

Title: **Set of second millennium BC unbaked clay objects from Tell Arbid**

Author(s): Agnieszka Szymczak

Journal: *Polish Archaeology in the Mediterranean 22 (Research 2010)*

Year: 2013

Pages: 387–420

ISSN 1234–5415 (Print), ISSN 2083–537X (Online)

Publisher: Polish Centre of Mediterranean Archaeology, University of Warsaw (PCMA UW),
Wydawnictwa Uniwersytetu Warszawskiego (WUW)

www.pcma.uw.edu.pl – www.wuw.pl

Abstract: A collection of over 60 small objects of unbaked clay was found in a Khabur Ware period layer at Tell Arbid. The assemblage included a variety of object types: “spools”, “tokens” and discs (some decorated with the same cross-and-dots motif, some with punctuations), tetrahedrons, round model tables and others. The objects were found *in situ* and had clearly been used together as a set. Parallels for individual objects and an overview of interpretations of other sets of unbaked clay objects from Northern Mesopotamia and neighboring regions are considered in an attempt at establishing the function of the discussed assemblage. However, its interpretation remains open to discussion.

Keywords: Northern Mesopotamia, Khabur Ware period, unbaked clay, token, disc, model furniture, spool

SET OF SECOND MILLENNIUM BC UNBAKED CLAY OBJECTS FROM TELL ARBID

Agnieszka Szymczak

Polish Centre of Mediterranean Archaeology, University of Warsaw

Abstract: A collection of over 60 small objects of unbaked clay was found in a Khabur Ware period layer at Tell Arbid. The assemblage included a variety of object types: “spools”, “tokens” and discs (some decorated with the same cross-and-dots motif, some with punctuations), tetrahedrons, round model tables and others. The objects were found *in situ* and had clearly been used together as a set. Parallels for individual objects and an overview of interpretations of other sets of unbaked clay objects from Northern Mesopotamia and neighboring regions are considered in an attempt at establishing the function of the discussed assemblage. However, its interpretation remains open to discussion.

Keywords: Northern Mesopotamia, Khabur Ware period, unbaked clay, token, disc, model furniture, spool

The collection of over sixty unbaked clay objects presented in this paper (and which was also shown in poster form at the 8th ICAANE in Warsaw in 2012) was discovered during the 2010 season of excavations at Tell Arbid.¹ The find

is unique in terms of both the richness of object types and the findspot in an undisturbed, Khabur Ware-period context,² hence its presentation separate from the preliminary excavation report in this volume (Bieliński 2013).

THE ASSEMBLAGE

The sixty odd objects of unbaked clay making up this collection will be presented beginning with the most numerous types [*Table 1*]. As is often the case with objects

of uncertain function, the terms in which the separate categories have been described, e.g. “spool” and “token”, are largely arbitrary and refer to the shape of the objects rather

¹ Tell Arbid is a large site (approximately 38 ha) in the Khabur Triangle (northeastern Syria), between the modern towns of Qamishli and Hassake. Since 1996 it has been excavated by a joint Polish–Syrian archaeological expedition directed by Prof. Piotr Bieliński (University of Warsaw). The excavations revealed extensive occupation from the 3rd and 2nd millennia BC, followed by diminished settlement of Neo-Babylonian and Hellenistic times and some attestations of use in the Islamic period. Annual excavation reports from Tell Arbid have been published in successive volumes of *PAM* (volumes 8–21); for a comprehensive bibliography of the site, see www.tellarbid.uw.edu.pl.

² The chronological terms used in the present article follow those used in the excavation reports.

Table 1. Breakdown of the assemblage by type and number

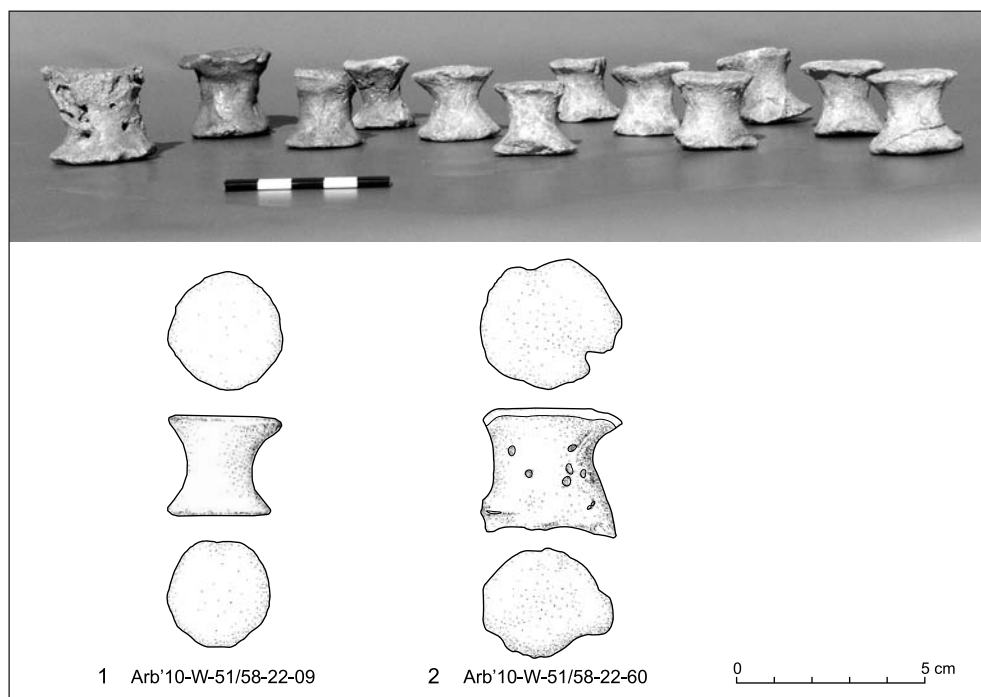
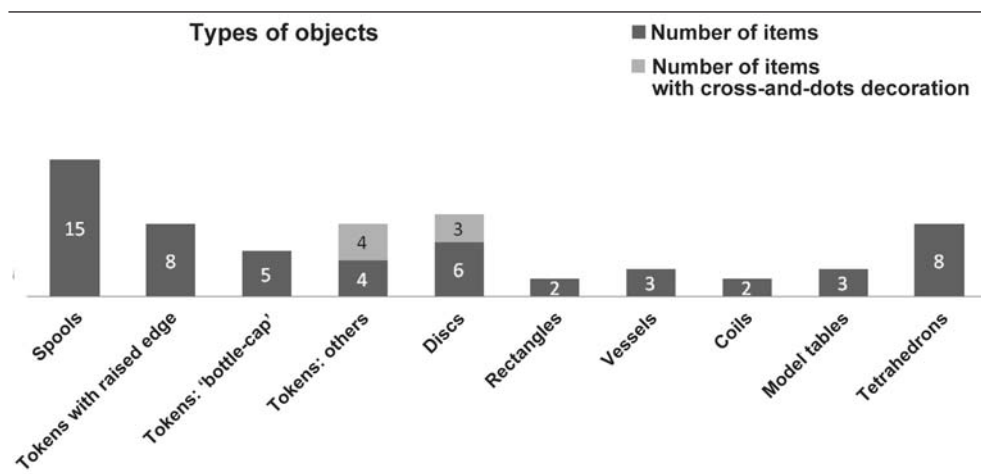


Fig. 1. Complete "spools" (top) and examples of a typical well-made specimen (1) and a roughly-shaped one, made of coarser clay (2) (Drawing D. Kossowska and M. Momot; digitizing M. Momot, A. Szymczak, Ł. Wojnarowicz; photos K. Kiersnowski, A. Reiche, A. Szymczak; photo processing E. Czyżewska, M. Wagner)

than their function. Most of these pieces were undecorated, but seven of them (11% of the collection) bore the same type of impressed decoration, consisting of two crossing lines with circles (or dots) in the triangles formed by the lines, and in a few cases also a central circle/dot at the intersection of the lines. Other finds from the same context included two fragmentary animal figurine legs(?) and a wheel, all of baked clay.

TYPES OF OBJECTS

The collection included 15 “spools”, that is to say, bobbin-like objects, consisting of a cylindrical, slightly concave shaft with flattened discs at either end. The discs are of roughly comparable diameters (from about 2.4 cm to 3.7 cm), but one is usually almost completely flat and the other slightly concave. The height of these items is fairly uniform: 2.4 cm to 3.5 cm [Fig. 1].

The next category of objects, “tokens” or “pieces”, is more varied, with several recurring shapes among the 21 items. Eight examples were round with raised edges, seven of a uniform size (Diam. about 2 cm) and one somewhat larger (Diam. 3 cm) [Fig. 2:1]. Round “tokens” with raised, pinched edges, resembling crusted pies, rope or bottle-caps [Fig. 2:2] appeared in diverse sizes (Diam. from about 2 cm to 4.3 cm). There are four complete and one fragmentarily preserved specimens. A round token with impressed indentations along the edge [Fig. 2:3] is reminiscent of this type, but seems to have been

made in a mould, or at least tooled, rather than formed in the fingers as is the case with the other examples. Also present was a plain, round lenticular token with two minute holes near the edge [Fig. 2:4], and a straight-sided disc with central impression [Fig. 2:5]. Another four objects were decorated with cross-and-dots decoration [Fig. 2:6] (see below). All were lens-shaped, differing in thickness and diameter.³

The collection yielded also at least nine clay discs [Fig. 3].⁴ Four variants were distinguished: (A) oval, with flat bottom and raised edge; (B) round, flat, with flattened edge, with finger impressions (B1) or cross-and-dots decoration (B2); (C) round/oval with puncture marks; (D) irregular, thin and brittle, possibly with impressions of plant stems [for details, see Table 2].

Table 2. Disc variants with dimensions

No.	Type	Dimensions in cm
1		6.5 by 7.8; H. 0.9
2	Disc A	Approx. 4.3 by ? (extant); H. 1.2
3		Fragmentarily preserved
4	Disc B1	8.5 by 9; Th. 0.7
5		8 by 9; Th. 1.2
6	Disc B2	Dia. about 8 (reconstructed); Th. 0.7
7		Approx. 7.5 (reconstructed) by approx. 9; Th. 0.9
8	Disc C	5.5 by min. 3.8; Th. 0.8
9-?	Disc D	Approx. 9 by 7; Th. < 1

³ A round, thick disc with fingernail-impressed decoration on both sides and along the edge was found close to, but more to the east than the remaining tokens, and was thus ascribed to another tag, yet it is possible that it had been associated with this collection.

⁴ The distinction between a disc and a “token”, many of which are disc-shaped, is made herein based on the size, discs being the larger of the two (Diam. 5 cm and more), and the greater durability of tokens, which had to be more resistant to being moved about.

For variant D, the term “clay patch” might be better suited than “disc”. The latter were so poorly preserved that their exact number could not be ascertained. Indeed, three varieties of clay discs (A, B, D) were too fragile for handling without some kind of flat support. Admittedly, the only example of variant C was also quite fragile upon discovery, but its size and thickness ought

to have warranted enough body for it to be moved about. The punctures, together with the disc’s reasonable mobility put it closer to the category of “pseudo-tablets” (see below) than to the other discs.

