

STRAINERS: OBSERVATIONS ON A DISTINCT TYPE OF NEOLITHIC AND CHALCOLITHIC POTTERY IN THE Khabur Valley (NORTHEASTERN SYRIA)

Anna Hanzelková*, Maximilian Wilding*

El artículo se centra en la distribución de coladores/tamices en el valle de Khabur durante los periodos Neolítico final y Calcolítico. Se pretende corroborar la concurrencia de estos vasos dentro de los conjuntos cerámicos de los yacimientos estudiados mediante gráficos y tablas. En base a las evidencias arqueológicas se proponen nuevos caminos para el estudio funcional de estos artefactos en el Medio Oriente.

Valle del Khabur, Coladores, Tamices, Ceràmica, Neolítico Final, Calcolítico.

The paper focuses on the distribution of strainers/sieves in the Khabur Valley during the Late Neolithic and Chalcolithic periods. This contribution tries to substantiate the rare occurrence of this vessel type within the ceramic assemblages of sites in the named area by the use of graphs and tables. On the basis of the evidence, new paths are suggested for a further research of this functional type of Middle Eastern pottery.

Khabur Valley, strainers, sieve, pottery, Late Neolithic, Chalcolithic.

207

INTRODUCTION

This investigation focuses on the distribution of strainers (also labeled 'sieves' or 'colanders') in the Khabur Valley region during the Late Neolithic and Chalcolithic period. By a 'strainer', we mean a vessel, often plain and made from coarse paste that is perforated by holes (Nieuwenhuyse 2007, 111). Our interest in this particular type of pottery derives from past Czech excavations at the Late Neolithic site of Tell Arbid Abyad (Masaryk University, 2006 - 2010) as well as from our current collaboration between Masaryk University and Yale University in the analysis of yet unpublished pottery material that was collected by the Khabur Basin Survey Project (director: Frank A. Hole, Department of Anthropology/Yale University) during the years 1984 - 1997. As a consequence of this ongoing study of survey material, the paper attempts to express the vaguely felt scarcity of perforated vessels in the pottery

assemblages of the region in more exact, *quantitative* terms. In order to achieve this, the amount of strainer fragments from a site is put in direct relation to a comparison sample: the best suited non-perforated pottery assemblage available at the respective site.

AIMS AND METHODS

Whereas published sources about strainers found in Europe do exist, e.g. Bogucki (1984) on Neolithic strainers or Valentová and Šumberová (2012) on specimen dated back to the La Tène period, for Upper Mesopotamia there are still no contributions that deal with the issue of the strainers or report their quantities in relation to a other pottery material that has been retrieved from site. Exceptions for the Late Neolithic of the Near East are, for example, the findings of strainers at sites like Tell Sabi Abyad (Nieuwenhuyse 2007) and Tell el-Kerkh

* Centre of Prehistoric Archaeology of the Near East (PANE), Department of Classical Studies, Faculty of Arts Masaryk University, Brno, Czech Republic. AnnaHanzelkova@seznam.cz; max.wilding@phil.muni.cz.

(Tsuneki *et al.* 2000), where subsequent analysis have revealed traces of animal fat, possibly milk (Tsuneki *et al.* 2000, 36), which could be associated with the production of dairy products (Gouin 1990). Currently, this type of perforated sherds is often subsumed in the 'Miscellaneous' or 'Others' categories of found objects, or, in some cases (Matsutani 1991, 24; Çilingiroglu 2009; McMahon *et al.* 2009, 188; Al Quntar 2010, 56), marginally mentioned. This was the reason to undertake an investigation that focuses upon the actual rate of strainer-finds in the chosen region (Khabur Valley).

Apart from the Khabur Basin Project ceramic assemblages, the main body of evidence used for the research consists of the reports, papers, publications, catalogues and various unpublished sources - table of sites, radiocarbon dates, paper drafts - and personal information provided by professor emeritus Frank Hole about his Yale Khabur Basin Survey Project (in the following: KBP). Additionally, this contribution builds upon the published data of other smaller and larger sites in the Khabur region which have been described in the wake of field projects such as *surveys* - namely the

KBP (Hole 1993/1994), the Rescue Project of Jean-Yves Monchambert (1984), the Project of Tübinger Atlas des Vorderen Orients (Röllig/Kühne 1983; 1987/88), the prospection project of Bertille Lyonnet (Lyonnet 2000; Nieuwenhuys 2000), the Tell Hamoukar Survey Project (Ur 2010), the Tell Beydar Survey Project (Nieuwenhuys/Wilkinson 2008; Ur/Wilkinson 2008), Tell Arbid Prehistoric Survey (Mateiciucová *et al.* 2012) - and *excavations* at sites like Tell Arbid Abyad (Mateiciucová 2010; Mateiciucová/Wilding 2010), Tell Boueid II (Nieuwenhuys/Suleiman 2002; Nieuwenhuys *et al.* 2002), Tell Halaf (Lutz 2012; Becker 2015; Tell Halaf, online), Tell Kashkashok (Koizumi 1993; Matsutani 1991), Tell Chagar Bazar (McMahon *et al.* 2001; 2005; Cruells/Nieuwenhuys 2004; Cruells 2006; Cruells and Molist 2006), Tell Brak (Oates/Oates/McDonald 1997; 2001; Matthews 2003), Tell Leilan (Weiss 1983; 1985; Weiss *et al.* 1990; Brustolon/Rova 2007) and Tell Ziyadeh (Arzt 2001; Hole 2000a, 2000b; Hole/Arzt 1998; Hole/Tonnoike 2016). All strainer sherds found by the Khabur Basin Project in the 1980 and 1990ies were described with the aid of a database created on the basis of the

