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**THE ITALIAN ARCHAEOLOGICAL EXCAVATIONS
AT TELL ZURGHUL, ANCIENT NIGIN, IRAQ.
FINAL REPORT OF THE SEASONS 2015-2017**

**EDITED BY
DAVIDE NADALI AND ANDREA POLCARO**

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FOREWORD

The Italian Archaeological Expedition to Nigin of Sapienza University of Rome and University of Perugia started excavations at Tell Zurghul in 2015: a survey and three excavations seasons were carried out in the period between 2016 and 2017. This volume presents the results of the archaeological explorations with the analysis of the stratigraphic and architectural contexts of Area A, B and D as well as the study of the pottery from the contexts so far investigated and the survey in Area C in the western sector of the site.

Tell Zurghul is a site of about 70 ha in the modern province of Dhi Qar in Southern Iraq: it belongs, together with Tello/Girsu and al-Hiba/Lagaš, to the ancient State of Lagaš: starting from the very beginning of the 3rd millennium BC, Tell Zurghul can in fact be identified with the ancient Sumerian city of Nigin. Cuneiform sources dating from the first and second dynasties of Lagaš testify the intensive building activities of the rulers, mainly related to the important temple dedicated to the city goddess Nanše. In fact, Nigin was an important religious centre of the ancient State of Lagaš, and Gudea states that he purposely dug a canal from Girsu to Nigin (the so-called “Canal going to Nigin”) he regularly used to reach the city on the occasion of festivals, ceremonies and visits to the temple. The regulation of water, with the digging of canals and the management of the area of the marshes around the settlement, is an activity that involved, at several times, the rulers of Lagaš: in this respect, it is interesting to point out that Nanše, the patron deity of Nigin, is not only Enki’s daughter, but she is specifically linked to aquatic species, birds and fish, with a clear indication of the importance of the ancient environment and landscape for the development and growth of the city.

The importance of the shape and features of the ancient environment and landscape has been at the centre of the archaeological investigations at Tell Zurghul: next to archaeological operations, the programme of research also encompassed the study of the ancient landscape, pointing to the reconstruction of the waterscape of the ancient State of Lagaš, in particularly for what concerns the proximity of the sea and, more importantly, the phenomenon of the sea ingressions that occurred in the Early- and Mid-Holocene period (about 6500-6000 yr BP). The reconstruction so far made showed that Tell Zurghul was in fact in the middle of a lagoon system of brackish water, an environment that favoured the life of species, such as the bull sharks, whose vertebrae have been found in the archaeological context of Area B.

The site had already been briefly investigated, in 1887, by Robert Koldewey during his visit to southern Iraq in the region of the ancient State of Lagaš: his works concentrated on the two mounds, with two narrow and deep soundings, and in other areas of the site (along the North-Western side and in the space in between the two mounds). Unfortunately, little information of his works is known: Koldewey published only one report, but he does not properly give any useful archaeological information, his conclusions on the nature and chronology of the site are misleading and untenable.

The explorations so far conducted, for example, on the two mounds (Area B and Area D), definitely showed a different pattern and picture of the occupation and development of the site. On the one hand, excavations of the top and South-Western slope of Mound B revealed the superimposition of at least 5 architectural phases of a sacred building dating

from the Ubaid 4 period, with the recovery of typical Ubaid findings such as clay cones, black painted vessels, clay sickles and both painted and unpainted censers. On the other, excavations on the Southern slope of the main Mound A, to the South of the soundings made by Koldewey, a system of artificial terracing has been identified: terraces and plastered platforms are probably to be ascribed to the work of rehabilitation of the area of the temple of Nanše by Gudea of Lagaš. Investigation in this area also revealed what seems to be the latest occupation of the site at the very beginning of the 2nd millennium BC, as it is also documented by the finding of fragments of 2nd millennium pottery in the lower city, to the South of Mound A (those fragments collapsed, together with the baked bricks and clay cones with Gudea's inscriptions, from the uppermost layers of the mound) and in the survey Area C.

