corona 1039, 28 Feb 1967).



2 - Site 944 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 944 from West. (2016).

SITE NUMBER	944
LOCAL NAME	-
POSITION	364515; 4050659
AREA	0,1 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	Building activities
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**0,1**	**0,1**	**0,1**					**0,1**		
N. fr. TGAS								1	1	1					3		

SITE DESCRIPTION

The very small, almost flat site is situated close to the eastern edge of Tell Gomel, beside the dirt road that connects the village of Gomel with Kalakchi. The site is covered by gravel and a small concrete building. The visibility was very low, but it was possible to record the presence of abundant medium and large pottery fragments and basalt tool fragments. Unfortunately, only a few diagnostic sherds were collected.

SITE BIOGRAPHY

The few diagnostic sherds seem to indicate an occupation sequence from the mid-late 3rd millennium BC to the Mitanni period and, after a long gap, resettlement of the site during the Parthian epoch.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
944	07	14	1	1
944	08	0	1	1
944	09	0	1	1
944	14	0	2	2
944	14	14	1	1
TOT			**6**	**6**

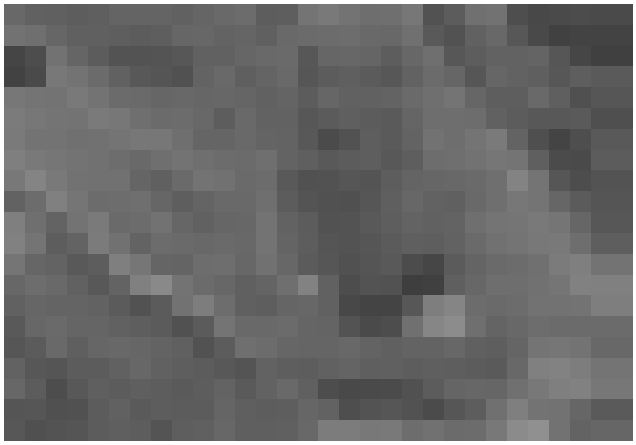
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	944.16.1.1	Rim; pale yellow surfaces (5Y 7/3) and olive gray core (5Y 5/2); mineral fabric with no visible inclusions; overfired. Rim dm. 34 cm.	T7/14	7	944.1
2	944.16.1.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with fine calcite inclusions; smoothed surfaces. Rim dm. 18 cm.	T8/0	8	944.1
3	944.16.1.3	Rim; reddish yellow exterior surface (5YR 6/6) and very pale brown interior surface (10YR 7/4); mineral fabric with occasional chaff, abundant fine-medium calcite and occasional grits inclusions. Rim dm. 29 cm.	T9/13	10	944.1

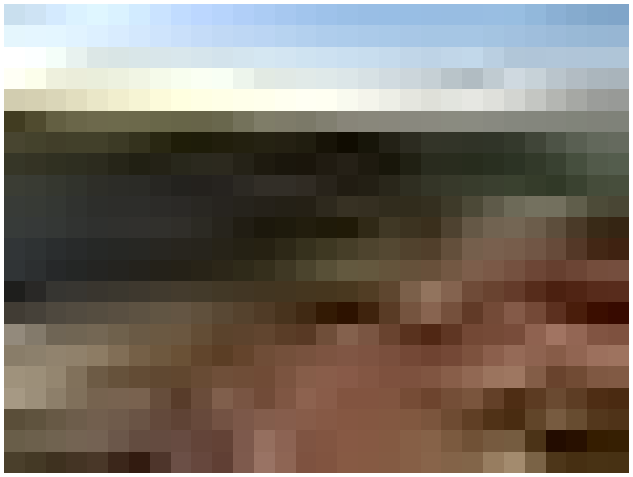
SITE 951

(C2 sector)



1 - Site 951 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 951 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).



3 - Site 951, the water basin. (2016)

4 - Site 951, the water basin. (2016)

SITE NUMBER	951
LOCAL NAME	-
POSITION	363515 E; 4047794 N
AREA	?
SURVEY YEARS	2016
TYPE OF SITE	Flat site covered by alluvial deposit
OBSERVATION CONDITIONS	Very low
DAMAGE AND THREATS	Extensive damages due to excavation activities
COLLECTION AREAS	1

PERIOD OF OCCUPATION

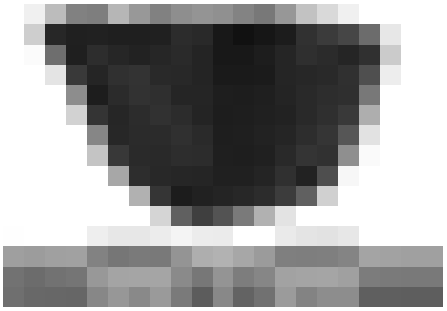
This site could be ascribed to a later phase of the PPN.

SITE DESCRIPTION

The site was discovered after the excavation of a deep basin for fish breeding. It was not possible to determine the limits of the site and the only finds were collected from the base of the hole (2 m under the field surface) and from its sides. In the sections animal bones, the remains of plaster and several stones of different dimensions could be seen. A concentration of blades, bladelets, flakes and cores, mainly in obsidian, was collected.

	Obsidian	Chert
Flakes	7	3
Blade and Bladelets	17	1
Cores	1	2
Tools	2 (1 endscraper, 1 sidescraper)	-
Debris	6	-

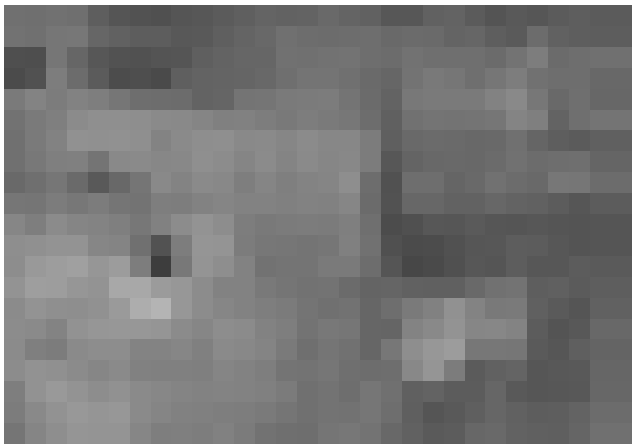
5 - Obsidian blades and bladelets



6 – Obsidian core

SITE 952

(B2 sector)



1 - Site 952 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 952 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

SITE NUMBER	952
LOCAL NAME	-
POSITION	363931 E; 4049132 N
AREA	0,1
SURVEY YEARS	2016
TYPE OF SITE	Flat site
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha																	**0,1**
N. fr. TGAS	1																16

SITE DESCRIPTION

Very small flat site located immediately east of site 939. The site was characterized by the red colour of the soil, with numerous small sherds and small stones. The borders were defined by soil colour and sherd density.

SITE BIOGRAPHY

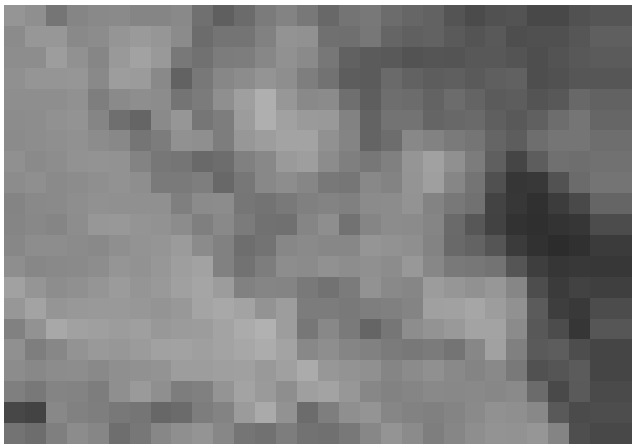
Small Islamic period site, perhaps a non-permanent settlement.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
952	21	0	16	16
952	Und.	-	1	1
TOT			**17**	**17**

SITE 953

(A1 sector)



1 - Site 953 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 953 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

SITE NUMBER	953
LOCAL NAME	-
POSITION	361002 E; 4053799 N
AREA	1,7 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	Traces of bulldozing activities
COLLECTION AREAS	1-3

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha												**1,7**		**0,8**	**0,9**	**0,8**	**1,7**
N. fr. TGAS	39											71		1	6	2	66

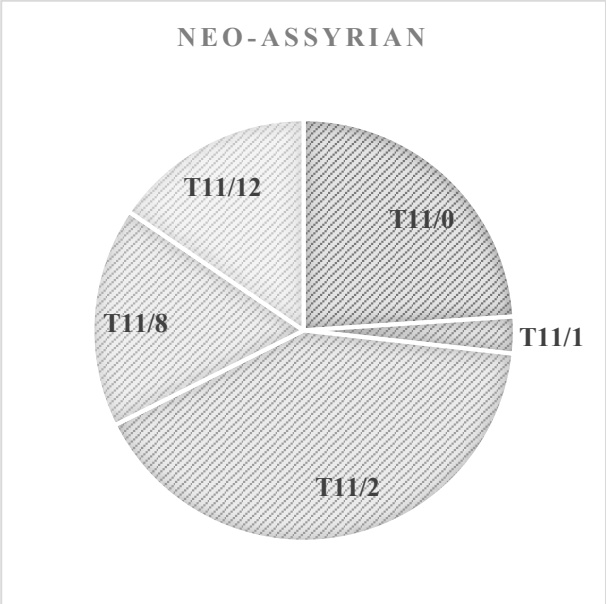
SITE DESCRIPTION

Small low-mounded site crossed by the modern road between Mahad and Gir Faqir. It is one of a group of 5 small circular mounds associated with a dense network of small watercourses. The site was bulldozed in order to level the surface for the agriculture. The site features light grey soil, several baked brick and basalt tool fragments, and large stones.

SITE BIOGRAPHY

The site was first occupied during the Neo-Assyrian period, that also represents (together with the Islamic epoch) the site's maximum expansion. There is also evidence of occupation of the site during the Hellenistic, Parthian and Sasanian periods.

POTTERY TYPES ATTESTED FOR EACH PERIOD



TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1	2	3
953	11	0	17	7		10
953	11	1	2		1	1
953	11	2	29	12	7	10
953	11	8	12	2	5	5
953	11	12	11	6	4	1
953	13	0	1			1
953	14	0	6	5	1	
953	15	0	1			1
953	15	1	1			1
953	21	0	66	35	27	4
953	Und.	-	39	12	16	11
TOT			**185**	**79**	**61**	**45**

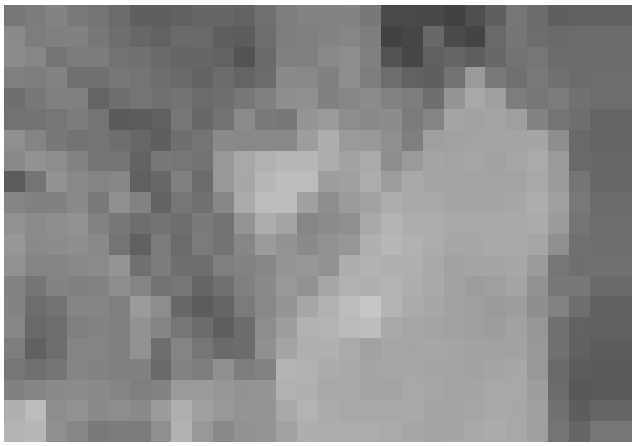
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	953.16.2.1	Base; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional chaff and common fine calcite inclusions; smoothed exterior surface. Base dm. 2 cm.	T8/0	8	953.2
2	953.16.2.3	Rim; reddish yellow core (7.5YR 8/6) and very pale brown surfaces (10YR 8/3); mineral fabric with occasional fine calcite inclusions; burnished surfaces. Rim dm. 14 cm.	T9/0	9	953.2
3	953.16.2.2	Rim; reddish yellow core and surfaces (10YR 8/4); mineral fabric with common chaff and fine calcite inclusions. Rim dm. 12 cm.	T9/0	9	953.2
4	953.16.3.10	Rim; very dark grayish brown core and surfaces (2.5Y 3/2); mineral fabric with abundant mineral inclusions; burnished surfaces. Rim dm. 12 cm.	T11/0	11	953.3
5	953.16.1.9	Rim; light brown surfaces (7.5YR 6/4) and light brownish gray core (2.5Y 6/3); mineral fabric with abundant fine calcite, quartz, mica and grits inclusions; burnished exterior surface. Rim dm. 23 cm.	T11/0	11	953.1
6	953.16.3.23	Base; pale yellow core and surfaces (5Y 8/3); mineral fabric with occasional fine calcite inclusions; smoothed exterior surface; overfired.	T11/0	11	953.3
7	953.16.1.27	Base; very pale brown exterior surface (10YR 8/2), pink core and interior surface (7.5YR 8/6); mineral fabric; smoothed exterior surface.	T11/0	11	953.1
8	953.16.3.2	Rim; very pale brown surfaces (10YR 7/4) and brownish yellow core (10YR 6/6); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 22 cm.	T11/1	11	953.3
9	953.16.2.4	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with common chaff and frequent fine-medium calcite inclusions; smoothed surfaces. Rim dm. 21 cm.	T11/1	11	953.2
10	953.16.1.3	Rim; reddish yellow core (5YR 7/6) and very pale brown surfaces (10YR 8/3); mineral fabric with occasional chaff and frequent fine calcite and grits inclusions. Rim dm. 29 cm.	T11/2	11	953.1
11	953.16.3.6	Rim; light reddish brown surfaces (5YR 6/4) and dark grayish brown core (10YR 4/2); mineral fabric with common chaff and common fine calcite and grits inclusions; smoothed surfaces. Rim dm. 18 cm.	T11/2	11	953.3
12	953.16.2.11	Rim; reddish brown core and surfaces (7.5YR 7/6); mineral fabric with occasional chaff and abundant fine calcite inclusions. Rim dm. 28 cm.	T11/2	11	953.2
13	953.16.1.26	Rim; reddish yellow surfaces (7.5YR 7/6) and very pale brown core (10YR 7/3); mineral fabric with occasional chaff and abundant fine-medium calcite, quartz and grits inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/8	11	953.1
14	953.16.3.19	Rim; pale yellow exterior surface (2.5Y 8/2) and very pale brown interior surfaces (10YR 7/4) and light brown core (7.5YR 6/4); chaff fabric with occasional fine calcite and quartz inclusions; bitumen decoration on the exterior surface. Rim dm. 36 cm.	T11/8	11	953.3
15	953.16.1.19	Rim; pale yellow exterior surface (2.5Y 8/2), pink core and interior surface (7.5YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/12	11	953.1
16	953.16.3.12	Rim; reddish yellow core and surfaces (7.5YR 6/6); mineral fabric with occasional chaff and abundant fine-medium calcite inclusions; smoothed surfaces. Rim dm. 28 cm.	T11/12	11	953.3