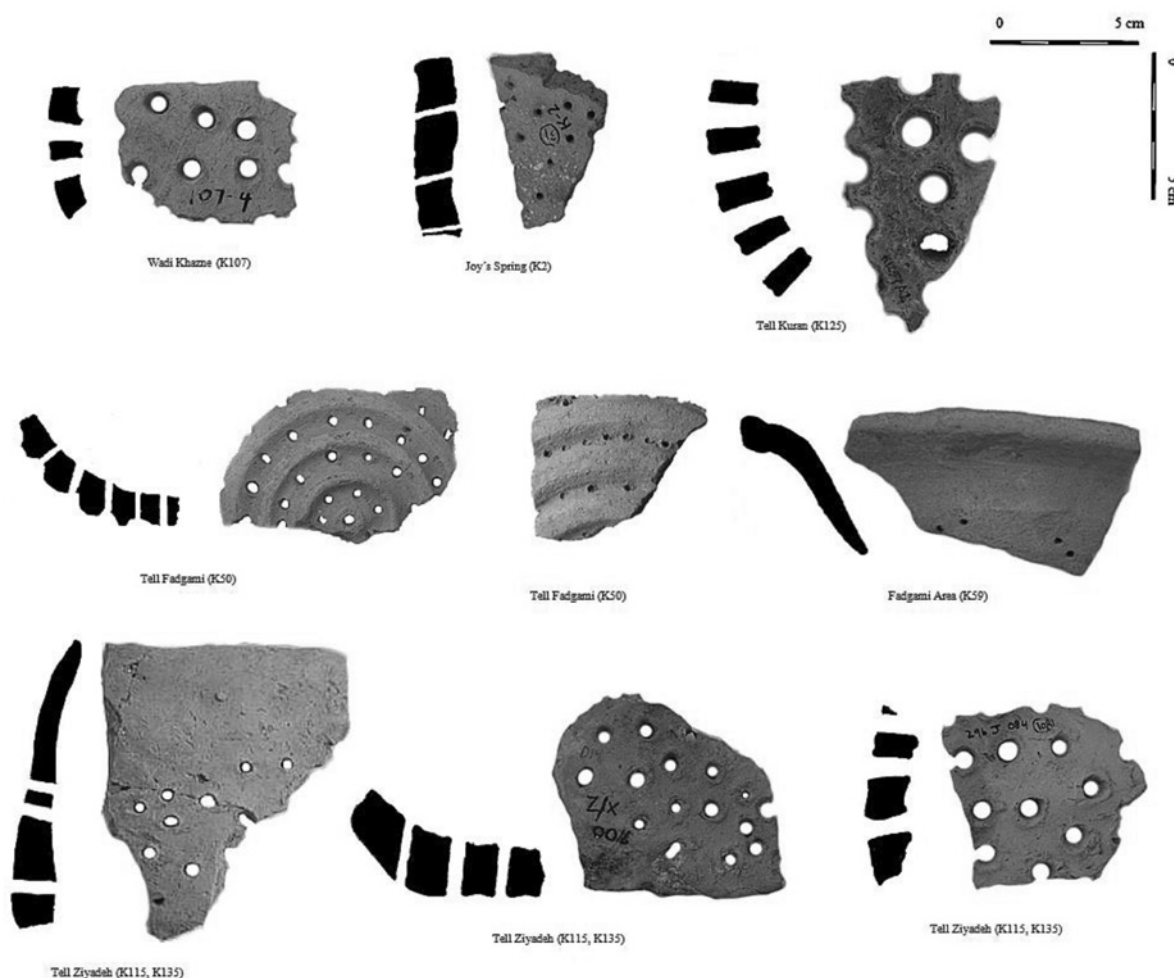


Figure 1. The strainer sherds found by the Yale Khabur Basin Survey Project (1988 – 1997).

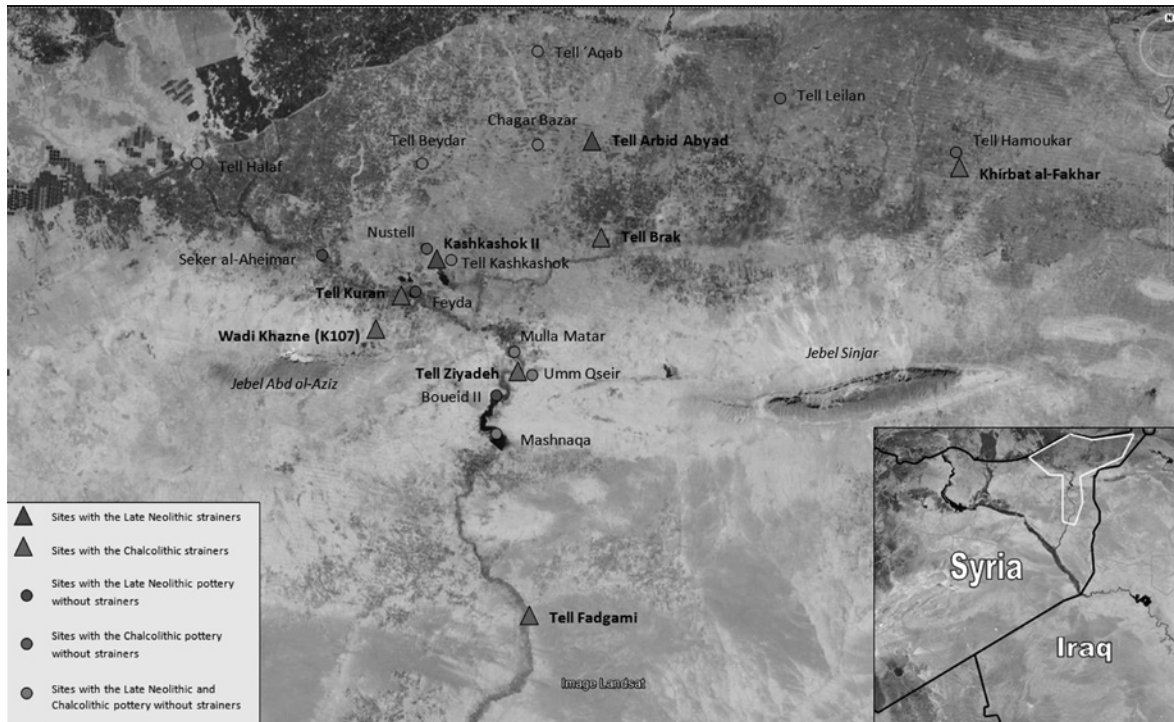


Figure 2. Late Neolithic and Chalcolithic sites with/without strainers in the Khabur region (based on Google Earth, 2015).

description and classification system that has been developed by Olivier Nieuwenhuyse for the Late Neolithic pottery of Tell Sabi Abyad (Nieuwenhuyse 2007)¹. Furthermore, the KBP strainers have been documented by photos and drawings (Fig. 1). Pottery assemblages presented in published sources by other projects have been searched for 'strainers' or other terms that are in common use for that kind of pottery ('perforated vessels', 'sieves', 'colanders') (Fig. 2). In some cases, the amount of strainers in the pottery assemblages were explicated by drawing up graphs (Fig. 3 a and b; Fig. 5 a and b) which serves to visualize the frequency of strainers in the bulk of pottery found at a particular site².

The rationale of the selection has been to obtain as much concrete information on strainers in the Khabur region as possible and to try to show the number of strainer findings in relation to the 'nearest' existing body of non-strainer sherds, both in a temporal as well as spatial sense. However, it has not been within the scope of the present paper (which is based on a BA thesis – Hanzelková 2015) to present all the sites within the Khabur region but only a sample that would serve the investigative purpose. The authors of the paper are fully

aware of the differing quality of sources and published data, as well as the differences in the systematization of the research projects and the varying sizes of the investigation areas. Despite these shortcomings, it is hoped that the overall aim of this paper is achieved: by highlighting the *factual trend* on strainer-remains to serve as lever for further studies on this underrated type of Upper Mesopotamian ceramics (see Fig. 4).

RESULTS

Via the study of the material from the Khabur Basin Survey Project and published sources, the following specimens could be identified in the Khabur Valley: *four Neolithic strainer sherds* coming from three out of a total of 135 investigated sites, and *16 Chalcolithic strainer sherds* coming from seven of the 92 examined sites. Of the 20 Khabur strainers in total, eleven stem from five sites in the Khabur headwaters. Two body sherds were discovered at Tell Kashkashok II during the excavations in 1987 and 1988 in K/9-1 and G/12/1 (Layer 1, Proto-Hassuna period) (Matsutani 1991, 19, 24, PL 63-6, 7). At Tell Arbid Abyad, one body sherd

1. A standard description has already been used by the Masaryk University team for investigation of the Late Neolithic pottery at the site Tell Arbid Abyad (Vostrovská *et al.* 2011).

