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POTS AND PLACES IN THE LATE CHALCOLITHIC PERIOD. A VIEW FROM THE EASTERN HĀBUR REGION (KURDISTAN REGION, IRAQ)

P. SCONZO

Abstract. *This paper attempts to contextualise the preliminary results of a survey (EHAS) and excavation (KUGAMID) projects recently undertaken by a team of the University of Tübingen in the uppermost region of Iraqi Kurdistan as far as the Late Chalcolithic period is concerned. Settlement patterns and land use, stratigraphic sequences and pottery assemblages are considered here in order to shed light on the dynamics of the emergence of social complexity and the establishment of proto-urban trajectories along the river banks, riverine plains, foothills and mountain valleys of the foothills of Zagros. Preliminary results suggest that the process of urbanisation in this area seems to be connected with the establishment of a strong network of small centres interacting at different levels, rather than with the formation of large centralised settlements.*

Résumé. *Le présent article tente de contextualiser les résultats préliminaires des projets de prospection (EHAS) et de fouilles archéologiques (KUGAMID), entrepris récemment par une équipe de l'université de Tübingen dans la région la plus élevée du Kurdistan d'Irak, en ce qui concerne la période du Chalcolithique récent. Les modes d'occupation et d'utilisation du sol, les séquences stratigraphiques et les ensembles de mobilier céramique sont étudiés ici afin de mettre en lumière la dynamique de l'émergence de la complexité sociale et la mise en place de trajectoires proto-urbaines le long des berges du fleuve, des plaines fluviales, des piémonts et des vallées près des contreforts du Zagros. Les résultats préliminaires suggèrent que les processus d'urbanisation dans cette région semblent être davantage liés à l'établissement d'un solide réseau de petits centres qui interagissent à différents niveaux qu'à la formation de grandes agglomérations centralisées.*

Keywords. *Late Chalcolithic, North Mesopotamia, Iraqi Kurdistan, Proto-urbanism, Uruk expansion*

Mots-clés. *Chalcolithique récent, Mésopotamie du Nord, Kurdistan irakien, Proto-urbanisme, expansion de la culture d'Uruk*

Over the ages, Mesopotamia has represented a unique convergence point wherein urbanism was born, states first arose and fell, long-distance trade networks developed and disintegrated, and patterns of human mobility catalysed cultural change at differing rates.

Following decades of strife and unrest, during which the Kurdistan region of Northern Iraq—partially overlapping with what in the archaeological literature is considered to be “Upper Mesopotamia”—was closed to the outside world, thanks to the recent political and civil stabilisation and its subsequent economic upturn, a new era of international scientific enterprise has lately begun. This has allowed scholars to

return to this region and initiate various projects aiming at the preservation and enhancement of its cultural heritage, these mainly consisting of a series of new archaeological undertakings in the form of surveys and excavations (Kopaniak and McGinnis 2016). Such projects have fostered a new wave of wide-ranging interdisciplinary field research, which, above all, has propelled a shift in the focus of traditional archaeological investigations within the remit of Near Eastern archaeology from large historical sites and the famous capital cities of Early Mesopotamia to their periphery and surrounding landscape, moving also from metropolitan elites to village and town communities, and furthermore from major site sequences

to regional occupations.¹ Among the topics preoccupying the academic community, particular interest has been given to the emergence of the first indigenous urban societies, and consequently to the appearance of an “urban model” in Upper Mesopotamia from the Late Chalcolithic period (mid-5th-4th millennium BC, henceforth LC) onwards.

The achievements of this new generation of archaeological research have definitively improved the understanding of the socio-political systems characterising “marginal” areas of Mesopotamia, thus shedding light upon how such regions were capable of producing advanced pre-urban (and sometimes subsequently urban) formations over time, which (despite alternate phases of contact and interaction) mostly remained significantly distinct in nature and organisation from those of the lowland societies of the South, thus following localised and autonomous trajectories (Rothman 1993, 2001; Stein 1999, 2001, 2002a, 2002b, 2012; Butterlin 2002; Gut 2002; Postgate 2002; Wilkinson *et al.* 2014; Frangipane 2018).²

Despite a certain degree of homogeneity in terms of material culture characterising the entire Northern Fertile Crescent, each single “marginal” area may be seen to have acted and reacted differently one from another, as is indicated by its own local character in settlement patterns (nucleated *versus* sparse), and in territorial organisation, as well as, most vitally, in pottery style, the lattermost laying the foundation for any chronological assessment of prehistoric periods. In this scenario of cultural variability, the “lived environment”, *i.e.* the landscape inhabited, acted both as trigger and constraint.

In this paper, I would like to examine one of these “peripheries” lying at the north-eastern reaches of the “Fertile Crescent”, namely the area immediately to the south and west of the Zagros Mountains, nowadays comprising the north-western corner of the autonomous region of Iraqi Kurdistan, aiming at drawing some ideas from the evidence revealed in both a regional survey (Eastern Ḥabur Archaeological Survey)

and the excavation (Kurdish-German Archaeological Mission in Duhok) projects currently undertaken by a team from the University of Tübingen within this very region.³

The combined data offer a range of forms of information capable of addressing some of the questions raised above both in terms of quality (updated investigations and pertinence of the achieved information) and quantity of data. Settlement patterns and land use, and stratigraphic sequences and assessment of pottery will all here be considered as useful indicators of the variation occurring within the landscape throughout the Late Chalcolithic Age.

THE SURVEY REGION AND EXCAVATED SITES

The Eastern Ḥabur Archaeological Survey (henceforth EHAS) project is a regional survey carried out over an area of almost 4400 km² in the northern district of the province of Duhok.⁴ For reasons of geography, this large region enjoys a strategic setting between Southern Mesopotamia, the Anatolian highlands, and the Jazirah steppe, and must undoubtedly have played a major role as a “traffic hub” during this formative stage.

Partially defined by natural as well as artificial boundaries, the survey area covers a representative sector of a broad ecological zone including the Northern Zagros foothills. The region is characterised by a strikingly diverse physical environment, featuring river valleys and wadis, springs and streams, rolling plains, rocky gorges, and narrow canyons, as well as steep passes cutting up into rugged mountain chains (fig. 1).

1. Just considering those sites of North Iraq in which Late Chalcolithic assemblages were excavated, a copious number is reached (* = excavation prior to 2012): Tell Abu Dhahir*, Tell Arbat*, Tell Azzo (1-3)*, Bab-w-Kur, Bakr Awa, Ban Qala*, Baradost*, Bazmusian*, Tell Begum*, Tell Billa*, Chemchemical Qala' (Spy Hasar), Tell al-Dur*, Tell ed-Deim*, Tepe Gawra*, Gerde Resh*, Girdi Gulak*, Girdi Qala, Grai Resh*, Gurga Chiya, Hajjiluk*, Khirbet Hatara*, Tell Hawa*, Tell Helawa, Tell Hilwa*, Tell Jigan*, Tell Kamarian*, Kani Shaie, Tell Karrana 1-2*, Logardan, Gir Matbakh*, Tell Mishrifeh*, Tell Mohammed 'Arab*, Muqable I and III, Musayfnah*, Tell Nader, Nineveh (Ninawa)*, Yorgan Tepe*, Qalat Said Ahmadan, Tell Qalinj Agha*, Qarashina*, Tell Raffaan*, Tell Rijim*, Sheikh Homsi*, Tell Shelgiyya*, Siyana Ulya*, Tell Surezha, Tanjero*, Telul eth-Thalathat; Tell Thuwaji*, Tell Thuwajina* and Kurdi Rush*.
2. For a short reassessment of this matter, see Vallet *et al.* 2017: 63-64.

3. This is a revised version of a paper presented at the 8th ICAANE held in Vienna in 2016 and two different contributions at the Assyrian Landscape Conference held in Poznan in 2017 on the combined results of the survey and excavations in the upper Duhok province of Iraqi Kurdistan (KRG). It stems from both published and unpublished data collected and analysed by the author, including the most recent results of the 2018 survey campaign.

4. The EHAS is one of the initiatives promoted by a DFG-funded Collaborative Research Centre at the University of Tübingen, entitled “Resource Cultures” (CRC 1070), which aims at investigating from diverse perspectives forms and cultural modes of resources in various historical and ethnographic contexts. In particular, the survey falls within a wider multidisciplinary research project which attempts to sound out the role played by cultural *versus* natural resources in the expansion of the oldest Mesopotamian territorial states toward the almost inaccessible districts of their northernmost periphery. The project, directed by P. Pfälzner (and by the author as field director), has been carried out since 2013 under the auspices of the General Directorate of Antiquities in Erbil, with the invaluable support of its section for the Duhok Province in the person of H.A. Qasim, also co-director of the KUGAMID excavations.

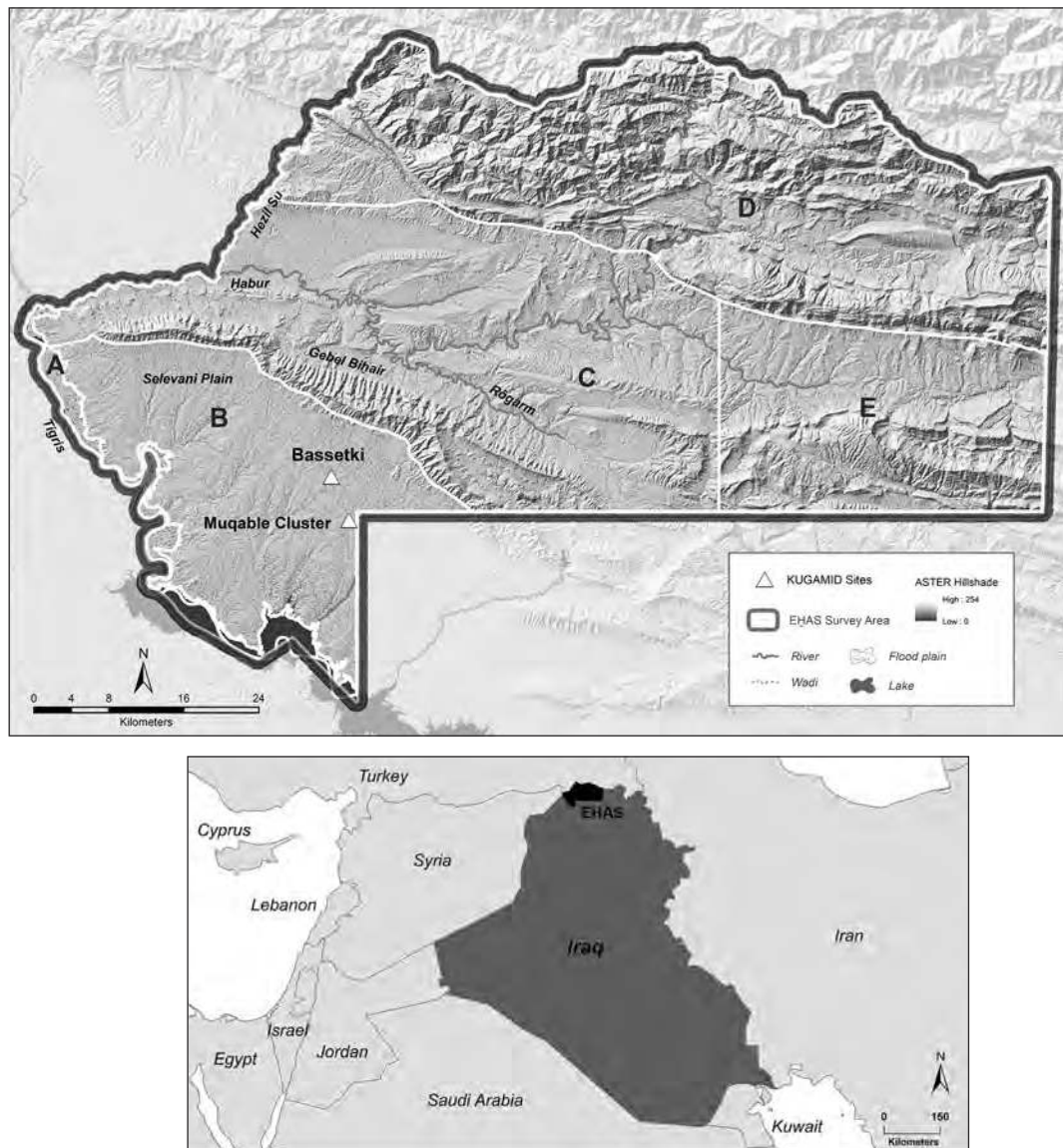


Fig. 1 – Maps of the EHAS region showing its five macro-zones and sites excavated by the Tübingen project (H. Ahmadpour, F. Simi, P. Sconzo).

Both the Tigris River and its Ḥabur tributary were vital arteries for land use and communication, playing a paramount role in shaping human settlement over the millennia. This is a zone of both rainfed and irrigation agriculture, as well as of seasonal pasturage for sheep and goats. Such variety in landscape provided room for various lifestyles and subsistence niches, comprising of settled farmers, and nomadic and semi-nomadic groups. In the past, as today, all these people were closely interwoven, symbiotically interacting in a manner best exploiting such a diversified physical

environment. “Transitional” and “permeable” are therefore the terms best describing the entire landscape at both a local and super-regional level.

On geomorphological grounds, five large environmental districts or macro-zones were distinguished within the survey area, defined as zones A-E (Pfälzner and Sconzo 2015). The present paper focuses on three such zones: zone A, the alluvium on the eastern bank of the Tigris River; zone B, the East-Tigridian plateau up to the first Zagros Mountain range; zone C, the wide basin of the Ḥabur River and its tributaries.

This is as they are the only areas to have presently evidenced traces of occupation in the period here considered.⁵

The survey has now completed its 6th field season, as of yet bringing to light some 500 settlements and site features, 53 of which date to the LC (*ca.* 4500-3100 BC), thus providing fresh, updated information as to the human settlement of the region.⁶

Geographically, the latter is not equally distributed among the various aforementioned zones; as is further discussed, most sites strongly cluster in the Tigris alluvium and the plains of its immediate hinterland, while the Ġebel Biḥair (*i.e.* the preliminary mountain range of the Zagros) may be shown to have played a vital role, acting as something of a barrier and constraint.

Turning to the Kurdish-German Archaeological Mission in Duhok (henceforth KUGAMID) excavations, this second enterprise was undertaken in 2015 as a result of the international cooperation between the University of Tübingen, in the person of P. Pfälzner, and the Duhok Department of Antiquities, in the person of H.A. Qasim.⁷ Under the auspices of this project, three sites lying in the same south-western district of the region are currently under investigation. The



Fig. 2 – General view of Muqable I (site B11), from South (photo P. Sconzo).