SITE 955

(B1 sector)



1 - Site 955 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 955 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 955 from North-West. (2016)

SITE NUMBER	955
LOCAL NAME	-
POSITION	360259 E; 4051110 N
AREA	0,8 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Low
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
												0,8		0,8			0,8
N. fr. TGAS	4											3		4			2

SITE DESCRIPTION

Very small and elongated low-mounded site located immediately south of site 128. A clear depression divides the two sites. The visibility conditions were poor and only a few diagnostic fragments were collected.

SITE BIOGRAPHY

The site seems to show Neo-Assyrian, Hellenistic and Islamic period occupation.

TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
955	11	2	2	2
955	11	8	1	1
955	13	1	3	3
955	13	9	1	1
955	21	0	2	2
955	Und.	-	4	4
TOT			**13**	**13**

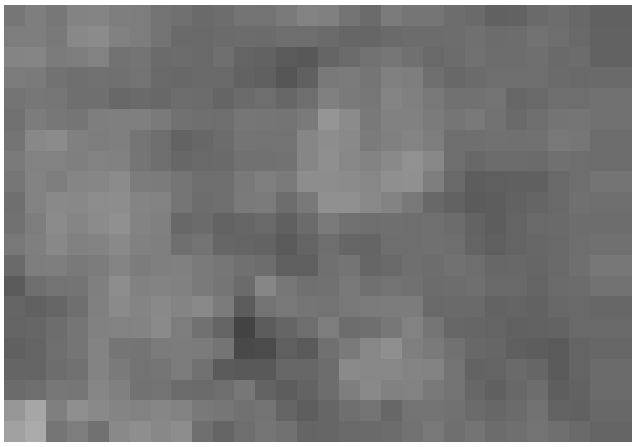
POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
1	955.15.1.1	Rim; brownish yellow core and surfaces (10YR 6/6); mineral fabric with occasional fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/2	11	955.1
2	955.15.1.3	Rim; pale olive core and surfaces (5Y 6/3); mineral fabric with abundant grits inclusions; overfired. Rim dm. 5 cm.	T11/8	11	955.1

SITE 974

(B2 sector)



1 – Site 974 on a Corona satellite image (Corona 1039, 28 Feb 1967).

2 - Site 974 on a DigitalGlobe image (taken on 24 Jun 2010, Sources: Esri, DigitalGlobe).

3 - Site 974 from West. (2016)

SITE NUMBER	974
LOCAL NAME	-
POSITION	364618 E; 4050818 N
AREA	1,2 ha ca.
SURVEY YEARS	2016
TYPE OF SITE	Low mounded
OBSERVATION CONDITIONS	Good
DAMAGE AND THREATS	-
COLLECTION AREAS	1

PERIODS OF OCCUPATION

Period	Und.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
Ha								**1,2**	**1,2**								**1,2**
N. fr. TGAS	7							68	13								1

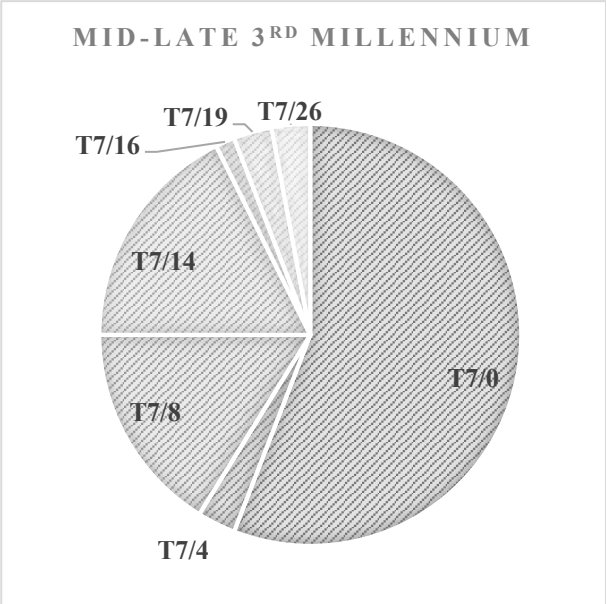
SITE DESCRIPTION

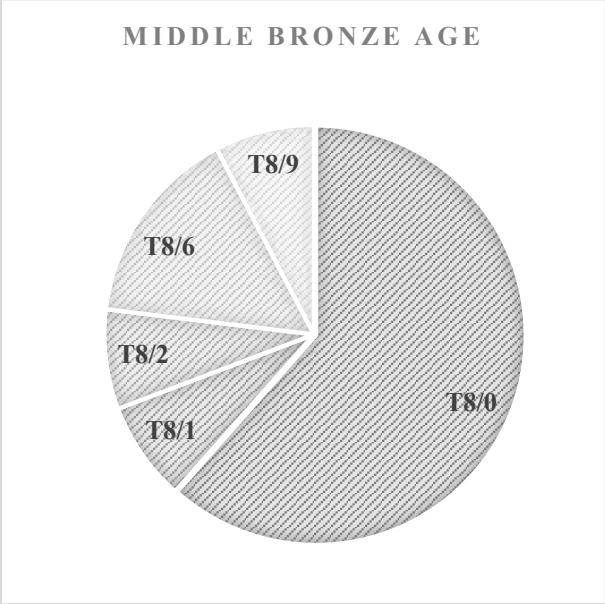
Small low-mounded site situated close to the eastern limit of Tell Gomel. The site was recently ploughed, and the surface was densely covered by pottery sherds, and baked brick and basalt grindstone fragments. The site is subjected to continuous ploughing.

SITE BIOGRAPHY

The small site was densely occupied in the mid-late 3rd millennium and the Middle Bronze Age. Only one single Islamic period fragment was collected.

POTTERY TYPES ATTESTED FOR EACH PERIOD





TYPES ATTESTED

SITE	PERIOD	TYPE	TOTAL	1
974	07	0	38	38
974	07	4	2	2
974	07	8	11	11
974	07	14	12	12
974	07	16	1	1
974	07	19	2	2
974	07	26	2	2
974	08	0	8	8
974	08	1	1	1
974	08	2	1	1
974	08	6	2	2
974	08	9	1	1
974	21	0	1	1
974	Und.	-	7	7
TOT			**89**	**89**

POTTERY SELECTION

Plate 1

N.	Code	Description	Type	Period	Area
-	3.3.10	Jar rim; pink surfaces (7.5YR 7/4) and dark gray core (5YR 4/1); chaff fabric with frequent fine to medium calcite inclusions. No drawing available.	T5b/0	5b	Extra (T3.3)
-	3.3.8	Bowl rim; reddish yellow core and surfaces (5YR 7/6); chaff fabric with abundant fine calcite inclusion; severely abraded. No drawing available.	T5b/13	5b	Extra (T3.3)
1	974.16.1.1	Bowl rim; pale yellow slipped surfaces (2.5Y 8/3) and reddish yellow core (5YR 7/6); chaff fabric with occasional fine calcite inclusions. Rim dm. 44 cm.	T7/0	7	974.1
2	974.16.1.5	Bowl rim; very pale brown surfaces (10YR 8/4) and pink core (7.5YR 7/4); mineral fabric with occasional chaff and fine calcite inclusions; smoothed surfaces. Rim dm. 33 cm.	T7/0	7	974.1
3	974.16.1.50	Jar rim; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/3); chaff fabric with frequent fine grits inclusions; fine incisions on the exterior surface. Rim dm. 29 cm.	T7/0 Akk.	7	974.1
4	974.16.1.54	Jar rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine grits inclusions; fine incisions on the exterior surface. Rim dm. 32 cm.	T7/0 Akk.	7	974.1
5	974.16.1.52	Jar rim; very pale brown surfaces (10YR 8/3) and pale yellow core (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces; traces of black painted decoration on the rim. Rim dm. 15 cm.	T7/0 Akk.	7	974.1
6	974.16.1.51	Jar rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with no visible inclusions; comb incised decoration on the exterior surface. Rim dm. 32 cm.	T7/4 Akk.	7	974.1
7	974.16.1.59	Body sherd; pale yellow surfaces and core (5Y 8/3); chaff fabric with no visible inclusions; comb incised decoration.	T7/4 Akk.	7	974.1
-	3.3.4	Jar rim; pale yellow core and surfaces (5Y 8/4); chaff fabric with no visible inclusions; comb incised decoration on the exterior surface. No drawing available.	T7/4 Akk.	7	Extra (T3.3)
8	974.16.1.13	Jar rim; pale yellow surfaces (2.5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with frequent fine calcite inclusions. Rim dm. 27 cm.	T7/8	7	974.1
9	974.16.1.8	Jar rim; pale yellow surfaces (5Y 8/3) and very pale brown core (10YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 31 cm.	T7/14	7	974.1
10	974.16.1.16	Jar rim; very pale brown surfaces and core (10YR 8/4); mineral fabric with common chaff and no visible mineral inclusions; smoothed surfaces. Rim dm. 26 cm.	T7/16	7	974.1
11	974.16.1.49	Bowl rim; pale yellow surfaces (2.5Y 8/4) and gray core (2.5Y 5/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 19 cm.	T7/19 Akk.	7	974.1
12	974.16.1.48	Bowl rim; pale yellow core and surfaces (2.5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T7/26 Akk.	7	974.1
13	974.16.1.76	Jar rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with occasional grits inclusions; smoothed surfaces. Rim dm. 23 cm.	T8/0	8	974.1
14	974.16.1.71	Jar rim; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with occasional chaff and fine grits inclusions; bitumen on the interior surface; smoothed exterior surface; incised decoration on the exterior surface. Rim dm. 27 cm.	T8/2	8	974.1
15	974.15.1.78	Channel base; very pale brown surfaces (10YR 8/3) and reddish yellow interior core (5YR 7/6); mineral fabric with abundant fine calcite inclusions; smoothed exterior surface. Base dm. ? cm.	T8/6	8	974.1

NO SETTLEMENT SITES

SITE 255 (364025 4050539 Meters)

SITE DESCRIPTION

Bricks structure on the bed of Gomel River

SITE 268 (368615 4049505 Meters)

SITE DESCRIPTION

Limestone blocks (one with cuneiform inscription) used as foundation of a house in Kalakchi

SITE 269 (369022 4050107 Meters)

SITE DESCRIPTION

Lion statue found during mining activities on the Khazir river

3.