2. Because the data for the calculations were obtained from manifold sources it is likely that not all strainers are listed here that were found at the mentioned sites. What nevertheless becomes apparent, however, is the over-all trend.

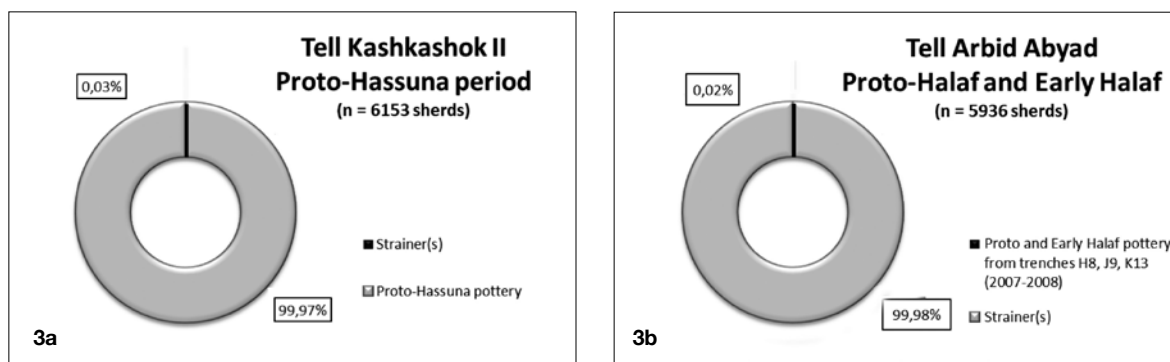


Figure 3. 3a: The amount of comparison sherds and the percentage of ceramic strainers within the Proto-Hassuna pottery assemblage of Layers 3 and 4 at Tell Kashkashok II. 3b: The amount of comparison sherds and the percentage of ceramic strainers within the Proto and Early Halaf pottery assemblages of Tell Arbid Abyad.

was found in 2008 just under the topsoil of Trench K13 (with pottery mostly dated to the Early Halaf period) (Vostrovská *et al.* 2011, Fig. 135:12 Mateiciucová pers. com.). The area of 'Joy's Spring'/KBP K2, with the discovery of one strainer sherd, was surveyed in

1988 by KBP. At Tell Kuran one body sherd was found in 1990 in Area A2 (Ubaid period) (Hole/Kouchoukos in press; Hole *et al.* in press, 5-6). The area of Wadi Khazne/K107 was surveyed in July 1988 and June 1995 within the Khabur Basin Project with the discovery

210

Region	Site	No. of strainer	Dating of strainer	No. of comparison sherds	Dating of the comparison sherds	Percentage of strainers	References
Upper Khabur Basin	Kashkashok II	2	Proto-Hassuna (Layer 1)	6 151	Hassuna Coarse Ware	0,03%	Matsutani 1991
	B. Lyvonné's project - Hassuna sites	0		1 485	Hassuna Coarse Ware	0,00%	Le Miére 2000
	B. Lyvonné's project - Halaf sites	0		1 098	Halaf Fine Ware	0,00%	Nieuwenhuyse 2000
	THS - Hassuna sites	0		88	Hassuna (diagnostic)	-	Ur 2010
	THS - Halaf sites	0		228	Halaf (diagnostic)	-	Ur 2010
	Tell Arbid Abyad	1	Early Halaf (Trench K13)	5 936	Proto and Early Halaf (trenches H8, J9, K13)	0,02%	Vostrovská <i>et al.</i> 2011; Mateiciucová (pers. com.)
	(Trench K13)			2 694	Early Halaf (K13)	0,04%	Vostrovská <i>et al.</i> 2011; Mateiciucová (pers. com.)
	Tell Halaf	0		-	Late Neolithic, LC3	-	
	TBS - Late Neolithic sites	0		523	Late Neolithic	0,00%	Nieuwenhuyse and Wilkinson 2008
	Chagar Bazar	0		6 077	Late Neolithic (Area E)	0,00%	Craels 2006
	Joy's Spring (K2)	1	Late Neolithic	-	-	-	Hole (KBP)
	Tell Kuran (K93, K125)	1	Northern Ubaid (Area A)	381	Ubaid (diagnostic from Area A, B, C, D, E)	0,26%	Hole and Kouchoukos in press a; Hole <i>et al.</i> 1990
	Khirbat al-Fakhar	1	LC2 (Area Z)	401	LC1-2 (diagnostic of central mound)	0,25%	Al Quntar 2010; Ur 2010
	Wadi Khanze (K107)	1	Halaf, Ubaid, LC1-2	-	-	-	information provided by F. Hole (KBP)
	Tell Brak	4	LC3-5 (Trench CH B, HF)	-	-	-	Fielden 1981; Matthews 2001
	Tell Hamoukar	0		301	LC3-5 (diagnostic from sampling units)	0,00%	Ur 2010
	THS - Chalcolithic sites	0		1 160	Chalcolithic (diagnostic)	-	Ur 2010
	Nustell			-	LC3-5	-	Schwartz 2001
	Tell Leilan Project	0		947	Late Chalcolithic	0,00%	Brustolon and Rova 2006; 2007
	Umm Qseir	0		8 200	Halaf	0,00%	Miyake 1998
Middle Khabur Valley	Umm Qseir	0		11 596	Halaf	0,00%	Hole and Johnson 1986-87
							Nieuwenhuyse and Sulciman 2002; Nieuwenhuyse <i>et al.</i> 2002
	Boueid II	0		2 960	Late Neolithic	0,00%	
	Ziyadeh (K135)	6	Northern/Post-Ubaid	3 011	Northern/Terminal Ubaid (Area J I, J II)	0,20%	Arzt 2001; Hole (pers. com.)
							Hole and Kouchoukos in press a; Hole <i>et al.</i> 1990
	Mashnaga	0		461	Ubaid, Post-Ubaid	0,00%	Monchambert 1984
Lower Khabur Valley	Mulka Matar	0		-	Uruk	-	
	Tell Fadgami (K50)	2	Uruk	-	-	-	information provided by F. Hole (KBP)
	Fadgami Area (K59)	1	Uruk	-	-	-	information provided by F. Hole (KBP)
	Total	20					

Figure 4. The Late Neolithic and Chalcolithic ceramic strainers of the Khabur Valley in relation to the comparison sherds.