5. In the frame of the EHAS project the process of collecting, preparing, and interpreting data has been carried out through four basic stages including: a desk-based preliminary home work that included the collection and analysis of written sources (ancient and modern), maps and satellite images, travellers' accounts and archives; the ground verification of potential sites through visits (site-based investigation); concurrent archaeological field activities guided by pedestrian transects (off-site investigation) and interviews; and, finally, data integration and analysis (see Pfälzner and Sconzo 2015, 2016a, 2016b). These procedures were, in turn, mostly resting on standard techniques established and/or already employed from British landscape archaeology by teams working in the Syrian and Iraqi North Jazira (*e.g.* Ball *et al.* 1989; Wilkinson and Tucker 1995), though, of course, adapted to fit capabilities, research interests, scientific goals and questions. Sampling coverage was, in turn, contingent on environmental factors, accessibility, visibility and obstructiveness of the summer landscape; in addition, the research project's agenda was to face the political situation of the Iraqi Kurdistan region. Therefore, notwithstanding the enormous extension of the overall survey region, the original plan of covering and sampling the five environmental zones in an equal proportion has been only partially accomplished. If the zones A-C were quite well investigated, the zone D has remained unexplored and only a limited portion of zone E was inspected. The latter provided no hints of occupation in prehistoric times.
6. The EHAS survey is not as yet concluded. The present paper gathers all of the data collected between 2013 and 2018, although that from the final year are still very preliminary and require further reassessment. The settlement patterns presented here may well, therefore, be slightly modified by future investigations. Considering, however, that a considerable amount of data and finds from sample of all the different macro-regions has been already visited and tested—although by the end of the works an increase in number of sites by period can be expected—the present author is confident that additional evidence will not fundamentally alter the patterns elucidated here.
7. I am very grateful to the co-directors P. Pfälzner and H.A. Qasim for allowing me to study some of the most significant results achieved within their fieldwork.

first, Bassetki, is the best known and largest site in the region since the 1970s, due to a chance find of the finest quality and greatest historical value, an inscribed bronze statue base mentioning Naram-Sin's deification. Bassetki, only touched upon in the present appraisal, has a long history beginning in the Bronze Age (Pfälzner and Sconzo 2015, 2016a, 2016b; Pfälzner and Qasim 2017, 2018).

The bulk of material hails, however, from the stratified sequences of the other two sites investigated in 2015, namely Muqable I (fig. 2) and III. These are both located 5 km to the south of Bassetki and belong to an unusually thick cluster of settlements. Both were chosen not only because they display a continuous interlinked sequence of occupation, but also more crucially as they were menaced by heavy construction works in connection with the current building of a new airport at Duhok (Pfälzner and Sconzo 2015, 2016a, 2016b; Pfälzner *et al.* 2017).

While Muqable I (site B11) dates almost exclusively to an early phase of the LC (4500-3800 BC), Muqable III (site B13) is a multi-period mound wherein LC marks the beginning of a long-lasting superimposed occupation yielding the formation of a true tell. Both sites have already provided well-stratified material and may become highly valuable benchmarks for the Chalcolithic and Early Bronze Age archaeology of Upper Mesopotamia (fig. 3). Muqable I, moreover, feasibly acted in the early 4th millennium BC as pottery production centre, as is suggested by the retrieval of a pottery kiln associated with a bunch of wasters, and a reasonable amount of locally produced ceramic material *in situ* (Pfälzner *et al.* 2017).

The Muqable cluster lies along the Wadi Saru Kani, one of the larger streams in the region, which was historically watered

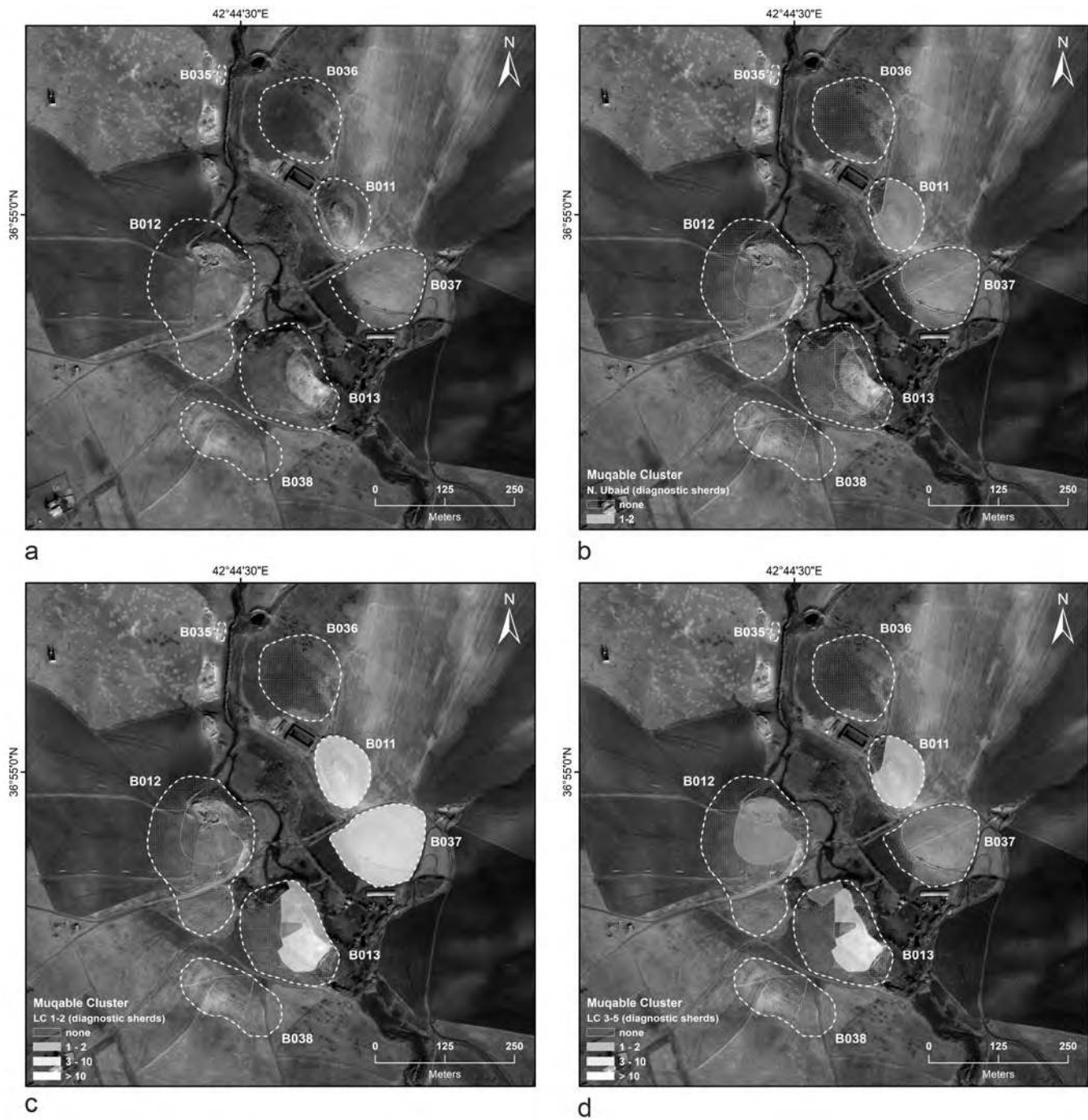


Fig. 3 – Muqable cluster: site biography of the Chalcolithic period, ca. 5500-3100 BC (F. Simi, P. Sconzo).

by several productive springs. The wadi is nearly dry today in the summer, but, until recently, irrigated fertile gardens and fields along the valley floor, and supplied water to villages further downstream. The Muqable area represents an ideal

setting for self-sufficient agricultural settlements, thus forming a small and peculiar ecological niche. The cluster consists of seven hills altogether, lying in a radius of 350 m, and at a lesser distance apart from one other (fig. 3a).

The earliest evidence for occupation (only traces) at Muqable dates back to the Neolithic (Halaf) period, albeit the major occupation is attested during the Late Chalcolithic (fig. 3c-d) and the Bronze Age. The cluster also continued to be settled (though to a lesser extent) in the Parthian, Sassanian, and Islamic periods. During each period, only some sites appear to have been settled contemporaneously, the settlement location(s) moving over time from site to site within the cluster in a circular pattern. Spatially, this topographic settlement system can thus be defined as a “crown cluster”.

HISTORY OF RESEARCH AND CHRONOLOGICAL ISSUES

Prior to the beginning of the Tübingen project, very little was known of the early settlement history of the entire area. Practically no archaeological fieldwork had occurred within this region, and the area often appeared as a blurred or empty patch within distribution maps depicting prehistoric and early historical periods. This was due to various reasons, including its remote geographic location, the mountainous rugged terrain hampering any assessment on the sole basis of remote sensing (Pfälzner and Sconzo 2016a: 16), and the unstable political situation that characterised the recent history of Iraqi Kurdistan in different decades of last century.

The systematic registration of archaeological sites carried out by the State Board of Antiquities and Heritage of Iraq in the whole country between 1938 and 1965 acknowledged very few sites dating to the period within the EHAS borders.⁸ Based on relevant file cards kept in the archives of IDGA in Baghdad, Abu al-Soof (1964, 1968) managed to publish two different papers devoted to the settlement history of Mesopotamia, dealing with the Uruk period and the Early Bronze Age respectively. In respect to the EHAS region, he recognised only one Ubaid site (namely Tell Dornoq) located on the northern side of the Ġebel Biḥair, on the north bank of the

Ḥabur,⁹ along with the Chalcolithic origin of at least two sites from the Muqable cluster.¹⁰ A pair of other sites were also listed as being Chalcolithic in date, Khirbet Ban (1352) and Khirbet Faqih Hassan (1364), both as of yet not located.

Given the turbulent political situation which has developed since the mid-1970s, bringing the local Kurdish population into continuous conflict, the Tigris sector of the EHAS region (our zone A) remained archaeologically excluded from the large-scale rescue excavation projects sponsored by the Iraqi government at the beginning of the 1980s despite being directly affected by the construction of the Eski Mosul Dam. As a result of this event, on the map of over 150 archaeological sites based on a new survey promoted along the river by the SOAH, only six new sites of the east-Tigridian bank dating to the whole Chalcolithic period were listed, and ultimately none was chosen for excavation (fig. 4, table 1).¹¹

While, as previously mentioned, our zone was not directly affected by fieldwork, the investigations undertaken along the Eski Mosul lake provided a large array of new data which have also become important to the present understanding of the settlement history of Northern Iraqi Kurdistan as a whole (State Organization of Antiquities and Heritage 1987). The sites mapped by the SOAH were revisited by the EHAS team; nevertheless, the chronological assessment was only confirmed for three of them, two of which date to the Late Chalcolithic (table 1). One, Gire Baqal (site B193), mentioned as Tell Kamuna on the map, was excavated for a short season in 2010 by the DGA of Duhok under the direction of H.A. Qasim, but the results remain presently unpublished.

Thereafter, apart from sporadic local activities, the whole region was inaccessible for over two decades due to extensive military operations connected with the former political unrest.

Turning to chronology, it must here be noted that an assessment of a fine-tuned occupational history of the EHAS region is, for the LC, as for many other periods, still hampered by various factors. After almost 30 years, the overall chronology of the Late Chalcolithic of Upper Mesopotamia and the

8. The reconnaissance activities of the State Board of Antiquities managed to map thousands of archaeological sites all over the country displaying the major periods of occupation. Records of the surface finds and features kept in the Directorate's archives were used over time by local and foreign archaeologists to produce contributions on different aspects of the settlement history of the whole country. The work converged in two catalogues of all recorded sites and monuments, namely the *Archaeological sites in Iraq* (Directorate General of Antiquities 1970), and, slightly later, the *Atlas of archaeological sites of Iraq* (Directorate General of Antiquities 1976), which located such sites, thus becoming one of the basic sources for site recognition during our survey.

9. Abu Al-Soof 1968: 79, “Telul Dornoq” (or Dornakh). It corresponds to the IDGA site 518 and AASI 289, 48/50 (Directorate General of Antiquities 1976). See also Abu Al-Soof 1964: 43. It has not been possible so far to reach this site, given its location in a district with restricted access.

10. Abu Al-Soof 1968: 79, “Kirdi Muqbel” (I 3 5 2) Zakho; Ubaid, and Ninevite V sherds”. The same sites are mentioned in the *Atlas des sites du Proche-Orient* (Hours *et al.* 1994: 120: Tell Dornakh; 246: Muqbel I-II).

11. This map was distributed to those archaeologists interested in taking part in the Eski Mosul salvage excavation project during a symposium held in Baghdad in 1981. It has been published in a very small scale by Hussain (1987: 110). All threatened sites were numbered and named both in Arabic and English, with indications of archaeological periods based upon the collection of surface finds.

Table 1 – List of prehistoric sites of the EHAS region mapped in the frame of the Eski Mosul Dam survey with periods of occupation (P. Sconzo).

Sites names	Map no.	Exc.	N. Ubad	LC1-2	LC3-5	EHAS site	Confirmed
Ker Bajid Barat	113	No	x			A10	no
Tousana Cem.	134	No	x	x	x	B183 or A07	no
Kh. Qar A Bur	95	No	x			A25	yes
Kh. Al-Kwain	83	No	x			B267	no
T. Kamuna	67	yes		x		B199	yes
Kh. Sulaiman	65	No		x	x	A30	yes

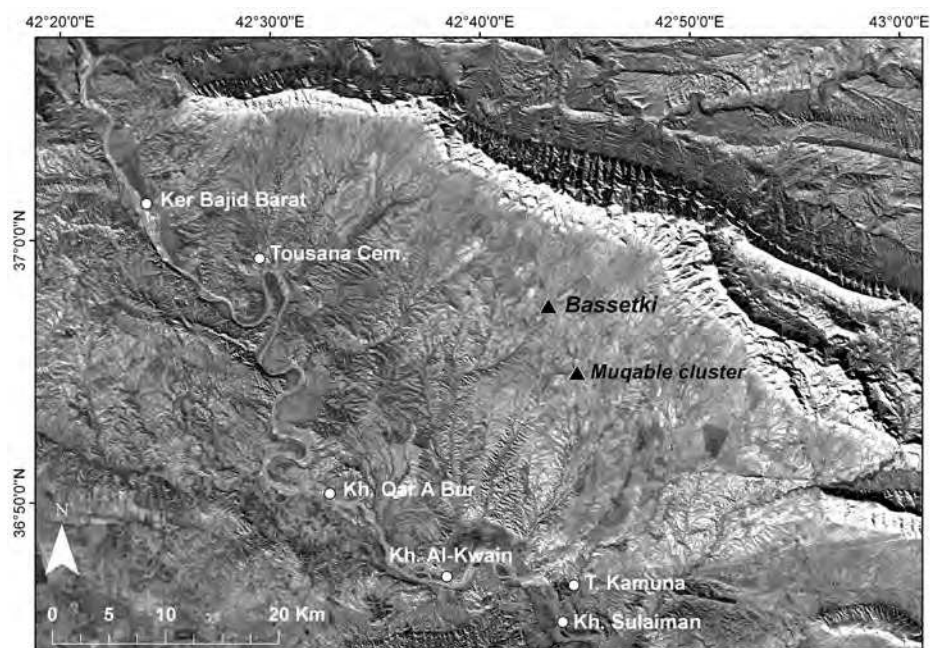


Fig. 4 – Prehistoric sites of the EHAS region mapped in the frame of the Eski Mosul Dam survey (F. Simi, P. Sconzo).

resulting finer fivefold periodisation established by the advanced seminar of Santa Fe in 1991 (Rothman 2001; Wright and Rupley 2001), still remain hardly applicable in dealing with survey material; but, as regards ceramic changes from one phase to the following, they result in being more quantitative than qualitative in nature, and also as being geographically sensitive.

The new KUGAMID excavations have not presently brought to light any striking enduring local sequence spanning the entire LC period, but rather only snapshots of specific and chronologically distinct stages in the life of the settlements at hand.

In accordance with a system largely applied in survey contexts in the past (Wilkinson and Tucker 1995; Ball 2003; Ur 2010; Algaze *et al.* 2012), and fully shared by all projects

currently undertaken within the Upper Iraqi Kurdistan area (*i.e.* the Assyrian Landscapes Research Group),¹² the ceramic finds collected in the frame of our survey fieldwork (and consequently settlement patterns) are treated here within two separate time-lapses: an early stage (gathering LC1-2, *ca.* 4500-3800 BC), and a late one (LC3-5, *ca.* 3800-3000 BC).¹³

12. The Assyrian Landscapes Research Group is an informal cooperation initiative founded by J. Ur, D. Morandi Bonacossi and R. Koliński in 2012, joined by P. Pfälzner in 2013. Its aim is to undertake field research according to similar methodologies and to provide a platform for rapid exchange of results and ideas between cooperating projects. See Pfälzner and Sconzo 2015: n. 68.