TRANSECTS CATALOGUE

TRANSECT 1 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1								1							1		
2								1									
3																	
4																	
5																	
6								1									
7																	
8																	
9																	
10																	
11										1							
12																	
13																	
14																	
15									1								
16																	
17	1																
18																	
19									1								1
20									1								
21	1																
TOT	***2***							***3***	***3***	***1***					***1***		***1***

TRANSECT 2 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9	1							1	1								
10	1								1								
11	1				1			2									
12																	
13																	
14								1									
15																	4
16								2									
17																	
18																	
19																	
20												1					
21																	1
22	1										1						
TOT	***4***				***1***			***6***	***2***		***1***	***1***					***5***

TRANSECT 3 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2					1			3									
3																	
4																	1
5	1																
6																	
7																	
8	1								1								
9	1																
10																	1
11									1		1						
12																	
13																	
14																	
15																	
16	1																
17																	
18																	
19																	
20																	
21																	
TOT	***4***				***1***			***3***	***2***		***1***						***2***

TRANSECT 4 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1									1								
2																	
3									2		1						
4																	
5																	
6																	
7																	
8																	
9																	
10																	3
11																	
12	2								2		1	1					2
13																	
14																	
15																	
16																	
17	1								1								4
18																	
19																	
20																	
21																	
22								1	1								
TOT	***3***							***1***	***7***		***2***	***1***					***9***

TRANSECT 5 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4											1						1
5														1			
6																	2
7									1			2					1
8																	4
9	4														1		
10									1								
11												1					
12							1	1									
13																	
14								1									
15	3																
16																	
17																	
18																	
19																	
20																	
21																	
TOT	*7*						*1*	*2*	*2*		*1*	*3*		*1*	*1*		*8*

TRANSECT 6 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1					2												
2	2																2
3	1								1								
4								3	1								
5	4											1					1
6	1										1	1					2
7	1																
8	1														1		1
9																	
10																	
11																	
12																	
13																1	
14	2														2		
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***12***				***2***			***3***	***2***		***1***	***2***			***3***	***1***	***6***

TRANSECT 7 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1	1																
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11	1								1								1
12																	
13																	
14																	
15	3																
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***5***								***1***								***1***

TRANSECT 8 – PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13	1																
14																	
15																	
16												1					
17																1	
18																	1
19																	
20																	
21																	1
TOT	***1***											***1***				***1***	***2***

TRANSECT 9 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2	1							1									
3	3																
4																	
5																	
6																	
7																	
8																	
9	4			1				2									1
10	2																
11																	
12				2						1							
13											2						
14	1																
15				1													
16																	
17																	
18																	
19																	
20																	
21	1																
TOT	***12***			***4***				***3***		***1***	***2***						***1***

TRANSECT 10 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2	2										1	1					
3	2			1					2								
4																	1
5																	
6																	
7	2									2							
8																	
9																	
10	1								1			1					
11	2							1									1
12									2								
13	1																
14																	
15																	
16	1														1		
17																	
18																	
19	2																
20																	
21																	
TOT	***13***			***1***				***1***	***5***	***2***	***1***	***2***			***1***		***2***

TRANSECT 11 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2	2																
3																	
4																	
5																	
6																	
7																	
8																	
9	1																
10																	
11	1																
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19															1		
20	1										1	1					
21																	
TOT	***5***										***1***	***1***			***1***		

TRANSECT 12 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2									1								
3																	
4																	
5																	
6	1																
7								1									
8																	
9								1	1								
10																	
11																	
12																	
13																	
14																	
15	1								1								
16																	
17																	
18	1																
19																	
20																	
21																	
TOT	***3***							***2***	***3***								

TRANSECT 13 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6	1																
7																	1
8																	
9	1																
10																	
11	1																
12																	
13																	
14																	
15	1																
16																	
17									1								
18																	
19																	
20																	
21								1				1					
TOT	***4***							***1***	***1***			***1***					***1***

TRANSECT 14 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4								1									
5									1				1				
6	1																
7	1							2	1								
8																	
9																	
10																	
11																	
12	1																
13																	
14																	
15																	
16																	
17									1								
18																	
19																	
20																	
21																	
TOT	***3***							***3***	***3***				***1***				

TRANSECT 15 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2											1						
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10								1									
11																	1
12												1					
13																	
14																	
15																	
16								1									
17																	
18																	
19																	
20																	
21																	
TOT								***2***			***1***	***1***					***1***

TRANSECT 16 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7	4											2					
8																	
9	1																
10	1																3
11																	
12																	1
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***6***											***2***					***4***

TRANSECT 17 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8	4																3
9																	
10	1											3					
11																	
12	1																
13																	
14	1							2									
15																	
16	1								1		1						5
17																	
18																	
19																	
20																	1
21																	
TOT	***8***							***2***	***1***		***1***	***3***					***9***

TRANSECT 18 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1	1								1		1						2
2																	
3																	
4																	
5																	
6								1									
7	1																
8											1	1					
9																	
10								1									
11												1					
12																	
13																	
14																	
15	2																
16																	
17								2									
18								2									
19																	1
20																	
21											3	1					
TOT	***4***							***6***	***1***		***5***	***3***					***3***

TRANSECT 19 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4								1									
5																	
6	1																
7																	
8																	
9																	
10																	
11																	
12												1					
13	2								1		1						
14																	
15																	
16																	
17																	
18																	
19																	
20															1		1
21											1						
TOT	***3***							***1***	***1***		***2***	***1***			***1***		***1***

TRANSECT 20 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4	2						1										1
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12												1					
13																	
14																	
15																	
16									2								
17																	
18																	
19																	
20																	
21																	
TOT	***2***						***1***		***2***			***1***					***1***

TRANSECT 21 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	1
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15	1											2					
16																	
17											1						
18								1									
19																	
20																	
21																	
TOT	***1***							***1***			***1***	***2***					***1***

TRANSECT 22 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2	2							2									
3												1					
4																	
5	2																
6	2																
7								1									
8																	
9																	
10																	
11								1									
12																	
13																	
14	2																
15																	
16																	
17																	
18																	
19																	
20																	1
21																	
TOT	***8***							***4***				***1***					***1***

TRANSECT 23 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6	3							3		1		1					
7								1									
8												1					
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***3***							***4***		***1***		***2***					

TRANSECT 24 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1								1	1			1					
2																	
3																	
4																	
5																	
6																	
7									1								
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																1	
18	1																
19	1																
20										1							
21	1																
TOT	***3***							***1***	***2***	***1***		***1***				***1***	

TRANSECT 25 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5								1									
6	2							4	1								
7	5							14	2								
8																	
9																	
10																	
11								1									
12								1									
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	2
21																	
22																	
23																	
24	1							6	1								
TOT	***8***							***27***	***4***								***2***

TRANSECT 26 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3									2								
4								1									
5																	
6																	
7																	
8								2	1								
9	1																
10								1									
11								1									
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	2
22																	
23								1									
TOT	***1***							***6***	***3***								***2***

TRANSECT 27 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1	2								1								
2	2							1								1	
3																	
4																	
5	2							1									
6																	
7																	
8	1																3
9								1									4
10																	4
11																	1
12																	2
13																	
14																	
15													1				1
16	1																
17																	1
18	1																
19																	
20																	
21																	
TOT	***9***							***3***	***1***				***1***			***1***	***16***

TRANSECT 28 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15								1									
16																	
17																	
18																	
19																	
20																	
21																	
TOT								***1***									

TRANSECT 29 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1											1						
2																	
3	1																1
4																	
5	1																
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***2***										***1***						***1***

TRANSECT 30 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3								1									
4	1																
5								1									
6																	
7																	
8																	
9																	
10																	
11	1																
12																	
13									1								
14								1									
15								1									
16																	
17																	
18										1							
19																	
20																	
21																	
TOT	***2***							***4***	***1***	***1***							

TRANSECT 31 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1								2	2								
2									1								
3								1									
4	1																
5									1								
6									2								
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***1***							***3***	***6***								

TRANSECT 32 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7												1					
8								1									
9									3								
10									1								
11								1									
12																	
13	1																
14	1																
15																	
16																	
17																	
18																	
19									1								
20								1									
21																	
TOT	***2***							***3***	***5***			***1***					

TRANSECT 33 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6	1								1								2
7																	
8																	
9															1		
10																	
11																	
12																	
13																	
14																	
15																	
16								2									
17								2									
18																	
19																	
20																	1
21																	
TOT	***1***							***4***	***1***						***1***		***3***

TRANSECT 34 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1	1																
2																	
3	1																
4																	
5																	
6																	
7																	
8	1																
9																	
10																	
11																	
12																	
13									1								
14																	
15																	
16																	
17								2	1								
18																	
19																	
20																	
21																	
TOT	***3***							***2***	***2***								

TRANSECT 35 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2									2								1
3											1						
4																	
5												1					
6								1									
7									1								
8																	
9																	
10																	
11																	
12																	
13																	
14																	1
15																	
16																	
17																	
18									1								
19																	
20								1									
21																	
TOT								***2***	***4***		***1***	***1***					***2***

TRANSECT 36 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	1
11																	1
12	1								1								2
13								1									
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT	***1***							***1***	***1***								***4***

TRANSECT 37 – PERIODS ATTESTED (diagnostic fragments numbero)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	1
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
TOT																	***1***

TRANSECT 38 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	1
4																	
5																	
6											1						
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20	1																
21																	
TOT	***1***										***1***						***1***

TRANSECT 39 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	1
2																	
3																	
4																	1
5																	
6																	
7								1									
8																	
9																	1
10								1									
11																	
12																	
13																	
14																	
15									1								
16																	1
17																	
18																	
19																	
20																	
21																	
TOT								***2***	***1***								***4***

TRANSECT 40 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1												1					
2																	
3																	
4																	
5																	
6																	
7									1								
8								1									
9								1									
10								1									
11																	
12																	1
13																	
14																	
15	1																
16																	
17																	
18	1																1
19																	1
20																	
21																	
TOT	***2***							***3***	***1***			***1***					***3***

TRANSECT 41 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1								1									
2																	
3								1									
4																	
5																	
6								1									
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14											1						
15																	
16																	
17									1								
18	1								1			1					
19									1			1					
20																	
21																	
TOT	***1***							***3***	***3***		***1***	***2***					

TRANSECT 42 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5	1							1									
6																	
7								1									
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18															1		
19																	
20																	
21																	
TOT	***1***							***2***							***1***		

TRANSECT 43

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4															1		
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	1
19																	
20																	
21																	
TOT															***1***		***1***

TRANSECT 44

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1															1		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
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19																	1
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21																	
TOT	***1***														***1***		***2***

TRANSECT 45 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
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21																	
TOT								***2***									

TRANSECT 46 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
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16																	
17																	
18											1						
19																	
20																	
21																	1
TOT								***1***			***2***	***1***					***1***

TRANSECT 47 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
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21																	
TOT																	***1***

TRANSECT 48 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
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18											1						
19	1																
20																	
21												1					
TOT	***1***										***1***	***1***					***1***

TRANSECT 49 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1												1					
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16																	
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18									1								
19																	
20	1																1
21																	
TOT	***1***								***1***			***1***					***1***

TRANSECT 50 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
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19																	
20																	
21									1								
TOT									***1***		***1***						

TRANSECT 51 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
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18																	
19																	1
20																	
21																	
TOT								***1***									***1***

TRANSECT 52 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5																	
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14																	
15									2								2
16																	
17																	
18												1					1
19																	2
20												1					1
21																	
TOT																	

TRANSECT 53 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1												1					
2																	1
3																	
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14																	
15																	3
16																	1
17																	3
18																	
19																	
20																	
21																	
TOT												***1***					***8***

TRANSECT 54 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	2
5																	
6																	
7																	
8																	
9																	
10									1								
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12																	
13												2			1		1
14																	2
15																	
16	1																1
17																	
18																	
19																	
20																	
21																	
TOT	***1***								***1***			***2***			***1***		***6***

TRANSECT 55 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1									1								
2																	
3								1	1								
4								2									
5																	
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12																	
13																	
14																	
15																	
16												1					
17	1																
18	1																
19																	
20								1									
21																	
TOT	***2***							***4***	***2***			***1***					***1***

TRANSECT 56 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3																	
4																	
5									2								
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12																	
13																	
14	1																1
15																	
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18	1											1					
19																	
20																	
21																	
TOT	***3***						***1***		***2***			***1***					***1***

TRANSECT 57 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2	1																1
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21																	
TOT																	

TRANSECT 58 - PERIODS ATTESTED (diagnostic fragments number)

PERIOD / SQUARE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21
1																	
2																	
3									1								
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TOT	***2***								***4***								