The next category comprised two sub-rectangular objects that actually differed from one another considerably. The first one was a sizeable “pseudo-tablet” with

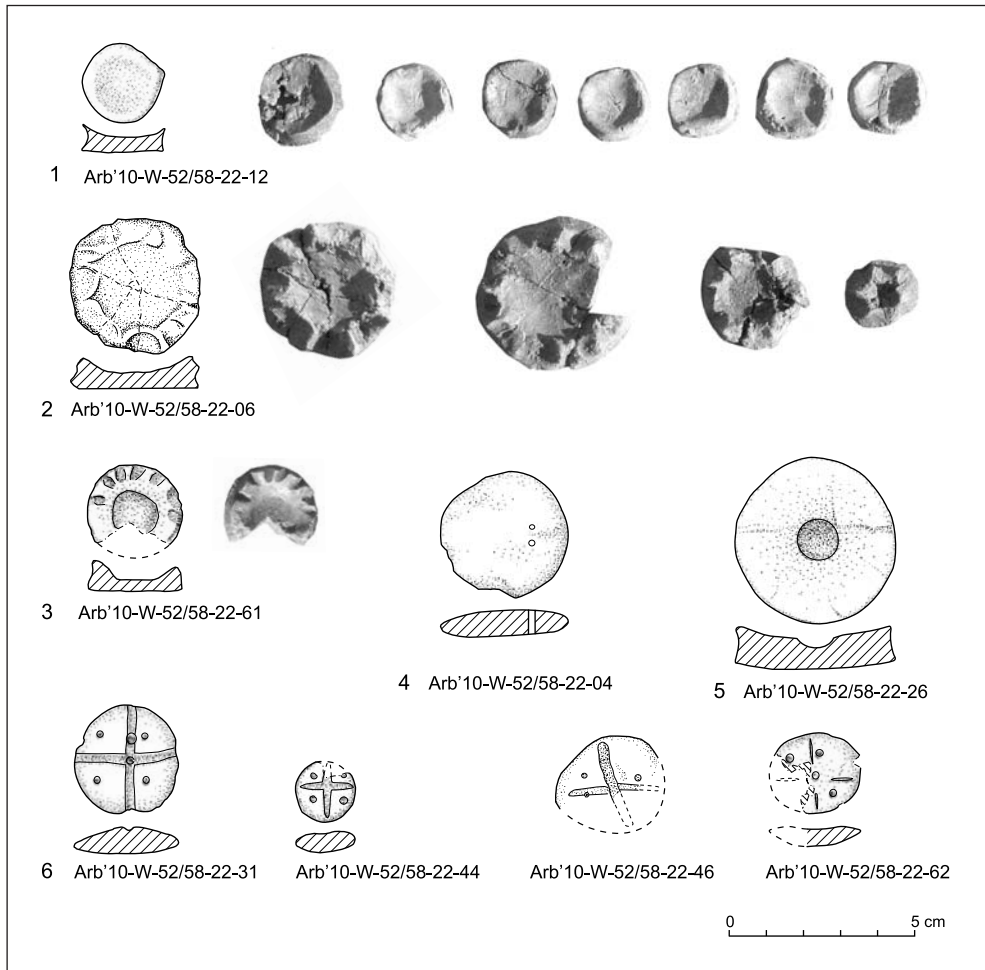


Fig. 2. “Tokens”: 1 – with raised edges; 2 – “bottle-cap”; 3 – “bottle-cap”-like; 4 – lenticular; 5 – disc with central impression; 6a–d – lenticular with cross-and-dots decoration

four longitudinal finger impressions and small punctures on the upper face [Fig. 4:1]. It differed from disc variant C in proportions, being thicker and more

elongated, and in the position of the dots, which though far from being neatly spaced, tended to form columns along the object's longer sides. These were reminiscent of

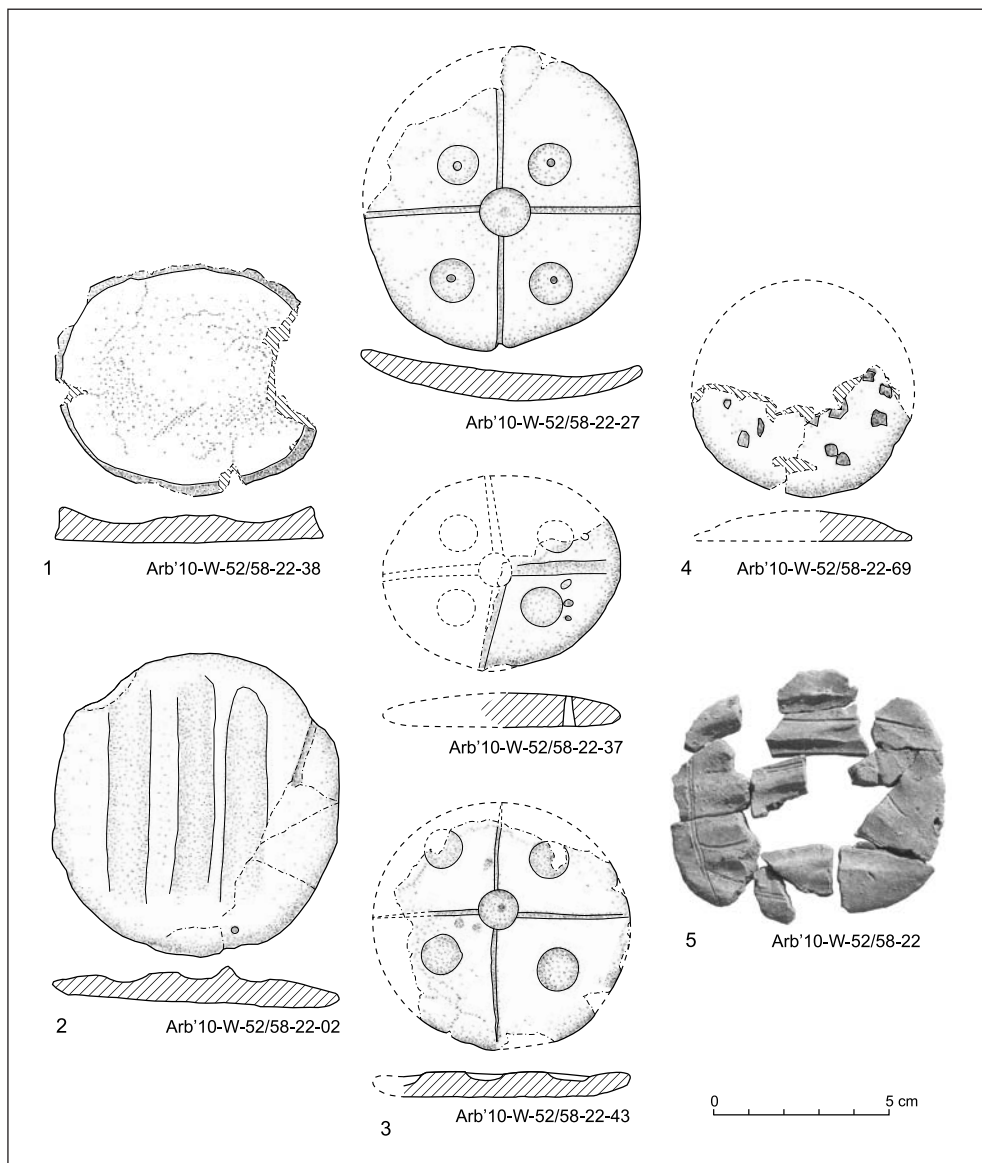


Fig. 3. Discs: 1 – variant A; 2 – variant B1; 3a–c; variant B2; 4 – variant C; 5 – variant D

tablets with primitive numerical notations. The other sub-rectangular object was much smaller [Fig. 4:2]. Its upper, slightly convex surface was impressed with four lines and pierced with two holes, accompanied by six small punctures. The other surface is flat.

Two **coils** found in the collection were of a totally different form and character. One is a simple, double-bent clay coil, forming, in fact, a rectangle with rounded-off corners vaguely reminiscent of the previously described item [Fig. 4:3]. It is decorated with short, delicate grooves running perpendicular to the coil's edges and the whole object is pierced with a round hole. The other coil is the most

intricate object in the whole assemblage. It is a flat band of clay (about 30 cm long), coiled in a spiral [Fig. 4:4]. One side is plain, the other impressed with dots. The coil (resembling a coiled snake, not the least by analogy with the decoration on snakes applied on some post-Akkadian vessels (e.g., Koliński 2011: Fig. 9) was snugly enclosed between thin clay patches forming a sort of envelope.

Paraboloid tetrahedrons were the smallest of the objects in the collection [Fig. 4:5]; there were eight of these, measuring just about 0.50 cm by 1 cm.

Two objects can be described as **small** or **miniature vessels** (although they are

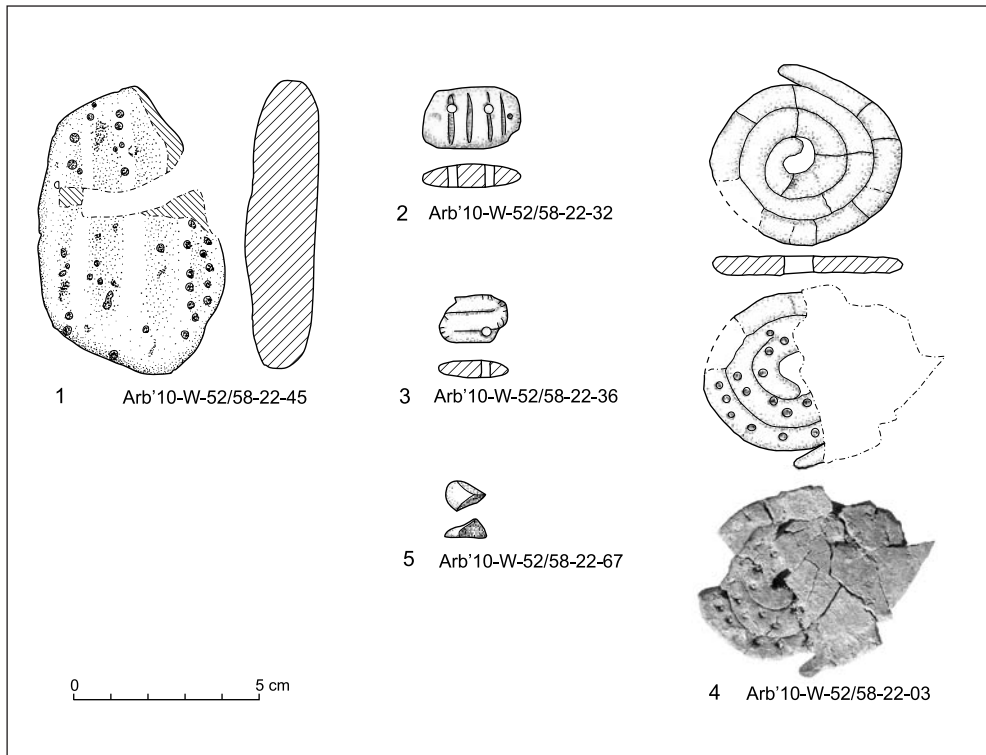


Fig. 4. Rectangles and coils: 1 – “pseudo-tablet”; 2 – small rectangle; 3 – double bent-coil; 4 – spiral in clay “envelope”; 5 – tetrahedron

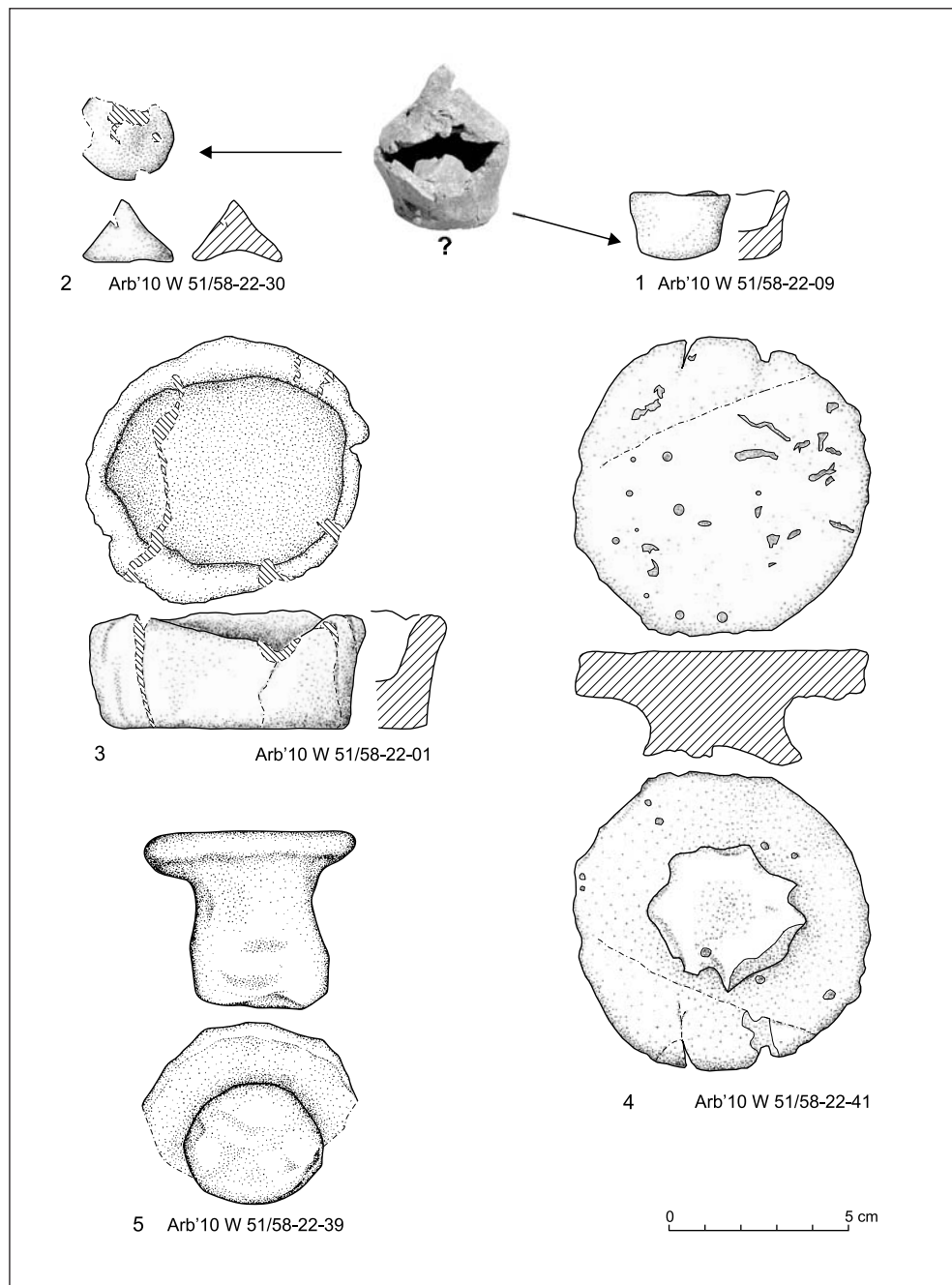


Fig. 5. Vessels: 1 – miniature bowl; 2 – conical lid; 3 – small bowl; 4, 5 – model round tables

probably not models of full-size vessel forms): a bowl and a cone interpreted here as a lid [*Fig. 5:1, 2*]. Such objects have also been interpreted as tokens or gaming pieces (see below). However, the bowl has high walls and a rounded bottom (both inside and outside), unlike all the token-like objects described above. As for the cone, its interpretation as a token or piece does not seem convincing due to the object's fragility. Moreover, its findspot — next to the miniature bowl of fitting rim diameter and clay quality — speaks, in my opinion, for their interpretation as a bowl and lid set. A thick-walled, crudely-made bowl can be better described as a small vessel, as it measures 6.5 cm by 8 cm at the (oval) rim and its wall is about 3 cm high [*Fig. 5:3*].