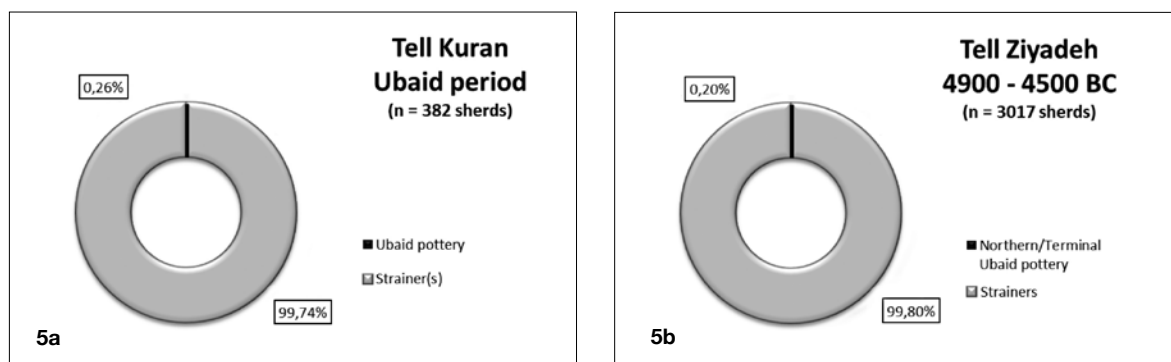


Figure 5. 5a: The amount of comparison sherds and the percentage of ceramic strainers within the Ubaid pottery of Tell Kuran (Area A, B, C, D, E). 5b: The amount of comparison sherds and percentage of ceramic strainers within the Northern and the Terminal Ubaid pottery assemblages of Tell Ziyadeh uncovered since 1997.

of one strainer body sherd. A single body sherd was recognized in the Hamoukar Southern Extension, Area Z, Phase 2 (LC2 period), which was excavated during the seasons 2005-2006 and 2008 (Al Quntar 2010, 50-56, 114 Fig. 3.25; Ur 2010, App. B, 231-240, App. C, 359-360). Three body sherds were found at Tell Brak in the HF spur, units A7020, A7044, A7046 (Late Uruk period) (Matthews 2003, 10-13, 18-19, Fig. 2.7: 23, 20-21, Fig. 2.8: 7, 9) and one strainer body sherd was excavated in Trench CH B, Phase 4 (Fielden 1981, PL 5:23). Furthermore, six strainers were uncovered at the site of Tell Ziyadeh in the Middle Khabur Valley - three of them were found during the Khabur Basin Project and three other strainer sherds were discovered during the salvage excavations in 1995-1997 in Area J, level 2 and 13 (Ubaid and post-Ubaid period) (Arzt 2001, 21-24, 126-127; Hole 2000a; 2000b; Hole/Arzt 1998). The remaining three specimens (dating to the Uruk period) come from Tell Fadgami (K50) and its surroundings (K59), which were located and surveyed in July 1988 during the KBP. Although two of these strainers, the first from Tell Fadgami and the second from its surroundings, have very small holes and do not have a totally typical shape, they are undoubtedly part of this "strainer collection" (Fig. 5b).

DISCUSSION

Even if we consider the above data on the occurrence of Late Neolithic and Chalcolithic age strainers in the Khabur Valley to be incomplete, the results lead to a striking realization: the strainers are reported exclusively in very small numbers - with the percentage of their occurrence in the ceramic materials invariably hovering around '1' (*irrespective of the size, the design or the actual circumstance of the survey or excavation, and irrespective of whether this relates to tangible sherd collections or published information*).

In the case of the Middle Khabur, the number of existing strainers may be kept low by the fact that some of the archaeological sites along the river have become inaccessible after the construction of the Hassake-South dam. Still, it is remarkable that - except for the site Tell Ziyadeh - a whole series of *large and well-studied excavation sites* in the Khabur Valley like Tell Halaf (Lutz 2012; Becker 2015; Tell Halaf, online), Tell Chagar Bazar (McMahon *et al.* 2001; 2005; Cruells/Nieuwenhuyse 2004, 53-56; Cruells 2006; Cruells/Molist 2006), Tell Brak (Oates/Oates/McDonald 1997; 2001; Matthews 2003) and Tell Leilan (Weiss 1983; 1985; Weiss *et al.* 1990; Brustolon/Rova 2007) have produced either very few strainer sherds, or none at all. Equally, none of the other above-mentioned renowned surveys like Jean-Yves Monchambert's Survey (Monchambert, 1984), Bertille Lyonnet's Prospection Survey (Lyonnet 2000; Nieuwenhuyse 2000) the Tell Beydar Survey (Nieuwenhuyse/Wilkinson 2008; Ur/Wilkinson 2008), and the Tell Hamoukar Survey (except THS 25) (Ur 2010) report many strainers (this time dating between the late 7th to 4th millennium) in their respective published sources.

Such observation leads to specific questions: are the lacunae of strainers perhaps just a characteristic of the Khabur Valley? When taking a look now at an adjacent river basin, the Balikh Valley, it turns out that - according to the published data - the well-excavated Late Neolithic site of Tell Sabi Abyad I has likewise brought forward only two strainers among the bulk of 49,974 Late Neolithic potsherds, 89% of which consists of plant-tempered Standard Ware (Nieuwenhuyse 2007, 53, Table 4.3.1., 111). At another site in the Balikh Valley, Tell Tawila, no strainer sherds were discovered (Becker 2015). Also, one of the first consequences of this persistent trend is that the interpretation of strainers as a 'basic commodity' (e.g. Matthews 2003, 197-199) (which underlies many past and current interpretations of strainers) comes under pressure. Simply said: if clay functional strainers have served mundane

Cal. BCE	Period	Tell Arbid Abyad	Khirbet al-Fakhar	Tell Brak	Kashkashok II	Tell Kuran	Wadi Khazne (K 107)	Joy's spring (K2)	Tell Ziyadeh	Tell Fadgami (K50)	Fadgami Area (K59)	
												3 000
3 100										Δ Δ	Δ	
	LC5			Δ Δ Δ Δ								
3 300												
	LC4											3 500
3 600												
	LC3											
3 850			Δ									
	LC2											4 000
4 200							Δ					
	LC1								Δ Δ Δ			
4 500												4 500
						Δ						
	Northern Ubaid											
												5 000
5 100									Δ Δ Δ			
	HUT											
5 300								Δ				
	Late Halaf											
5 500												5 500
	Middle Halaf											
5 700												
	Early Halaf	Δ										
5 900												6 000
6 100	Proto-Halaf											
	Pre-Halaf/Proto-Hassuna				Δ Δ							
6 300												
												6 500

Figure 6. The number of Khabur Valley strainers in relation to the considered archaeological periods (n = 20).

food processing purposes, should we not expect to find remains of them more often in the assemblages of archaeological potsherds? No matter what it remains an enigma why such a *well-defined, easily reproducible and archaeologically highly 'visible' pottery-type* has been, in some instances, expertly produced on

the one hand, and on the other hand occurs in very low numbers only in the materials of well-studied and well-preserved sites in Upper Mesopotamia, across a range of archaeological ages. The scope of the present text permits only to briefly touch on three major factors (A, B, C) which could in theory lead to the per-

sistently low number of remains of this artifact type in the archaeological record of the region:

A. 'Cultural factor'. Ceramic strainers *were not produced* in larger numbers. Ceramic strainers (despite their assumed usefulness and ease of making) had *de facto* been items which have been infrequently produced and used by occupants of the Khabur Valley throughout major cultural periods, perhaps on account of the existence of an even better suited alternative that tended not to be preserved (*matted or wickerwork utensils*).