13. The same distinction has been already applied in previous contributions of mine (Sconzo in Pfälzner and Sconzo 2016a; Gavagnin *et al.* 2016).

LANDSCAPE AND SETTLEMENTS IN THE LATE CHALCOLITHIC 1-2

As a general pattern, the overall Chalcolithic occupation in the Upper Zagros Piedmont is still characterised by a rather dispersed form of settlement and land use (Iamoni 2014). Although a general increase from the Northern Ubaid to the Late Chalcolithic in site number (about 25%) and in overall occupied area could be sketched, such increase cannot be considered neither linear nor drastic, as the continuity between the two broad periods concerns less than 40% of sites, while the remaining ones are either new foundations or resettling of earlier sites occupied in the Neolithic.

At the cultural baseline of the LC1-2, according to the results of our survey work, just a small network of villages and towns still dotted the Northern Zagros foothills, representing about 15% of the settlement sites presently detected. With the only exception of the so-called “Muqable trajectory” (to be treated later), these spread out across the region without according to any remarkable linear patterns: while, on the one hand, the latter may be understood as an indicator of the lack of emerging contact routes, on the other, this could possibly testify an ancillary means of exploiting the different potentials provided by the surrounding environment, and of the synergising of the land (fig. 5a).

A novel implant occurs in the westernmost sector of our zone C, *i.e.* the stretch of the Ḥabur to the west of the modern city of Zaxo¹⁴ and along the Hezil Su River terrace (sites C85, C95, C96, C98, C114). This area can be environmentally considered as part of the large Silopi plain that extends on the opposite bank of the above-mentioned rivers, right beyond the present Turkish border. In zone C, the occupation skips the alluvium and seems to be limited to the first terrace level, rising about 20 m above the alluvial plain, thus possibly mirroring the deliberate choice of avoiding the lowest point of the valley floor, which may have undergone seasonal flooding, but could be still exploited for cultivation in the dry season, following a pattern also attested further north in the Cizre-Silopi area (Algaze *et al.* 2012: 10).

No visible occupation has been instead detected in the eastern stretch of the Ḥabur and Rugarm rivers and their tributaries, where, however, the agriculturalists of the Pottery Neolithic period had already established their first seasonal camps (Sconzo and Pfälzner 2016a: 24-26).

14. Due to the recent urban explosion and modern agglomeration around Zaxo, it must be assumed that ancient human settlement along this stretch of the river was much more intense than what might now be assessed.

The choice of settling on high terraces is also mirrored along the Tigris itself, in the area of the Eski Mosul Dam Lake, while northwards, closer to the Syro-Turkish border, the only two sites that we were able to recognise are set directly into the alluvium (sites A6 and A13). These would later develop into proper tell formations.¹⁵

The highest concentration of sites, as in any other period, is to be found in the southern sector of the Selevani plain (Daşt-e Selevani). This plain is the only area of the Zagros Piedmont in the survey region featuring enough space for pastureland and farming. Crossed by several seasonal watercourses, this water-rich area was good enough for largescale rainfed agriculture and, consequently, for the establishment of a staple economy and eventually of a surplus gain. Both of these events will be basic requisite for the emergence and consolidation of large centres.

A particularly striking attribute of this plain is the socio-ideological magnetism achieved by springs and wadis. Specifically, I refer to the fact that most of our LC1-2 evidence presently recognised belongs to clusters or strings of sites distributed for long stretches along the same wadi, mainly in connection with perennial springs. As in modern times, the latter was largely canalised in the past so as to irrigate large portions of land, to power water mills, and could have been an essential precondition for surviving the dry season in the absence of a network of channels. This water-rich area often experienced the establishment of long-term settlement activities over various prehistoric and historic periods.¹⁶

One of the main strings is set in the southernmost part of the plain along the Wadi Saru Kani/Muqable/Kelek: here at least seven sites were detected, with the Muqable cluster set midway between the Tigris banks and the Lower Zagros Piedmont, in an oasis-like area rich of groundwater and natural springs (fig. 5b). In LC1-2, three of the seven-site cluster are inhabited, with the core settlement established around Muqable I and VII (respectively sites B11 and B37), two natural hillocks separated by a saddle, bearing a few metres of human occupation on top, and sharing a similar general morphology and the same agricultural environment; the southern side of Muqable III (site B13) seems also to have been occupied at this time.¹⁷ Further south, both once lying along streams a few

15. Given the fact that most of the alluvial plain of the survey area is currently underwater, it is also possible that the occupation of the alluvium was actually more extensive than what might now be discerned.

16. The same was noticed by Algaze in the Cizre/Silopi Plain (Algaze *et al.* 2012: 20). On the strict bond between water and settlements in Prehistory, see also Iamoni 2018.

17. The two tell-like formations may have formed a single saddled settlement extending along the west bank of the stream.

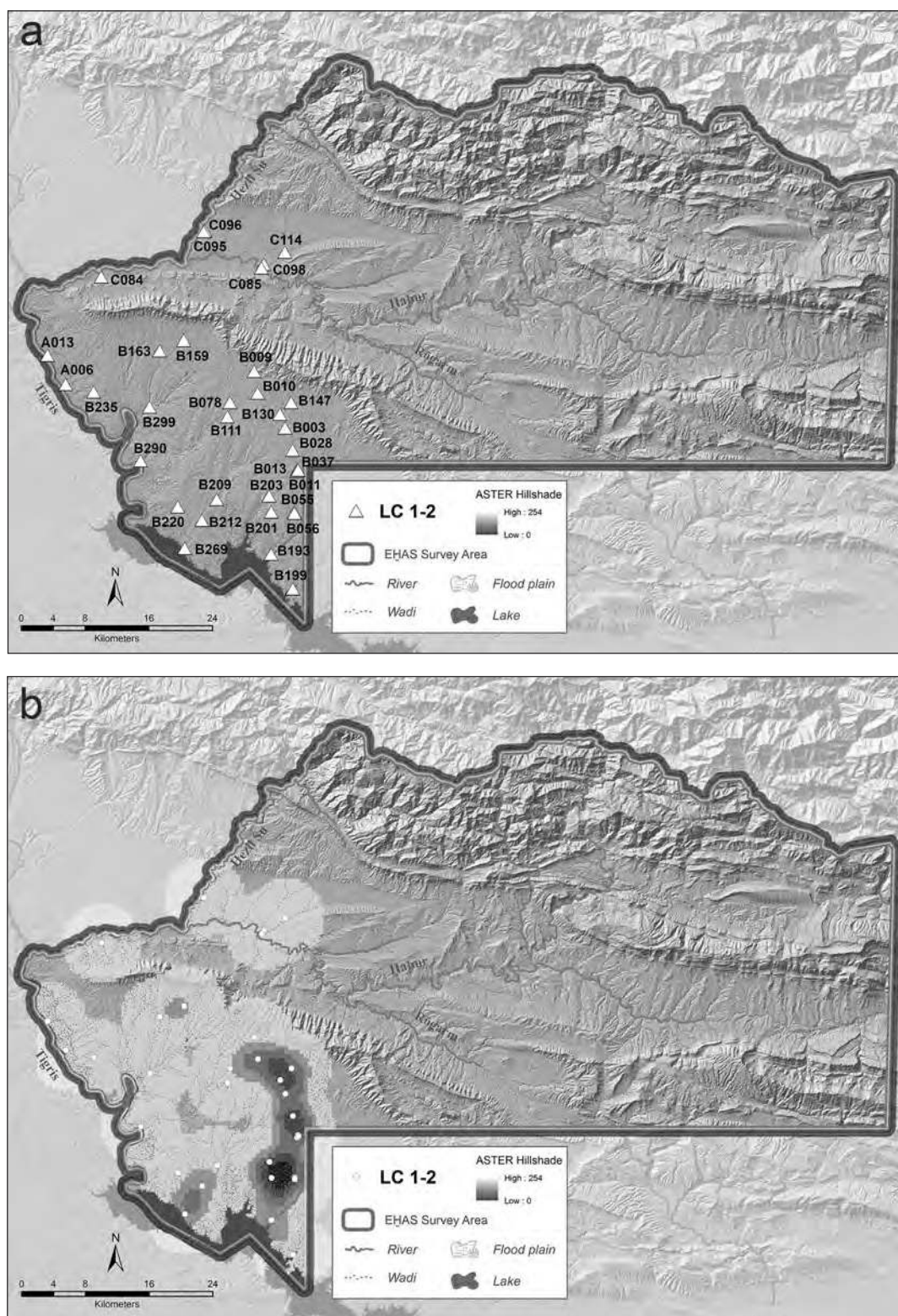


Fig. 5 – Map of LCI-2 settlement distribution and areas of nucleation (F. Simi, P. Sconzo).

hundred metres away from the Tigris left bank, are the two mounds of Gire Laud (site B199) and Gire Baqal (site B193), the latter recently investigated by the DGM of Duhok (see above).

Following a pattern noticed immediately to the south, in the northern Nineveh hinterland within the framework of the LONAP survey, such string of sites seems to have acted as a preferential penetration route and may testify the emergence of an ancillary form of trade network connected to the exploitation of local resources (flint?) set at the base of the mountains.¹⁸

Another interesting site nearby must have been Bassetki 3 (site B3), where the LC1-2 horizon marks the end of a long-lasting occupation originating in the Halaf period (Pfälzner and Sconzo 2015).

To summarise, both artificial mounds and flat sites are attested, lying at an altitude between 329 m (Tigris alluvium) and 607 m. asl (Gebel Biḥair foothills). For some of them, an ancillary phase at the very beginning of the period is suggested by the presence of “Sprig Ware” and the abundance of other painted pottery of post-Ubaid tradition (Ball 1997, 2003: 11, 154).

Site size spans from a few hundred square metres up to about 4 ha, the maximum size ultimately reaching 5 ha if the three LC1-2 sites of the Muqable cluster are considered as a single unit. The system of villages is thus resultantly fairly homogeneous in size and devoid of spatial hierarchies. To provide a comparative frame of reference, the overall occupied area in this period presently amounts to 57 ha, corresponding more or less to 1/7th of what it was later attained in the Middle Bronze and Iron Ages. Thus, this is hardly similar to what simultaneously occurred to the South at Nineveh (Stronach 1994), and to the west of the Tigris, in the large sweep of the Jazirah (Wilkinson and Tucker 1995: 78; Ur *et al.* 2011), where LC1-2 spatial agglomeration and nucleation are evident at and around very large settlements such as Tell Hawa (Ball *et al.* 1989; Ball 1990), Hamoukar/Khirbet al Fakhar (Ur 2010: 96-98; Al Quntar *et al.* 2011) or Tell Brak (Oates *et al.* 2007; Ur *et al.* 2011: 2; McMahon and Crawford 2014).

Despite the sparse occupation, village-size sites, and the absence of a true site hierarchy, the area eventually became embedded in a far-flung exchange network embracing the entirety of Northern Mesopotamia. The circulation of raw materials and craft products, as well as knowledge and modes of socio-economic organisation, are perceptible in some specialised activities related to the occurrence of both imported

and local artefacts such as: lithic industry in exotic materials (mainly obsidian blades, attested in the survey collection at different sites; fig. 6a); serial-produced vessels (see below); and, above all, traces of an administrative system in the ancillary form of impressed stamp seals.

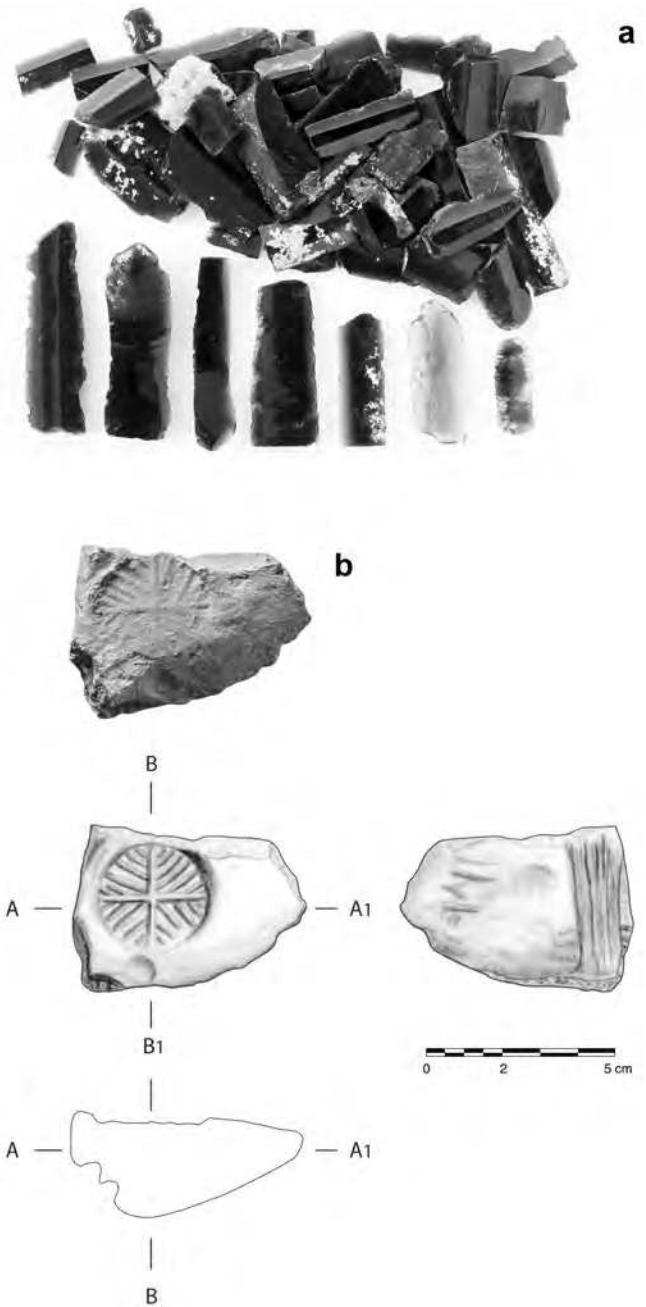


Fig. 6 – a. Obsidian blades from site B269 (photo S. Zarifian); b. Stamp sealing from site B37 (drawing A. al-Hashemi).

18. CONATI BARBARO C. and MOSCONE D., Going to the source: New perspectives in the study of the Canaanite blade technology from Iraqi Kurdistan. In: *Proceedings of the XVIIIth UISPP congress, Paris, 4th-9th June 2018*, forthcoming.

Worth mentioning in this regard is a unique small clay seal impression from the Muqable cluster displaying the “quartered circle” (fig. 6b), a motif typical of the Gawra XII-IX style (Tobler 1950: 179-180, pl. CLVIII, fig. 12-15 and pl. CLIX, fig. 16-17; also attested at Hamoukar: Reichel 2009: fig. 12).

About four thousand potsherds form the bulk of the survey finds used for LC1-2 site determination (table 2).¹⁹ This figure is further augmented by a comparable amount of pottery retrieved from well-stratified contexts excavated at Muqable I (site B11: see Sconzo in Pfälzner *et al.* 2017: 53-59).