Completing the collection were three round **model tables**. The best-preserved example consisted of a thick disc top supported on a stubby, cylindrical leg [*Fig. 5:4*]. Another one had a smaller disc top (Dia. 6.5 cm, Th. 0.7 cm) on a longer leg (Dia. about 3.5 cm, H. about 4.1 cm) [*Fig. 5:5*], and of the third one nothing but the cylindrical leg (Dia. about 3.5–4 cm, H. about 6 cm), seemingly with three separate feet, was preserved.

MANUFACTURING DETAILS

All the objects were made of unbaked clay, but of a different kind between objects. Some were of compact, brown-grey clay (e.g., most of the “spools” and “tokens” with raised edges, as well as the lenticular, cross-and-dots decorated “tokens”), whereas others were fashioned of coarser clay, light brown, without the grayish tinge (e.g., most of the clay discs and coils).⁵

In a few cases, objects of the same type were made of two different varieties of clay. Those of coarser clay were often also more awkward in shape than the other specimens of the same type. This is evident in the most numerous and uniform categories of finds: the “spools” (three specimens out of 15) and “tokens” with raised edge (one of eight). Some objects made of the coarser clay featured holes that were roughly round in cross-section, but crooked, irregularly spaced and seem not to have been pierced from any specific direction [see e.g., *Figs 1:2, 5:4*]. Apparently unintentional, they might perhaps be traces of some organic substance mixed in with the clay.

Apart from the “token” with indentations (mentioned above) and the one with the central impression, both of which may have been made in some sort of a mold or tooled, all the other objects were formed by hand.

SETS OF FINDS

Most of the objects were found in two clusters or sets, each centered around a large, coarse- or common-ware potsherd. The remaining objects were scattered across an area of less than 1.50 m by 2 m around the two sets [*Fig. 6*].

Objects registered as Set 1 lay on and around a large potsherd [*Fig. 7*]. The inside of the sherd had been lined with patches of mud (disc variety D), which were so brittle that only small fragments could be lifted from the potsherd. Still, they preserved some impressions of plant stems (leaves?, grass?) [see *Fig. 3:5*] so they seem to have been interlaid with some organic material. A smaller sherd supported the

⁵ The quality of the clay of some of the objects was so poor that they cracked upon being exposed to the air and were in need of immediate preservation treatment (e.g., the small bowl or the larger bottle-cap).

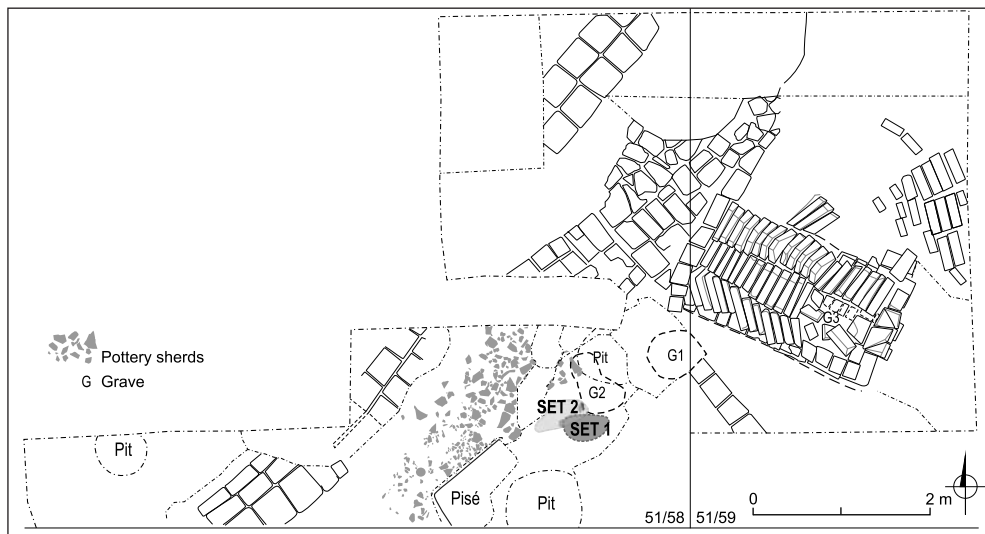


Fig. 6. General area of the findspot

(Drawing E. Czyńska, K. Kiersnowski, A. Szymczak; digitizing M. Momot, A. Szymczak)



Fig. 7. Set 1 discovered in situ

disc with finger impressions (variety B1), and another, the larger bowl (in all cases, the objects stood on the inside face of the sherds). At least 10 items were found on the largest potsherd: the dotted coil, lenticular token, two bottle-cap “tokens”, three “tokens” with raised edges and three “spools”. Just next to the sherds, another three “spools” were encountered, followed by three more “spools” and four “tokens” with raised edges uncovered a bit further on [see *Fig. 7*].

Set 2 also included potsherds with clay objects resting on them. In one case, it was a cross-and-dots decorated disc (variant B2) upon which a round “token” with circular impression lay [*Fig. 8B*]. Another potsherd supported an even more elaborate arrangement: a clay disc with raised edges (A) with a superimposed disc decorated with the cross-and-dots motif (variant B2) and three other tokens resting on top of it, one of them with the same decoration [*Fig. 8A*]. The miniature



Fig. 8A. Part of set 2 as discovered in situ



Fig. 8B. Part of set 2 discovered in situ and a close-up of part of the set after cleaning

bowl and lid stood on the same sherd. Set 2 included also a model table, various “tokens”, a double-bent coil, tetrahedrons and more “spools”.

Objects that could not be ascribed to either of the sets included further “spools”, discs, “pseudo-tablets”, “tokens” (some with the cross-and-dots decoration) and two fragments of round model tables.

CONTEXT AND CHRONOLOGY

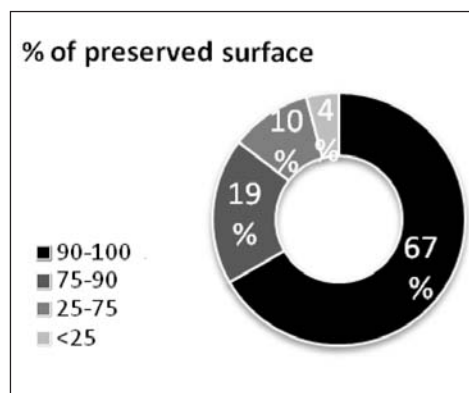
The objects were excavated in square 51/58, located in sector W-East on the southern slope of Tell Arbid. They were recovered from a narrow test trench, so their wider context is rather poorly recognized. It seems to have been some sort of a ditch or pit [Fig. 6] with a fill rich in lumps of clay and large potsherds, disturbed by later pits. The potsherds probably came from a pavement (Akkadian/post-Akkadian in date), which had been cut by the ditch-diggers. Nonetheless, the context is dated both by stratigraphical and ceramic evidence to the Khabur Ware period.

The stratigraphy and interpretation of the context was further blurred by a pit grave (G2-51/58) that was found just beside, but apparently slightly below the sets of objects. It contained a fragmented male skeleton (Sołtysiak 2010). Another secondary pit burial (G1-51/58), comprising a few bones accompanied by small Khabur Ware jars, was encountered just one meter away. The state of preservation of the bones is indicative of their having been exposed to the elements for some time. The bones reburied in these makeshift graves may have come from a Khabur Ware-period chamber tomb (G1-51/59), located just a few meters to the northeast. The tomb was not excavated, but judging by its disturbed covering, it would have been penetrated.

No architectural remains from the Khabur Ware period have been found so far in the immediate vicinity, but there were some graves and large pits (possibly clay-pits) of that date (e.g., Bieliński 2012: Fig. 7). Their presence indicates that this part of the site was not a dwelling area in that period.

Despite the poorly recognized context there can be no doubt that the objects were found in place. Foremost, they were too fragile to be in such a good state of preservation had they been moved at any time after their deposition [Table 3] and they could hardly constitute discarded refuse when found standing one on top of the other. Secondly, the potsherds that were used as trays or stands for the objects apparently came from the pavement destroyed by Khabur Ware-period digging activity. Given the brittleness of the clay discs found on the potsherds and the way they were closely fitted to the sherd surface, at least some of them must have been made on the spot. Moreover, only then could they have been placed on the dug-up potsherds.

Table 3. *State of preservation of the objects*



PARALLELS AND INTERPRETATION

The above remarks add yet another question to the most evident one regarding the function of such a set of objects: why would they be used in such circumstances? Since the findspot provides few clues as to either of these, the answers must be sought in the objects themselves. As no parallels are available for the collection as a whole, one needs to look at the parallels for individual types of objects [see *Table 5*] in order to shed any light on the matter. Regretfully, unbaked clay objects of undefined function are often the last category of finds among archaeological material to be published, a limitation that must be kept in mind when attempting comparative studies.

TERRITORIAL AND
CHRONOLOGICAL OVERVIEW

A comparison of the Tell Arbid assemblage with a comprehensive typology of small clay objects identified as tokens, developed by D. Schmand-Besserat (1992a; 1992b), shows parallels for virtually all the forms in question [*Table 4*]. Interestingly, the forms missing from that typology, that is to say, coils, are also those with the least number of parallels in consulted publications.

Objects listed by Schmand-Besserat dated from the 8th–4th millennium BC and were regarded as essential for the development of writing systems. Naturally, the presence of similar forms in a 2nd mil-

lennium BC North Syrian set does not necessarily reflect a similar purpose,⁶ but it does show that such objects, regardless of their function, were well-rooted in the material culture of Mesopotamia and neighboring regions. And indeed, most of the objects find quite numerous parallels at sites in Northern Syria (practically all types of objects), Mesopotamia (“spools”, some “tokens”, tetrahedrons and model tables) and eastern Anatolia (“spools”, bottle-cap “tokens” and cones). Most of the parallels can be dated to the 3rd and 2nd millennia BC, several being contemporary with the presented set (“tokens” with raised edges, lenticular “tokens”, some sub-rectangular “pseudo-tablets” and model tables), with bottle-cap “tokens”, model tables and discs of the B variety finding contemporaneous analogies at Tell Arbid itself. Many of the objects have been encountered in contexts as early as the 4th millennium BC (tetrahedrons, “tokens”, cones and “spools”) and some survived into the 1st millennium BC (e.g., “spools” and model tables).