B. Preservation factor. Ceramic strainers *did not survive* in larger numbers. For some yet unknown reason, taphonomical agents affect the strainer sherds more easily over time than plain pottery sherds of the same dimensions.

C. Documentation factor. Ceramic strainers *have not been recorded* in larger numbers. Strainer sherds are somehow misrepresented in field-archaeological and find-administrative records. During find administration they tend to be subsumed in unspecific categories like 'Others' or 'Miscellaneous' (perhaps due to their infrequent appearance?), and thus have an even higher chance to disappear from the published data on ceramics.

It is proposed that novel research on Mesopotamian strainers could aim at ruling out some of the above basic variants by the following rationale.

Turning to the 'cultural' factor first, a plausible explanation seems to be that the mundane filtering-function of ceramic strainers could have been simply fulfilled by an analogous implement in most cases. Indeed, the complete vacuum of any functional substitute for ceramic strainers in the archaeological record makes a strong case for assuming that the inferred objects have been *highly perishable*.

It is tempting to think of some kind of *organic, matted or wickerwork sieving utensil* in this connection (Valentová/Šumberová 2012, 343). To be specific, basketry products can supposedly be handled with greater ease (notably if one hand is busy with pouring) than flat, flexible mats, or items made out of some sort of canvas. Consequently, basketry products - stable in shape - could have been more in use than ceramic strainers on the

account of *their instant availability, serviceability and their higher throughput while sieving*.

The possibility to actually prove the existence of organic strainers is restricted by the preservation problem of wickerwork. If, however, we adopt this view point, then, easy to furnish, light-weighted, unbreakable (plaited) sieving devices (multi-purpose?) should have been widely in use by farming households³, perhaps in matching forms over millennia. Furthermore, if strainers of organic origin should indeed have been that extensively used, then their faint remains might also appear in the trenches sooner or later in association with storage vessels or food processing areas (a factor to at least consider in the future when coming across remains of plaited material in the trenches⁴).

The caveat of this 'alternative strainers explanation' is that it does not explain the principal occurrence of prehistoric ceramic strainers that look no different from colanders of clay, which are produced and used in many parts of the world today. It is a matter-of-fact that the few specimens that we have from the Khabur (see Fig. 1) all point to a full-fledged, entirely functional vessel-type whose purpose in all likelihood has been to separate a liquid component from the rest of a primary substance.

However, since we are dealing here with earthen products, *temperature* should perhaps be taken into the consideration. Could, for instance, boiling liquids damage basketry strainers out of common organic materials and render them unusable? In the said case (i.e., the straining of boiling liquids) ethnoarchaeological research backed-up by experimental archaeology should be a novel way to approach Khabur Valley type clay strainers⁵.

Looking at cause B ('preservation factor'), another factor to explain the low frequency of actual finds of ceramic strainers could be a (yet unknown) structural property of the strainer sherds that limits their capabilities to withstand the effects of artifact aging. This would be a specific quality of strainer vessels that spurs their disintegration, somehow reduces the life-span of strainer sherds in comparison to plain sherds, and lowers their chance of being encountered on the surface and in the trench.

3. A focused ethnographic-ethnoarchaeological investigation in appropriate regions in the vicinity should be staged to verify or reject the matter-of-fact usage of strainers made from perishable (organic) materials.

4. Limited (rounded?) patches of plaited material found during excavating could sometimes represent sieves or spherical baskets rather than square mats.

5. Another *thermal use* of perforated clay vessels needs to be mentioned here too: ceremonial incense-burning. The recent-ethnographic Greek incense burner (καπνιστήρι/ *kapnistiri*) e.g., is in some cases likewise made of course clay and perforated (London *et al.* 1990; Ionas 1998; 2000; Demetriou 2001). The perforations, however, are fewer, more widely spaced, and for practical reasons they are never found in the *lowest part* of the implement where usually multiple small supports or a base ring sit for practical reasons (= a characteristic that may help to discern sieving items from incense burners archaeologically).

One notable structural difference with common sherds in this respect is that many tiny holes are punched through the wall of ceramic strainers that, under mechanical stress, may act like the perforations that we know from postage stamps blocks and other applications that possess *predetermined breaking points*. It would not be illogical to assume that, as a consequence of the regularly spaced holes, breaks should spread more easily in strainer sherds than in plain sherds of comparable material, thickness and dimension. Not only this: each of the perforations that are relatively tightly packed allows agents that are detrimental to pottery conservation (humidity, salt, frost etc.) deep access to the sherd's core material, contrary to the case of the ordinary sherd.

Henceforth it would be worthwhile to undertake (comparative) taphonomic experiments with modeled strainer sherds to assess their ability to withstand effects of mechanical stress/physicochemical exposure, in comparison to similar dimensioned plain sherds. Should strainers turn out to be inferior in this regard, it should be taken into account when reflecting on the cultural practice - for example, when making assumptions about how important and widespread ceramic strainers have been in the Khabur region during Late Neolithic and Chalcolithic times.

Finally, when considering cause C (Documentation factor), it does not deserve much elaboration to claim that the effect of not having a separate category for ceramic strainers in routine excavation documentation will twist our perception of the frequency and cultural significance of clay strainers in that region. Once fed to the broad and indeterminate class of 'Others' in field documentation and find administration, this kind of 'odd' sherds would have low chances to resurface during the later analytical stage of knowledge production (cf. Al Quntar 2010, 56; Çilingiroglu 2009; Matsutani 1991, 24; McMahon 2009, 188). However, it can also be assumed that the characteristic perforated sherds will not be easily overlooked by archaeologists or the people employed in sherd-washing. Judging from how, commonly, the main find categories at a new site become assigned over time (usually following a pragmatic 'first come, first serve'-principle), one may assume that perforated strainer sherds do indeed occur in low frequencies only - otherwise this *especially ostentatious, functional ceramic type* would quite likely form an independent find category early on. Still, in order to rule out that a crude sampling error enters artifact interpretation, it makes sense to check the 'Miscellaneous' category at sites with a long-standing research tradition, also with a view of better supporting

the fact that perforated clay vessels appear in negligible numbers in the first place.

CONCLUSION

The submitted paper aims to quantify and visualize the rare occurrence of strainers in the pottery assemblages of the major Late Neolithic and Chalcolithic sites in the Khabur Valley region. Two bodies of evidence were considered: (1) actual survey material (from the Yale Khabur Basin Survey Project in the 1980/90ies) and (2) published data from the most prolific archaeological projects in the region (both surveys and excavations). The visualization aim is supported by using tables and graphs which display the percentages of strainers in relation to representative pottery assemblages that are pertinent to the same time horizon/place to which the ceramic strainer finds belong. (For this purpose the most suited and well-dated comparison samples of plain pottery at a site have been sought for).

Within the scope of the initially defined criteria, only 20 *strainer sherds in total* (four dating to the Late Neolithic and 16 belonging to the Chalcolithic period) have been identified in the Khabur Basin Project survey material as well as in the publications of the major projects considered in this contribution⁶. The eleven strainers attested for the Upper Khabur Valley originate from seven individual (surveyed/excavated) sites (see Fig. 4). In the Middle Khabur Valley all six strainer fragments stem from a single site, Tell Ziyadeh (KBP), and they are dating to the Ubaid period. Likewise, in the Lower Khabur Valley the remaining three strainer sherds have come from a single site. The said Uruk sherds have been found when surveying Tell Fadgami and its immediate surroundings (Fig. 6).