TRANSECT 1

Plate 1

N.	Code	Description	Type	Period	T	S
1	1.f.1	Rim; pale yellow surfaces (5Y 8/2) and light olive gray core (5Y 6/2); fine mineral fabric with no visible inclusions; smoothed surfaces with traces of burnishing. Rim dm. 19 cm.	T7/0	7	1	6
2	1.9.1	Pot stand; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite and grits inclusions; pie-crust. Base dm. 18 cm.	T9/0	9	1	9
3	1.15.1	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with frequent fine calcite and grits inclusions. Rim dm. 20 cm.	T8/0	8	1	15
4	1.19.1	Rim; very pale brown core and surfaces (10YR 7/3); chaff fabric with common fine to medium calcite inclusions; severely abraded. Rim dm. 34 cm.	T8/0	8	1	19
5	1.20.1	Base; light gray core and surfaces (2.5Y 7/2); mineral fabric with common chaff and frequent fine calcite inclusions. Base dm. 11 cm.	T8/6	8	1	20

TRANSECT 2

Plate 1

N.	Code	Description	Type	Period	T	S
1	2.3.1	Body sherd; light olive gray core (5Y 6/2); mineral fabric with common fine calcite inclusions; applied rope and incised decoration on the exterior surface.	T7/0	7 (Akk.)	2	3
2	2.9.1	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with common chaff and frequent fine calcite inclusions. Rim dm. 25 cm.	T7/14	7	2	9
3	2.9.2	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine to large calcite inclusions; badly preserved.	T8/0	8	2	9
4	2.10.1	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with common chaff and abundant fine calcite inclusions; very badly preserved (severely abraded);	T8/0	8	2	10
5	2.11.3	Rim; pink surfaces (7.5YR 7/4) and brown core (10YR 5/3); chaff fabric with occasional fine calcite inclusions. Rim dm. 34 cm.	T4-5	4-5	2	11
6	2.11.1	Rim; pale yellow surfaces (2.5Y 7/3) and gray core (10YR 5/1); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 15 cm.	T7/26	7	2	11
7	2.11.2	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with occasional chaff and rare fine calcite inclusions. Rim dm. ca. 23 cm.	T7/15	7	2	11
8	2.16.1	Rim; pale yellow core and surfaces (5Y8/4); chaff fabric with very fine quartz inclusions; comb incised decoration on the exterior surface. Rim dm. 11 cm.	T7/4	7 (Akk.)	2	16
9	2.16.2	Rim; pink surfaces and core (7.5YR 8/4); chaff fabric with rare fine calcite inclusions; severely abraded. Rim dm. 18 cm.	T7/0	7	2	16
10	2.20.1	Rim; pale yellow surfaces (2.5Y 7/3) and light red core (2.5YR 6/6); mineral fabric with occasional chaff and frequent fine to medium calcite and very fine quartz inclusions. Rim dm. 14 cm.	T11/2	11	2	20
11	2.22.1	Rim; very pale brown core and surfaces (10YR 8/4); mineral fabric with occasional chaff and common fine calcite and grits inclusions; burnished exterior surface. Rim dm. 19 cm.	T10/6	10	2	22

TRANSECT 3

Plate 1

N.	Code	Description	Type	Period	T	S
1	3.2.4	Base; reddish yellow surfaces (7.5YR 7/6) and dark gray core (10YR 4/1); chaff fabric with abundant fine to large calcite and grits inclusions. Base dm. 34 cm.	T4-5/0	4-5	3	2
2	3.2.1	Rim; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/3); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 15 cm.	T7/0	7	3	2
3	3.2.2	Rim; very pale brown core and surfaces (10YR 8/3); mineral fabric with occasional chaff and fine to very large grits inclusions, common fine calcite inclusions. Rim dm. 25 cm.	T7/0	7	3	2
4	3.2.3	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite inclusions. Rim dm. 20 cm.	T7/8	7	3	2
5	3.h.1	Base; light gray surfaces (5Y 7/2) and light olive gray core (5Y 5/2); chaff fabric with frequent fine calcite inclusions; overfired. Base dm. 21 cm.	T8/6	8	3	8
6	3.11.1	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with frequent chaff and rare fine visible inclusions.	T8/0	8	3	11
7	3.11.2	Rim; pink core and surfaces (7.5YR 7/4); chaff fabric with no visible inclusions. Rim dm. 15 cm.	T10/0	10	3	11
8	3.15.1	Rim; pale yellow surfaces (5Y 8/4); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T8/0	8	3	15

TRANSECT 4

Plate 1

N.	Code	Description	Type	Period	T	S
1	4.1.2	Rim; reddish yellow surfaces (5YR 7/6) and gray core (10YR 6/1) with reddish yellow margins (5YR 7/6); mineral fabric with occasional fine to large grits inclusions and fine calcite inclusions; severely abraded.	T8/0	8	4	1
2	4.1.1	Rim; light gray core and surfaces (10YR 7/2); chaff fabric with occasional fine calcite inclusion; very badly preserved (severely abraded). Rim dm. 27 cm.	T8/0	8	4	1
3	4.3.1	Rim; very pale brown surfaces (10YR 7/3) and light olive gray core (5Y 6/2); mineral fabric with abundant fine calcite and grits inclusions. Rim dm. 19 cm.	T8/0	8	4	3
4	4.3.2	Base; pale yellow core and surface (5Y 8/3); chaff fabric with no visible inclusions. Base dm 10 cm.	T8/8	8	4	3
5	4.3.3	Rim; very pale brown core and surface (10YR 7/4); chaff fabric with common fine to large calcite inclusions. Rim dm. 38 cm.	T10/0	10	4	3
6	4.12.1	Rim; pink core and surface (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions; very badly preserved (severely abraded).	T8/0	8	4	12
7	4.12.2	Rim; very pale brown core and surfaces (10YR 8/4); chaff fabric with fine grits and calcite inclusions; smoothed surfaces.	T10/0	10	4	12
8	4.n.2	Rim; pink core (7.5YR 7/4) and very pale brown surfaces (10YR 8/4); mineral fabric with rare fine calcite inclusions; smoothed surfaces. Rim dm. 16 cm.	T11/8	11	4	12
9	4.17.1	Rim; very pale brown surfaces (10YR 7/3) and pinkish gray core (7.5YR 7/2); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 18 cm.	T8/0	8	4	17
10	4.22.1	Base; gray core (5YR 5/1); fine mineral fabric with no visible inclusions; white thick encrustation on the surfaces. Base dm. 6 cm.	T7/0	7	4	22
11	4.22.2	Base; pale yellow surfaces (2.5Y 7/4) and pale yellow core (5Y 7/4); chaff fabric with occasional fine calcite inclusions. Base dm. 11 cm.	T8/6	8	4	22

TRANSECT 5

Plate 1

N.	Code	Description	Type	Period	T	S
1	5.4.1	Base; reddish yellow core and surfaces (5YR 6/6); chaff fabric with abundant fine calcite inclusions.	T10/10	10	5	4
2	5.7.2	Body sherd; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent fine calcite inclusions; black painted decoration on the exterior surface.	T8/1	8	5	7
3	5.g.1	Rim; reddish yellow core (5YR 7/6) and very pale brown core (10YR 8/4); mineral fabric with occasional fine calcite inclusions; smoothed surfaces.	T11/1	11	5	7
4	5.g.2	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with abundant fine calcite and grits inclusions; smoothed surfaces.	T11/2	11	5	7
5	5.l.1	Rim; gray core (2.5Y 5/1) and reddish yellow surface (7.5YR 7/6); mineral fabric with abundant chaff and frequent fine to large calcite inclusions; severely abraded.	T8/0	8	5	1
6	5.14.1	Body sherd; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; comb-impressed decoration on the exterior surface.	T7/4 Post-Akk.	7	5	14
7	5.11.1	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with abundant fine to medium calcite and grits inclusions; smoothed surfaces. Rim dm. 19 cm.	T11/8	11	5	11
8	5.12.1	Body sherd; light gray surfaces (5Y 7/2) and gray core (5Y 5/1); fine mineral fabric with no visible inclusions; incised and excised decoration on the exterior surface.	T6/3	6	5	12
9	5.12.2	Rim; pale yellow core and surfaces (5Y 8/3); fine mineral ware with no visible inclusions; smoothed surfaces. Rim dm. 14 cm.	T7/26	7	5	12

TRANSECT 6

Plate 1

N.	Code	Description	Type	Period	T	S
1	6.2.2	Rim; pale yellow surfaces (5Y 8/3) and light gray core (5Y 7/2); chaff fabric with common fine calcite inclusions.	T4-5	4-5	6	2
2	6.3.1	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with no visible inclusions; severely abraded.	T8/0	8	6	3
3	6.4.1	Rim; pale yellow surfaces (2.5Y 7/4) and dark gray core (2.5Y 4/1); chaff fabric with no visible inclusions; overfired. Rim dm. 18 cm.	T7/0	7	6	4
4	6.d.1	Rim; light gray core (2.5Y 7/1) and gray surfaces (GLEY N5/); fine mineral fabric with no visible inclusions; smoothed surfaces with traces of burnishing. Rim dm. 19 cm.	T7/0 Akk.	7	6	4
5	6.d.2	Rim; light gray surfaces (2.5Y 7/1) and dark gray core (2.5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces with traces of burnishing. Rim dm. 8 cm.	T7/19 Akk.	7	6	4
6	6.4.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusions; very badly preserved (severely abraded).	T8/0	8	6	4
7	6.5.1	Rim; reddish yellow core and surfaces (7.5YR 7/6); mineral fabric with abundant fine to medium calcite inclusions; very badly preserved (severely abraded).	T11/0	11	6	5
8	6.6.1	Rim; gray core and surfaces (2.5Y 5/1); mineral fabric with frequent fine calcite and grits inclusions; severely abraded.	T10/13	10	6	6
9	6.6.2	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with frequent fine calcite inclusions; smoothed surfaces. Rim dm. 20 cm.	T11/2	11	6	6

TRANSECT 8

Plate 1

N.	Code	Description	Type	Period	T	S
1	8.16.1	Jar rim; light brown surfaces and core (7.5YR 6/4); mineral fabric with abundant fine calcite, quartz and grits inclusions; badly preserved.	T11/0	11	8	16

TRANSECT 9

Plate 1

N.	Code	Description	Type	Period	T	S
1	9.2.4	Body sherd; light gray surfaces (2.5Y 7/2) and grayish brown core (2.5Y 5/2); chaff fabric with frequent fine calcite inclusions; comb-impressed decoration on the exterior surface.	T7/4 Akk.	7	9	2
2	9.9.8	Body sherd; pink core (7.5YR 7/3) and very pale brown surfaces (10YR 8/2); mineral fabric with common chaff and rare fine calcite inclusions; corrugated exterior surface.	T3/2	3	9	9
3	9.9.2	Body sherd; light gray core and surfaces (5Y 7/2); chaff fabric with rare fine calcite inclusions; comb-impressed decoration on the exterior surface.	T7/4 Akk.	7	9	9
4	9.9.1	Jar rim; reddish yellow surfaces (5YR 7/6) and very pale brown core (10YR 7/4); mineral fabric with frequent chaff and abundant fine calcite inclusions and occasional fine to medium grits; severely abraded. Rim dm. 22 cm.	T7/0	7	9	9
5	9.12.1	Body sherd; very pale brown surfaces (10YR 7/$) and brown core (7.5YR 5/2); mineral fabric with no visible inclusions; corrugated and incised exterior surface.	T3/2	3	9	12
6	9.12.2	Body sherd; very pale brown exterior surface (10YR 7/4), pale yellow interior surface (2.5Y 8/4), pale brown core (10YR 6/3); fine mineral fabric with no visible inclusions; black painted decoration on the exterior surface.	T3/1	3	9	12
7	9.12.3	Jar rim; reddish yellow core and surfaces (5YR 7/6); chaff fabric with frequent fine calcite inclusions; severely abraded. Rim dm. 39 cm.	T9/0	9	9	12
8	9.13.1	Bowl rim; pink surfaces (7.5YR 7/3) and light brown core (7.5YR 6/3) with reddish yellow margins (5YR 7/6); chaff fabric with frequent fine to medium calcite and grits inclusions; very badly preserved. Rim dm. 25 cm.	T10/0	10	9	13
9	9.13.2	Jar rim; reddish yellow surfaces (7.5YR 7/6) and gray core (10YR 5/1); chaff fabric with frequent fine calcite inclusions; very badly preserved (severely abraded). Rim dm. 45 cm.	T10/0	10	9	13
10	9.15.1	Body sherd; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with rare fine calcite inclusions; corrugated and black painted on the exterior surface.	T3/2	3	9	15