As for the cross-and-dots decoration, the parallels show it to be fairly ubiquitous, if not very common [*Table 5:H*]. However, this (incomprehensive) listing offers no information on the character of this motif: Is it symbolic or purely decorative? There is no intrinsic meaning that might be read into it, but the fact of its special association with our assemblage remains. There

⁶ Tell Arbid has yielded no written records apart from an Old Babylonian envelope fragment (Bieliński 2000: Fig. 2) and seems to date to have been effectively a pre-literate site. As remarked by P.R.S. Moorey, ‘... incipient literacy does not in itself remove the possibility that clay images of all types may often still have had utilitarian, as well as cultic, roles in daily life amongst the illiterate’ (Moorey 2005: 152). Moreover, the “Nuzi hollow tablet” — inscribed clay envelope containing small tokens used as markers or counters in sheepfold accounts — dating from the mid-2nd millennium BC, attests to the persistence in this late period of the idea (and practice) of using clay tokens for accounting and administrative purposes (Oppenheim 1959).

is an entertaining, if farfetched association between the decorated lenticular “tokens” and the decoration on some model tables retrieved in the vicinity of Uruk. There are fragments of table tops featuring pellets with the motif of crossing lines (Wrede 2003: Abb. 38:d,e) reminiscent of our cross-and-dots decorated lenticular “tokens”. This decoration is taken to represent dishes (Wrede 2003: 74), in this case perhaps breads or cakes. It would be easy to envisage the decorated “tokens” placed on table tops in similar fashion.⁷ However, the Uruk tables are attributed to the Seleucid period (though table tops with decoration resembling various foodstuffs are known also from, e.g., Old Elamite Susa),⁸ and,

more importantly, the position in which the decorated “tokens” were found does not seem to confirm such use.

CONTEXT OF THE FINDS

Information on context and concurrence of parallels is not always available from the publications [compare *Table 5:A–H*]. Moreover, many are stray finds, excavated from secondary or tertiary contexts. Additionally, some (especially the token-like ones) are often thought to be typical of prehistoric contexts and treated as suspect in more recent levels.⁹

Nonetheless, objects of the discussed type have been recovered from all kinds of contexts: not just refuse pits, but also court-

Table 4. Types of clay objects according to D. Schmand-Besserat (1992a; 1992b)

Type of object	Type:subtype — D. Schmand-Besserat 1992a; 1992b	
Spool	13:11	Vessels: stands
Token with raised edge	3:5	Discs: special shapes —hollow
Bottle-cap token	3:78	Discs: pinched — folded over
Lenticular token	3:3	Discs: lenticular
Straight-sided disc with circular central impression	3:8(?)	Discs: with one puncture
Sub-rectangular pseudo-tablet	12:9	Ovals/rhomboid: multiple punctures
Lined rectangle	7:10(?)	Quadrangles: six horizontal lines
Coils	–	–
Model table	15	Tools: furniture and utensils
Tetrahedrons	5:1	Tetrahedrons: plain
Miniature bowl	13:35	Round bowls
Miniature lid	1:40	Cones: base/side markings — one stroke
Disc with cross-and-dots motif	3:52a	Discs: with perpendicular lines and four punctures

⁷ On a similar idea of use for models with undecorated tops, see Cholidis 1992: 46–47.

⁸ N. Cholidis (1992: 10) points to similarities between some of these depictions and roughly contemporaneous “baking moulds” from Mari.

⁹ As A. McMahon has remarked: ‘Small prehistoric tokens recovered from the surface or in pit excavation might have invoked an emotional response and been retained as curiosities’ (McMahon 2009: 210–211).

yards and rooms of dwelling houses, store-rooms and workshops, and even a grave,¹⁰ so there is no clear pattern of occurrence to be traced. Those among the parallels that came from larger sets of unbaked-clay objects should be potentially the most elucidating and there are actually a few sets of this kind recognized in the published material.

At Tell Sabi Abyad, a number of objects were found piled on the floor of a room (Akkermans, Le Mièrre 1992: 15) [see *Table 5:A*]. Apart from spools, the set included anthropo- and zoomorphic figurines, miniature vessels, balls, plaques, discs and cones. However, being of Early Halaf date, the set seems too remote a parallel.

Excavations at the so-called “Ash-Tip” at Abu Salabikh yielded a large number of various unbaked-clay objects, among others, figurines, tokens and miniature vessels [see *Table 5:B*]. The ash tip is thought to contain discard from an official building, perhaps a temple, dated to the ED IIIb period. In A. Green’s view, the objects found there might have served religious administration or, in the case of the figurines and miniature vessels, they may have been used in cult, the latter as substitutes for offerings of food and drink (Green [ed.] 1993: 20). A Tell Taya “token” [see *Table 5:B*] was found along with unbaked-clay objects, stone and pottery tools and figurines (Reade 1973: 171). Most of the clay objects were roughly bowl-shaped and have been interpreted as containers or crucibles constituting the equipment of a Middle Bronze Age workshop. Tell Munbaqat yielded a younger, Late Bronze Age collection, providing exquisite parallels for our “token” with central impres-

sion, discs B1 and C, as well as three punctured discs that featured crossing lines with a circle at their intersection, as in variety B2 [see *Table 5:B, C*]. The objects were lying in two clusters by the walls of a room in a quayside warehouse or workshop. Their discoverers provided two alternative interpretations of the function of these clay discs: either as gaming devices, counting-discs or “bonus chips” (M. Karras, in Karras, Werner 1998: 333–334), or artisans’ “pincushions” for small implements or “display cases” for the ready products (P. Werner, in Karras, Werner 1998: 334; Machule *et alii* 1988: 37). Finally, a few objects analogous to the Tell Arbid set were included among the finds from a metal workshop in an EJ IIIb building at Tell Beydar (Pruss 2012). These were a miniature bowl and a conical lid (larger than the Tell Arbid specimens, but nonetheless supporting their interpretation as a set) and three tetrahedral “tokens”. The author postulated ritual use for the objects, based, among others, on the material they were made of (see below) and on their association with other miniature vessels and special anthropomorphic figurines.¹¹

In fact, the best parallel has been encountered at Tell Arbid itself, moreover, also in a Khabur Ware-period layer. Over 30 objects of unbaked clay were discovered on a low bench lining the wall of a room (Bieliński 2000: 281, Figs 5, 6; Reiche 2006: 104). The set included, among others, an anthropomorphic figurine (Makowski 2013: 621 and Fig. 3, in this volume), furniture models, including a round table on a cylindrical leg, miniature vessels and a thin, plain disc, parallel to

¹⁰ A “spool” from Tell Mozan, which may perhaps be seen as a weaving device buried with its owner(?).

¹¹ Including so-called decantation jars, deemed to be of symbolic value for the site’s inhabitants. It should be pointed out that a similar vessel, also just about 15 cm high, was found in an ED III layer at Tell Arbid (Ławecka 2006: Fig. 12).

our variety B [see *Tables 5:C, F*]. It seems the house where they were found had been abandoned by the time they found their way there. The items were thus interpreted as a set of children's toys.

Among other sets of unbaked clay objects that did not, however, produce direct parallels with objects from our collection, one can cite a votive offering deposit from Hammam et-Turkman, found in a pit under the floor of the main hall in a LBA palace (Rossmeisl, Venema 1988: 571–573). Anthropomorphic figurines and model body parts were accompanied by miniature vessels that were several times larger and of much more elaborate shapes than those in our assemblage. There is also a set of anthropo- and zoomorphic figurines and miniature vessels from the site of Gedikli Hoyuk in southeastern Anatolia (Duru 1986), found in association with an animal burial/sacrifice within a necropolis, pointing to their role in some kind of ritual.

However, these assemblages have what our set seems to lack— a context allowing relatively sound conclusions to be drawn regarding their function.¹²

FUNCTIONAL CATEGORIES

The purported functions of individual items that have been considered as parallels for the Tell Arbid sets are given in Table 5.

The cited interpretations can be divided into four categories:

1. utilitarian: weaving devices (spools¹³); containers, crucibles or lids (miniature vessels, “tokens” with raised edge); “pin-cushions” (punctured discs);
2. administrative/memory aids: notation/numerical tablets (punctured discs, “pseudo-tablets”);¹⁴ counters (tetrahedrons, tokens, cones); tokens (spools, tokens, cones);
3. socio-cultural: pawns/gaming pieces (spools, tokens, cones); toys (model tables, miniature vessels);
4. cultic/ritual: vota or magical objects (model tables,¹⁵ miniature vessels¹⁶ and zoomorphic figurines¹⁷).

In just a few cases — predominantly those with a clearly definable context — the proposed functional interpretations have been explicitly supported by archaeological evidence, whereas for the most part they remain speculative. In the case of unbaked clay objects, the associations with cult are strengthened by the character of the material they were made of. Unbaked clay, apart from not having much practical use due to its brittleness, was readily available and easily formed — a quality sought after by performers of various magical rituals involving the impromptu formation of images or objects, as attested by cuneiform sources.

¹² A fine illustration of P.R.S. Moorey's remark: 'In excavations contexts of disposal rather than of use remain predominant, whilst contexts of use that allow for confident assessments of functions and meanings remain exceptionally rare' (2005: 194).

¹³ As confirmed by experiments, unfired clay spools, approximately 4 cm thick and weighing some 100 g, could have functioned as loom weights (Mårtensson *et alii* 2007). On the other hand, spools weighing less than 30 g have been described as usable in weaving, though not as loom weights (Andersson n.d.: 26). The Tell Arbid specimens were not weighed.

¹⁴ For an overview, see e.g., Bianchi, Wissing 2009: 298.

¹⁵ For a discussion, see e.g., Cholidis 1992: 44 *passim*; Wrede 2003: 66.

¹⁶ An object reminiscent of our “bottle-cap tokens”, but interpreted as a miniature vessel, was found in the fill of an Akkadian period temple at Tell Brak [see *Table 5:B*], so it could also be tentatively cited as an example in this category.

¹⁷ Although not discussed here, as no direct parallels have been found. Should the dotted coil be assumed to represent a snake, it would fall under the heading of a zoomorphic figurine.

Table 5. Selected parallels to the Tell Arbid objects, presented by categories: A. Spools, B. Tokens, C. Clay discs, D. Numerical tablets and lined rectangles, E. Terrahedrons, F. Model round tables on cylindrical leg, G. Miniature vessels, H. Cross-and-dots (c & d) motif
 UBC – unbaked clay; TC – terracotta

Object type	Site	Dating	Material	Interpretation	Comments	Reference
Spools	A. SPOOLS					
	Tell Arbid	Akkadian/post-Akkadian period(?)	UBC	-	Context: secondary(?)	Arb'99-SS-36/55-IX, unpublished
		Ninevite 5 period			Context: fill over floor	Arb'03-D-30/41-36, unpublished
		?				Arb'05-SD-35/64-4-17, unpublished
		Early Dynastic III(?)			Incomplete; might also be a vessel fragment	Arb'03-SD-36/65-160-34, unpublished
		Early Dynastic III				Arb'99-SD-36/65-47-16, unpublished
	Tell Barri	Bronze/Iron Age	TC or UBC	Weaving devices		Baccelli 2008: 299, Fig. 3:11
	Tell Brak	Akkadian layers	TC	None	Four specimens	Oates, Oates, McDonald 2001: 277, 616, Fig. 491:110
	Tell Chagar Bazar	2nd millennium BC	UBC	Token	Only reminiscent of a spool	McMahon 2009: 210–211, 406, Pl. 82:7 (object CB2058)
	Tell Mozan	Old Jezirah V	UBC	None	Context: courtyard of house	Bianchi, Wissing 2009: 411–415, Pl. 90: 1332
		Early Jezirah I			Context: grave	Bianchi, Wissing 2009: 411–415, Pl. 90: 1328
		Early Jezirah I-II, Early Jezirah IIIa, Early Jezirah IV, Early Jezirah V			Further objects from secondary contexts	Bianchi, Wissing 2009: 411–415
		Early Halaf period			Context: floor of room; found with UBC figurines and tokens	Akkermans, Le Mière 1992: Fig 17:10
		Tell Sabi Abyad	UBC	None		
	Kenan Tepe	Late Chalcolithic 4 period	TC	Weaving device (loom weight)	Context: pit, like Andersson n.d.: Fig. 10	Foster 2009: 245

Object type	Site	Dating	Material	Interpretation	Comments	Reference
	Norsun-tepe	Iron Age Early Bronze Age IIIC	TC	Gaming pieces	Function suggested by analogy with New Kingdom Egypt (Schmidt 2002: 32)	Plain specimen: Schmidt 2002: Pl. 33: 430, 431 Specimen with notched edges; Schmidt 2002: Pl. 33:436
	Malatya / Arslantepe	Iron Age (?)	?	Loom weights	Twice the size of the Tell Arbid examples	Pecorella (ed.) 1975: 85; Fig. 2:30, 2:31
		Late Chalcolithic 3-4; Early Bronze Age III; Middle/Late Bronze Age	UBC/TC	Weaving devices	Eight specimens weighing from 5g to 40g	Andersson n.d.: Figs 1, 10
		"Period of the Hittite Empires" (MBA-LBA(?))	TC, UBC		Spools reported to have been numerous (von der Osten 1937b: 273)	Von der Osten 1937b: 273, 284, Fig. 307:d 2599
	Alishar Hüyük	"Stratum II" (Middle Bronze Age(?))	UBC and slightly fired	None		Schmidt 1932: 123, Fig. 150.b 2687
		Not dated				Von der Osten, Schmidt 1932: 114, Fig. 94: 2272
		"Period of Hittite Empires" (MBA-LBA(?))			"Upper" surface features c & d motif	Von der Osten 1937b: Fig. 307:e14
	Nuzi	Mitanni period	TC	Kiln stilt(?)	Approximately twice the size of the Tell Arbid examples	Starr 1937: 30, Pl. 117:s; Starr 1939: 414
	Uruk	Uruk period	Asphalt	None	Shape very similar to our examples	Lindemeyer, Martin 1993: 251, Pl. 96
	B. TOKENS					
Raised edge ¹⁸	Tell Arbid	Ninevite 5 period(?)	UBC		Context: upper parts of fill in/over the entrance to the Southern Temple	Arb'05-W-53/56-20-A unpublished
		Khabur Ware period	TC(?)	-	Context: secondary; incomplete; might also be the foot of a vessel	Arb'99-SA-37/54-66 unpublished
		Post-Akkadian period	TC	Miniature vessel		Oates, Oates, McDonald 2001: Fig. 410:391
	Tell Brak	Akkadian period	TC	Miniature vessel / counter / lid		Oates, Oates, McDonald 2001: Fig. 491:141