The genuine result of the current study is the corroboration of a well-known, yet surprising tendency, considering the fact that clay strainers represent a functional, uniquely identifiable type of undecorated pottery ware: throughout the Khabur Valley, the ceramic strainers appear in negligible numbers only (in most cases below 1%), irrespective of the type, the extent, duration or preferences of the considered research projects (older vs. newer projects; excavation vs. survey; limited vs. vast area; differing research focuses; differing institutional preferences and so forth).

Three *speculative* reasons have been raised here, which may help to understand why research has so infrequently come across ceramic strainers in the Khabur River Valley. (By accident they appear as pre-dig, dig, post-dig factors):

6. Altogether more than 200 Late Neolithic and/or Chalcolithic sites in the Khabur Valley (see Hanzelková 2015).

A. 'Cultural' factor. Predominantly strainers of organic-perishable material (basketry?) were used in the said regions. Besides of milk processing (Tsuneki *et al.* 2000, 36), clay strainers may have been specially used for treating boiling liquids.

B. Preservation factor. The likelihood of sherd preservation is significantly lower for strainers than for the common (plain) vessels types as a consequence of the multiple perforations forming 'built-in breaking points' and allowing in-depth access of agents of degradation to the interior clay substance of strainer sherds.

C. Documentation factor. Occurring infrequently, strainer sherds may not always constitute a distinct potsherd class within the find registration of a site. Together with a range of other specimens which defy routine classification, they may occasionally end up in the amorphous class of 'Other' or 'Miscellaneous' items, with a fair chance of being accidentally by-passed in the subsequent pottery analysis.

All three effects together may have turned simple clay strainers into a rare pottery category in the Khabur region. Besides drawing up three theoretical causes, no further effort is made here to rationalize the lack. However, reasoning (see 'Discussion') implies that reason A is more likely instrumental in strainer paucity than B (even small strainer pieces would stick out via their boreholes), and that cause B in turn is supposedly more decisive than reason C.

On the basis of these three causes, a verification-falsification procedure can be launched to ultimately shed more light on the peculiar lack of strainers of clay in the archaeological record of the Khabur Valley. The authors suggest a *multipronged research process* that combines:

- (1) an exemplary re-study of the 'Others' pottery class at the most prolific Khabur projects (documentation perusal; checking of specific assemblages)
- (2) systematic taphonomical trials with experimental strainers (interplay with laboratory material analysis) and
- (3) an ethnoarchaeological project designed to elucidate the actual use of traditional strainer implements made of differing materials which will be a stimulus for the further study of Khabur strainers.

Beyond these issues, there are some other questions which could be successfully addressed by future ventures:

Does the same situation prevail in other regions in Mesopotamia as well, or is the remarkable paucity of strainers an idiosyncrasy of the Khabur Valley and the neighboring Balikh?

What does it mean that the sites in the northern part of

the Khabur Valley have more strainers in comparison to the sites in the south (i.e. below the Hassake dam)?

Even if this paper has presented only some fraction of the total information on the strainers, there is little doubt that their numbers in the ceramic assemblages is exceedingly low in the region's archaeological record.

Currently, no straightforward explanation can be given for the remarkable 'void' of sherds of this basic, highly functional vessel-type in the most important pottery assemblages of the Khabur region during prehistoric times.

Despite being undecorated and 'obvious', perforated vessels sherds still should get some extra attention by pottery science. There are good indications that the unimposing sherds have a more complex story to tell than so far assumed.

REFERENCES

- AL QUNTAR, S. 2010, The Role of Craft Specialisation and Exchange in the Emergence of Early Mesopotamian Urbanism, Doctoral Paper, Cambridge, University of Cambridge.
- AL QUNTAR, S., KHALDI, L., 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, retrieved 17th June 2016 on Harvard University's DASH repository <<http://dash.harvard.edu/handle/1/10873239>>.
- ARZT, J.M. 2001, Excavations at Tell Ziyadeh, Syria: The Northern Ubaid Reconsidered, Doctoral Paper, New Haven, Yale University.
- BECKER, J. 2015, *Tell Tawila, Tell Halaf und Wadi Hamar: Halaf- und ,Obel-Zeit in Nordost-Syrien.: Regionale Entwicklungen, Gemeinsamkeiten und Unterschiede, 2 Parts*, Berlin, Ex oriente.
- BOGUCKI, P.I. 1984, Ceramic Sieves of the Linear Pottery Culture and their Economic Implications, *Oxford Journal of Archaeology* 3/1, 15-30.
- BRUSTOLON, A., ROVA, E. 2006, The Late Chalcolithic settlement in the Tell Leilan region of Northeastern Syria: A preliminary assessment, *Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East*, Vol. 1 (Madrid, April – 8 April 2006), Universidad Autónoma de Madrid, UAM Ediciones, 357-381.
- BRUSTOLON, A., ROVA, E. 2007, The Late Chalcolithic Period in the Tell Leilan Region: a Report on the Ceramic Material of the 1995 Survey, *Kaskal* 4, 1-42.
- CRUELLES, W. 2006, Chagar Bazar Préhistorique. Es-