TRANSECT 10

Plate 1

N.	Code	Description	Type	Period	T	S
1	10.2.1	Rim; reddish yellow core and surfaces (5YR 7/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 25 cm.	T10/0	10	10	2
2	10.2.2	Rim; pink surfaces (5YR 7/4) and reddish yellow core (7.5YR 7/6); mineral fabric with frequent chaff and abundant fine calcite inclusions; very badly preserved. Rim dm. 12 cm.	T11/2	11	10	2
3	10.3.1	Body sherd; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with occasional fine calcite inclusions; black painted decoration on the exterior surface. Rim dm. 25 cm.	T3/1	3	10	3
4	10.3.2	Rim; very pale brown core and surfaces (10YR 7/3); mineral fabric with frequent chaff and common fine to medium calcite and grits inclusions; smoothed surfaces. Rim dm. 39 cm.	T8/1	8	10	3
5	10.7.1	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with frequent fine to medium calcite inclusions. Rim dm. > 50 cm.	T9/0	9	10	7
6	10.m.1 = 10.11.1	Rim; pale yellow surfaces and core (5Y 7/3); chaff fabric with frequent fine calcite inclusions; very badly preserved (severely abraded). Rim dm. 21 cm.	T7/0	7	10	11
7	10.12.1	Body sherd; very pale brown core and surfaces (10YR 7/4); mineral fabric with common fine calcite inclusions; black painted decoration on the exterior surface; very badly preserved.	T8/1	8	10	12
8	10.12.2	Rim; pale yellow core and surfaces (5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces.	T8/0	8	10	12

TRANSECT 11

Plate 2

N.	Code	Description	Type	Period	T	S
1	11.20.1	Base; light gray surfaces (2.5Y 7/2) and light brownish gray (2.5Y 6/2); mineral fabric with rare quartz inclusions; very badly preserved. Base dm. 6 cm.	T10/0	10	11	20
2	11.20.2	Rim; reddish yellow (7.5YR 7/6) and light reddish brown (5YR 6/4); mineral fabric with occasional fine to medium calcite inclusions. Rim dm. 22 cm.	T11/2	11	11	20

TRANSECT 12

Plate 1

N.	Code	Description	Type	Period	T	S
1	12.2.1	Rim; pale yellow surfaces (2.5Y 6/3) and dark gray core (5Y 4/1); mineral fabric with occasional chaff and fine calcite inclusions; badly preserved (overfired?). Rim dm. 11 cm.	T8/0	8	12	2
2	12.7.1	Base; gray surfaces (2.5Y 6/1) and dark gray core (2.5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 4 cm.	T7/0	7	12	7
3	12.9.1	Body sherd; pink core and surfaces (7.5YR 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces; comb-impressed decoration on the exterior surface.	T7/0 Post-Akk.	7	12	9
4	12.15.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; black painted decoration on the rim.	T8/1	8	12	15

TRANSECT 13

Plate 1

N.	Code	Description	Type	Period	T	S
1	13.17.1	Bowl rim; pale yellow surfaces (2.5Y 7/4) and light yellowish brown core (2.5Y 6/3); chaff fabric with rare fine calcite, quartz and grits inclusions. Rim dm. 49 cm.	T8/0	8	13	17
2	13.21.1	Jar rim; pale yellow surfaces (2.5Y 7/4) and pale olive core (5Y 6/4); mineral with abundant chaff with abundant fine quartz and occasional calcite and grits inclusions. Rim dm. 22 cm.	T7/8	7	13	21
3	13.21.2	Bowl rim; pale yellow surfaces (2.5Y 7/3) and white core (2.5Y 8/1); mineral fabric with frequent chaff and no other visible inclusions. Rim dm. 20 cm.	T11/2	11	13	21

TRANSECT 14

Plate 1

N.	Code	Description	Type	Period	T	S
1	14.4.1	Rim; pale yellow core and surfaces (5Y 7/3); chaff fabric with occasional fine calcite inclusions. Rim dm. 22 cm.	T7/0	7	14	4
2	14.5.1	Rim; pale yellow surfaces and core (2.5Y 8/2); mineral fabric with occasional chaff and rare fine calcite inclusions; severely abraded.	T8/0	8	14	5
3	14.5.2	Rim; reddish yellow surfaces (7.5YR 7/6) and pale brown core (10YR 6/3); mineral fabric with occasional chaff and fine calcite and grits inclusions; very badly preserved.	T12/3	12	14	5
4	14.7.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with rare fine calcite inclusions; very badly preserved (severely abraded). Rim dm. 22 cm.	T7/0	7	14	7
5	14.7.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with rare fine calcite inclusions; very badly preserved (severely abraded).	T7/0	7	14	7
6	14.7.3	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with rare fine calcite inclusions; very badly preserved (severely abraded).	T8/0	8	14	7
7	14.17.1	Base; reddish yellow surfaces (7.5YR 7/6) and light brown core (7.5YR 7/4); mineral fabric with frequent chaff and occasional fine calcite and grits inclusions and rare quartz. Base dm. 14 cm.	T8/0	8	14	17

TRANSECT 15

Plate 1

N.	Code	Description	Type	Period	T	S
1	15.10.1	Rim; gray surfaces (GLEY 6/1) and dark gray core (GLEY 4/1); very fine mineral fabric with rare fine calcite inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	15	10
2	15.12.1	Rim; very pale brown (10YR 8/4) and light red core (2.5YR 6/6); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces.	T11/2	11	15	12
3	15.16.1	Base; pale yellow surfaces (5Y 8/3) and pale yellow (5Y 7/3); fine mineral fabric with rare chaff and no other visible inclusions; smoothed surfaces. Base dm. 5 cm.	T7/0	7	15	16

TRANSECT 16

Plate 1

N.	Code	Description	Type	Period	T	S
1	16.g.1	Rim; pink surfaces (7.5YR 7/4) and reddish yellow core (5YR 6/6); mineral fabric with frequent fine calcite and grits inclusions; burnished surfaces. Rim dm. 17 cm.	T11/2	11	16	G= 7
2	16.g.2	Rim; slipped pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 7/4); mineral fabric with abundant fine to medium calcite and grits inclusions. Rim dm. 16 cm.	T11/2	11	16	G= 7

TRANSECT 17

Plate 1

N.	Code	Description	Type	Period	T	S
1	17.10.1	Rim; reddish yellow surfaces (5YR 6/6) and light yellowish brown core (10YR 6/4); mineral fabric with common fine calcite inclusions; smoothed surfaces with traces of burnishing on the rim. Rim dm. 33 cm.	T11/2	11	17	10
2	17.10.3	Rim; very pale brown surfaces (10YR 8/4); mineral fabric with common fine calcite inclusions; badly preserved. Rim dm. 22 cm.	T11/2	11	17	10
3	17.10.2	Rim; very pale brown surfaces (10YR 8/4) and reddish yellow core (5YR 7/6); mineral fabric with frequent fine calcite inclusions. Rim dm. 10 cm.	T11/9	11	17	10
4	17.14.1	Rim; very pale brown exterior surface (10YR 8/3) and reddish yellow core and interior surface (5YR 7/6); very badly preserved (severely abraded). Rim dm. 15 cm.	T7/0	7	17	14
5	17.14.2	Base; light gray surfaces (10YR 7/4) and gray core (GLEY N5/); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 5 cm.	T7/1	7	17	14
6	17.16.1	Base; reddish yellow surfaces (5YR 6/6) and light reddish brown core (5YR 6/4); mineral fabric with occasional chaff and frequent fine calcite inclusions. Base dm. 6 cm.	T8/6	8	17	16
7	17.16.2	Rim; pale yellow surfaces (2.5Y 8/4) and pale yellow core (5Y 8/4); mineral fabric with abundant chaff and rare fine quartz and calcite inclusions; presence of mica.	T10/0	10	17	16

TRANSECT 18

Plate 1

N.	Code	Description	Type	Period	T	S
1	18.1.1	Rim; very pale brown surface (10YR 8/2) and pink core (7.5YR 7/4); chaff fabric with frequent fine calcite inclusions; smoothed surfaces; very badly preserved. Rim dm. 21 cm.	T8/0	8	18	1
2	18.1.2	Rim; reddish yellow core and surfaces (7.5YR 7/6); chaff fabric with abundant fine calcite inclusions. Rim dm. 40 cm.	T10/0	10	18	1
3	18.6.1	Rim; light gray surfaces (2.5Y 7/1) and gray core (GLEY N6/); fine mineral fabric with no visible inclusions; smoothed surface (traces of burnishing?). Rim dm. 18 cm.	T7/0	7	18	6
4	18.8.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with common fine calcite, quartz and grits inclusions; severely abraded.	T10/0	10	18	8
5	18.8.2	Rim; reddish yellow surfaces and core (7.5YR 7/6); mineral fabric with abundant fine calcite inclusions; very badly preserved. Rim dm. 22 cm.	T11/0	11	18	8
6	18.10.1	Rim; very pale brown core and surfaces (10YR 7/3); chaff fabric with no visible inclusions. Rim dm. 21 cm.	T7/8	7	18	10
7	18.11.1	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with occasional fine calcite inclusions; very badly preserved. Rim dm. 13 cm.	T11/0	11	18	11
8	18.17.1	Rim; pale yellow surface and core (2.5Y 7/4); chaff fabric with occasional fine calcite and grits inclusions; badly preserved (severely abraded). Rim dm. 30 cm.	T7/0	7	18	17
9	18.17.2	Rim; very pale brown surfaces (10YR 7/3) and pale brown core (10YR 6/3); chaff fabric with abundant fine to medium calcite inclusions and occasional fine quartz inclusions; very badly preserved (severely abraded).	T7/0	7	18	17
10	18.18.1	Rim; pale yellow surfaces (2.5Y 7/3) with pale olive core (5Y 6/3); mineral with frequent chaff and rare very fine quartz inclusions. Rim dm. 19 cm.	T7/0	7	18	18
11	18.18.2	Body sherd; slipped very pale brown exterior surface (10YR 8/4), reddish yellow interior surface and core (5YR 7/6); mineral fabric with rare chaff and rare fine grits inclusions; incised decoration on the exterior surface.	T7/0	7	18	18
12	18.21.3	Rim; light brown surface (7.5YR 6/4) with pinkish gray core (7.5YR 6/2); mineral fabric with rare chaff with fine to medium quartz and grits and rare fine calcite inclusions; cooking ware. Rim dm. 17 cm.	T10/0	10	18	21
13	18.21.1	Rim; very pale brown exterior surface (10YR 7/4), reddish yellow interior surface (7.5YR 6/6) and pinkish gray core (7.5YR 6/2); mineral fabric with common chaff and fine calcite and grits inclusions; presence of mica; badly eroded.	T10/12	10	18	21
14	18.21.4	Rim; light brown surfaces (7.5YR 6/4) and gray core (7.5YR 5/1); mineral fabric with abundant fine to medium quartz and grits inclusions and occasional fine calcite inclusions; cooking ware. Rim dm. 17 cm.	T11/0	11	18	21

TRANSECT 19

Plate 1

N.	Code	Description	Type	Period	T	S
1	19.4.1	Rim; pale yellow surfaces (2.5Y 7/4) and light gray core (5Y 7/2); mineral fabric with abundant fine calcite and grits inclusions; severely abraded. Rim dm. 34 cm.	T7/4	7	19	4
2	19.12.1	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with fine to large calcite inclusions; very badly preserved. Rim dm. 27 cm.	T11/2	11	19	12
3	19.13.1	Rim; light brown surfaces (7.5YR 6/4) and grayish brown core (10YR 5/2); mineral fabric with abundant fine calcite inclusions; severely eroded. Rim dm. 25 cm.	T8/0	8	19	13
4	19.13.2	Rim; pale brown surfaces (10YR 6/3) and brown core (10YR 5/3); mineral fabric with frequent fine calcite and grits inclusions; smoothed surfaces. Rim dm. 19 cm.	T10/10	10	19	13
5	19.20.1	Rim; very pale brown surfaces and core (10YR 7/4); mineral fabric with very abundant fine calcite and grits inclusions; very badly preserved (severely abraded). Rim dm. 23 cm.	T14/0	14	19	20
6	19.21.1	Rim; very pale brown exterior surface (10YR 8/3) and reddish yellow core and interior surface (5YR 7/4); chaff fabric with frequent fine calcite inclusions; presence of mica; severely abraded. Rim dm. 25 cm.	T10/0	10	19	21