Object type	Site	Dating	Material	Interpretation	Comments	Reference
	Tell Brak	Mid-3rd millennium BC	UBC	Miniature vessels		Matthews (ed.) 2003: Figs 5.75:2, 5.79:18–20
	Tell Mozan	Early Jezirah IIIb to Old Jezirah I	UBC	Gaming piece / counter	Context: secondary	Bianchi, Wissing 2009: 308–311, Pl. 61–62; 1024, 1030, 1332, 1035
		Old Jezirah I–II	UBC	Gaming piece / counter	Context: collection MZ00C2-q1143 not illustrated	Bianchi, Wissing 2009: 308–311; object 1038
	Tell Tayā	About 1780 BC	UBC	Containers / crucibles	Context: workshop; larger than the Tell Arbid examples	Reade 1973: 171, Pl. LXX:c
	Alishar Hüyük	Early Bronze Age	TC	Pottery “cake”	Uncertain; seems shallower than the Tell Arbid examples	Von der Osten 1937a: Fig. 100, object c 554
	Abu Salabikh	Early Dynastic III period	UBC	Miniature vessels	Context: ash-tip; comparisons with full-sized vessels cited (Green 1993b: 112)	Green (ed.) 1993: Fig. 4:4, e.g., objects 438, 445
	Ur	Early Dynastic period	UBC(?)	Miniature vessels	Illustrated as part of a set of miniature vessels	Green (ed.) 1993: Fig. 4:2 b
	Tell Arbid	Khabur Ware period	UBC	–	Context: ashy fill of pit; good likeness to examples from the set	Arb'00-SA-70a unpublished
		Post-Akkadian period	UBC	–	More of a round-bottomed bowl with serrated edge	Arb'00-SA-37/54-115, unpublished
	Tell Brak	Akkadian period	UBC	Token / miniature vessel	Context: fill of temple cella (Oates, Oates, McDonald 2001: 616); with rounded bottom	Oates, Oates, McDonald 2001: 598, Fig. 491:140
“Bottle-cap”						
	Alishar Hüyük	“Period of the Hittite Empires” (MBA–LBA)	TC(?)	None	Described as pottery “<cakes>, the use of which is entirely problematic” (Von der Osten 1937b: 273)	Von der Osten 1937b: Figs 302, 303; objects c 1165, d 1358, possibly also d 2223, d 1586, d 2551, d 2597

Object type	Site	Dating	Material	Interpretation	Comments	Reference
Lenticular ¹⁹	Tell Arbid	Ninevite 5 period	UBC	–	Context: between fallen bricks over floor of the Southern Temple	Arb'07-W-52/55-49-2, unpublished
	Tell Bderi	3rd millennium BC	UBC	Tokens/ reckoning devices	See also: Tell Bderi in Table y5 (discs B and C)	Pfälzner 1992-1993: Fig. 59, first from top
	Tell Mozan	Old Jezirah I, Early Jezirah IV and Old Jezirah IIb	UBC	Gaming piece / counter	See also: Tell Mozan in Table y5 (discs B)	Bianchi, Wissing 2009: Pl. 60; e.g. 999, 1004, 1005
	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices(?)	Context: part of a collection of UBC objects from quayside storeroom; interpretation same as discs variant C	Karras, Werner 1998: 4237
Straight-sided, central impression	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices / stands or displays	Context: part of a collection of UBC objects from a quayside storeroom interpretation centered on discs variant C	Karras, Werner 1998: objects 4234, 4233
C. CLAY DISCS ²⁰						
Variant B	Tell Arbid	Khabur Ware period	UBC	–	Context: set of UBC "toys" (Bielński 2000: 28); Dia. approx. 10 cm by 8 cm; Th. 0.9 cm	ARB'99-SR-36/61-60-9(?); unpublished
Variant B ₁	Tell Mozan	Early Jezirah IIIa–V	UBC	None	Context: secondary; Dia. approx. 5 cm, "token"?	Bianchi, Wissing 2009: 298, Pl. 63:1079
	Tell Bderi	Early Dynastic II or III period	UBC	Token / reckoning devices	Context: secondary(?); with impressed stems(?); Dia. < 5 cm, "token"?	Pfälzner 1992–1993: Fig. 59, first object from bottom
	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices / stands or displays	Context: collection of UBC objects; 4235, 4237; Dia. approx. 5 cm, "tokens"?	Karras, Werner 1998: objects 4235, 4236, 4237
	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices / "pincushions" or displays	Interpretation focused on variant C	Karras, Werner 1998: objects 4226, 4227

Object type	Site	Dating	Material	Interpretation	Comments	Reference
Variant B ^{2/c}	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices / "pincushions" or displays	Upper face features impressed dots and basic cross (-and-dot) decoration	Karras, Werner 1998: objects 4210, 4211, 4219
	Tell Bderi	Early Dynastic II or III period	UBC	Reckoning devices / notation tablets	Context: pits; Dia. < 5 cm, "token"?	Pfälzner 1990: 77; Pfälzner 1992–1993: Fig. 59, second and third object from top
	Tell Munbaqat	Late Bronze Age	UBC (secondary firing)	Gaming devices / "pincushions" or displays		Karras, Werner 1998: objects 4212–4216, 4218, 4220, 4228–4230
D. NUMERICAL TABLETS AND LINED RECTANGLES						
Sub-rectangular pseudo-tablet	Tell Arbid	Late Ninevite 5 period	UBC	–	Context; found beneath the floor of locus 41; points along three edges of obverse; fourth edge damaged	Arb'07-D-30/41-8-25; unpublished
	Tell Bderi	Early Dynastic II or III period	UBC	Numerical notation tablets	(?) (not illustrated)	Pfälzner 1990: 77
	Tell Attij	About 2500 BC	UBC	Numerical notation tablet	Context: storage complex, associated with UBC tokens (Fortin, Schwartz 2003: 223)	Fortin 1989; Fig. 16; 1999: Fig. 236
	Tell Bi'a	About 1782–1774 BC	UBC	Elementary writing or counting exercises	(?) Well-prepared tablets with regularly spaced points	Krebernik 1990: 86–87; Bi. 28/48; 57 Bi. 26/49; 27
Sub-rectangular pseudo-tablet / lined rectangle	Tell Raqa'i	Early Dynastic III period	UBC	Tablet with numerical(?) notations	Context: fill; convex face divided by lines into fields; two large impressed circles, rows of notches and points in the fields	Curvers, Schwartz 1990: Fig. 7

Object type	Site	Dating	Material	Interpretation	Comments	Reference
Lined rectangle	Tell Chagar Bazar	Early 2nd millennium BC	Slightly baked clay	Tally	Oblong, tapered at one end; incised central line, multiple perpendicular lines (pelt-like?)	McMahon 2009: Pl. 81:4
	E. TETRAHEDRONS					
Tetrahedrons	Tell Beydar	Early Jezirah IIIb (2425–2340)	UBC	Tokens	Context: floor of room 1660 (metal workshop) in what had been the Eastern Palace; part of a set(?)	Pruss 2011: Fig. 6; 16259-M-5, 16259-M-18, 16259-M-21
	Tell Raqa'i	Mid/Late Ninevite 5 period	TC	Tokens	Context: burnt contents of a two-room house (unit 29/120); part of a set of about two dozen tokens, including disc, cones and spheres	Schartz, Curvers 1993–1994: 250, Figs 72–73
	Tell Bi'a	Early 2nd millennium BC(?)	UBC	Calculus(?)	Secondary firing	Strommenger, Miglus (eds) 2010: Pl. 93: 26/ 9:109
	Uruk	Late 4th millennium BC	UBC	Tokens / calculi	Probably associated with a clay envelope (bulla)	Nissen, Damerow, Englund 2004: Pl. 18a; Schmand-Besserat 1988: Type V/1, e.g., Pl. 5:447
	Susa	Late Uruk period (about 3300 BC)	UBC	Tokens / calculi	Found with other small tokens in a clay envelope	Harper, Aruz, Tallon (eds) 1994: 55, Fig. 2
	Choga Mish	Late Uruk period (3350–3100 BC)	UBC	Tokens / calculi		Woods 2010: Fig. 21
F. MODEL ROUND TABLES ON CYLINDRICAL LEG						
Model round tables	Tell Arbid	Khabur Ware period	UBC	Toy	Context: set of UBC objects	Arb'99-36/61-60-05; Bieliński 2000: 281, Fig. 6

Object type	Site	Dating	Material	Interpretation	Comments	Reference
	Tell Br'a	Early Bronze Age(?)	TC	Cult(?)	One with three-footed leg; one with decorated, raised edge and center of the table-top	Strommenger, Miglus 2010: Pl. 91:39/23:5. 26/49:264, 40/24:37
		Early Bronze Age(?)	UBC	Cult(?)	Decorated all over with short notches	Strommenger, Miglus 2010: Pl. 91:25/48:10
	Tell Huera	Old Syrian period (2000/1900–1530 BC)	TC?	Cult / offering tables	Pitted top	Cholidis 1992: No. 189
	Tell es-Sweyhat	Early Bronze Age IVb	TC	Offering stand	Very slender leg	Holland 2006: Fig. 160:4, Pl. 120:c
		Early Bronze Age IV (2400–2100 BC)	TC	Cult-related	Uncertain; fragment of a column	Moorey 2005: 198, Cat. No. 248
	Ebla	Middle Bronze Age II	TC	Offering table	With applied pellets on top and very pronounced feet	Marchetti 2001: Pl. CCLXI; Marchetti 2000: 846, Fig. 23
	Tell Khan Sheikhun	Middle Bronze Age IIA	TC	Offering table	With applied pellets on top and very pronounced feet; probably more than one item	Marchetti 2001: 207, Pl. CCLXXI: 7
	Selmiya	Middle Bronze Age IIA	TC	Offering table	With applied pellets on top and very pronounced feet; three items from the site and vicinity	Marchetti 2001: 207
	Syria – un-provenanced	Middle Bronze Age II	TC	Offering table	With applied pellets on top and very pronounced feet	Marchetti 2001: 207, Pl. CCLX-IX: 2–4; 27/4, CCXCII: 3
	Assur	Old Babylonian(?) period	TC	Cult / offering tables	Not certain, if supported by a central column rather than by separate legs; possibly Parthian according to N. Cholidis	Cholidis 1992: No. 170
	Babylon	Neo-Babylonian period	TC	Cult / offering tables		Cholidis 1992: Nos 1–142
	Nippur	Old Babylonian period	TC	Cult / offering tables		Cholidis 1992: No. 172