- quise de la Séquence d'Évolution et la Périodisation, in Tunca, Ö. and Baghdo, A. (Eds.) *Chagar Bazar (Syrie) I. Les Sondages Préhistoriques (1999-2001)*, Louvain-Paris-Dudley (MA), Peeters, 121-142.
- CRUELLES, W., MOLIST, M. 2006, Au Sein de la Préhistorique du Bassin du Khabur. in Tunca, Ö. and Baghdo, A. (Eds.) *Chagar Bazar (Syrie) I. Les Sondages Préhistoriques (1999-2001)*, Louvain-Paris-Dudley (MA), Peeters, 143-154.
- CRUELLES, W., NIEUWENHUYSE, O.P. 2004, The Proto-Halaf period in Syria: New sites, new data, *Paléorient* 30/1, 47-68.
- ÇILINGIROGLU, Ç. 2009, Central-West Anatolia at the End of 7th and Beginning of 6th Millennium BCE, in the Light of Pottery from Ulucak (İzmir), PhD. Dissertation, Tübingen, Eberhard-Karls-University Tübingen.
- DEMETRIOU, M. 2001, Traditional pottery in Cyprus, Nikosia: Ethnographiko Mouseio Kyprou.
- FIELDEN, K.J. 1981, The Chronology of Settlement in Northeast Syria During the Later Fourth and Third Millennia B.C. in the Light of Ceramic Evidence from Tell Brak, Doctoral Paper, Oxford, Faculty of Oriental Studies, Corpus Christi College.
- GOUIN, P. 1990, Rapes, jarres et faiselles. La production et l'exportation des produits laitiers dans l'Indus du 3^e millénaire, *Paléorient* 16/2, 37-54.
- HANZELKOVÁ, A. 2015, Strainers: Observations on a Distinct Type of Neolithic and Chalcolithic pottery in the Khabur Valley (Northeastern Syria), unpublished Bachelor Thesis, Brno, Masaryk University.
- HOLE, F. 1993/1994, The Habur Basin Project, *Archiv für Orientforschung* 45/46, 289-298.
- HOLE, F. 2000a, Tell Ziyadeh on the Middle Khabur, Syria, 1st International Congress on the Archaeology of the Ancient Near East (Rome, 18-23 May 1998), Rome, Università degli Studi di Roma "La Sapienza".
- HOLE, F. 2000b, The Prehistory of the Khabur, in O. Rouault and M. Wäfler (Eds.) *La Djéziré et l'Euphrate syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: tendances dans l'interprétation historique des données nouvelles*, Turnhout, Brepols, Subartu, vol. 7, 16-27.
- HOLE, F., ARZT, J. 1998, Excavations at Tell Ziyadeh, 1996-97, *Orient-Express* 1998/3, 64-66.
- HOLE, F., JOHNSON, G.A. 1986-87, Umm Qseir On The Khabur: Preliminary Report on the 1986 excavation. *Annales Archéologiques Arabes Syriennes* 36/37, 172-220.
- HOLE, F., JOHNSON, G.A., KOUCHOUKOS, N. *et al.* (in press), Preliminary Report on the Joint American-Danish Archaeobiological Sampling of Sites in the Khabur Basin (1990), Unpublished manuscript.
- HOLE, F., KOUCHOUKOS, N. (in press a), Stratigraphic Soundings at Tell Mashnaqa on the Khabur River, 1991, Unpublished manuscript.
- HOLE, F., KOUCHOUKOS, N. (in press b), Preliminary report on an Archaeological Survey in the Western Khabur Basin, 1994, Unpublished manuscript.
- HOLE, F., KOUCHOUKOS, N. (in press c), Preliminary report on an Archaeological Survey in the Western Khabur Basin, 1995, Unpublished manuscript.
- HOLE, F., TONOIKE, Y. 2016, Geography and Environment of the Khabur Basin, in F. Hole and Y. Tonoike (Eds.), *Homesteads on the Khabur: Tell Ziyadeh and Other Settlements*, Oxford, BAR International Series 2827: 13-38.
- IONAS, I. 1998, Pottery in the Cyprus Tradition, Nicosia, Cyprus Research Centre, Publications of the Cyprus Research Centre, 23.
- IONAS, I. 2000, Traditional pottery and potters in Cyprus: The disappearance of an ancient craft industry in the 19th and 20th centuries, Aldershot: Ashgate, Birmingham Byzantine and Ottoman Monographs, 6.
- KOIZUMI, T. 1993, Ubaid Pottery from Kashkashok II: Typology and Chronology, *Al-Rafidan* 14, 19-67.
- LE MIÉRE, M. 2000, L'occupation proto-Hassuna du Haut-Khabur occidental d'après la céramique, in Lyonnet, B. (Eds.), *Prospection archéologique du Haut Khabur occidental (Syrie du N.E.)*, Vol. I., Beyrouth, Institut Français du Proche-Orient, 127-149.
- LE MIÉRE, M. 2013, Neolithic pottery from the Khabur basin: A reassessment in the light of recent discoveries, in Nishiaki, Y., Kashima, K., Verhoeven, M. (Eds.), *Neolithic Archaeology in the Khabur Valley, Upper Mesopotamia and Beyond: Studies in early Near Eastern production, subsistence and environment no. 15.*, Berlin, ex oriente, 96-109.
- LONDON, G., EGOUMENIDOU, F., KARAGEORGHIS, V. 1990, Töpferei auf Zypern damals - heute. Traditional pottery in Cyprus, Mainz am Rhein: von Zabern.
- LYONNET, B. 2000, Prospection archéologique du Haut-Khabur occidental (Syrie du N.E.), Vol. I., Beyrouth, Institut Français d'Archéologie du Proche-Orient.
- LUTZ, M. 2012, Research history of Tell Halaf, retrieved 17th June 2016 on, <http://www.grabung-halaf.de/pdfs/ResearchResearchHistory_eng.pdf>.
- MALLOWAN, M. 1936, The Excavations at Tall Chagar Bazar, and an Archaeological Survey of the Habur Region, 1934-5, *Iraq* 3/1, 1-85.