TRANSECT 20

Plate 1

N.	Code	Description	Type	Period	T	S
1	20.4.1	Rim; light gray surfaces (10YR 7/2) and gray core (2.5Y 5/1); fine mineral fabric with no visible inclusions; very badly preserved (severely abraded). Rim dm. 22 cm.	T6/0	6	20	4
2	20.12.1	Rim; pale yellow surfaces (2.5Y 7/3) and light brownish gray core (2.5Y 6/2); chaff fabric with frequent fine calcite inclusions. Rim dm. 23 cm.	T11/0	11	20	12
3	20.16.1	Rim; pink surfaces (7.5YR 7/4) and light gray core (7.5YR 7/1); mineral fabric with frequent chaff and occasional fine quartz and calcite inclusions; very badly preserved (severely abraded). Rim dm. 20 cm.	T8/0	8	20	16
4	20.16.2	Rim; pink surfaces and core (7.5 YR 8/3); chaff fabric with frequent fine calcite and quartz inclusions; very badly preserved (severely abraded).	T8/0	8	20	16

TRANSECT 21

Plate 1

N.	Code	Description	Type	Period	T	S
1	21.4.1	Bowl rim; pink core and surfaces (7.5YR 7/3); mineral fabric with frequent chaff and common fine calcite and grits inclusions; severely abraded. Rim dm. 17 cm.	T11/2	11	21	4
2	21.4.2	Bowl rim; pale yellow core and surfaces (2.5Y 8/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 24 cm.	T11/2	11	21	4
3	21.17.1	Jar rim; pale yellow surface and core (5Y 7/3); chaff fabric with abundant fine grits and rare fine quartz inclusions; very badly preserved. Rim dm. 14 cm.	T10/0	10	21	17
4	21.18.1	Base; light gray surfaces (5Y 7/1) and grey core (GLEY N5/); mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 7 cm.	T7/0	7	21	18

TRANSECT 22

Plate 1

N.	Code	Description	Type	Period	T	S
1	22.2.1	Rim; very pale brown core and surfaces (10YR 8/3); chaff fabric with no visible inclusions. Rim dm. 13 cm.	T7/0	7	22	2
2	22.2.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; badly preserved (severely abraded). Rim dm. 20 cm.	T7/0	7	22	2
3	22.7.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusions. Rim dm. 17 cm.	T7/0	7	22	7
4	22.11.1	Base; light gray surfaces (2.5Y 7/2) and grayish brown core (10YR 5/2); mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 6 cm.	T7/0	7	22	11

TRANSECT 23

Plate 1

N.	Code	Description	Type	Period	T	S
1	23.6.1	Rim; pinkish gray surfaces (7.5YR 7/2) and light brown core (7.5YR 6/3); traces of burnishing on the exterior and interior surfaces. Rim dm. 16 cm.	T7/0	7	23	6
2	23.6.2	Rim; light gray surfaces and core (10YR 7/2); chaff fabric with occasional fine calcite inclusions; severely abraded. Rim dm. 28 cm.	T7/0	7	23	6
3	23.6.4	Base; pale yellow exterior surface (5Y 8/2), very pale brown core and interior surface (10YR 8/3); mineral fabric with rare fine calcite inclusions; smoothed exterior surface.	T9/0	9	23	6
4	23.6.5	Rim; pink surfaces (7.5YR 7/4) and light brownish gray core (10YR 6/2) with pink margins (7.5YR 7/4); mineral fabric with abundant fine to medium calcite, quartz and grit inclusions. Rim dm. 15 cm.	T11/0	11	23	6
5	23.7.1	Rim; gray core and surfaces (10YR 6/1); fine mineral fabric with no visible inclusions. Rim dm. 8 cm.	T7/19	7	23	7
6	23.8.1	Rim; reddish yellow surfaces (5YR 7/6) and pale brown core (10YR 6/3); mineral fabric with abundant fine to large calcite inclusions nd fine grits; severely abraded.	T11/2	11	23	8

TRANSECT 24

Plate 1

N.	Code	Description	Type	Period	T	S
1	24.1.1	Rim; pale yellow core and surfaces (2.5Y 8/3); mineral fabric with no visible inclusions; severely abraded. Rim dm. 14 cm.	T7/19	7	24	1
2	24.1.2	Rim; light yellowish brown (2.5Y 6/3); mineral fabric with rare fine calcite inclusions; overfired. Rim dm. 19 cm.	T8/0	8	24	1
3	24.1.3	Rim; very pale brown surfaces (10YR 7/4) and light reddish brown core (2.5YR 7/4) with very pale brown margins (10YR 7/4); mineral fabric with common fine calcite inclusions and frequent fine grit inclusions; very badly preserved (severely abraded). Rim dm. 28 cm.	T11/0	11	24	1
4	24.7.1	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent chaff and occasional fine calcite inclusions; overfired. Rim dm. 11 cm.	T8/0	8	24	7
5	24.20.1	Rim; pale yellow surfaces (2.5Y 8/3) and pale yellow core (2.5Y 7/3); chaff fabric with abundant fine grits; very badly preserved (severely abraded).	T9/0	8	24	20

TRANSECT 25

Plate 1

N.	Code	Description	Type	Period	T	S
1	25.5.1	Rim; pale yellow surfaces (2.5Y 7/3) and pale yellow core (5Y 7/3); fine mineral fabric with rare fine calcite inclusion; smoothed surfaces. Rim dm. 14 cm.	T7/26 (Akk.)	7	25	5
2	25.6.1	Rim; light reddish brown surfaces (5YR 6/4) and gray core (7.5YR 5/1); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed surfaces. Rim dm. 30< and >40 cm.	T7/16	7	25	6
3	25.6.2	Rim; very pale brown surfaces (10YR 8/3) and pale yellow core (2.5Y 8/3); fine mineral fabric with no visible inclusions; smoothed surfaces.	T7/26	7	25	6
4	25.6.3	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite and grits inclusions.	T7/8	7	25	6
5	25.6.5	Rim; pale olive surfaces (5Y 6/3) and dark gray core (5Y 4/1); mineral fabric with occasional chaff and fine calcite inclusions; black painted decoration on the exterior surface; overfired. Rim dm. 40 cm.	T8/1	8	25	6
6	25.7.1	Rim; pale yellow surfaces and core (2.5Y 7/3); mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 12 cm.	T7/19	7	25	7
7	25.7.2	Rim; dark gray surfaces (2.5Y 4/1) and gray core (GLEY N5/); fine mineral fabric with no visible inclusions; yellow horizontal strikes on the exterior surface; smoothed surfaces. Rim dm. 11 cm.	T7/5	7	25	7
8	25.7.3	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with abundant fine calcite and grits inclusions. Rim dm. 20 cm.	T7/0	7	25	7
9	25.7.11	Base; light gray surfaces (10YR 7/2) and pink core (7.5YR 7/3); mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 7,5 cm.	T7/1	7	25	7
10	25.7.13	Body sherd; pale yellow surfaces (2.5Y 8/4) and pale yellow core (2.5Y 7/4); mineral fabric with rare fine calcite inclusions; smoothed surface; incised and comb-impressed decoration on the exterior surface.	T7/0 Post Akk.	7	25	7
11	25.7.15	Rim; pink surfaces (7.5YR 7/4) and light brownish gray core (2.5Y 6/2) with pink margins (7.5YR 7/4); mineral fabric with occasional chaff and rare fine calcite inclusions. Rim dm. 24 cm.	T11/0	11	25	7
12	25.11.1	Rim; pale yellow core and surfaces (2.5Y 8/4); chaff fabric with occasional fine calcite and grits inclusions. Rim dm. 25 cm.	T7/0	7	25	11
13	25.12.1	Rim; pale yellow surfaces (2.5Y 8/3) and light brownish gray core (2.5Y 6/2); mineral fabric; overfired. Rim dm. 12 cm.	T7/16	7	25	12
14	25.24.1	Rim; pale yellow surfaces (2.5Y 8/3) and pale yellow core (2.5Y 3); chaff fabric with rare fine grits; very badly preserved (severely abraded). Rim dm. 10 cm.	T7/0	7	25	24
15	25.24.2	Rim; pale olive surfaces (5Y 6/4) and olive core (5Y 5/3); mineral fabric with frequent chaff and abundant fine grits, quartz and calcite inclusions. Rim dm. 15 cm.	T7/8	7	25	24
16	25.24.3	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with rare fine calcite and grits inclusions; very badly preserved. Rim dm. 17 cm.	T7/0	7	25	24
17	25.24.4	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with occasional grits and rare quartz inclusions; very badly preserved. Rim dm. 14 cm.	T7/0	7	25	24
18	25.24.5	Rim; pale yellow exterior surface and core (2.5Y 7/3), very pale brown interior surface (10YR 7/3); chaff fabric with rare silk and only some fin grits; very badly preserved.	T7/0	7	25	24
19	25.24.6	Rim; pale yellow surfaces (5Y 8/3) and pale olive (5Y 6/3); mineral fabric with occasional vegetal inclusions presence of quartz and calcite. Rim dm. 12 cm.	T8/0	8	25	24

TRANSECT 26

Plate 1

N.	Code	Description	Type	Period	T	S
1	26.3.1	Rim; pink core and surfaces (7.5YR 7/4); mineral fabric with common chaff and abundant fine calcite inclusions and frequent grits inclusions; very poorly preserved. Rim dm. 30 cm.	T8/0	8	26	3
2	26.3.2	Base; pale brown core (10YR 6/3) and very pale brown surfaces (10YR 6/4); mineral fabric with occasional chaff and fine calcite inclusions and rare fine grits; severely abraded.	T8/0	8	26	3
3	26.4.1	Base; pale yellow surfaces (2.5Y 8/2) and very pale brown core (10YR 7/4); mineral fabric with abundant fine calcite inclusions; severely abraded. Base dm. 3,5 cm.	T7/0	7	26	4
4	26.8.1	Rim; pale yellow core and surfaces (5Y 7/4); chaff fabric with occasional fine calcite inclusions. Rim dm. 25 cm.	T7/16	8	26	8
5	26.8.2	Rim; pale yellow core and surfaces (5Y 8/2); chaff fabric with occasional fine calcite and quartz inclusions.	T7/0	8	26	8
6	26.8.3	Rim; very pale brown surfaces (10YR 8/3) and pink core (7.5YR 7/4); chaff fabric with abundant fine calcite inclusions. Rim dm. 38 cm.	T8/0	8	26	8
7	26.10.1	Rim; slipped very pale brown exterior surface (10YR 8/3), pink interior surface (7.5YR 8/3) and reddish yellow core (5YR 7/6); mineral fabric with common chaff and frequent fine calcite inclusions; smoothed exterior surface. Rim dm. 30 cm.	T7/0	7	26	10
8	26.11.1	Body sherd; pale yellow exterior surface (2.5Y 8/2), light brownish gray interior surface (10YR 6/2) and gray core (10YR 5/1); fine mineral fabric with no visible inclusions; comb-incised and incised decoration on the exterior surface.	T7/7	7	26	11
9	26.23.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite and grits inclusions; very badly preserved. Rim dm. 40 cm.	T7/0	7	26	23

TRANSECT 27

Plate 1

N.	Code	Description	Type	Period	T	S
1	27.1.1	Base; pink core and surfaces (7.5YR 7/4); mineral fabric with occasional chaff and frequent fine calcite inclusions; smoothed exterior surface. Base dm. 12 cm.	T8/6	8	27	1
2	27.2.1	Base; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with rare chaff and no visible inclusions; smoothed surfaces. Base dm. 3 cm.	T7/0	7	27	2
3	27.5.1	Rim; very pale brown core and surfaces (10YR 7/4); fine mineral fabric with rare fine calcite inclusion; very badly preserved (severely abraded). Rim dm. 10 cm.	T7/0	7	27	5
4	27.9.1	Rim; pale yellow core and surfaces (5Y 7/3); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 24 cm.	T7/8	7	27	9
5	27.15.1	Rim; reddish yellow core and surfaces (5YR 7/6); mineral fabric with abundant chaff and frequent fine to medium calcite inclusions; severely abraded. Rim dm. 21 cm.	T12/0	12	27	15

TRANSECT 28

Plate 1

N.	Code	Description	Type	Period	T	S
1	28.15.1	Rim; very pale core and surfaces (10YR 7/3); fine mineral fabric with rare fine grits; smoothed surfaces.	T7/0	7	28	15

TRANSECT 29

Plate 1

N.	Code	Description	Type	Period	T	S
1	29.1.1	Base; pale yellow surfaces and core (2.5Y 7/4); chaff fabric with frequent fine to medium calcite inclusion; severely abraded. Base dm. 10 cm.	T10/9	10	29	1