Object type	Site	Dating	Material	Interpretation	Comments	Reference
	Tello	Neo-Sumerian period	TC	Cult / offering tables		Cholidis 1992: No. 177
	Uruk	Neo-Babylonian period	TC	Pottery stands(?)	Almost non-existent tops	Wrede 2003: 66, Fig. 37:a, b
	Ur	Neo-Babylonian period	TC	Cult / offering tables	Plastic decoration on top — breads?	Cholidis 1992: No. 179
	G. MINIATURE VESSELS					
Miniature bowl	Tell Arbid	Khabur Ware period	UBC	–	Rounded wall	Arb'01-SA-37/54-12-15; unpublished
	Tell Beydar	Early Jezirah IIIb (2425–2340)	UBC	Miniature vessel — ritual function(?)	Context: floor of room 1660 (metal workshop) in what had been the Eastern Palace; found with matching conical lid (Dia. 5.5 cm)	Pruss 2011: Fig. 6: 16259-M-15
	Tell Brak	Post-Akkadian period	UBC	Miniature vessels — toys(?)	Larger, Dia. 4 cm	Oates, Oates, McDonald 2001: Fig. 410:402
	Tell Arbid	?	UBC	–	Round depression on bottom	Arb'03-SD-35/36-8-10; unpublished
Cone - miniature 'lid'	Tell Arbid	Late Early Dynastic period III	–	–	Context: over/on floor level in locus 21; probably found with a UBC model bowl	Arb'99-SD-36/65-38-2; unpublished
	Tell Mozan	Old Jezirah I	UBC	Gaming piece / counter		Bianchi, Wissing 2009: 312, Pl. 62:1049
		Middle Bronze Age and 2nd half of the Early Bronze Age	UBC	Gaming pieces / counters	Six other conical objects	Bianchi, Wissing 2009: 312
	Tell Beydar	Early Jezirah IIIb (2425–2340)	UBC	Miniature lid — ritual	Context: floor of room 1660 (metal workshop) in what had been the Eastern Palace; found with matching bowl (Dia. 6.3 cm)	Pruss 2011: Fig. 6: 16259-M-9
	Tell Kashkashok	Hassuna Ia period	TC	'Stamp-shaped' counting devices(?)		Matsutani (ed.) 1991: 34, Pl. 69:13

Object type	Site	Dating	Material	Interpretation	Comments	Reference
	Korucutepe	Late Bronze Age I (1600–1400 BC)	?	Human figurine-shaped pawns(?)	Slightly bulging top	Van Loon (ed.) 1978: Pl. 43:F
	Alishar Hüyük	“Period of the Hittite Empires” (MBA–LBA?)	TC	Pottery “cakes”		Von der Osten 1937b: Fig. 302, objects c 2353, c 1372
		“Chalcolithic Age”	TC	Small lid	Found in level 15	Von der Osten 1937a: Fig. 97, object c 2391
	Demircihuyuk	Early Bronze Age	UBC(?)	Gaming pieces	Other TC an UBC conical gaming pieces: 108:7–15	Obladen-Kauder 1996: 255-256, Pl. 108:12
H. CROSS-AND-DOTS (C & D) MOTIF						
Flattened pellet	Tell Arbid	Early Dynastic III / Akkadian period	UBC	–	Very thick pellet of blackened clay	ARB'00-SS-36/55-84; unpublished
Elongated cone	Tell Brak	Mitanni period	TC	Pottery stamp seal	Context: Area HH, level 2, locus 241, Room 21, floor	Oates, Oates, McDonald 1997: Fig. 180:24
Jewelry mold	Tell Hamidiya	Mitanni/Middle Assyrian period	Stone	Mold for pendant(?)		Eichler, Waeffer, Warburton (eds.) 1990: 303, Fig. 85; object 20/23-37
Flattened pellet with loop	Tell Munbaqat	Late Bronze Age	UBC	Pendant(?)	Round, with crossing lines and two dots in each field formed by the crossing lines	Karras 1998: object 2066
Spool	Alishar Hüyük	“period of the Hittite Empire” (MBA–LBA?)	TC	“Misc. pot. objects”	Motif on “upper” face	Von der Osten 1937b: Fig. 307:e 14
Truncated bicone	Beycesultan	Middle Bronze Age	TC or UBC?	Spindle whorl	Object 163; grey-buff clay; Dia. 2.25 cm, H. 2.5 cm; other decor on the underside	Murray 1995: 119, 138, Fig. 014:163

Object type	Site	Dating	Material	Interpretation	Comments	Reference
Spindle whorl	Demirci-huyuk	Early Bronze Age	Clay	Spindle whorl	Stray find; Dia. 3.2 cm, H. 2.4 cm; decoration on the "upper" face	Secher 2000; Fig. 56:9
Knob		Neo-Babylonian period	Stone	Knob / button		Becker 1993: 12, Pl. 7:77
Disc	Uruk	Ubaid or Uruk period(?)	UBC?	Token	Field no. 25199c; context: Locus Va XV/III; Grab 391; season/uvb-30	Schmand-Besserat 1988: Pl. 2:357
Round table		Seleucid-Parthian period	TC	Model table	Pellets with crossing lines on table top	Wrede 2003: Pl. 38: d, e
Disc	Buri necropolis (Bahrain)	Early Dilmun period (about 2000–1800 BC)	Stone	Stamp seal		Crawford, Rice (eds) 2000: 104, object 142

¹⁸ Parallels lack certain traits present in our objects, that is to say, pointed walls, formed by squeezing the clay between thumb and finger.

¹⁹ This plain shape is so lacking in characteristic features that the search for analogies has been restricted.

²⁰ In seeking out parallels for discs A, B and D only objects of unbaked clay have been taken into consideration, since, in my opinion, the possibility of easily making them for a specific purpose and the acceptance for their frailty are among the defining features of such objects. The line between a clay disc and a "token" not being sharp, in the case of objects measuring about 5 cm in diameter, the categories may overlap. As for discs B1 and B2, parallels have been sought among objects similar in shape and size rather than in decoration. Punctures, which are the most prominent feature of disc variant C, have taken precedence over other traits in seeking out parallels.

DISCUSSION: TOWARDS FUNCTION AND MEANING

In the quest for identifying the function of our collection there are some inferences to be made from the data availed by the collection itself. The most important assumption is that all the objects were used simultaneously and, as such, were elements of one activity. Therefore, a single interpretation ought to be found that will provide explanations for the functions of objects as different as “spools”, pseudo-tablets, calculi, clay discs and model tables.

Their users must have needed a given number of objects for their purpose, as indicated, for example, by the apparent addition of three spools to a pre-existing set. On the other hand, they used materials available on the spot (the large potsherds, and — judging by the quality of clay — mud for making some of the objects, like the discs). It would thus seem that they had brought some of the objects with them and then decided to complement the set with a number of other elements. After all, to make simple objects of unbaked clay does not require special preparation, skill or equipment, nor much time, other perhaps than that needed for the objects to dry. After having been used, the objects were left in the ditch (there was no evidence of their having been intentionally buried). Therefore, the second premise in this effort at an interpretation is that we are dealing with not a mere deposition context, but with a context reflecting the use of these objects.

Although most of the interpretations presented above are educated guesswork at best, they illustrate the array from which one can choose. There are

a few negative opinions that can be voiced based on this overview. Firstly, there is no evidence to support a utilitarian application (first group of interpretations) for the objects from the Tell Arbid collection. For instance, even had the spools been made originally as some sort of weaving devices, in the discussed context they were obviously used in a different capacity.

Although many of the objects can be interpreted as tokens or counters, their findspot does not support an interpretation within an administrative framework. As said above, in the Khabur Ware-period, this part of the tell, as suggested by the excavated area, seems to have been abandoned and was used as a burial ground and as a place for digging pits. No trace of any commercial or other administratively-demanding activities was recorded there.

With regard to the next functional category, many of the items could well be endowed with meaning in a gaming context, as pawns, for example (tokens and spools). The discovery of some tokens atop the decorated discs makes the latter look like some kind of boards. In gaming circumstances, explaining the tetrahedrons/calculi, punctured disc and the “pseudo-tablet” as a primitive notation set might seem reasonably plausible (one dot = one run/win?). What is problematic is the presence of objects of a completely different sort: the model tables and the dotted coil (snake?) hidden in a clay envelope, which do not easily fit into this line of reasoning. Moreover, although some games are known from the region and period in

question, the Tell Arbid example is not one that has been attested elsewhere.

To remain still in this category of meaning, construing the objects as children's toys (following the interpretation of the other Tell Arbid set) would probably necessitate abandoning the proposed function of reckoning devices for the "pseudo-tablets" and tetrahedrons/calculi, highly unlikely to have been used as such by children, but it might allow other objects, like the model tables and clay discs, to be incorporated. Notably, both sets of objects were used and apparently left behind casually in a disused part of the site, which might point to a similar function of the two sets. However, views on such circumstances may differ, as illustrated by the case of Tell Beydar, where objects left in a disused building have been interpreted as part of a closure ritual rather than a casually abandoned set of toys (Pruss 2012).

As for the cultic interpretation category, the model tables²¹ and the miniature vessels are the only types of objects linking the set with activities of this sort, this in the face of the absence of anthropo- and

zoomorphic figurines often interpreted as magical images (e.g., Moorey 2005: 6–7, Cooper 2006: 89–93), with the possible exception of the snake-like coil. Another argument for this line of reasoning is the use of unbaked clay (see above), although the same properties that made it desirable as a vehicle of magic seem also to speak in favor of the toy interpretation. As in the latter case, the ritual/magical category is also broad enough to incorporate any kind of object and is thus a tempting avenue to follow, especially in view of the assumption that any explanation should encompass the entire spectrum of these very diverse objects.

Taking these speculations one step further, could not a game played with the presented set have had a magical purpose to it?²² Or can some other cultic or ritualistic meaning be read into the circumstances of our sets? It would be enticing to think, for instance, that the use of the clay objects in this particular place was in relation to the secondary pit burials, perhaps of bones discarded after a grave robbery. However, such a context would be, to my knowledge, unparalleled at other sites.

CONCLUSIONS

The function of the set of over 60 unbaked clay objects found in a Khabur Ware-period layer at Tell Arbid remains open to discussion. Although we are dealing here with a collection found *in situ*, its context of use does not allow for drawing

confident conclusions as to its function. As demonstrated, interpretations that would be probable for an individual object do not hold once the assemblage is viewed as a whole, whereas those proposed for the lot cannot be regarded as anything but

²¹ The purported function of model tables as offering tables (Cholidis 1992: 3–44) or model altars (Marchetti 2000: 851) used in household cult or magical practices derives foremost from iconography (depictions of tables in scenes of offerings) and on their mentions in written sources (in the absence of such models in well-recognized cult contexts).

²² Building on A. Green's remark regarding the figurines, tokens and vessels from the Abu Salabikh ash-tip: 'how can we distinguish items of secular administration from those of religious administration?' (Green [ed.] 1993: 20).

speculative. Still, the discovery of a second large set of diverse unbaked clay objects, including token-like items, in a Khabur Ware-period layer at Tell Arbid proves that such objects were not uncommon, even in this relatively late period. The question of meaning can be approached with more success once more information on similar objects, their contexts and concurrence, is made available.

ACKNOWLEDGMENTS

I would like to thank the director of the Tell Arbid mission, Prof. Piotr Bieliński, for permission to present this material. The objects were explored for the most part by Krzysztof Kiersnowski, who also took care of their field conservation. Information on the dating of parallels from Tell Arbid was provided by Dr. Maciej Makowski. I am very grateful for their help.

Agnieszka Szymczak

Polish Centre of Mediterranean Archaeology, University of Warsaw

00-497 Warsaw, Poland, ul. Nowy Świat 4

agnieszka.szymczak@uw.edu.pl

REFERENCES

- Akkermans, P.M.M.G., Le Mièrre, M.
1992 The 1988 excavations at Tell Sabi Abyad, a Later Neolithic village in Northern Syria, *AJA* 96/1, 1–22
- Andersson, E.B.
n.d. *Tools and Textiles – Texts and Contexts Research Programme. Technical Textile Tools Report, Arslantepe, Turkey*, The Danish Research Foundation's Centre for Textile Research, University of Copenhagen, electronic resource: http://ctr.hum.ku.dk/tools/toolsreports/Arslantepe_Technical_Textiles_Tools_Report.pdf/ [accessed: May 2013]
- Bacelli, G.
2008 Lo strumentario per la filatura e la tessitura di Tell Barri/Kahat, *La parola del Passato* 63, 292–304
- Becker, A.
1993 *Uruk. Kleinfunde I. Stein* [= *Ausgrabungen in Uruk-Warka* 6], Mainz am Rhein: Philipp von Zabern
- Bianchi, A., Wissing, A.
2009 *Die Kleinfunde* [= *Studien zur Urbanisierung Nordmesopotamiens A. Ausgrabungen 1998–2001 in der zentralen Oberstadt von Tall Mozan/Urkeš 2*], Wiesbaden: Harrassowitz
- Bieliński, P.
2000 Tell Arbid. The fourth season, *PAM* 11 (*Reports* 1999), 273–284
2012 Tell Arbid 2008–2009. Preliminary report on the results of the thirteenth and fourteenth seasons of Polish–Syrian excavations, *PAM* 21 (*Reports* 2009), 511–536
2013 Preliminary results of the fifteenth field season of joint Polish–Syrian explorations on Tell Arbid (2010), *PAM* 22 (*Research* 2010), 351–370