As stressed elsewhere (Pfälzner and Sconzo 2016a; Sconzo in Pfälzner *et al.* 2017), general trends defining the pottery horizon of the post-Ubaid period in the Upper Zagros Piedmont can be summarised in the upsurge of “chaff-faced wares”, mostly in the form of serially produced bowls (often referred to as “Eastern Coba bowls” or straight-sided bowls/flower pots; Al Quntar *et al.* 2011: 157; Baldi 2012: fig. 1)²⁰ associated with the employment of cost-reducing firing methods, and the gradual decrease of painted decoration. The latter lingers, however, in the form of an overall wash or coating (black to red in colour and applied upon both the inner and outer vessel surface, fig. 7.7), and also in complex metopal patterns and vegetal motifs, and in simple bands and blobs (fig. 7.4-5, 10, the latter characteristic of a later LC2 phase).

Overall, the corpus of LC1-2 pottery is handmade and mainly coiled, although exceptions do occur.²¹ In contrast to Ubaid wares, fabric colours are deeper, more intense, and range from a pale yellow (rare) to a more common beige or orange. Based on solely macroscopic inspection, two broad fabric families can be distinguished: one primarily chaff-tempered, the other primarily mineral-tempered. Most examples of the latter fabric display regular horizontal stripes on the inner and/or outer surface which might be interpreted as traces of the use of a rotative device, suggesting a finishing on the slow wheel. The firing process, which appears to be irregular and poorly monitored in most of the chaff-faced production, reaches a high standard of uniformity, by contrast, in the case of the overall mineral-tempered ware, which is also characterised by a relatively good control of temperature.

Outstanding within the entire assemblage is the so-called “Red-Burnished Ware”, a specialised ware perhaps related to kitchen activities. The latter is characterised by a brittle, medium- to coarse-textured fabric, tempered with shell, large limestone grits, and even larger quartz crystals. In this instance, surface treatment is characterised by a thick coating of red slip and hand-burnished finishing. Incomplete oxidation occurs on many examples, as well as the double surface colour (especially in the area of the rim), tending towards a grey hue, and on the inner side of vessel surfaces. This ware occurs in a limited, specialised set of forms, among which may be found hole-mouthed pots, sometimes spouted (fig. 7.2-3).

Apart from the latter ware and from the flat-based conical bowls, which are quite homogeneous in terms of recipes, size, and related set of forms, the rest of the production still displays interchanging rules in the association of not only shapes and wares, but also surface treatment and decorative patterns. On the whole, the repertoire does not seem to have completely abandoned Ubaid traditions.

Without entering into all that much detail,²² the following are most attested among open forms (both from the survey and from the Muqable I excavations): chaff-faced, flat-based conical bowls or “wide flower pots” (fig. 7.1); hemispherical bowls with a tapering or pinched rim (fig. 7.4); bowls with inwardly bevelled rim and (possible) ring-base (fig. 7.5); bowls with beaded rim (fig. 7.7); small deep bowls with slightly beaded rim, often painted (fig. 7.6, 8). Closed forms include the aforementioned hole-mouth pots, with or without spouts (fig. 7.2-3); flaring-neck jars, either plain or painted (fig. 7.9); early internally hollowed rim jars, again finely tempered and mostly painted (fig. 7.11-12); neck-less flaring rim jars (fig. 7.10), and double-rimmed jars.

Taken as indicators of a Terminal Ubaid/LC1 occupation were the deep straight-sided urns with an offset rim both in plain or painted versions (fig. 7.13), the drooping ledge-rim jars, and (naturally) the so-called “Sprig Ware” and other metopal/patterned painted motifs, such as cross-hatched triangles and checkerboards (fig. 7.6, 8, 14-16).²³ The fact that the latter is quite well attested within the EHAS region should hardly come as a surprise, considering that Tell Shelgiya,

19. In this instance, no attempt has been made to set a sharp line-distinction between the LC1 (4500-4200 cal. BC) and the LC2 (4200-3800 cal. BC), although a comparative analysis could give some hints in this direction.

20. The EHAS examples belong to Baldi's type IV (Baldi 2012, fig. 5, with updated parallels and literature).

21. Some straight-sided bowls feature smoothed inner surfaces which could be taken as an indication of moulding. Scraping at the base occurs in the case of most of the samples analysed.

22. The pottery repertoire from both survey and excavation has been discussed by the present writer in previous contributions (Pfälzner and Sconzo 2016a; Sconzo in Pfälzner *et al.* 2017).

23. In fact, within the literature, many different painted motifs, some also lacking the sprig as a central element, have been lumped under the “Sprig Ware” designation (Rothman 2001; Rothman and Blackman 2003: 3 note 3, 11-13). Among them are, for example, cross-hatched triangles and ladders, these being considered here separately.

Table 2 – Sites discussed in the text and their sherds count by period (provisional assessment based on 2013-2018 survey data; P. Sconzo).

Site no.	Site type	Overall ext. (in ha)	LC1-2		LC3-5 – local		LC3-5 – Uruk related	
				sherds count		sherds count		sherds count
EHS-A006	Tell	0,5	yes	5	yes	7	yes	8
EHS-A013	Tell	0,5	yes	3	no	0	no	0
EHS-A025	Tell	2,9	no	0	yes	38	yes	16
EHS-A027	Tell	7,2	no	0	no	0	yes	166
EHS-A030	Bluff-top	1,6	no	0	no	0	yes	94
EHS-B003	Tell	3,2	yes	358	no	0	no	0
EHS-B009	Tell	0,5	yes	1	no	0	no	0
EHS-B010	Tell	1,2	yes	38	yes	7	no	0
EHS-B011	Hill-top	1,0	yes	251	no	0	yes	4
EHS-B012	Hill-top	3,8	no	0	no	0	yes	1
EHS-B013	Tell	2,5	yes	27	yes	1	yes	27
EHS-B028	Tell	3,4	yes	10	yes	19	yes	27
EHS-B037	Tell	1,9	yes	164	no	0	no	0
EHS-B055	Tell	2,0	yes	22	yes	28	yes	7
EHS-B056	Tell	3,8	yes	2	no	0	no	0
EHS-B078	Flat site	1,2	yes	51	no	0	no	0
EHS-B110	Flat site	1,0	no	0	yes	4	no	0
EHS-B111	Tell	5,7	yes	4	no	0	no	0
EHS-B130	Flat site	0,7	yes	23	no	0	no	0
EHS-B134	Tell	1,3	no	0	no	0	yes	25
EHS-B147	Flat site	8,5	yes	120	yes	158	yes	2
EHS-B151	Hill-top	0,1	no	0	yes	16	yes	22
EHS-B159	Flat site	2,7	yes	1	no	0	no	0
EHS-B163	Bluff-top	1,4	yes	171	no	0	yes	12
EHS-B193	Hill-top	4,6	yes	1598	no	0	yes	97
EHS-B199	Tell	2,0	yes	238	yes	2	yes	35
EHS-B201	Tell	5,1	yes	6	no	0	no	0
EHS-B203	Tell	5,3	yes	41	no	0	yes	8
EHS-B205	Spot	0,4	no	0	yes	3	yes	2
EHS-B209	Tell	2,3	yes	1	no	0	yes	16
EHS-B212	Bluff-top	3,0	yes	25	no	0	no	0
EHS-B220	Tell	1,6	yes	7	yes	3	no	0
EHS-B223	Tell	3,4	yes	3	yes	2	yes	50
EHS-B235	Tell	1,2	yes	15	no	0	no	0
EHS-B259	Tell	5,2	no	0	yes	5	yes	72
EHS-B261	Bluff-top	1,5	no	0	no	0	yes	6
EHS-B269	Bluff-top	3,3	yes	583	yes	230	yes	512
EHS-B281	Hill-top	0,2	no	0	no	0	yes	15
EHS-B290	Bluff-top	1,5	yes	21	yes	5	yes	23
EHS-B299	Hill-top	3,4	yes	11	yes	4	yes	31
EHS-B308	Tell	2,1	no	0	no	0	yes	18
EHS-B310	Tell	2,4	no	0	yes	2	yes	1
EHS-C064	Bluff-top	1,2	no	0	yes	113	yes	195
EHS-C084	Tell	1,0	yes	3	no	0	no	0
EHS-C085	Tell	0,5	yes	3	yes	2	yes	17
EHS-C092	Tell	1,4	no	0	yes	2	no	0
EHS-C095	Bluff-top	1,1	yes	18	no	0	no	0
EHS-C096	Bluff-top	0,9	yes	3	yes	108	yes	5
EHS-C098	Tell	4,4	yes	0	yes	1	yes	0
EHS-C104	Tell	0,6	no	0	yes	8	yes	32
EHS-C108	Tell	0,6	no	0	yes	4	yes	3
EHS-C114	Tell	5,2	yes	6	yes	3	yes	5
Total no. sherds per period				3833		775		1554

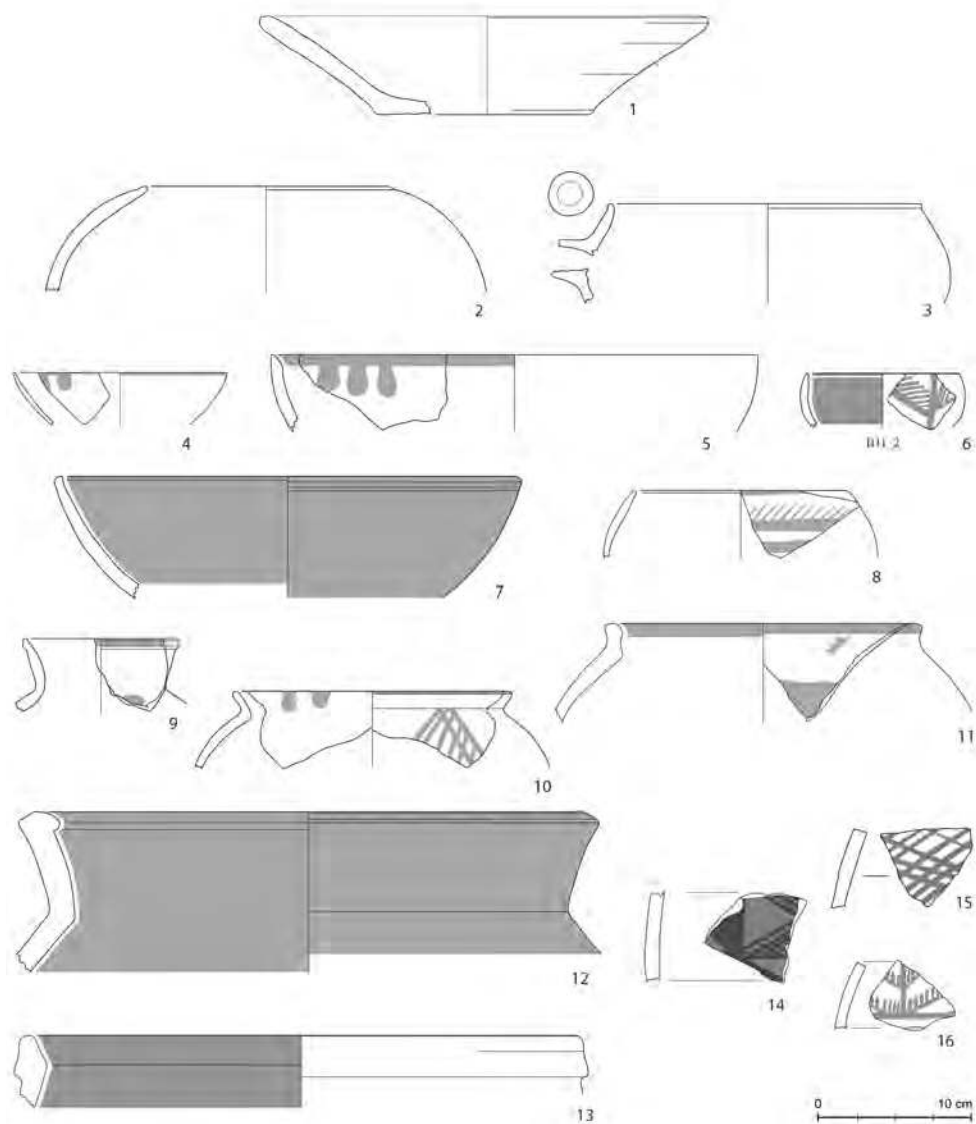


Fig. 7 – LC1-2 key types in the EHAS region and at Muqable (emphasis given to painted types; drawing A. al-Hashemi).

considered the main production centre of this specialised painted ware (Ball *et al.* 2003), is a 5-ha site located on the opposite bank of the Tigris, and thus virtually belonging to the same region.

On cultural grounds, the overall LC1-2 repertoire from the riverine portion of our region, apparently the only sector to be settled in this period, belongs to the so-called “Gawra sphere” or broader “eastern” province of Northern Mesopotamia, spanning from the left bank of the Euphrates to the western piedmont of the Zagros Mountains. It fully reflects that which was retrieved immediately to the south within the Nineveh

region (LONAP survey; Gavagnin *et al.* 2016), or on the opposite bank of the Tigris in the Zammar district.²⁴ It displays a close affinity with the findings from Khirbet Hatara (Negro 1998) and Musharifa (Numoto 1987), now submerged by the Eski Mosul lake, Gawra (Tobler 1950), and Nineveh (Gut 1995). Further south, in the Erbil Plain, slightly looser parallels may be traced at Qalinji Agha and Helawa (Hijara

²⁴ We are deeply grateful to W. Ball for having provided us with access to the complete dataset and illustrations of the pottery material retrieved by the British archaeological expedition in the Zammar region.



Fig. 8 – Muqable I: LC2 pottery kiln, view from South (photo P. Pfälzner).

1973; Peyronel and Vacca 2015); in the Chamchamal area at Girdi Qala, and, to a lesser extent, Logardan (Vallet *et al.* 2017); and Gurga Chiya (Wengrow *et al.* 2016). In Western Iraq and Syrian Jazirah, comparisons might also be found at sites such as Grai Resh (Kepinski 2011), Khirbet al Fakhar (Al Quntar *et al.* 2011; Abu Juyyab 2012), Tell Feres al-Sharqi (Baldi and Abu Juyyab 2012), Tell Brak (Matthews 2003), and Tell Leilan (Schwartz 1988). Finally, ties to the LC sites to the west of the Euphrates River are loose.

Although the 2015 excavation at Muqable I unearthed no conspicuous architectural remains (Pfälzner *et al.* 2017), the assemblage retrieved around and inside a pottery kiln (fig. 8), consisting of straight-sided bowls (fig. 9.1-2) and other closed vessels such as, for example, the pithoi with a hollowed rim (fig. 9.3-4) side by side with numerous wasters suggest that the area under analysis may well have served as a pottery production centre during LC2 (if not earlier).

This evidence is further strengthened by the retrieval of a series of fine mineral-tempered ring-shaped scrapers (fig. 9.5-7); other surface finds of the same type have been collected at this and other sites. Scraping is an age-old technique, already appearing in Ubaid contexts as a device for reducing the time of unbaked vessel drying, as well as for improving rapidity and serial production. These tools from Muqable were as well feasibly used in pottery finishing; typologically they recall those widely attested in Mesopotamia from the Uruk period onward: therefore, they further suggest that the origin of this class of finds should be moved back to the late 5th millennium BC, thus making a northern feature preceding and later embodied in the urban revolution of the south (Alden 1988; Alden and Minc 2016).

LANDSCAPE AND SETTLEMENTS OF THE LATE CHALCOLITHIC 3-5

The following period, spanning about 700 years, is here collected under the neutral umbrella term of LC3-5.²⁵

Contrary to what was preliminarily suggested in previous contributions based upon survey results from the seasons 2013-2014 (Pfälzner and Sconzo 2015, 2016a), the EHAS region apparently provides incipient hints of advancement in the trend toward settlement nucleation, redefinition of modes of production and consumption as well as socio-political reorganisation during this phase.