- MATEICIUCOVÁ, I. 2010, Tell Arbid Abyad – A New Late Neolithic Site in the Upper Khabur Basin, NE Syria: The First Preliminary Report, in P. Matthiae, F. Pinnock, L. Nigro and N. Marchetti (Eds), *Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East (ICAANE)*, 5–10 May 2008, 'Sapienza' - Università di Roma, Vol. 3, 411–422, Wiesbaden, Harrassowitz Verlag.
- MATEICIUCOVÁ, I., WILDING, M. 2010, Final Report of the Excavation Project of the Masaryk University Brno at Tell Arbid Abyad, unpublished final report (pdf version).
- MATEICIUCOVÁ, I., VLACH, M., MATOUŠEK, J., MILO, P., TENCER, T. 2012, A Preliminary Report of Surface Survey and Geophysical Prospection in the Micro-region of Tell Arbid, NE Syria, in Matthews, R., Curtis, J. (Eds), *Proceedings of the 7th International Congress on the Archaeology of the Ancient Near East*, 12 April – 16 April 2010, the British Museum and UCL, London, Vol. 3: Fieldwork & Recent Research Posters. Wiesbaden, Harrassowitz Verlag, 17–32.
- MATSUTANI, T. 1991, Tell Kashkashok: Excavations at Tell No. II., Japan, The University of Tokyo, The Institute of Oriental Culture.
- 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., COLANTONI, C., SEMPLE, M. 2005, British Excavations at Chagar Bazar, 2001–2002. Iraq 67/2, 1–16.
- McMAHON, A., COLANTONI, C., FRANE, J., SOLTYSIAK, A. 2009, Once There Was a Place: Settlement Archaeology at Chagar Bazar 1999–2002, Exeter, Short Run Press.
- McMAHON, A., TUNCA, Ö., BAGDO, A.-M. 2001, New Excavations at Chagar Bazar, 1999–2000, Iraq 63, 201–222.
- MIYAKE, Y. 1998, Halaf Pottery, in Tsuneki, A. and Miyake, Y. (Eds.) Excavations at Tell Umm Qseir in Middle Khabur Valley, North Syria: Report of the 1996 Season, Tsukuba, University of Tsukuba, Department of Archaeology, 41–85.
- MONCHAMBERT, J.-Y. 1984, Le Futur lac du Moyen Khabour: rapport sur la prospection archéologique menée en 1983, Syria 61/3–4, 181–218.
- NIEUWENHUYSE, O.P. 2000, Halaf Settlement in the Khabur Headwaters, in Lyonnet, B. (Eds), *Prospection archéologique du Haut-Khabur occidental (Syrie du N.E.)*, Vol. I, Beyrouth, Institut Français d'Archéologie du Proche-Orient, 151–198.
- NIEUWENHUYSE, O.P. 2007, Plain and Painted Pottery: The Rise of Late Neolithic Ceramic Styles on the Syrian Plains and the Northern Mesopotamian Plains, *Papers on Archaeology of the Leiden Museum of Antiquities* 3, Turnhout, Brepols Publishers.
- NIEUWENHUYSE, O.P., JACOBS, L., VAN AS, B. 2002, Chapter 4: The ceramics, in Nieuwenhuyse, O.P. and Suleiman, A. (Eds), *Tell Boueid II: A Late Neolithic village on the Middle-Khabur (Syria)*, Brussel, Brepols, 35–123.
- NIEUWENHUYSE, O.P., SULEIMAN, A. 2002, Tell Boueid II. A Late Neolithic village on the Middle-Khabur (Syria), Brussel, Brepols.
- NIEUWENHUYSE, O.P., WILKINSON, T.J.W. 2008, Late Neolithic settlement in the area of Tell Beydar, (NE Syria), in Lebeau, M., Suleiman, A. (Eds), *Beydar Studies I, Subartu XXI.*, Turnhout, Brepols, 268–303.
- NISHIAKI, Y., LE MIÉRE, M. 2005, The Oldest Pottery Neolithic of Upper Mesopotamia: New Evidence from Tell Seker Al-Aheimar, the Khabur, Northeast Syria, *Paléorient* 31/2, 55–68.
- OATES, D., OATES, J., McDONALD, H. 1997, The Excavations at Tell Brak 1: The Mitanni and Old Babylonian Periods, Cambridge, McDonald Institute for Archaeological Research.
- OATES, D., OATES, J., McDONALD, H. 2001, Excavations at Tell Brak - Vol. 2: Nagar in the Third millennium, Cambridge, McDonald Institute for Archaeological Research.
- PFÄLZNER, P., BECKER, C., DOHMANN, H., KULEMANN, S. 1988, Tell Bderi 1985, Bericht über die erste Kampagne, *Damaszener Mitteilungen* 3, 223–386.
- POIDEBARD, A. 1928, Mission archéologique en Haute Djezireh (Autumne 1927), Syria 9/3, 216–223.
- RÖLLIG, W., KÜHNE, H. 1977/78, The Lower Habur: A Preliminary Report on a Survey Conducted by the Tübinger Atlas des Vorderen Orients in 1975, *Les Annales Archéologiques Arabes Syriennes* 27/28, 115–140.
- RÖLLIG, W., KÜHNE, H. 1983, The Lower Habur: Second Preliminary Report on a Survey in 1977, *Les Annales Archéologiques Arabes Syriennes* 33/2, 197–199.
- SCHWARTZ, G.M. 2001, Syria and the Uruk expansion, in Rotman M. (Ed), *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, Santa Fe, SAR Press, 233–264.
- TOMITA, T. 1998, Pottery from Later phases, in Tsuneki, A. and Miyake, Y. (Eds), Excavations at Tell Umm Qseir in Middle Khabur Valley, North Syria: Report of the 1996 Season, Tsukuba, University of Tsukuba, Department of

Archaeology, 141-160.

TSUNEKI, A., HYDAR, J., MIYAKE, Y. et al. 2000, Fourth preliminary report of the excavations at Tell el-Kerkh (2000), Northwestern Syria, Bulletin of the Ancient Orient Museum 21, 1-36.

TSUNEKI, A., MIYAKE, Y. 1998, Excavations at Tell Umm Qseir in Middle Khabur Valley, North Syria: Report of the 1996 Season, Tsukuba, University of Tsukuba, Department of Archaeology.

UR, J.A. 2002a, Settlement and Landscape in Northern Mesopotamia: The Tell Hamoukar Survey 2000-2001, Akkadica, 123/1, 57-88.

UR, J.A. 2002b, Surface Collection and Offsite Studies at Tell Hamoukar, 1999, Iraq 64, 15-44.

UR, J.A. 2004, Urbanism and Society in the Third Millennium Upper Khabur Basin, Doctoral Paper, Chicago, the University of Chicago, retrieved 17th June 2016 on <<http://oi.uchicago.edu/sites/oi.uchicago.edu/files/uploads/shared/docs/urj.pdf>>.

UR, J.A. 2010, Urbanism and Cultural Landscapes in Northeastern Syria: The Tell Hamoukar Survey, 1999-2001, Chicago, Oriental Institute of the University of Chicago, Oriental Institute Publications 137.

UR, J. A., WILKINSON, T. J. 2008, Settlement and Economic Landscapes of Tell Beydar and its Hinterland, in Lebeau, M., Suleiman, A. (Eds), Beydar Studies I., Turnhout, Brepols, 305-327, retrieved 17th June 2016 on <http://www.people.fas.harvard.edu/~jasonur/pdf/Ur_Wilkinson_2008_Subartu.pdf>

VALENTOVÁ, J., ŠUMBEROVÁ, R. 2012, Keramické cedníky, poklopy a trychtýře z oppida Stradonice, Archeologické rozhledy 64, 333-346.

VOSTROVSKÁ, I., FILIPOVÁ, M., MATEICIUCOVÁ, I., SALVETOVÁ, SEDLÁKOVÁ, R., TÓTH, P., TRÁVNÍČKOVÁ, Š., UCHYTILOVÁ, J., ZAHRÁDKOVÁ, L., 2011, Late Neolithic Pottery from the Tell Arbid Abyad: Catalogue from seasons 2007-2008, unpublished pottery catalogue (pdf version).

WEISS, H. 1983, Excavations at Tell Leilan and the Origins of North Mesopotamian cities in the Third Millennium B.C., Paléorient 9/2, 39 – 52.

WEISS, H. 1985, Rediscovering: Tell Leilan on the Habur Plains of Syria, The Biblical Archaeologist 48/1, 5-34.

WEISS, H., AKKERMANS, P.A., STEIN, G., PARAYRE, D., WHITING, R. 1990, 1985 Excavations at Tell Leilan, Syria, American Journal of Archaeology 94/4, 529-581.

WEB SITES

Tell Halaf. Tell Halaf Excavation Project, 2015 [online], retrieved 17th June 2016 on <<http://www.grabung-halaf.de/index.php?l=eng>>.

Tell Brak. Tell Brak Project, 2013 [online], retrieved 17th 2016 June on <<http://www.tellbrak.mcdonald.cam.ac.uk/home.html>>.

Tell Beydar. Tell Beydar, 2015 [online], retrieved 17th 2016 June on <<http://www.beydar.org/index.php?lg=16&index=2#content>>.

Tell Beydar (Syria). Jason Ur, Harvard University, Open Scholar [online], retrieved 17th June 2016 on <<http://scholar.harvard.edu/jasonur/pages/tell-beydar>>.

Tell Hamoukar (Syria). Jason Ur, Harvard University, Open Scholar [online], retrieved 17th June 2016 on <<http://scholar.harvard.edu/jasonur/pages/hamoukar>>

Tell Leilan Project. Harvey Weiss, Yale University, 2007 [online], retrieved 17th June 2016 on <<http://www.leilan.yale.edu/about/index.html>> .

OTHER SOURCES

Tell Arbid Abyad field documentation (MU-ARBA Project, seasons 2007-2010).