- Cholidis, N.
 1992 *Möbel in Ton. Untersuchungen zur archäologischen und religionsgeschichtlichen Bedeutung der Terrakottamodelle von Tischen, Stühlen und Betten aus dem Alten Orient*, Münster: Ugarit-Verlag
- Cooper, L.
 2006 *Early Urbanism on the Syrian Euphrates*, New York–London: Routledge
- Crawford, H., Rice, M. (eds)
 2000 *Traces of Paradise. The Archaeology of Bahrain 2500 BC–300 AD. An Exhibition at the Brunei Gallery, Thornhaugh Street, London WC1, 12 July–15 September 2000*, London: Dilmun Committee
- Curvers, H.H., Schwartz, G.M.
 1990 Excavations at Tell al-Raqa'i: a small rural site of early urban Northern Mesopotamia, *AJA* 94/1, 3–23
- Duru, R.
 1986 Tarihönçesi Çağlarına Ait Dini Bir Tören, *Anadolu Araştırmaları* 10, 169–176
- Eichler, S., Waefler, M., Warburton, D. (eds)
 1990 *Tall al-Hamidiya II. Symposion. Recent Excavations in the Upper Khabur Region, Berne, December 9–11, 1986* [=OBO Series archaeologica 6], Fribourg: Universitätsverlag; Göttingen: Vandenhoeck & Ruprecht
- Fortin, M.
 1989 Trois campagnes de fouilles à Tell 'Attij: Un comptoir commercial du III^{ème} millénaire av. J.-C. en Syrie du Nord, *Bulletin of the Canadian Society for Mesopotamian Studies* 18, 36–55
 1997 Urbanisation et 'redistribution' de surplus agricoles en Mésopotamie septentrionale (3000–2500 av. J.-C.) [in:] W.E. Aufrecht, N.A. Mirau, S.W. Gauley (eds), *Aspects of Urbanism in Antiquity. From Mesopotamia to Crete* [=Journal for the Study of the Old Testament. Supplement Series 244], Sheffield: Sheffield Academic Press, 50–81
 1999 *Syrie, terre de civilisations. Catalogue d'une exposition itinérante tenue au Musée de la civilisation, Québec, Québec du 30 mai 2000 au 7 janv. 2001* [exhibition catalogue], Montreal: Les Éditions de l'Homme
- Fortin, M., Schwartz, G.M.
 2003 The Middle Habur in the third millennium B.C. [in:] E. Rova, H. Weiss (eds), *The Origins of North Mesopotamian Civilization: Ninevite 5 Chronology, Economy, Society* [=Subartu 9], Turnhout: Brepols, 221–248
- Foster, C.P.
 2009 *Household Archaeology and the Uruk Period Phenomenon. A Case Study from Kenan Tepe, Turkey* (unpublished PhD dissertation, University of California, Berkeley), online resource: https://www.academia.edu/257270/Household_Archaeology_and_the_Uruk_Phenomenon_A_Case_Study_from_Kenan_Tepe_Turkey [accessed: October 2013]
- Green, A.R.
 1993a The excavations. Details and overview [in:] A.R. Green (ed.), *Abu Salabikh Excavations IV.1. The 6G Ash-Tip and its Contents: Cultic and Administrative Discard from the Temple?*, London: British School of Archaeology in Iraq, 1–21
 1993b Miniature vessels [in:] A.R. Green (ed.), *Abu Salabikh Excavations IV.1. The 6G Ash-Tip and its Contents: Cultic and Administrative Discard from the Temple?*, London: British School of Archaeology in Iraq, 111–124

- Green, A.R. (ed.)
 1993 *Abu Salabikh Excavations IV.2. The 6G Ash-Tip and its Contents: Cultic and Administrative Discard from the Temple?*, London: British School of Archaeology in Iraq
- Harper, P.O., Aruz, J., Tallon, F. (eds)
 1994 *La cité royale de Suse. Trésors du Proche-Orient ancien au Louvre* [exhibition catalogue], Paris: Réunion des musées nationaux
- Holland, T.A.
 2006 *Excavations at Tell es-Sweyhat, Syria II.2. Archaeology of the Bronze Age, Hellenistic, and Roman Remains at an Ancient Town on the Euphrates River. Figures and Plates [=OIP 125]*, Chicago: The Oriental Institute of the University of Chicago
- Karras, M.
 1998 Verschiedene Schmuckstücke [in:] R.M. Czichon, P. Werner (eds), *Ausgrabungen in Tall Munbāqa — Ekalte I. Die bronzezeitlichen Kleinfunde [=WVDOG 97]*, Saarbrücken: Saarbrücker Druckerei und Verlag, 178–224
- Karras, M., Werner, P.
 1998 Tonscheiben [in:] R.M. Czichon, P. Werner (eds), *Ausgrabungen in Tall Munbāqa — Ekalte I. Die bronzezeitlichen Kleinfunde [=WVDOG 97]*, Saarbrücken: Saarbrücker Druckerei und Verlag, 333–335
- Koliński, R.
 2011 Tell Arbid. Adam Mickiewicz University excavations in Sector P. Spring season of 2008, *PAM 21 (Research 2009)*, 303–319
- Krebernik, M.
 1990 Die Textfunde aus Tall Bi'a, *MDOG 122*, 67–87
- Lindemeyer, E., Martin, L.
 1993 *Uruk. Kleinfunde III. Kleinfunde im Vorderasiatischen Museum zu Berlin: Steingefäße und Asphalt, Farbreste, Fritte, Glas, Holz, Knochen/Elfenbein, Muschel/Perlmutter/Schnecke [=Ausgrabungen in Uruk-Warka 9]*, Mainz am Rhein: Philipp von Zabern
- (van) Loon, M.N. (ed.)
 1978 *Korucutepe. Final Report on the Excavations of the Universities of Chicago, California (Los Angeles) and Amsterdam in the Keban Reservoir, Eastern Anatolia 1968–1970, II*, Amsterdam–Oxford: North-Holland Publishing Co.
- Ławecka, D.
 2006 *Północna Mezopotamia w czasach Sumerów*, Warsaw: Agade
- Machule, D., Benter, M., Czichon, R., Karstens, K., Klapproth, H., Mayer, W., Pape, W., Werner, P.
 1988 Ausgrabungen in Tall Munbāqa 1986, *MDOG 120*, 11–50
- Makowski, M.
 2013 Anthropomorphic figurines of the second millennium BC from Tell Arbid. Preliminary report, *PAM 22 (Research 2010)*, 617–626
- Marchetti, N.
 2000 Clay figurines of the Middle Bronze Age from Northern Inner Syria: Chronology, symbolic meanings and historical relations [in:] P. Matthiae, A. Enea, L. Peyronel, F. Pinna (eds), *Proceedings of the First International Congress on the Archaeology of the Ancient Near East, Rome, May 18th–23rd, 1998*, Rome: Università degli studi di Roma “La Sapienza”, 839–867
- 2001 *La coroplastica eblaita e siriana nel Bronzo Medio. Campagne 1964–1980 [=Materiali e Studi Archeologici di Ebla 5]*, Rome: Università degli studi di Roma “La Sapienza”

- Mårtensson, L., Andersson, E., Nosch, M-L., Batzer, A.
 2007 *Tools and Textiles — Texts and Contexts Research Programme. Technical Report. Experimental Archaeology Part 4, Spools*, The Danish Research Foundation's Centre for Textile Research, University of Copenhagen, electronic resource: http://ctr.hum.ku.dk/tools/Technical_report_4_experimental_arcaheology.PDF/ [accessed: May 2013]
- Matsutani, T. (ed.)
 1991 *Tell Kashkashok: The Excavations at Tell No. II*, Tokyo: University of Tokyo Press
- Matthews, R. (ed.)
 2003 *The Excavations at Tell Brak IV. Exploring an Upper Mesopotamian Regional Centre, 1994–1996*, Cambridge: McDonald Institute for Archaeological Research; London: British School of Archaeology in Iraq
- McMahon, A.
 2009 *Once There Was a Place: Settlement Archaeology at Chagar Bazar, 1999–2002*, London: British School of Archaeology in Iraq
- Moorey, P.R.S.
 2005 *Ancient Near Eastern Terracottas with a Catalogue of the Collection in the Ashmolean Museum*, Oxford: Ashmolean Museum of Art and Archaeology, University of Oxford
- Murray, A.
 1995 The Middle and Late Bronze Age small objects [in:] J. Mellaart, A. Murray, *Beycesultan III.2. Late Bronze Age and Phrygian Pottery and Middle and Late Bronze Age Small Objects* [=Occasional Publication of the British Institute of Archaeology at Ankara 12], London: British Institute of Archaeology at Ankara, 113–191
- Nissen, H.J., Damerow, P., Englund, R.K.
 2004 *Informationsverarbeitung vor 5000 Jahre. Frühe Schrift und Techniken der Wirtschaftsverwaltung im alten Vorderen Orient. Informationsschpeicherung und Verarbeitung vor 5000 Jahre*, Hildesheim–Berlin: Max-Planck Institut für Bildungsvorschung
- Oates, D., Oates, J., McDonald, H.
 1997 *The Excavations at Tell Brak I. The Mitanni and Old Babylonian Periods*, London: British School of Archaeology in Iraq
 2001 *The Excavations at Tell Brak II. Nagar in the Third Millennium BC*, London: British School of Archaeology in Iraq
- Obladen-Kauder, J.
 1996 Die Kleinfunde aus Ton, Knochen und Metal [in:] M. Korfmann (ed.), *Demircihüyük. Die Ergebnisse der Ausgrabungen, 1972–1975*, IV. *Die Kleinfunde*, Mainz am Rhein: Philipp von Zabern
- Oppenheim, A.
 1959 On an operational device in Mesopotamian bureaucracy, *JNES* 18-2, 121–128
- (von der) Osten, H.H.
 1937a *The Alishar Hüyük Seasons of 1930–1932*, I [=OIP 28; *Researches in Anatolia* 7], Chicago: Oriental Institute of Chicago
 1937b *The Alishar Hüyük Seasons of 1930–1932*, II [=OIP 29; *Researches in Anatolia* 8], Chicago: Oriental Institute of Chicago
- (von der) Osten, H.H., Schmidt, E.F.
 1932 *The Alishar Hüyük Season of 1927*, II [=OIP 7; *Researches in Anatolia* 3], Chicago: University of Chicago Press

Pecorella, P.E. (ed.)

- 1975 *Malatya III. Rapporto preliminare delle campagne 1963–1968: il livello eteo imperiale e quelli neoteici* [= *Orientalis antiqui collectio* 12], Rome: Centro per le antichità e la storia dell'arte del Vicino Oriente

Pfälzner, P.

- 1990 Tell Bderi, the development of a Bronze Age Town [in:] S. Kerner (ed.), *The Near East in Antiquity. German Contributions to the Archaeology of Jordan, Palestine, Syria, Lebanon and Egypt I. Lectures held 1988–summer 1989 under the Patronage of H.E. the Minister of Culture and H.E. the Ambassador of the Federal Republic of Germany*, Amman: Goethe-Institut; Al Kutba, 63–79
- 1992–1993 Wohnen vor 4500 Jahren. Ergebnisse der Ausgrabungen auf dem Tall Bderi, *Nürnberger Blätter zur Archäologie* 9, 49–62

Pruss, A.

- 2011 Finds from Field P [in:] M. Lebeau, A. Suleiman (eds), *Tell Beydar. The 2004/2–2009 Seasons of Excavations. The 2004/2–2009 Seasons of Architectural Restoration. A Preliminary Report* [= *Subartu* 29], Turnhout: Brepols, 177–225
- 2012 A closure ritual at Tell Beydar? [in:] T. Boiy, J. Bretschneider, A. Goddeeris, H. Hameeuw, G. Jans, J. Tavernier (eds), *The Ancient Near East, a Life! Festschrift Karel Van Lerberghe* [= *OLA* 220], Leuven–Paris–Walpole, MA: Uitgeverij Peeters and Department Oosterse Studies, 471–486

Reade, J.E.

- 1973 Tell Taya (1972–73): Summary report, *Iraq* 35/2, 155–187

Reiche, A.

- 2006 Polish archaeological research in North-Eastern Syria, *BMNV* 42 (2001), 95–106

Rittig, D.

- 2010 Modelle von Gebrauchsobjekten [in:] E. Strommenger, P.A. Miglus (eds), *Ausgrabungen in Tall Bi'a/Tuttul V. Altorientalische Kleinfunde* [= *WVDOG* 126], Wiesbaden: Harrassowitz, 88–90

Rittig, D., Strommenger, E.

- 2010 Diverse Objekte aus gebranntem oder ungebranntem Ton und Asphalt [in:] E. Strommenger, P.A. Miglus (eds), *Ausgrabungen in Tall Bi'a/Tuttul V. Altorientalische Kleinfunde* [= *WVDOG* 126], Wiesbaden: Harrassowitz, 90–101

Rossmesl, I., Venema, P.