The latter phenomena cannot be understood without issuing a *caveat* concerning site attribution. As a whole, the LC3-5 ceramic assemblage retrieved during our survey presently includes over two thousand diagnostic sherds, gathering together both a local/indigenous chaff-faced and a Uruk-related mineral-tempered production. It needs scarcely be stated that the survey material, as category, does not help to overcome the dichotomy between the “local” and the “foreign” and problems of attribution and data interpretation occur whenever forms which are expected to be found in mineral-tempered wares feature rough chaff-tempered fabrics or the other way around (Vallet *et al.* 2017: 74-75). The repertoire of collected sherds displays a certain degree of borrowings or hybridisation between southern and local types, which remain difficult to interpret in the absence of any true context. This means that the material culture from this very corner of Northern Mesopotamia remains still nebulous and would deserve new adequate reference stratigraphies in order to give a proper response to the question of culture contact and interaction.

A few points might, however, here be stressed. The form spectrum of the indigenous assemblage is rather limited and, indeed, elusive: some examples considered to be key types of

25. While dealing exclusively with survey finds, the LC3-5 is a quite difficult period to catch up, since the presence of local, traditionally chaff-tempered *versus* Uruk-related mineral-tempered pottery at a given site may be either temporal—the local assemblage preceding the arrival of Uruk contact/influence—or functional (sites excluded from the Uruk exchange network and sites included in it): thus, a clear-cut distinction between a pre-contact (*i.e.* LC3) and a contact (LC4-5) phase remains presently hard to grasp. As is known from the current literature, moreover, the local pottery repertoire of the LC3-4 (5)—*i.e.* the one that develops from the LC1-2 tradition—is generally characterised by a striking longevity, thus implying that, at those sites where Southern Mesopotamian imports or imitations are absent, it can become difficult to achieve finer-tuned distinctions merely on the basis of the endogenous material (Rova 2000: 176). Even the assumption of such a declaratory dichotomy between “local” and the “foreign” is no longer accepted and has been recently revised in the light of new excavation sequences and pottery studies (Helwing 1999; Vallet *et al.* 2017).

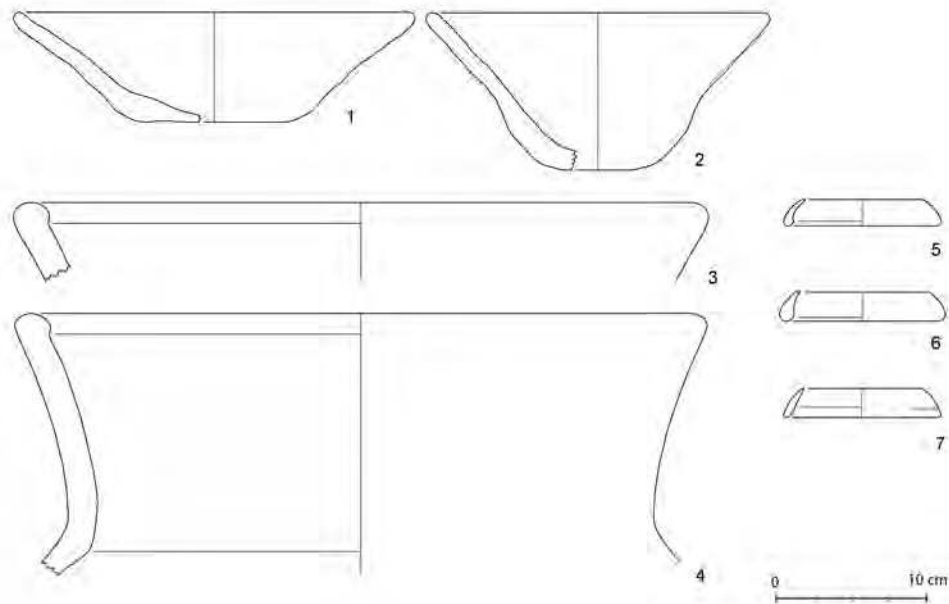


Fig. 9 – LC1-2 vessels and scrapers found in the fill and outside the pottery kiln at Muqable 1 (drawing A. al-Hashemi).

the period throughout the entirety of Upper Mesopotamia, such as hammer-head bowls and carinated casseroles, appear to be rare on the left bank of the Iraqi Upper Tigris.²⁶ Interestingly, such ceramic types, whenever present, seem to cluster mainly in the northern sector of the survey region, *i.e.* along the Hezil Su and Ḥabur rivers (fig. 10.6-11), or along the Tigris itself, while being absent in the hinterland. What instead is quite distinctive and widely attested throughout the region are club-headed bowls, jars with internally hollowed or grooved rims (fig. 10.13-17), and open or (to a lesser extent) closed forms in a chaff-tempered gray ware. These represent a local version of the large Northern Mesopotamian “chaff-faced *oikumene*” spanning from Central Mesopotamia to the Southern Caucasus (Marro 2010, 2012: 29-31).

In the LC3-4 (5) local repertoire, the fine mineral-tempered fabrics, quite widespread in the LC1-2, disappear, being replaced by much coarser, low-fired, chaff-tempered examples. This phenomenon is accompanied by the vanishing of the painted decoration which (as has been previously identified) still lingered in the prior assemblages. On the other hand, all those aspects of pottery technology considered the major diagnostics of increased cheap and large-scale pottery production in the period do occur (Al Quntar and Abu Jayyab 2014:

99-106): uniformity in vessel type, simplification of form and manufacture, new strategies for fuel consumption, and a decrease in (if not abandonment of) aesthetic attributes, thus possibly testifying to a process of progressive decline in quality in favour of a more standardised, cruder, but also faster process of manufacture, and a progressive loss of the symbolic and representative functions of ceramics. Should a phase of increasing standardisation be sought, then this would be the appropriate period in which to locate the beginnings of such a development.

The Uruk-influenced assemblage remains even more elusive, if no longer in terms of quantity (table 2), then, at least, in terms of variability. Apart from the chaff-tempered, usually mould-made bevelled-rim bowls (quite rare within the survey region as a whole) and another set of grit and/or chaff-tempered hand-made vessels, the assemblage features medium-to-fine wheel-made fabrics tempered with sand, calcite, and especially mica. Ranging from yellow to deep orange, vessels are evenly fired, thus strongly differing from the indigenous ceramic tradition. The part of the form spectrum which might be recognised is repetitive, being limited to nose-lug jars with incised and impressed decoration, bowls with oblique/triangular rims, jars with undercut rims (all very frequent), spouts (very few), and conical bowls with string-cut bases. One single case of reserved slip ware has been detected, while no red slip has presently been recognised.

26. The same phenomenon, even more accentuated, seems also to occur in the Nineveh hinterland, just south of our survey region: Gavagnin *et al.* 2016; Vallet *et al.* 2017.

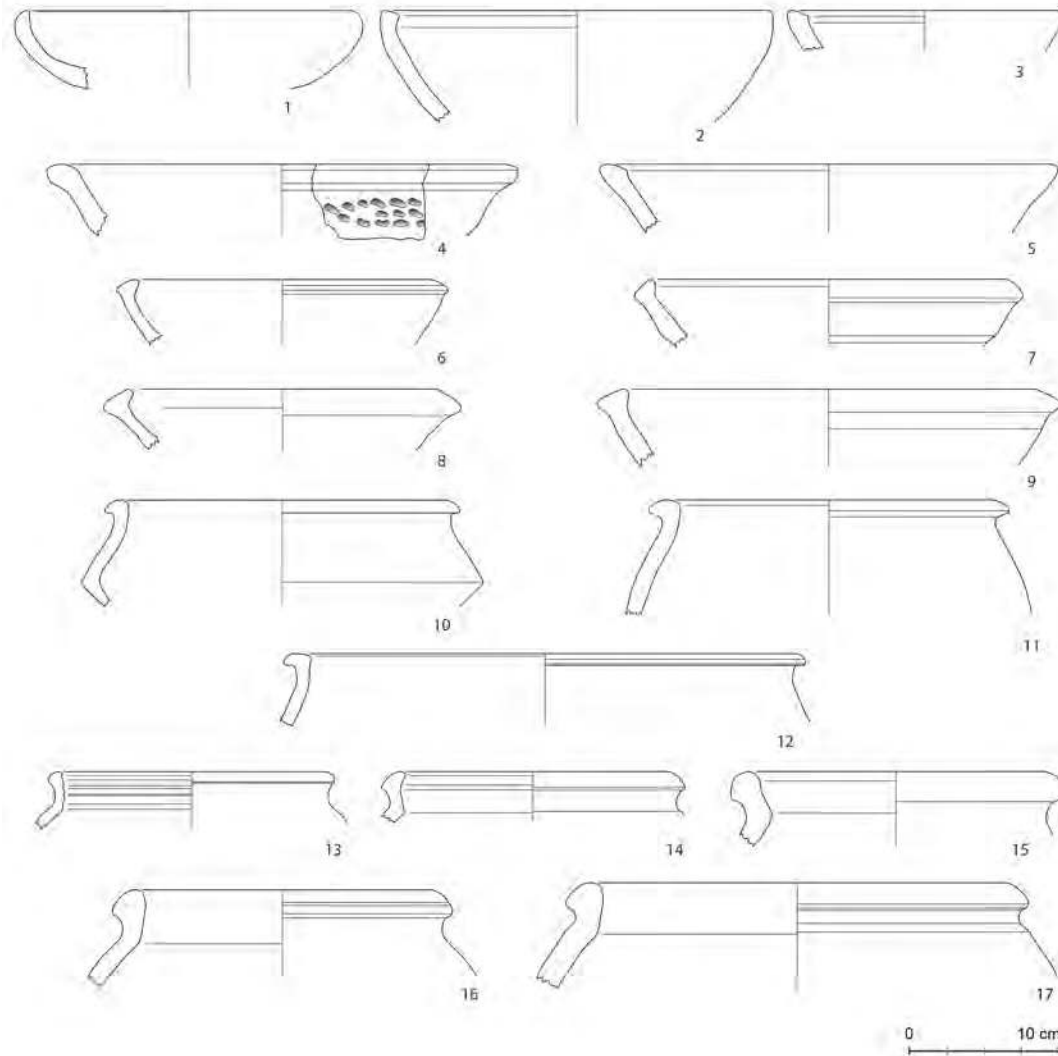


Fig. 10 – LC3-4 (5) vessels from site C197, on the Hezil Su river (drawing A. al-Hashemi).

If the survey material as of yet described does not by itself permit the clear-cut distinction in the relationship (chronological and/or spatial) between indigenous and foreign, and (within the latter) between a clear Middle and Late Uruk “style”, then the results of the Muqable III excavations have nevertheless enabled the better definition of those ceramic traits characterising the very last part of the 4th millennium, the so-called Terminal Uruk/Uruk D (Gut 1995: 103-105, 123-130, 266) and Transitional phase.²⁷ The pottery repertoire retrieved

27. In terms of the ARCANE periodisation, this would correspond to the ETG 1 period of the Tigris region (Arrivabeni 2019) and to the EJZ 0 for the Jezirah (Rova 2011). It is moreover contemporary to post-LC5 development in other regions (Rothman 2001) and may be at least partially

at the very base of a 20 m long step-trench cutting through the southern flank of the site²⁸ is characterised by a Late Uruk assemblage of rather provincial appearance featuring lingering Southern Mesopotamian traits (such as the almost exclusive adoption of fine mineral fabrics, the wide use of spouts and of plastic decoration on the vessel shoulder) side by side with

contemporary with what was traditionally defined as “Jemdet Nasr” in Southern and Central Mesopotamia.

28. At Muqable, a sequence of five architectural levels, namely levels 16-12, was brought to light. Radiocarbon dates provided for strata 14 and 12 suggest a time range at the very end of the 4th millennium BC (around 3100/3000 BC: Pfälzner *et al.* 2017: 80-82, fig. 40, table 3) thus confirming those achieved at Tell Karrana in level 3c which featured comparable material (Wilhelm and Zaccagnini 1993: 18-20).

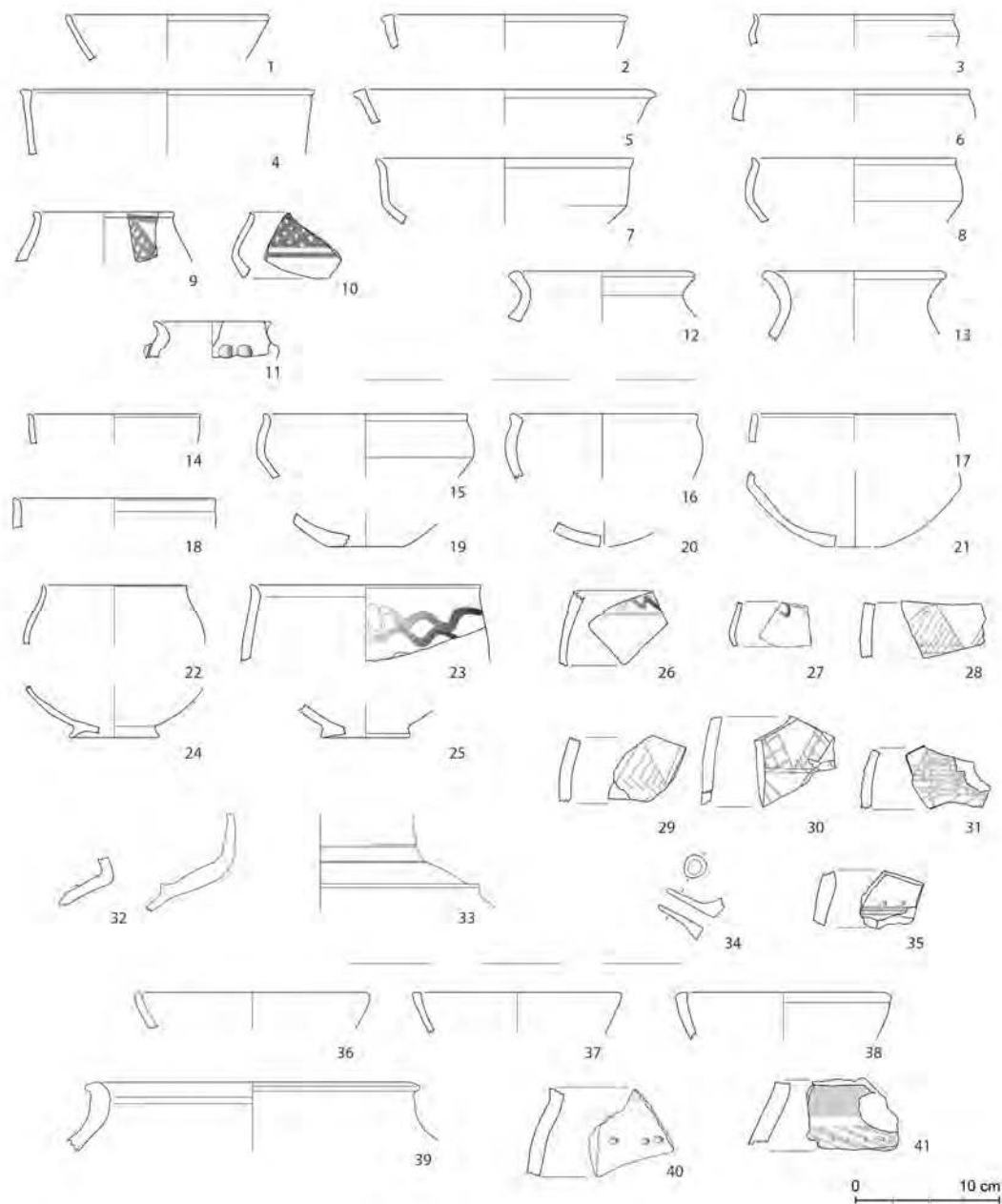


Fig. 11 – LC5-Terminal Uruk pottery from Muqable III (IANES, University of Tübingen, drawing A. al-Hashemi). 1-13. Phases 12-13, 14-35. Phase 14; 36-41. Phase 16.

local innovations later giving rise to the pure Ninevite 5 pottery style—introduction of carinated shapes (fig. 11.7-8, 15), low pedestal bases (fig. 11.24-25), and, above all, the revival of painted decoration (fig. 11.9-10)²⁹—, and a blended version of

the two styles.³⁰ Elements enabling the distinction between the repertoire just sketched and that considered Middle/Late Uruk are rounded carinations on jars shoulder, the extension in

29. The characteristic painted decoration had in the past different nicknames: Roaf (1998), after the discovery at Mohammed 'Arab, named it

“Mohammed Arab Late Uruk”; Gut (1995) at Nineveh called it “end-Uruk”. On the matter, see Rova 2003.