TRANSECT 30

Plate 1

N.	Code	Description	Type	Period	T	S
1	30.3.1	Base; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent chaff and occasional fine calcite inclusions. Base dm. 11 cm.	T7/0	7	30	3
2	30.5.1	Rim; pale yellow core and surfaces (2.5Y 8/2); mineral fabric with no visible inclusions; smoothed surfaces.	T7/19	7	30	3
3	30.13.1	Rim; very pale brown surfaces (10YR 7/3) and light brownish gray core (10YR 6/2); chaff fabric with common fine calcite inclusions. Rim dm. 35 cm.	T8/0	8	30	13
4	30.14.1	Rim; pink core (7.5YR 7/4) and light reddish brown core (5YR 6/4); mineral fabric with common chaff and frequent fine calcite inclusions.	T7/0	7	30	14
5	30.15.1	Rim; very pale brown core and surface (10YR 7/4); chaff fabric with frequent fine calcite and grits inclusions; very badly preserved (severely abraded). Rim dm. 22 cm.	T7/0	7	30	15
6	30.18.1	Pot-stand; pinkish gray surfaces (7.5YR 7/2) and light brown core (7.5YR 6/3); mineral fabric with frequent chaff and frequent fine calcite and rare quartz inclusions. Dm. 16 cm.	T9/0	9	30	18

TRANSECT 31

Plate 1

N.	Code	Description	Type	Period	T	S
1	31.1.1	Rim; pale yellow exterior surface (5Y 8/2), very pale brown interior surface and core (10YR 7/4); mineral fabric with abundant fine grits and calcite inclusions; very badly preserved. Rim dm. 17 cm.	T7/16	7	31	1
2	31.1.2	Base; pale yellow exterior surface (2.5Y 8/3), pink interior surface and core (7.5YR 7/4); fine mineral fabric with no visible inclusions; smoothed exterior surface. Base dm. 1,5 cm.	T7/0	7	31	1
3	31.1.3	Rim; pink surfaces and core (7.5YR 7/4); mineral fabric with common fine calcite inclusions; very badly preserved. Rim dm. 26 cm.	T8/0	8	31	1
4	31.1.4	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with frequent chaff and occasional fine to medium calcite inclusions; severely abraded. Rim dm. 27 cm.	T8/0	8	31	1
5	31.2.1	Rim; pale yellow core and surfaces (2.5Y 7/3); mineral fabric with occasional fine calcite inclusions; very badly preserved. Rim dm. 34 cm.	T8/0	8	31	2
6	31.3.1	Base; pale yellow surfaces (2.5Y 7/4) and dark gray core (2.5Y 4/1); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 9 cm.	T7/0	7	31	3
7	31.5.1	Rim; very pale brown core and surfaces (10YR 7/4); mineral fabric with common fine calcite and grits inclusions; severely abraded. Rim dm. 19 cm.	T8/0	8	31	5
8	31.6.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions. Rim dm. 21 cm.	T8/0	8	31	6
9	31.6.3	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with abundant fine calcite and grits inclusions. Rim dm. 22 cm.	T8/0	8	31	6

TRANSECT 32

Plate 1

N.	Code	Description	Type	Period	T	S
1	32.7.1	Jar rim; pink exterior surface and core (7.5YR 7/4) and very pale brown interior surface (10YR 7/4); mineral fabric with very abundant fine to large calcite and grits inclusions; severely battered and abraded; cooking ware. Rim dm. 12 cm.	T11/0	11	32	7
2	32.9.1	Bowl rim; very pale brown core and surfaces (10YR 8/2); mineral fabric with common chaff and occasional fine calcite inclusions; severely abraded. Rim dm. 19 cm.	T8/0	8	32	9
3	32.9.2	Jar rim; pink core surfaces (7.5YR 7/6) and reddish yellow core (5YR 6/6); mineral fabric with occasional chaff and common fine calcite inclusions. Rim dm. 30 cm.	T8/0	8	32	9
4	32.9.3	Jar rim; light yellowish brown surfaces and core (10YR 7/4); mineral fabric with occasional chaff and occasional fine calcite inclusions. Rim dm. 19 cm.	T8/0	8	32	9
5	32.11.1	Base; pale yellow surfaces (2.5Y 8/2) and light brownish gray (2.5Y 6/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 6 cm.	T7/1	7	32	11
6	32.19.1	Bowl rim; pale yellow surfaces (5Y 8/3) and dark gray core (GLEY N4/); mineral fabric with no visible inclusions; smoothed surfaces.	T8/0	8	32	19
7	32.20.1	Bowl rim; pink surfaces and core (7.5YR 7/3); chaff fabric with frequent fine calcite, quartz and grits inclusions. Rim dm. 30 cm.	T7/0	7	32	20

TRANSECT 33

Plate 1

N.	Code	Description	Type	Period	T	S
1	33.6.1	Rim; pale yellow surface and core (2.5Y 7/3); mineral fabric with frequent chaff and occasional fine calcite inclusions. Rim dm. 21 cm.	T8/0	8	33	6
2	33.16.1	Rim; pale yellow surfaces (2.5Y 8/4) and pale yellow core (5Y 7/3); chaff fabric with frequent fine grits and calcite inclusions; very badly preserved. Rim dm. 20 cm.	T7/0	7	33	16
3	33.16.2	Rim; pale yellow surfaces (2.5Y 7/4) and pale yellow core (2.5Y 7/3); chaff fabric with occasional calcite and grits inclusions; very badly preserved. Rim dm. 13 cm.	T7/0	7	33	16
4	33.17.1	Rim; pale yellow surfaces (5Y 8/3) and pale olive core (5Y 6/3); fine mineral ware with rare fine chaff and no other visible inclusions; smoothed surfaces. Rim dm. 11 cm.	T7/26	7	33	17
5	33.17.2	Rim; very pale brown surfaces and core (10YR 7/3); chaff fabric with rare fine grits inclusions. Rim dm. 32 cm.	T7/0	7	33	17

TRANSECT 34

Plate 1

N.	Code	Description	Type	Period	T	S
1	34.13.1	Rim; light brown core and surfaces (7.5YR 7/3); mineral fabric with frequent chaff and abundant fine calcite inclusions. Rim dm. 23 cm.	T8/0	8	34	13
2	34.17.1	Base; very pale brown surfaces (10YR 7/3) and very pale brown core (10YR 8/3); mineral fabric with occasional chaff and abundant very fine grits and rare fine calcite and quartz inclusions.	T7/0	7	34	17
3	34.17.2	Base; pale yellow surfaces (2.5Y 7/4) and gray core (2.5Y 6/1); fine mineral ware with very rare fine chaff and no visible inclusions; smoothed surfaces.	T7/5	7	34	17
4	34.17.3	Base; very pale brown surfaces and core (10YR 7/4); chaff fabric with occasional fine calcite, quartz and grits inclusions.	T8/6	8	34	17

TRANSECT 35

Plate 35

N.	Code	Description	Type	Period	T	S
1	35.2.1	Rim; pale yellow core and surfaces (2.5Y 8/2); chaff fabric with no visible inclusions; very badly preserved (severely battered and abraded).	T8/0	8	35	2
2	35.2.2	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with occasional fine calcite inclusions; very badly preserved (severely battered and abraded).	T8/0	8	35	2
3	35.3.1	Rim; very pale brown surfaces (10YR 7/4) and pale brown core (10 YR 6/3); chaff fabric with abundant fine to large calcite grits, fine to medium calcite and very fine quartz inclusions. Rim dm. 37 cm.	T10/12	10	35	3
4	35.5.1	Rim; pink surfaces (7.5YR 7/4) and light reddish brown core (5YR 6/4); mineral fabric with common chaff and abundant fine to medium calcite inclusions. Rim dm. 25 cm.	T11/2	11	35	5
5	35.6.1	Base; pale yellow surfaces (2.5Y 7/3) and dark gray core (2.5Y 4/1); fine mineral fabric with no visible inclusions; very badly preserved. Base dm. 4 cm.	T7/0	7	35	6
6	35.7.1	Rim; pink surfaces and core (7.5YR 7/4); mineral fabric with frequent chaff and occasional fine calcite inclusions; severely abraded. Rim dm. 33 cm.	T8/0	8	35	7
7	35.18.1	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with frequent fine calcite and grits inclusions; very badly preserved. Rim dm. 19 cm.	T8/0	8	35	18
8	35.20.1	Rim; pale yellow surfaces (2.5Y 8/4) and pale yellow core (5Y 7/4); chaff fabric with abundant fine calcite and very fine grits inclusions. Rim dm. 27 cm.	T7/14	7	35	20

TRANSECT 36

Plate 1

N.	Code	Description	Type	Period	T	S
1	36.12.1	Rim; very pale brown surfaces and core (10YR 7/3); chaff fabric with occasional fine calcite and grits inclusions. Rim dm. 21 cm.	T8/0	8	36	12
2	36.13.1	Base; very pale brown surfaces and core (10YR 7/3); fine mineral fabric with rare chaff and very fine grits inclusions. Base dm. 2,5 cm.	T7/0	7	36	13

TRANSECT 38

Plate 1

N.	Code	Description	Type	Period	T	S
1	38.6.1	Rim; pale yellow surfaces and core (2.5Y 7/2); mineral fabric with frequent chaff and common fine calcite and grits inclusions. Rim dm. 15 cm.	T10/13	10	38	6

TRANSECT 39

Plate 1

N.	Code	Description	Type	Period	T	S
1	39.7.1	Rim; very pale brown core and surfaces (10YR 7/4); chaff fabric with common fine calcite and grits inclusions.	T7/0	7	39	7
2	39.10.1	Rim; pale yellow core and surfaces (2.5Y 7/3); chaff fabric with no visible inclusions; severely abraded. Rim dm. 31 cm.	T7/0	7	39	10
3	39.15.1	Rim; pale yellow core and surfaces (2.5Y 7/4); chaff fabric with no visible inclusions; very badly preserved (severely abraded). Rim dm. 24 cm.	T8/0	8	39	15

TRANSECT 40

Plate 1

N.	Code	Description	Type	Period	T	S
1	40.1.1	Rim; light olive brown core (2.5Y 5/3); mineral fabric with frequent chaff and common fine calcite inclusions; very badly preserved. Rim dm. 60 cm.	T11/0	11	40	1
2	40.8.1	Rim; pale yellow core and surfaces (5Y 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces; severely abraded. Rim dm. 16 cm.	T7/19	7	40	8
3	40.9.1	Base; pale yellow surfaces (5Y 8/2) and light olive gray core (5Y 6/2); fine mineral fabric with no visible inclusions; smoothed surfaces. Base dm. 5,5 cm.	T7/0	7	40	9
4	40.10.1	Rim; reddish yellow surfaces (5YR 6/6) and dark gray core (5Y 4/1); mineral fabric with abundant fine to medium calcite, quartz and grits inclusions; cooking pot. Rim dm. 13 cm.	T7/0	7	40	10

TRANSECT 41

Plate 1

N.	Code	Description	Type	Period	T	S
1	41.1.1	Base; dark gray surfaces and core (GLEY N4/); fine mineral fabric with no vegetable inclusions and with occasional very fine calcite inclusions; smoothed surfaces.	T7/5	7	41	1
2	41.3.1	Base; light gray surfaces (10YR 7/2) and brown core (7.5YR 5/2); fine mineral ware with no visible inclusions; smoothed surfaces. Base dm. 4,5 cm,	T7/1	7	41	3
3	41.6.1	Rim; light gray surfaces (2.5Y 7/1) and dark gray core (GLEY N4/); fine mineral fabric with occasional very fine calcite inclusions; traces of burnishing. Rim dm. 15 cm.	T7/5	7	41	6
4	41.14.1	Base; pale yellow surfaces and core (5Y 7/3); chaff fabric with abundant fine grits and occasional calcite inclusions. Rim dm. 8 cm.	T10/0	10	41	14
5	41.17.1	Rim; pink surfaces (7.5YR 8/3) and pink core (7.5YR 7/3); chaff fabric with abundant fine calcite, quartz and grits inclusions; badly preserved. Rim dm. 40 cm.	T8/0	8	41	17
6	41.18.1	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with occasional fine grits. Rim dm. 20 cm.	T8/0	8	41	18
7	41.18.2	Rim; light yellowish brown (2.5Y 6/3) and gray core (2.5Y 5/1); mineral fabric with frequent chaff and grits; deformed and overfired (?). Rim dm. 36 cm.	T11/0	11	41	18
8	41.19.1	Rim; pale brown surfaces (10YR 6/3) and pale olive (5Y 6/3); chaff fabric with frequent fine calcite and grits inclusions; badly preserved. Rim dm. 17 cm.	T8/0	8	41	19
9	41.19.2	Rim; light brown surfaces (7.5YR 6/4) with gray core (7.5YR 6/1); mineral with occasional chaff and fine calcite and grits inclusions. Rim dm. 23 cm.	T11/0	11	41	19