- 1988 The other clay finds [in:] M.N. van Loon (ed.), *Hammam et-Turkman I. Report on the University of Amsterdam's 1981–84 Excavations in Syria II* [= *Uitgaven van het Nederlands Historisch-Archaeologisch Instituut te Istanbul* 63], Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul, 562–573

Schmand-Besserat, D.

- 1988 Tokens from Uruk, *Baghdader Mitteilungen* 19, 1–175
- 1992a *Before Writing I. From Counting to Cuneiform*, Austin: University of Texas Press
- 1992b *Before Writing II. A Catalogue of Near Eastern Tokens*, Austin: University of Texas Press

Schmidt, E.F.

- 1932 *The Alishar Hüyük Season of 1928 and 1929, I* [= *OIP* 19; *Researches in Anatolia* 4], Chicago: The University of Chicago Press

Schmidt, K.

- 2002 *Norsuntepe Kleinfunde II. Artefakte aus Felsgestein, Knochen und Geweih, Ton, Metall und Glas* [= *Archaeologica Euphratica* 2], Mainz am Rhein: Philipp von Zabern

Schwartz, G., Curvers, H.H.

1993–1994 Tall ar-Raq'a 1986–1993, *Archiv für Orientforschung* 40/41, 246–257

Seeher, J.

2000 *Die bronzezeitliche Nekropole von Demircihüyük-Sarıket. Ausgrabungen des Deutschen Archäologischen Instituts in Zusammenarbeit mit dem Museum Bursa, 1990–1991 [=Istanbuler Forschungen 44]*, Tübingen: E. Wasmuth

Sołtysiak, A.

2010 Tell Arbid (Syria), seasons 1996–2010, *Bioarchaeology of the Near East* 4, 45–48

Starr, R.F.S.

1937 *Nuzi: Report on the Excavations at Yorgan Tepa near Kirkuk, Iraq, Conducted by Harvard University in Conjunction with the American Schools of Oriental Research and the University Museum of Philadelphia, 1927–1931, II. Plates and Plans*, Cambridge, MA: Harvard University Press

1939 *Nuzi: Report on the Excavations at Yorgan Tepa near Kirkuk, Iraq, Conducted by Harvard University in Conjunction with the American Schools of Oriental Research and the University Museum of Philadelphia, 1927–1931, I. Text*, Cambridge, MA: Harvard University Press

Strommenger, E., Miglus, P.A. (eds)

2010 *Ausgrabungen in Tall Bi'a/Tuttul V. Altorientalische Kleinfunde [=WVDOG 126]*, Wiesbaden: Harrassowitz

Woods, C.

2010 The earliest Mesopotamian writing [in:] C. Woods (ed.), *Visible Language: Inventions of Writing in the Ancient Middle East and Beyond* Beyond [=OIP 32], Chicago: Oriental Institute Press, 33–84

Wrede, N.

2003 *Uruk Terrakotten I. Von der Ubaid- bis zur altbabylonischen Zeit [=Ausgrabungen in Uruk-Warka 25]*, Mainz am Rhein: Philipp von Zabern

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

POLISH ARCHAEOLOGY IN THE MEDITERRANEAN

XXII

RESEARCH 2010



CONTENTS

CONTENTS

ACKNOWLEDGMENTS	10
OBITUARIES	
<i>Michał Neska</i>	11
<i>Piotr Parandowski</i>	13
<i>Adam Stefanowicz</i>	15
<i>Zygmunt Wysocki</i>	17
ABBREVIATIONS AND STANDARD REFERENCES	19

PAM REPORTS

PCMA FIELD MISSIONS AND PROJECTS IN 2010 (WITH MAP)	23
---	----

EGYPT

ALEXANDRIA

EXCAVATIONS AND PRESERVATION WORK ON KOM EL-DIKKA.	
PRELIMINARY REPORT 2009/2010	
<i>Grzegorz Majcherek</i>	33

MAREA

ELEVENTH SEASON OF EXCAVATIONS AT MAREA (2010)	
<i>Krzysztof Babraj, [Hanna Szymańska], Anna Drzymuchowska, Nina Willburger</i> ...	55
APPENDIX: THE HARBOR JETTIES OF MAREA	
<i>Krzysztof Babraj</i>	67

TELL EL-RETABA

TELL EL-RETABA, SEASON 2010	
<i>Sławomir Rzepka, Jozef Hudec, Łukasz Jarmużek</i>	79
APPENDIX: TELL EL-RETABA 2010. PRELIMINARY REPORT ON ARCHAEOBOTANICAL INVESTIGATIONS	
<i>Claire Malleon</i>	90
TELL EL-RETABA, SEASON 2010: POTTERY REPORT	
<i>Anna Wodzińska</i>	96

CONTENTS

TELL EL-MURRA

- TELL EL-MURRA (NORTHEASTERN NILE DELTA SURVEY). SEASON 2010
Mariusz A. Jucha, Katarzyna Błaszczuk, Artur Buszek, Grzegorz Pryc 105

TELL EL-GHABA

- GEOPHYSICAL SURVEY AT TELL EL-GHABA, 2010
Tomasz Herbich 121

DEIR EL-BAHARI

- TEMPLE OF HATSHEPSUT AT DEIR EL-BAHARI. SEASONS 2008/2009 AND 2009/2010
Zbigniew E. Szafrński 131
- NEW STONE SCULPTURES OF HATSHEPSUT FROM DEIR EL-BAHARI
Aliaksei Shukanau 152

VALLEY OF THE KINGS

- POLISH EPIGRAPHICAL MISSION IN THE TOMB OF RAMESSES VI (KV 9)
IN THE VALLEY OF THE KINGS IN 2010
Adam Łukaszewicz 161
- APPENDIX: THREE-DIMENSIONAL SPATIAL INFORMATION SYSTEM FOR THE GRAFFITI
INSIDE THE TOMB OF RAMESSES VI (KV 9) IN THE VALLEY OF THE KINGS
Wiesław Małkowski, Miron Bogacki 165

SHEIKH ABD EL-GURNA

- THE HERMITAGE IN SHEIKH ABD EL-GURNA (WEST THEBES): EXCAVATIONS,
STUDIES AND CONSERVATION IN 2009 AND 2010/2011
Tomasz Górecki 171
- PRELIMINARY REMARKS ON THE ARCHITECTURE OF THEBAN TOMB 1152
AT SHEIKH ABD EL-GURNA
Patryk Chudzik 193
- THE GURNA MANUSCRIPTS (HERMITAGE IN MMA 1152),
CONSERVATION REPORT, 2010
Anna Thommée 199

BERENIKE

- THE LATE ROMAN HARBOR TEMPLE OF BERENIKE. RESULTS OF THE 2010 SEASON
OF EXCAVATIONS
Joanna Rądkowska, Steven E. Sidebotham, Iwona Zych 209

SUDAN

DONGOLA

- ARCHAEOZOOLOGICAL RESEARCH ON ANIMAL REMAINS FROM EXCAVATIONS IN
DONGOLA (SUDAN) IN 2010
Marta Osypińska 229

CONTENTS

THE MOSQUE BUILDING IN OLD DONGOLA. CONSERVATION AND REVITALIZATION PROJECT

*Artur Obluski, Włodzimierz Godlewski, Wojciech Kołataj, Stanisław Medeksza,
Cristobal Calaforra-Rzepka* 248

BANGANARTI

BANGANARTI AND SELIB. SEASON 2010

*Bogdan Żurawski, Tomasz Stępnik, Mariusz Drzewiecki, Tadeusz Badowski,
Aneta Cedro, Katarzyna Molga, Katarzyna Solarska, Tomasz Włodarski* 273

APPENDIX: ARCHAEOLOGICAL RESEARCH REPORT FROM SELIB 2 (2010 SEASON)

Roksana Hajduga 287

THE ENCLOSURE WALLS OF BANGANARTI AND SELIB AFTER THE 2010 SEASON

Mariusz Drzewiecki 295

FOURTH CATARACT

HAGAR EL-BEIDA 1. EXCAVATIONS OF THE “ROYAL” TUMULUS (No. 10) IN 2010

Marek Chłodziński, Tomasz Stępnik 309

LEBANON

JIYEH

PRELIMINARY REPORT ON THE 2010 EXCAVATION SEASON AT JIYEH (PORPHYREON)

Tomasz Waliszewski, Mariusz Gwiazda 321

FISHING GEAR FROM JIYEH (PORPHYREON). PRELIMINARY REPORT

Agnieszka Szulc-Kajak 334

SYRIA

PALMYRA

REMARKS ON WATER SUPPLY IN PALMYRA. RESULTS OF A SURVEY IN 2010

Karol Juchniewicz, Marta Żuchowska 341

TELL ARBID

PRELIMINARY RESULTS OF THE FIFTEENTH FIELD SEASON OF JOINT POLISH–SYRIAN EXPLORATIONS ON TELL ARBID (2010)

Piotr Bieliński 351

NINEVITE 5 KITCHEN FROM TELL ARBID (SECTOR W)

Andrzej Reiche, Anna Smogorzewska 371

SET OF SECOND MILLENNIUM BC UNBAKED CLAY OBJECTS FROM TELL ARBID

Agnieszka Szymczak 387

DECORATIVE MOTIFS ON EARLY INCISED/EXCISED NINEVITE 5 POTTERY FROM TELL ARBID

Cezary Baka, Jacek Hamburg 421

CONTENTS

ANIMAL BONE REMAINS FROM TELL ARBID (SEASON 2009) — ARCHAEOZOOLOGICAL ANALYSIS <i>Joanna Piątkowska-Malecka, Anna Smogorzewska</i>	439
TELL ARBID. ADAM MICKIEWICZ UNIVERSITY EXCAVATIONS IN SECTOR P (SPRING SEASON OF 2010) <i>Rafał Koliński</i>	451

KUWAIT

AS-SABBIYA

ARCHAEOLOGICAL SURVEY IN THE EASTERN AS-SABBIYA (NORTH COAST OF KUWAIT BAY), SEASONS 2009–2010 <i>Lukasz Rutkowski</i>	479
TUMULI GRAVES AND DESERT WELLS IN THE AS-SABBIYA. PRELIMINARY EXCAVATION REPORT ON THE SPRING SEASON IN 2010 <i>Lukasz Rutkowski</i>	493
TUMULUS GRAVE SMQ 49 (AS-SABBIYA, KUWAIT). PRELIMINARY REPORT ON THE INVESTIGATIONS IN 2009–2010 <i>Maciej Makowski</i>	518
TUMULUS GRAVE SMQ 30 IN AS-SABBIYA – MUGHEIRA (NORTHERN KUWAIT). A REPORT ON THE 2007–2008 INVESTIGATIONS <i>Andrzej Reiche</i>	528

IRAN

KHONE-YE DIV

KHONE-YE DIV. PRELIMINARY REPORT ON THE SECOND AND THIRD SEASONS OF IRANO–POLISH EXCAVATIONS (2009 AND 2010) <i>Barbara Kaim, Mohammad Bakhtiari, Hassan Hashemi</i>	543
--	-----

PAM STUDIES

POTTERY FROM BAHRA 1 (KUWAIT). NEW EVIDENCE FOR THE PRESENCE OF UBAID CULTURE IN THE GULF <i>Anna Smogorzewska</i>	555
GROUND AND PECKED STONE INDUSTRY OF BAHRA 1, AN UBAID-RELATED SETTLEMENT IN NORTHERN KUWAIT <i>Marcin Białowarczuk</i>	569
SHELL OBJECTS FROM TELL RAD SHAQRAH (SYRIA) <i>Dariusz Szeląg</i>	587

CONTENTS

ANTHROPOMORPHIC FIGURINES OF THE SECOND MILLENNIUM BC FROM TELL ARBID, PRELIMINARY REPORT <i>Maciej Makowski</i>	617
EXECRATION AGAIN? REMARKS ON AN OLD KINGDOM RITUAL <i>Teodozja I. Rzeuska</i>	627
THE SOLAR ALTAR IN THE HATSHEPSUT TEMPLE AT DEIR EL-BAHARI <i>Teresa Dziedzic</i>	635
ROMAN CLAY LANTERN FROM BIJAN ISLAND (IRAQ) <i>Maria Krogulska, Iwona Zych</i>	651
ARCHBISHOP GEORGIOS OF DONGOLA. SOCIO-POLITICAL CHANGE IN THE KINGDOM OF MAKURIA IN THE SECOND HALF OF THE 11TH CENTURY <i>Włodzimierz Godlewski</i>	663
MEDIEVAL TRANSCULTURAL MEDIUM: BEADS AND PENDANTS FROM MAKURIAN AND POST-MAKURIAN DONGOLA IN NUBIA <i>Joanna Then-Obluska</i>	679
INDEX OF SITES	721
GUIDELINES FOR AUTHORS	722
PCMA PUBLICATIONS	723