30. For a further detailed account on the most common traits of the ceramic assemblage of the Terminal Uruk/Uruk D phase: Gut 1995: 123-130.

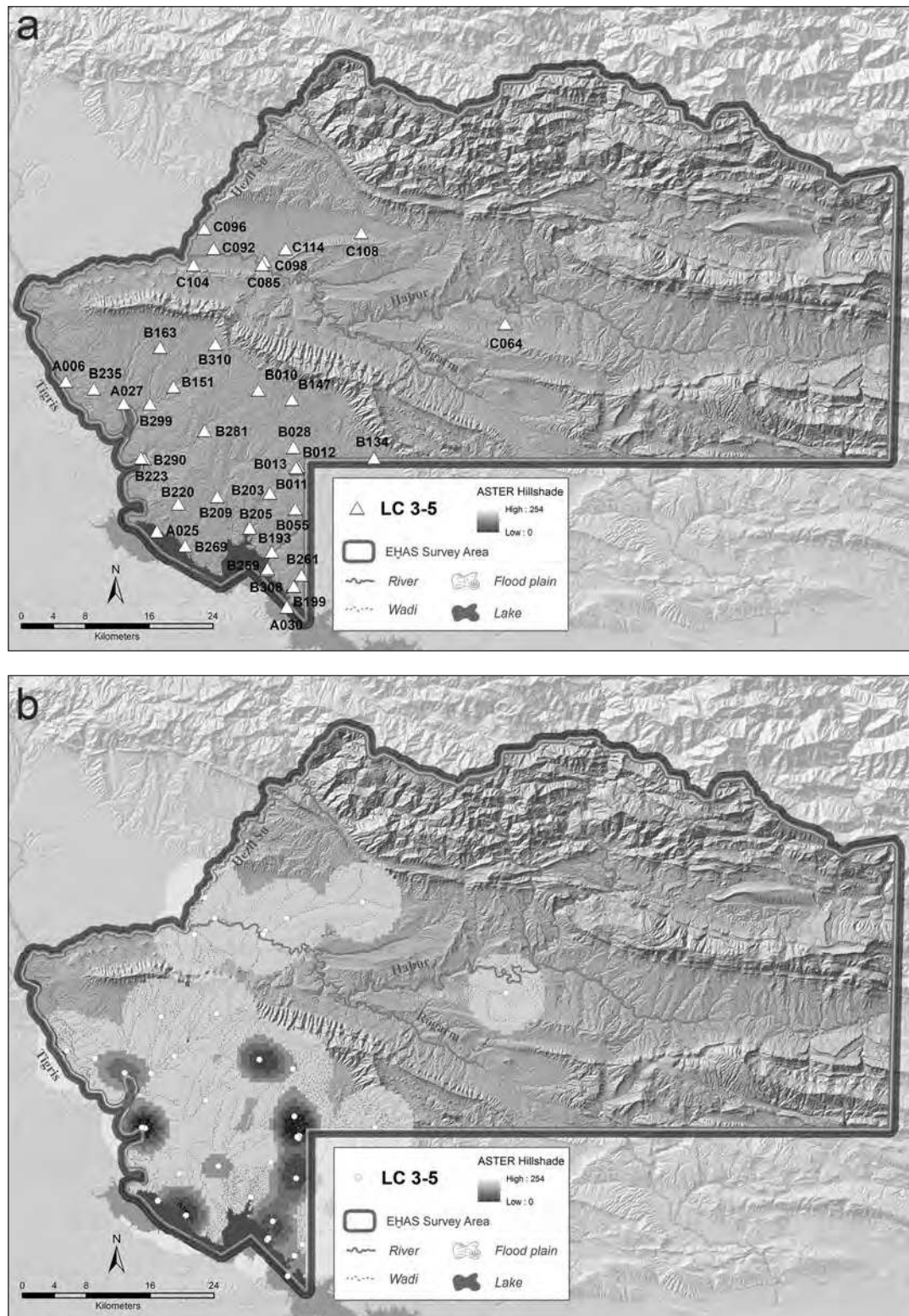


Fig. 12 – Maps of LC3-5 settlement distribution and areas of nucleation (F. Simi, P. Sconzo).

length of the nose lugs, the cursory rendering of cross-hatched triangles (fig. 11.28-31), the presence of new decorative forms such as one or more excised horizontal wavy lines (fig. 11.23, 26-27), or horizontal and vertical ribbing on the shoulder, even descending as far down as the belly (fig. 11.23, 32-33).

This assemblage is not at all new, as it is strictly comparable to that recorded at other excavated sites of the lower Eski Mosul district, such as Tell Karrana 3, strata 4-3a (Rova 1993, 2003), Mohammed 'Arab, phase MA 1 (Roaf 1998), and Tell Jessary, level 5, ash pit (Numoto 1990). It testifies to the existence a regional *facies* spanning from the northern Nineveh hinterland all the way to the preliminary Zagros Mountain chain at the time, if not, indeed, after the collapse of the Uruk network system.

Turning to settlement system, if we start approaching it from a neutral perspective (*i.e.* with no distinction between local and Uruk-oriented sites), it might seem as if the old pattern might remain more or less intact: in LC3-5, site number in fact grows by only a few units (34-39). Fundamentally, however, more than half of the LC1-2 settlements is temporarily or definitively abandoned, while various entirely new foundations are recorded (fig. 12). The aggregate area remains more or less of equal size (*ca.* 50 ha); site size ranges between 0.5 and 4 ha, while a size of 1-2 ha is now overwhelmingly the norm. While, on the Hezil Su and the Ḥabur valleys, occupation remains steady and continues mainly in the form of bluff-top sites set high up on the alluvial plain, a slight increase in number of tells can be noted within the Tigris hinterland, such as the Selevani Plain, testifying to the beginning of a rather long-lasting phase of settlement, at least in some areas.

Moreover, spatial planning becomes more organised and settlements tend to cluster along rather visible routes.

This becomes more apparent when, in light of the pottery evidence previously outlined, recorded data are split between sites in which elements of Southern Mesopotamian inspiration are evident and those with an exclusively local repertoire (fig. 13).

First of all, sites displaying a mixed repertoire greatly outnumber those only featuring a purely “foreign” or “local” style. Southern Mesopotamian oriented settlements are all new foundations clustering along the Tigris and its immediate hinterland, while local LC3-4 (5) ones apparently lie at the piedmont of the Ġebel Biḥair along an internal trajectory, and usually stem from an earlier LC1-2 nucleus. Among the latter is site B147, a flat larger settlement located at the confluence of two wadis to the north of Bassetki. Here, the initial LC2 occupation of about 4 ha may now be seen to have spread on the other side of one of the wadis, thus reaching an extension of

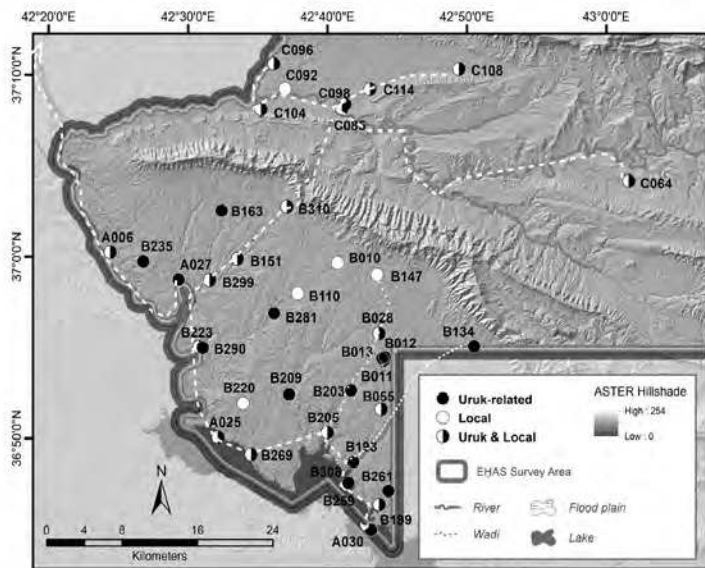


Fig. 13 – Close-up of LC 3-5 local and Uruk-related sites and settlement trajectories (F. Simi, P. Sconzo).

ca. 6 ha. The extraordinary amount of flint blades and grinding stones retrieved identifies its status as a specialised extraction (?) and/or production centre within the region.

By means of those sites with mixed assemblages, a deliberate choice of strengthening occupation along three main trajectories can be envisaged: two of them, riverine in character, included an E-W route along the Ḥabur River and a S-N example along the Tigris itself; the third was instead an inland route along the Wadi Amlik, directly linking the two rivers through a mountain pass.

Worth mentioning is the easternmost settlement presently detected along the Ḥabur, Gundi Kusa (site C64), located close to a spring in a hilly landscape some 5 km south of the Ḥabur River. Characterised by a prominently Uruk-oriented ceramic repertoire, the site presents a comparable amount of local chaff-tempered pottery and hybrid artefacts (Pfälzner and Sconzo 2016a: 24, fig. 8b). Given the impossibility of ascertaining the relationship between the two parts of the assemblage (whether spatial or temporal), it remains unclear as to whether this might be interpreted as some manner of southern implant or the seat of an indigenous community fully integrated within the southern Mesopotamian network as is the case for Hacinebi on the Middle Euphrates (Stein 2001, 2002a, 2002b). Its perfectly isolated geographical location, off any beaten track, but not too far away from the Ḥabur River may suggest the existence of exchange routes linking the Tigris lowlands to the Iranian uplands further east.

A second tiny hill-top site (B151) overlooking the Wadi Amlik is located on a natural hillock bordered by two wadis, immediately to the south of the modern highway leading to Peš Ḥabur. It belongs to a string of three sites similar in nature set at a certain distance between the Tigris and the Zaxo pass; its strategic hill-top setting was clearly intended to control both the mountain route, on the one hand, and the access to the Tigris alluvial plain, on the other. As previously mentioned, this prompts speculation that it might have been envisioned as a penetration route, in this instance connecting the eastern bank of the Tigris to the Ḥabur across the only existing north-south mountain pass: namely the “Zaxo connection”.

Finally, the second riverine trajectory, that along the Tigris, deserves special attention as it has been considerably enriched by the great amount of finds retrieved during the 2018 survey season, when a new, previously inaccessible area could be investigated. This is the lower sector of the Tigris left bank, a stretch of land extending S-N for about 30 km from the southern border of the survey area. This area, submerged by the Eski Mosul Dam lake since 1986, briefly re-emerged in the summer of 2018 thanks to an abrupt lowering of the lake’s water level by several metres, thus bringing to light several previously invisible sites.³¹ At these sites, the action of the waters had performed a sort of natural excavation by means of continuous erosion, thus often completely removing loose soil and bringing to light thereby old structures and their inventories buried for several centuries under the surface.

As a whole, seven new sites dating to the period under discussion were pinpointed (sites A25, A27, A30, B290, B269, B261, B259, B308), facing the river bank at a more or less regular distance (in some instances *ca.* 5 km, as the crow flies).³² Their location upon the first terrace level (rather than in the lower alluvium of the valley floor; fig. 14) demonstrates once more the deliberate choice of protecting them from flooding, thus engendering an enduring settlement and yielding a maximum exploitation of the fertile soil of the riverine plain below.³³ When mapped together with those sites previously retrieved further north (2015-2017 seasons),³⁴ they raise to 12 and may be seen to form a chain of nucleated sites along the

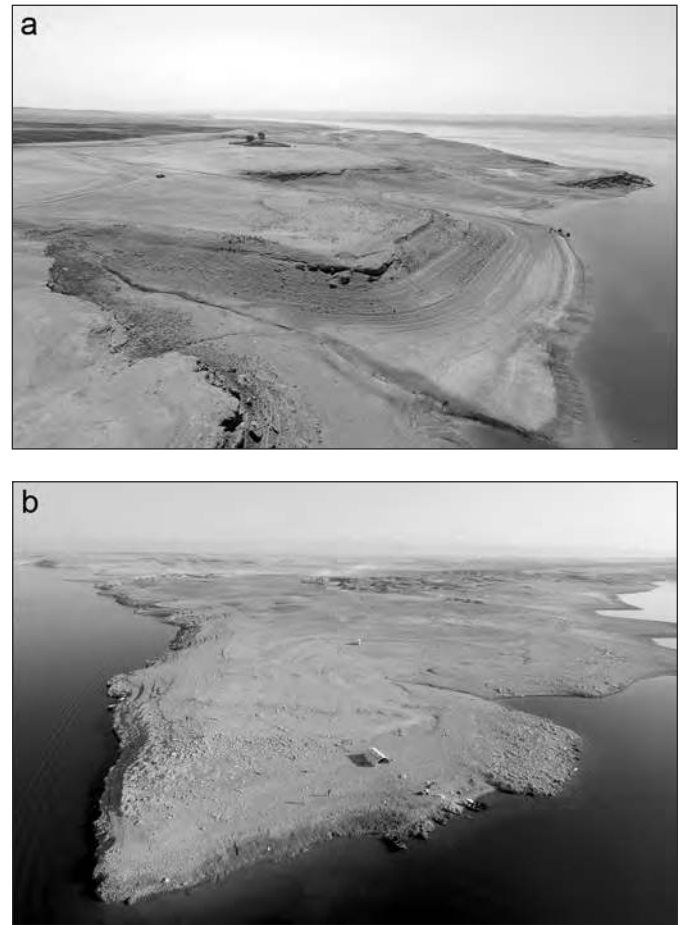


Fig. 14 – Aerial view of sites (photo H. Ahmadpour): a. B269, from North; b. A30, from South.

river (fig. 12b). Should the sites encountered within of the Zammar survey and Eski Mosul excavations on the opposite bank of the Tigris be factored into this, then, in some cases, they apparently form “pairs”,³⁵ thus suggesting they may have also acted as crossing points along the river, and, moreover, as nodes of a long-distance network system connecting the Mesopotamia lowlands and the land of Nineveh to the south with the Anatolian highlands to the north, as well as with the western steppe of the Jazirah.

31. After torrential downpours during Winter 2018, all the area is again completely submerged.

32. It must here be pointed out that the survey of the area affected by the Eski Mosul Dam is incomplete. Only those sites which briefly re-emerged were identified, while it is feasible that many others of similar nature are still shrouded beneath the lake’s waters.