TRANSECT 42

Plate 1

N.	Code	Description	Type	Period	T	S
1	42.5.1	Rim; pale yellow surfaces (2.5Y 8/4) with pale yellow core (2.5Y 7/3); mineral fabric with frequent chaff and very fine grits inclusions. Rim dm. 25 cm.	T7/14	7	42	5
2	42.7.1	Base; pale yellow surfaces (2.5Y 8/3) with light gray core (2.5Y 7/2); fine mineral fabric with very rare chaff and occasional fine grits; smoothed surfaces. Base dm. 8 cm.	T7/1	7	42	7

TRANSECT 45

Plate 1

N.	Code	Description	Type	Period	T	S
1	45.6.1	Rim; pale yellow surfaces (2.5Y 7/4) with pale yellow core (2.5Y 8/4); chaff fabric with occasional fine to medium grits and rare fine calcite inclusions; very badly preserved.	T7/0	7	45	6
2	45.10.1	Rim; very pale brown surfaces and core (10YR 7/3); chaff fabric with occasional fine grits and rare fine calcite; very badly preserved.	T7/0	7	45	10

TRANSECT 46

Plate 1

N.	Code	Description	Type	Period	T	S
1	46.12.1	Rim; pale yellow surfaces and core (2.5Y 7/3); mineral fabric with frequent fine chaff and occasional very fine grits. Rim dm. 26 cm.	T10/13	10	46	12
2	46.12.2	Rim; reddish yellow surfaces (5YR 7/6) with pale brown core (5YR 6/3); mineral fabric with abundant fine to medium mineral inclusions (calcite, quartz and grits); cooking ware. Rim dm. 14 cm.	T11/0	11	46	12
3	46.15.1	Rim; reddish yellow surfaces and core (5YR 7/6); mineral fabric with frequent chaff and fine calcite inclusions. Rim dm. 37 cm.	T7/14	7	46	15
4	46.18.1	Base; pale yellow surfaces and core (2.5Y 7/3); mineral with abundant chaff and frequent fine calcite inclusions and fine to medium grits; coarsely made. Base dm. 8 cm.	T10/9	10	46	18

TRANSECT 48

Plate 1

N.	Code	Description	Type	Period	T	S
1	48.18.1	Base; very pale brown surfaces (10YR 7/3) and very pale brown core (10YR 8/4); chaff fabric with frequent fine grits and occasional calcite inclusions; presence of mica; very badly preserved (severely abraded). Base dm. 5 cm.	T10/9	10	48	18
2	48.21.1	Rim; pale yellow surfaces (2.5Y 7/3) and pale yellow core (2.5Y 8/3); chaff fabric with common fine calcite and grits inclusions; presence of mica. Rim dm. 38 cm.	T11/2	11	48	21

TRANSECT 49

Plate 1

N.	Code	Description	Type	Period	T	S
1	49.1.1	Rim; pale yellow surfaces (2.5Y 7/4) and pale yellow core (2.5Y 8/2); chaff fabric with abundant fine grits and calcite inclusions; presence of mica; smoothed surfaces. Rim dm. 53 cm.	T11/2	11	49	1
2	49.18.1	Rim; pink surfaces and core (5YR 7/4); chaff fabric with frequent fine mineral inclusions (quartz, calcite and grits); very badly preserved. Rim dm. 22 cm.	T8/0	8	49	18

TRANSECT 50

Plate 1

N.	Code	Description	Type	Period	T	S
1	50.18.1	Rim; pale yellow surfaces (2.5Y 7/3) and pale yellow core (2.5Y 8/2); chaff fabric with abundant fine mineral inclusions (grits). Rim dm. 28 cm.	T10/0	10	50	18
2	50.21.2	Rim; pink surfaces (7.5YR 7/4) and gray core (7.5YR 6/1); chaff fabric with frequent fine calcite inclusions; very badly preserved (severely abraded).	T8/0	8	50	21

TRANSECT 51

Plate 1

N.	Code	Description	Type	Period	T	S
1	51.12.1	Base; white surfaces (10YR 8/1) and grey core (10YR 5/1); fine mineral fabric with no visible inclusions; the fragment is completely covered by a thick white crust.	T7/2	7	51	12

TRANSECT 52

Plate 1

N.	Code	Description	Type	Period	T	S
1	52.15.1	Base; pale brown exterior surface (10YR 6/3) pale, pale yellow interior surface (2.5Y 7/4) and pale yellow core (2.5Y 7/3); chaff fabric with frequent fine grits inclusions. Base dm. 9 cm.	T8/6	8	52	15
2	52.15.2	Base; very pale brown exterior surface (10YR 8/3), pink interior surface and core (7.5YR 7/4); mineral fabric with rare fine chaff with no other visible inclusions. Base dm. 5 cm.	T8/8	8	52	15
3	52.18.1	Rim; pale yellow exterior surface (2.5Y 7/3), pale yellow interior surface (2.5Y 8/2) and light gray core (2.5Y 7/2); mineral fabric with frequent fine grit inclusions. Rim dm. 7 cm.	T11/9	11	52	18
4	52.20.1	Rim; very pale brown surfaces (10YR 7/4) and grey core (10YR 5/19; mineral fabric with frequent chaff and very fine quartz inclusions; smoothed surfaces.	T11/2	11	52	20

TRANSECT 53

Plate 1

N.	Code	Description	Type	Period	T	S
1	53.1.1	Rim; pale yellow surfaces (2.5Y 8/2) and pink core (7.5YR 8/3); mineral fabric with frequent chaff and common very fine grits. Rim dm. 30 cm.	T11/2	11	53	1

TRANSECT 54

Plate 1

N.	Code	Description	Type	Period	T	S
1	54.10.1	Rim; very pale brown surfaces and core (10YR 8/3); mineral fabric with frequent fine chaff and rare fine calcite inclusions. Rim dm. 20 cm.	T8/0	8	54	10
2	54.13.1	Rim; pink surface and core (7.5YR 7/4); mineral fabric with occasional chaff and rare fine calcite inclusions; smoothed surfaces. Rim dm. 8 cm.	T11/10	11	54	13
3	54.13.2	Rim; pale yellow surface and core (2.5Y 8/2); mineral fabric with occasional very fine grits. Rim dm. 9 cm.	T11/2	11	54	13
4	54.13.3	Rim; pale yellow surfaces (2.5 Y 8/3) and pink core (7.5YR 7/4); mineral fabric with common chaff and abundant fine grits. Rim. dm. 21 cm.	T14/0	14	54	13

TRANSECT 55

Plate 1

N.	Code	Description	Type	Period	T	S
1	55.1.1	Rim; pink surfaces (7.5YR 7/4) and white core (2.5Y 8/1); chaff fabric with rare fine calcite inclusions. Rim dm. 17 cm.	T8/0	8	55	1
2	55.3.1	Rim; pale yellow surfaces (2.5Y 7/3) and pale olive core (5Y 6/3); chaff fabric with common medium calcite and fine grits inclusions.	T7/15	7	55	3
3	55.3.2	Rim; very pale brown surfaces (10YR 7/4) and pink core (5YR 7/4); chaff fabric with abundant fine to medium calcite and grits inclusions. Rim dm. 38 cm.	T8/0	8	55	3
4	55.4.2	Rim; light gray surfaces (2.5Y 7/2) and gray core (2.5Y 6/1); mineral fabric with no visible inclusions; traces of burnishing on both surfaces. Rim dm. 8 cm.	T7/0	7	55	4
5	55.16.1	Rim; reddish yellow surfaces (5YR 7/6) and grayish brown core (2.5Y 5/3); chaff fabric with common fine to medium calcite inclusions and abundant fine to large grits.	T11/0	11	55	16
6	55.20.1	Base; pale yellow surface and core (5Y 8/3); mineral fabric with rare chaff and common medium-fine calcite inclusions; smoothed surfaces.	T7/0	7	55	20

TRANSECT 56

Plate 1

N.	Code	Description	Type	Period	T	S
1	56.5.2	Base; pink exterior surface (7.5YR 8/4) and very pale brown core and interior surface (10YR 8/3); chaff fabric with occasional fine calcite inclusions. Base dm. 13 cm.	T8/6	8	56	5
2	56.18.1	Rim; pink core and surfaces (7.5YR 7/3); mineral fabric with common very fine calcite inclusions. Rim dm. 16 cm.	T11/8	11	56	18

TRANSECT 57

Plate 1

N.	Code	Description	Type	Period	T	S
1	57.3.1	Rim; pale yellow surfaces (5Y 7/4) and light olive gray core (5Y 6/2); mineral fabric with frequent chaff and fine calcite inclusions; presence of mica. Rim dm. 35 cm.	T11/2	11	57	3
2	57.19.1	Rim; very pale brow core and surfaces (10YR 8/3); mineral fabric with occasional fine chaff; no visible inclusions; very badly preserved. Rim dm. 22 cm.	T8/0	8	57	19

TRANSECT 58

Plate 1

N.	Code	Description	Type	Period	T	S
1	58.3.1	Rim; pale yellow surfaces and core (2.5Y 7/3); chaff fabric with abundant fine grits inclusions; very badly preserved.	T8/0	8	58	3
2	58.5.1	Rim; pale yellow surfaces (5Y 8/2) and pale olive core (5Y 6/3); mineral fabric with frequent chaff and abundant fine calcite inclusions and grits. Rim dm. 11 cm.	T8/0	8	58	5
3	58.7.1	Rim (?); very pale brown core and surfaces (10YR 7/4); mineral fabric with abundant fine calcite inclusions and frequent fine grits; very badly preserved.	T8/0	8	58	7
4	58.11.1	Rim (?); very pale brown surfaces (2.5Y 8/2) and light gray core (10YR 7/2); mineral fabric with frequent chaff and no visible inclusions; very badly preserved.	T8/0	8	58	11
5	58.12.1	Rim; pale yellow surfaces (5Y 8/2) and gray core (5Y 6/1); fine mineral fabric with no visible inclusions; smoothed surfaces.	T7/0	7	58	12
6	58.13.1	Rim; very pale brown surfaces (10YR 8/3) and very pale brown core (10YR 7/3); fine mineral fabric with no visible inclusions; smoothed surfaces. Rim dm. 13 cm.	T7/19	7	58	13

Estratto per riassunto della tesi di dottorato

L'estratto (max. 1000 battute) deve essere redatto sia in lingua italiana che in lingua inglese e nella lingua straniera eventualmente indicata dal Collegio dei docenti.

L'estratto va firmato e rilegato come ultimo foglio della tesi.

Studente: FRANCESCA SIMI matricola: 987764

Dottorato: Scienze dell'Antichità

Ciclo: XXX

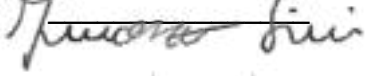
Titolo della tesi[1] : The Tell Gomel Archaeological Survey. Surface research and off-site investigations in the heart of the Navkur Plain, Iraqi Kurdistan.

Abstract:

[ENG] The thesis presents the results of the Tell Gomel Archaeological Survey (TGAS) carried out in Iraqi Kurdistan in the framework of the "Land of Nineveh Archaeological Project" of the University of Udine. The area examined by the project between 2015 and 2017 is the heart of the Navkur Plain, an alluvial plain that extends in the eastern hinterland of the Assyrian capital of Nineveh. The focus of the research was the intensive survey of the archaeological site of Tell Gomel and of an area of 100 km^2 sorrounding it. The goal of the investigation was to record and analyse the settlement pattern and the land use of the territory from a diachronic perspective, from the prehistory to nowadays. The thesis presents the methodology and results of the archaeological reconnaissance, the study of the population dynamics of the area until the Post-Assyrian period and a wide catalogue containing all the data collected during the fieldwork.

[ITA] La tesi presenta i risultati del progetto "Tell Gomel Archaeological Survey" (TGAS) condotto nel Kurdistan iracheno e che si inquadra nel contesto del più ampio "Progetto Archeologico Regionale Terra di Ninive" dell'Università di Udine. L'area studiata dal progetto tra il 2015 e il 2017 corrisponde al cuore della piana di Navkur, una fertile pianura alluvionale posizionata ai limiti orientali dell'entroterra della capitale assira di Ninive. Il progetto di ricognizione territoriale si poneva l'obiettivo di studiare, con una metodologia di tipo intensivo, il sito di Tell Gomel e un'area di 100 km^2 intorno ad esso con il fine di ricostruire lo sviluppo dell'insediamento e le dinamiche di sfruttamento del territorio da un punto di vista diacronico, dalla preistoria fino ai nostri giorni. La tesi presenta metodologia e risultati del progetto di ricognizione, un dettagliato studio delle dinamiche di popolamento dell'area fino all'epoca post-assira e un ampio catalogo contenente tutti i dati raccolti durante le attività sul campo.

Firma dello studente



[1] Il titolo deve essere quello definitivo, uguale a quello che risulta stampato sulla copertina dell'elaborato consegnato.