33. Very little evidence of tell-like formations was noticed in the Corona images of the area submerged by the lake.

34. These data postdate the results published in the 2015 and 2016 reports.

35. It is important to underline that neither side of the Upper Iraqi Tigris banks offered a continuous and easy means of N-S access, given the presence of a series of high cliffs alternating at close distance. Ascending functioned therefore only by means of crossing regularly from one bank to the other. The presence of paired settlements is a common feature of Bronze Age settlement also along the Euphrates (Wilkinson 2006).

At the same time, it should not be underestimated the possibility that such a regular spacing along the river terraces reflects—in turn—the establishment of a system of agricultural production for large urban centres not necessarily located within the limit of the survey area, rather located downstream, in the Nineveh plain or even southward.

While some of these riverine sites (mostly tells with a long-lasting occupation) feature both local and Uruk-oriented ceramics (fig. 13), others (mainly flat sites with a briefer occupation) almost exclusively display a representative suite of Southern Mesopotamian-oriented pottery. If the low resolution offered by the survey ceramics does not presently aid in precisely establishing the initial date of these new foundations (Middle, Late Uruk?), the presence of traits similar to those retrieved at Muqable III and at other excavated sites in the Mosul district would suggest that most of these sites were occupied until the very last stage of the Late Uruk period, and then down to the transition to the Nineveh 5 horizon.³⁶

In summary, a complex picture emerges from that which has been sketched above, in which one and the same region features areas apparently rather segregated and, in turn, less affected by the international network emerging from the LC3 onward, and yet also other areas—such as those of the Tigris and Ḥabur rivers—which are far more embedded within this network. Within such a reconstruction, it might be argued that the local component played an active role in the exchange network, local sites possessing the upper hand within resource extraction.

With these premises, the results of our survey concerning the LC3-5 period end up harmonising the data acquired in the frame of neighbouring survey projects of the past and present. They clearly go again hand in hand with the rich array of Uruk evidence retrieved on the west bank of the Tigris, both in the Zammar (Ball 2003) and Eski Mosul Dam areas.³⁷ A close analogy, in quality rather than in quantity, could be also grasped the Cizre/Silopi district (Algaze *et al.* 2012) to the north considered, wherein all Uruk-related sites also seem to be located on the left bank of the Tigris. This is also only apparently at loggerheads with the data from upper Nineveh region (LONAP survey; Gavagnin *et al.* 2016; Morandi Bonacossi and Iamoni 2015), wherein the declaimed paucity of Uruk-related remains could be now feasibly explained by the fact that most of the expected Uruk-oriented sites may well lie on the bed of the Eski Mosul lake.

36. The Nineveh 5 painted period is at most site the very last stage of occupation.

37. Ball 2003: 11-12 (among others, the excavated sites of Siyana Ulya and Abu Dhair). For the Eski Mosul dam area: Khirbet Hatara, Tell Karrana 3, Tell Mohammed Arab, Tell Mishrife, etc.

CONCLUSION

The results of the EHAS survey and KUGAMID excavations in the northernmost region of Iraqi Kurdistan doubtless bring new insights into the life of Chalcolithic communities in Upper Mesopotamia. While the continuation of investigations of the earlier occupation levels at Muqable, and consequently the further establishing a solid stratified pottery sequence, would ultimately lead to a better understanding of the paths toward urbanisation within this region, a few conclusive remarks may nevertheless now be sketched.

As far as settlement is concerned, in a broad sense, the East-Tigridian plateau extending north of Nineveh and south of the first ridge of the Zagros Mountains, namely the Ğebel Biḥair, seems apparently to have been continuously settled from the 6th to the 3rd millennium BC, while the Late Neolithic and Early Chalcolithic penetration further north seems to be minimal and strictly confined to the main waterway of the Ḥabur. If so, this first Zagros ridge may be seen to have acted as a barrier for at least the greater part of the Chalcolithic period.

In particular, the Late Chalcolithic in the EHAS region does not seem to feature at any stage those forms of accelerated urbanisation envisaged for the Jazirah steppe to the west, or at Nineveh to the south, as testified by population nucleation, spatial agglomeration and expansion, and, moreover, by the reorganisation of political institutions.

In turn, the area does not seem to be cut off completely from the urban formation process as a whole. First of all, the beginning of a long-lasting settlement strategy is suggested by the fact that the LC settlement gives preference to watercourses, especially to those fed by perennial springs, which would have assured water supply throughout the year.

Secondly, a change in settlement pattern clearly occurs, characterised by a net increase in the number of sites when compared to the preceding Early/Middle Chalcolithic period. Such process reflects a trend attested in most of the investigated regions of Northern Mesopotamia in general and of Iraqi Kurdistan in particular.³⁸

Thirdly, while it is true that no major centres (over 5 ha) of the LC1-2 or of the LC3-5 have presently been identified,³⁹ and

38. For the northern Nineveh hinterland, see Morandi Bonacossi and Iamoni 2015; for the region of the Greater Zab, see Koliński 2017; for the Upper Tanjero Valley, see Kepinski 2014; for the Rania and Peshdar plains, see Boaz Bruun Skuldbøl and Colantoni 2016a, 2016b; Baldi 2018; and for the Shahrizor Plain, see Altaweel *et al.* 2012).

39. Given the fact that a similar pattern emerges both to the north in the Silopi Plain (Algaze *et al.* 2012) as well as immediately to the south of our survey area, in the Nineveh hinterland (Morandi Bonacossi and Iamoni 2015;

no site hierarchy can be noticed, sites do not seem to be erratically distributed, and their linear patterning (incipient in the LC1-2, enhanced in the LC3-5) demonstrates the existence of forms of socio-political integration acting both at a regional and eventually supra-regional scale.

The LC1-2 settlement dynamics display the establishment of trajectories that would later develop and expand in the LC3-5: salient is the E-W example along the Ḥabur and a SW-NE axis connecting the Tigris to the Ġebel Biḥair Piedmont. The latter consists of a chain of village-size sites set at a short distance along the same wadi (Saru Kani), thus suggesting a penetration route leading from the Tigris alluvium towards the hinterland, perhaps connected to the exploitation at a regional scale of natural resources set at the foot of the mountains. A similar pattern has been noticed, albeit at a larger and more organised scale, a few miles to the south, in the Jebel Zawa Piedmont, by the LONAP project.

In this picture, the Muqable cluster, set midway between river and mountains, may have functioned as a small hub within the proposed local network.

The broader eastern Tigridian plateau, moreover, already displays material evidence of an extensive cross-regional interaction with the surrounding societies of Upper Mesopotamia including the exchange of obsidian, other raw materials and crafted commodities, and technology and knowledge.

Conversely, as far as pottery production is concerned, the abandonment of the Ubaid legacy, begun in the entire Northern Fertile Crescent right after the mid-5th millennium, seems to have been a rather sluggish, gradual process at the foot of the Zagros Mountains, as is attested by some lingering elements in the pottery repertoire, such as the persistence of the painted tradition, mineral-tempering, and costly firing techniques down to the end of the LC2. These features seem to make up a local development of this very sector of the Zagros Piedmont.

Regarding further development in pottery, it might be stated that if a change or break is to be envisaged, then this must apparently occur at the cultural baseline of the LC3. In fact, it is at this stage that a decisive step toward serial production is taken, with the result that a clear loss of quality is traded in favour of a gain in speed of manufacture and subsequent labour specialisation. At this time, the region seems once more to have ceramically been clearly oriented towards the steppe of the Jazirah, as hinted by the fact that certain typical features of the North Mesopotamian “chaff-faced *koiné*” (such as

casseroles and hammerhead bowls) find their south-eastern-most border in the upper EHAS region.

Since the beginning of the LC3, moreover, a further path toward the formation of an urbanised landscape might be traced. Recent investigations along the Zagros Piedmont have shown that, within the entire area, urbanisation does not necessarily seem to be connected to the formation of large or centralised sites, but rather to the establishment of a strong network of small centres interacting at different levels (on this issue, Boaz Bruun Skuldbøl and Colantoni 2016a).

As sketched above, the EHAS region seems somewhat to follow this pattern, albeit to a lesser extent. Despite the absence of an explicit size-based settlement hierarchy, sites are scarcely randomly dispersed, but rather strictly aligned along old and new paths and trajectories. A certain degree of site interdependence is implied by the close proximity of some sites to one another.

The E-W riverine penetration route along the Ḥabur is extended eastwards, connecting with the Tigris hinterland thanks to a mountain crossing over the Zagros, namely the Zaxo pass. The SW-NE trajectory along the Wadi Saru Kani clearly survives, but is now embedded in a wider network spanning the whole left bank of the Tigris. Here, between the Middle and Late Uruk period, a series of strongholds are newly founded. As of yet, twelve new sites can be counted, about 1/3 of the overall amount of settlements attested in the period. As suggested by pottery assemblages, some of these new sites were clearly inhabited by both local and Southern Mesopotamian oriented communities (living side by side in the form of “enclaves”, or perhaps succeeding each other), while others seem to display an exclusively Southern Mesopotamian oriented taste within their material culture.

Given these premises, this new settlement dynamic along the Tigris seems to have been strongly affected and feasibly catalysed by the interaction between the expanding colonial trade network of the Southern Uruk city states and the polities of Upper Mesopotamia (according to models well explained in the past by Algaze 2008; Stein 1999, 2002b, 2012; also Rothman 2001) and, therefore, to be the outcome of direct contacts between lowland Mesopotamian communities and the populations set along the main routes between the Tigris Piedmont and Central Zagros.

The location of most such foundations up above a riverine lower terrace suggests, in turn, a strong bond with an ancillary exploitation of the alluvium, which becomes from now on a prime agricultural resource, as well as the desire to connect with the hinterland, the latter being fulfilled by the enhancement of all those aforementioned wadi routes reaching the

Iamoni 2018), we may assume that, were a main urban centre to have existed, it must be sought after either on the opposite bank of the Tigris, or further to the south.

Zagros Piedmont. In the latter area, as already stated, a chain of sites with older LC1-2 roots probably involved in the exploitation of local resources and/or in the manufacture of lithic artefacts had still survived, albeit displaying instead throughout their life a purely local repertoire. Exemplary in this sense is site B147, which precisely at this time almost doubles its size, reaching over 6 ha in extension. It might be proposed that the pre-existing system of resource management acting at a regional level was enlarged and finally embedded in a supra-regional network of trade and exchange. All this reinforces that, during the LC3-5, sites of varying functions and roles co-existed: “local” sites deeply rooted in the territory; outposts set along a series of penetration routes providing a more complex material culture associating (spatially, temporally?) local and Uruk influenced material; and, finally, new foundations, mostly on the riverside, with a purely Uruk-related repertoire. All of these may have been in a structural and not discontinuous relationship, and therefore are potentially to be regarded as forming part of one and the same integrated complex spreading pervasively across the landscape.

This multi-variate evidence of cultural encounter with Uruk Mesopotamia not only alters the picture achieved so far

by current investigations in Upper Iraqi Kurdistan, but also engenders further unsolved questions which only future field research along the Upper Iraqi Tigris and Ḥabur rivers may bring to a solution.

In understanding such a diversified panorama, the impact of temporality naturally remains a clue. A more precise chronological setting for the new foundations along the Tigris, in fact, becomes compelling in better distinguishing the role played by external forces in the above-sketches formation process. Whatever the initial impact of this might have been, worth stressing for the time being is that most of the LC3-5 sites, and especially the new riverine foundations and the Muqable cluster, provide intimations of a continuous occupation also in the terminal phase of the Uruk period and even later, in an age in which the Uruk trade network had collapsed and the true Uruk colonies of the Middle Euphrates and elsewhere had already perished.

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BIBLIOGRAPHY

- ABU JAYYAB K.
2012 A ceramic chronology from Tell Hamoukar’s southern extension. In: MARRO C. (ed.), *After the Ubaid. Interpreting change from the Caucasus to Mesopotamia at the dawn of urban civilization (4500-3500 BC)*: 87-127. Istanbul: Institut français d’Études anatoliennes (Varia Anatolica 27).
- ABU AL-SOOF B.
1964 Uruk pottery from the Dokan and Shahrazur districts and the distribution of Ninevite V pottery as revealed by field survey work in Iraq. *Sumer* 20: 37-45.
1968 Distribution of Uruk, Jemdet Nasr, and Ninevite V pottery as revealed by field survey work in Iraq. *Iraq* 30: 74-86.
- ALDEN J.R.
1988 Ceramic ring scrapers: An Uruk period pottery production tool. *Paléorient* 14,1: 143-150.
- ALDEN J.R. and MINC L.
2016 Itinerant potters and the transmission of ceramic technologies and styles during the Proto-Elamite period in Iran. *Journal of Archaeological Science: Reports* 7: 863-876.
- ALGAZE G.
2008 *Ancient Mesopotamia at the dawn of civilization. The evolution of an urban landscape*. Chicago and London: University of Chicago.
- ALGAZE G., HAMMER E. and PARKER B., collab. BREUNINGER R. and KNUDSTAD J.
2012 The Tigris-Euphrates reconnaissance project. Final report of the Cizre Dam and Cizre-Silopi plain survey areas. *Anatolica* 38: 1-115.
- AL QUNTAR S. and ABU JAYYAB K.
2014 The political economy of the upper Khabur in the Late Chalcolithic 1-2: Ceramic mass-production, standardization and specialization. In: MCMAHON A. and CRAWFORD H. (eds.), *Preludes to urbanism. The Late Chalcolithic of Mesopotamia. In honour of Joan Oates*: 89-108. Cambridge: University of Cambridge (McDonald Institute Monographs).
- AL QUNTAR S., KHALIDI L. and UR J.
2011 Proto-urbanism in the Late 5th millennium BC: Survey and excavations at Khirbat al-Fakhar (Hamoukar), Northeast Syria. *Paléorient* 37,2: 151-175.
- ALTAWHEEL M., MARSH A., MÜHL S., NIEUWENHUYSE O.P., RADNER K., RASHEED K. and SABER S.A.
2012 New investigations in the environment, history, and archaeology of the Iraqi Hilly flanks: Shahrizor survey project 2009-2011. *Iraq* 74: 1-35.

- ARRIVABENI M.
2019 Pottery. In: ROVA E. (ed.), *Associated regional chronologies for the Ancient Near East and the Eastern Mediterranean. Tigridian region*: 45-129. Turnhout: Brepols (ARCANE 5).
- BALDI J.S.
2012 Coba bowls production, use and discard: A view from Tell Feres al-Sharqi. In: MATTHEWS R. and CURTIS J. (eds.), *Proceedings of the 7th ICAANE, London, 12th-16th April 2010*. Vol. 1: 355-368. Wiesbaden: Harrassowitz Verlag.
2018 Chalcolithic settlements and ceramics in the Rania Plain and beyond: Some results of the French Archaeological Mission at the Governorate of Sulaymaniyah. In: HOREJS B., SCHWALL C., MÜLLER V., LUCIANI M., RITTER M., GIUDETTI M., SALISBURY R.B., HÖFLMAYER F. and BÜRGE T. (eds.), *Proceedings of the 10th ICAANE, Vienna, 25th-29th April 2016*. Vol. 2: 27-40. Wiesbaden: Harrassowitz Verlag.
- BALDI J.S. and ABU JAYYAB K.
2012 A comparison of the ceramic assemblages from Tell Feres al-Sharqi and Hamoukar. In: MARRO C. (ed.), *After the Ubaid. Interpreting change from the Caucasus to Mesopotamia at the dawn of urban civilization (4500-3500 BC)*: 163-180. Istanbul: Institut français d'Études anatoliennes (Varia Anatolica 27).
- BALL W.
1990 Tell al-Hawa and the development of urbanization in the Jazira. *Al-Rāfidān* 11: 1-28.
1997 Tell Shelgiyya: An Early Uruk "Sprig Ware" manufacturing and exporting centre on the Tigris. *Al-Rāfidān* 18: 93-104.
2003 *Ancient settlement in the Zammar region. Excavations by the British Archaeological Expedition to Iraq in the Saddam Dam Salvage Project 1985-1986. Vol. 1: Introduction and overview. Excavations at Siyana Ulya, Khirbet Shireena, Khirbet Karhasan, Seh Qubba, Tell Gir Matbakh and Tell Shelgiyya, and other recorded sites*. Oxford: Archaeopress (BAR Int. Ser. 1096).
- BALL W., TUCKER D.J., WILKINSON T.J. and BLACK J.A.
1989 The Tell al-Hawa Project: Archaeological investigations in the North Jazira 1986-87. *Iraq* 51: 1-66.
- BOAZ BRUUN SKULDBØL T. and COLANTONI C.
2016a Early urbanism on the margins of Upper Mesopotamia – Complex settlement patterns and urban transformations on the Rania Plain in northeastern Iraq. In: IAMONI M. (ed.), *Trajectories of complexity. Socio-economic dynamics in Upper Mesopotamia in the Neolithic and Chalcolithic periods*: 1-26. Wiesbaden: Harrassowitz Verlag (Studia Chaburensia 6).
2016b First results of the Rania Plain Survey. Salvage operations in the Dokan Dam inundation zone. In: STUCKY R.A., KAELIN O. and MATHYS H.-P. (eds.), *Proceedings of the 9th ICAANE, Basel, 9th-13th June 2014*. Vol. 3: 131-145. Wiesbaden: Harrassowitz Verlag.
- BUTTERLIN P.
2003 *Les temps proto-urbains de Mésopotamie. Contacts et acculturation à l'époque d'Uruk au Moyen-Orient*. Paris: CNRS Éditions.
- DIRECTORATE GENERAL OF ANTIQUITIES
1970 *Archaeological sites in Iraq*. Baghdad: State Board of Antiquities and Heritage.
1976 *Atlas of the archaeological sites in Iraq*. Baghdad: Directorate General of Antiquities.
- FRANGIPANE M.
2018 Different trajectories in state formation in Greater Mesopotamia: A view from Arslantepe (Turkey). *Journal of Archaeological Research* 26,1: 3-63.
- GAVAGNIN K., IAMONI M. and PALERMO R.
2016 The land of Nineveh Archaeological Project: The ceramic repertoire from the Early Pottery Neolithic to the Sasanian period. *BASOR* 375: 119-169.
- GUT R.V.
1995 *Das prähistorische Ninive: Zur relativen Chronologie der frühen Perioden Nordmesopotamiens*. Mainz: Philipp von Zabern (Baghdader Forschungen 19).
2002 The significance of the Uruk sequence at Nineveh. In: POSTGATE J.N. (ed.), *Artefacts of complexity: Tracking the Uruk in the Near East*: 17-48. Warminster: British School of Archaeology in Iraq (Iraq Archaeological Reports 5).
- HELWING B.
1999 Cultural interaction at Hassek Höyük, Turkey. New evidence from pottery analysis. *Paléorient* 25,1: 91-99.
- HIJARA I.
1973 Excavations at Tell Qalinj Agha (Erbil), fourth season 1970. *Sumer* 29: 59-80.
- HOURS F., AURENCHÉ O., CAUVIN J., CAUVIN M.-C., COPELAND L. and SANLAVILLE P.
1994 *Atlas des sites du Proche Orient (14000-5700 BP)*. Lyon: Maison de l'Orient méditerranéen (Travaux 24).
- HUSSAIN M.G.
1987 Excavations at Tell Sha'bu (Arabic). In: State Organization of Antiquities and Heritage (eds.), *Researches on the antiquities of Saddam Dam basin salvage and other researches*: 110-116. Baghdad: State Organization of Antiquities and Heritage.
- IAMONI M.
2014 L'Alto Tigri fra preistoria e protostoria. Sequenze stratigrafiche e occupazione del territorio dal Tardo Neolitico ceramico al Tardo Calcolitico. *Mesopotamia* 49: 91-111.
2018 A vital resource in Prehistory: Water and settlement during the Pottery Neolithic and Chalcolithic periods. A preliminary analysis of the Eastern Upper Tigris basin area. In: KÜHNE H. (ed.), *Water for Assyria: 7-24*. Wiesbaden: Harrassowitz Verlag (Studia Chaburensia 7).
- KEPINSKI C.
2011 New evidence from Grai Resh, Northern Iraq, the 2001 and 2002 seasons. A pre-Uruk expansion site from the Late Chalcolithic period. *Zeitschrift für Orient-Archäologie* 4: 26-81.
2014 Research in the Suleimaniyah province (Iraq): The Upper Tanjero survey. In: BIELŃSKI P., GAWLIKOWSKI M., KOLIŃSKI R., ŁAWECKA D., SOŁTYSIAK A. and WYGNAŃSKA Z. (eds.), *Proceedings of the 8th ICAANE, Warsaw, 30th April-4th May 2012*. Vol. 2: 149-164. Wiesbaden: Harrassowitz Verlag.
- KOLIŃSKI R.
2017 Settlement history of Iraqi Kurdistan: An assessment halfway into the project. *Polish Archaeology in the Mediterranean* 26,1: 579-590.

- KOPANIAS K. and MACGINNIS J. (eds.)
2016 *The archaeology of the Kurdistan region of Iraq and the adjacent area*. Oxford: Archaeopress.
- MARRO C.
2010 Where did Late Chalcolithic chaff-faced ware originate? Cultural dynamics in Anatolia and Transcaucasia at the dawn of the urban civilization (ca. 4500-3500 BC). *Paléorient* 36,2: 35-55.
2012 *After the Ubaid. Interpreting change from the Caucasus to Mesopotamia at the dawn of urban civilization (4500-3500 BC)*. Istanbul: Institut français d'Études anatoliennes (Varia Anatolica 27).
- MATTHEWS R.
2003 *Excavations at Tell Brak. Vol. 4: Exploring an Upper Mesopotamian regional centre, 1994-1996*. Cambridge: McDonald Institute for Archaeological Research.
- MCMAHON A. and CRAWFORD H. (eds.)
2014 *Preludes to urbanism. The Late Chalcolithic of Mesopotamia. In honour of Joan Oates*. Cambridge: University of Cambridge (McDonald Institute Monographs).
- MORANDI BONACOSI D. and IAMONI M.
2015 Landscape and settlement in the eastern upper Iraqi Tigris and Navkur plains: The land of Nineveh Archaeological Project, seasons 2012-2013. *Iraq* 77: 9-39.
- NEGRO F.
1998 Khirbet Hatara (Eski Mosul). Livelli 4a-5b-5a – La ceramica. *Mesopotamia* 33: 29-147.
- NUMOTO H.
1987 Tell Musharifa. In: State Organization of Antiquities and Heritage (eds.), *Researches on the antiquities of Saddam Dam basin salvage and other researches*: 49-54. Baghdad: State Organization of Antiquities and Heritage.
1990 Findings from Tell Jessary. *Al-Rāfidān* 11: 201-244.
- OATES J., MCMAHON A., KARSGAARD P., AL-QUNTAR S. and UR J.
2007 Early Mesopotamian urbanism: A new view from the North. *Antiquity* 81,313: 585-600.
- PEYRONEL L. and VACCA A.
2015 Northern Ubaid and Late Chalcolithic 1-3 periods in the Erbil plain. New insights from recent researches at Helawa, Iraqi Kurdistan. *Origini* 37: 89-128.
- PFÄLZNER and SCONZO P.
2015 First results of the eastern Ḫabur Archaeological Survey in the Dohuk region of Iarqi Kurdistan. The season of 2013. *Zeitschrift für Orient-Archäologie* 8: 90-122.
2016a The Eastern Ḫabur Archaeological Survey in Iraqi Kurdistan. A preliminary report on the 2014 season. *Zeitschrift für Orient-Archäologie* 9: 10-69.
2016b From the banks of Upper Tigris River to the Zagros Highlands. The first season (2013) of the Tübingen Eastern Ḫabur Archaeological Survey. In: KOPANIAS K. and MACGINNIS J. (eds.), *The archaeology of the Kurdistan region of Iraq and the adjacent area*: 323-331. Oxford: Archaeopress.
- PFÄLZNER P. and QASIM H.A.
2017 The first and second seasons of the German-Kurdish excavations at Bassetki in 2015 and 2016. *Zeitschrift für Orient-Archäologie* 10: 10-43.
- 2018 Urban developments in Northeastern Mesopotamia from the Ninevite V to the Neo-Assyrian periods. Excavations at Bassetki in 2017. *Zeitschrift für Orient-Archäologie* 11: 42-87.
- PFÄLZNER P., QASIM H.A., SCONZO P. and PULJIZ I.
2017 Report on the first season of German-Kurdish excavations at Muqable in 2015. *Zeitschrift für Orient-Archäologie* 10: 44-96.
- POSTGATE J.N. (ed.)
2002 *Artefacts of complexity: Tracking the Uruk in the Near East*: 123-148. Warminster: British School of Archaeology in Iraq (Iraq archaeological reports 5).
- REICHEL C.
2009 Hamoukar. *Oriental Institute Annual Report 2008-2009*: 77-87.
- ROAF M.D.
1998 A group of pottery from Mohammed 'Arab Period I. In: LEBEAU M. (ed.), *About Subartu: Studies devoted to Upper Mesopotamia*: 131-149. Turnhout: Brepols (Subartu 4).
- ROTHMAN M.S.
1993 Another look at the "Uruk Expansion" from the Tigris Piedmont. In: FRANGIPANE M., HAUPTMANN H., LIVERANI M., MATTHIAE P. and MELLINK M. (eds.), *Between the rivers and over the mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri dedicata*: 162-176. Rome: Sapienza Università di Roma.
2001 *Uruk Mesopotamia and its neighbors. Cross-cultural interactions in the era of state formation*. Santa Fe: School of American Research Press (Advanced seminar series).
- ROTHMAN M.S. and BLACKMAN M.J.
2003 Late fifth and early fourth millennium exchange systems in Northern Mesopotamia: Chemical characterization of sprig and impressed wares. *Al-Rāfidān* 24: 1-24.
- ROVA E.
1993 Pottery. In: WILHELM G. and ZACCAGNINI C. (eds.), *Tell Karrana 3. Tell Jikan, Tell Khirbet Salih*: 37-136. Mainz: Philipp Von Zabern (Baghdader Forschungen 15).
2000 A tentative synchronisation of the local Late Chalcolithic ceramic horizons of Northern Syro-Mesopotamia. *Mesopotamia* 34-35: 175-199.
2003 Tell Karrana 3: Ceramic evidence for the Late Uruk/Ninevite 5 transition. In: ROVA E. and WEISS H. (eds.), *The origins of North Mesopotamian civilization: Ninevite 5 chronology, economy, society*: 11-23. Turnhout: Brepols (Subartu 9).
2011 Ceramic. In: LEBEAU M. (ed.), *Associated regional chronologies for the Ancient Near East and the Eastern Mediterranean. Vol. 1: Jezirah*: 49-127. Turnhout: Brepols (ARCANE 1).
- SCHWARTZ G.M.
1988 *A ceramic chronology from Tell Leilan: Operation I*. London-New Haven: Yale University Press (Tell Leilan Research 1).
- STATE ORGANIZATION OF ANTIQUITIES AND HERITAGE
1987 *Researches on the antiquities of Saddam Dam basin salvage and other researches*. Baghdad: State Organization of Antiquities and Heritage.
- STEIN G.J.
1999 *Rethinking world-systems: Diasporas, colonies and interaction in Uruk Mesopotamia*. Tucson: University of Arizona Press.
2001 Indigenous social complexity at Hacinebi (Turkey) and the organization of Uruk colonial contact. In: ROTHMAN M.S. (ed.), *Uruk*

- Mesopotamia and its neighbors. Cross-cultural interactions in the era of state formation*: 265-305. Santa Fe: School of American Research Press.
- 2002a The Uruk expansion in Anatolia: A Mesopotamian colony and its indigenous host community at Hacinebi, Turkey. In: POSTGATE J.N. (ed.), *Artefacts of complexity: Tracking the Uruk in the Near East*: 149-171. Warminster: British School of Archaeology in Iraq (Iraq archaeological reports 5).
- 2002b From passive periphery to active agents: Emerging perspectives in the archaeology of interregional interaction. *American Anthropologist* 104,3: 903-916.
- 2012 The development of indigenous social complexity in Late Chalcolithic Upper Mesopotamia in the 5th-4th millennia BC. An initial assessment. *Origini* 34: 125-151.
- STRONACH D.
- 1994 Villages to Metropolis: Nineveh and the beginning of urbanism in Northern Mesopotamia. In: MAZZONI S. (ed.), *Nuove fondazioni nel Vicino Oriente antico: realtà e ideologia*: 85-114. Pisa: Giardini (Seminari di orientalistica 4).
- TOBLER A.J.
- 1950 *Excavations at Tepe Gawra. Vol. 2*. Philadelphia: University of Pennsylvania Press (Museum Monographs).
- UR J.
- 2010 *Urbanism and cultural landscapes in Northeastern Syria. The Tell Hamoukar survey 1999-2001*. Chicago: University of Chicago (Oriental Institute Publication 137).
- UR J., KARSGAARD P. and OATES J.
- 2011 The spatial dimension of early Mesopotamian urbanism: The Tell Brak survey, 2003-2006. *Iraq* 73: 1-19.
- VALLET R., BALDI J.S., NACCARO H., RASHEED K., SABER S.A. and HAMARASHEED S.J.
- 2017 New evidence on Uruk expansion in the Central Mesopotamian Zagros Piedmont. *Paléorient* 43,1: 61-87.
- WENGROW D., CARTER R., BRERETON G., SHEPPERSON M., HAMARASHI S.J., SABER S.A., BEVAN A., FULLER D., HIMMELMAN H., SOSNOWSKA H. and GONZALEZ CARRETERO L.
- 2016 Gurga Chiya and Tepe Marani: New excavations in the Shahrizor Plain, Iraqi Kurdistan. *Iraq* 78: 253-284.
- WILHELM G. and ZACCAGNINI C.
- 1993 *Tell Karrana 3. Tell Jikan, Tell Khirbet Salih*. Mainz: Philipp Von Zabern (Baghdader Forschungen 15).
- WILKINSON T.J.
- 2006 Archaeological regions in the neighborhood of Carchemish. In: PELTENBURG E. (ed.), *Euphrates River valley settlement. The Carchemish sector in the third millennium BC*: 27-42. Oxford: Oxbow (Levant Suppl. 5).
- WILKINSON T.J. and TUCKER D.J.
- 1995 *Settlement development in the North Jazira, Iraq. A study of the archaeological landscape*. Warminster: Aris and Phillips (Iraq Archaeological Reports 3).
- WILKINSON T.J., PHILIP G., BRADBURY J., DUNFORD R., DONOGHUE D., GALIATSATOS N., LAWRENCE D., RICCI A. and SMITH S.L.
- 2014 Contextualizing early urbanization: Settlement cores, early states and agro-pastoral strategies in the Fertile Crescent during the fourth and third millennia BC. *Journal of World Prehistory* 27,1: 43-109.
- WRIGHT H.T. and RUPLEY E.S.A.
- 2001 Calibrated radiocarbon age determinations of Uruk-related assemblages. In: ROTHMAN M.S. (ed.), *Uruk Mesopotamia and its neighbors. Cross-cultural interactions in the era of state formation*: 85-122. Santa Fe: School of American Research Press.