Area C was surveyed in 2015 and 2017 and, even if open area excavations have not already been performed, an extended part of the North-Western sector of the city was largely surveyed, with the collections of several surface materials and the identification of topographical and architectural features. The area seems quite well delimited to the East by a white large strip of what looks like an inner water canal running within the city, and possibly changing its course during different chronological phases. Along the white strip on the ground, an elongated relief delimits on the ground this peripheral sector of the city, that, in particular during the 2nd millennium BC, but also in earlier periods, seems to have been exclusively used as a productive area. This explains the presence of installations and workshops for the production and manufacture of goods, such as pottery and metals (different types of slags have been collected during the survey). In particular the presence of a small mound characterized by heavy deposits of ashy soil on the surface is noteworthy: here, a large kiln for the production of pottery has been discovered during the operation of scraping.

This volume is therefore the result of the combination of several works: in particular, it aims to present a comprehensive study and analysis of pottery types, from the contexts dating from the Ubaid period to the latest phases of occupation in the early centuries of 2nd millennium BC. We are in fact strongly convinced that a new wave of Mesopotamian archaeology must necessarily encompass and be founded on the systematic study of pottery: the identification of recurrent types, the modes of production, chronological issues. This can be precisely done thanks to the exam of material culture from sure and stratified contexts that can then be compared and integrated with textual data, architectural features and, when possible, C14 datings. At the same time, the volume presents the architectural evidence of the buildings so far discovered as well as the geological studies and the analysis of the faunal remains as to reconstruct the ancient landscape and environment of the site within the region of the ancient State of Lagaš through the millennia.

Acknowledgements

We wish to warmly thank the Iraqi cultural authorities of the State Board of Antiquities and Heritage of Baghdad and the Ministry of Culture of the Republic of Iraq. We wish to specially thanks Dr. Ahmad Kamil, former General Director of the SBAH, who granted us with the permission for the excavation at Tell Zorghul in 2014 and constantly supported our work, and Dr. Qais Rasheed, former General Director of the SBAH, who renewed, in 2019, our permission for the continuation of the archaeological excavations and research at Tell Zorghul for the period 2019-2023. A very special thank goes to Dr. Abdulamir al-Hamdani, who has been recently appointed Minister of Culture of the Republic of Iraq, for his friendship, continuous support and suggestions, and to Prof. Abbas al-Hussainy for his friendship, priceless help, for sharing with us his knowledge of Mesopotamian archaeology.

Excavations have been made possible thanks to the financial support of the Italian Ministry of Foreign Affairs and the grant “Grandi Scavi di Ateneo” of Sapienza University of Rome. A financial support was also given by the Italian Ministry of University and Research thanks to the grant “FIRB – Futuro in Ricerca”, a joint research programme of Sapienza University of Rome, University of Perugia and University of Cagliari.

For the support of our research in Iraq, we wish to thank H.E. Ahmad A.H. Bamarni, Ambassador of the Republic of Iraq in Italy, and his predecessors, and H.E. Bruno Antonio Pasquino, Ambassador of the Republic of Italy in Iraq, and his predecessors: our work in Iraq has been made possible thanks to their important cooperation and help.

We wish to thank Prof. Lorenzo Nigro who, as scientific editor of *Quaderni di Vicino Oriente*, accepted the publication of our field report in the series and Dr Daria Montanari for her work of editing and her cooperation.

Finally, we wish to thank our Iraqi friends and workers of Zorghul who contributed to make Iraq our second home, with their warm friendship and hospitality: the results we are here presenting have been possible thanks to their cooperation and love for the archaeological heritage of their Country.

Davide Nadali
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TOOLS AND OBJECTS FROM TELL ZURGHUL EXCAVATIONS (2015-2017)

Alessandra Caselli - Andrea Titolo - Sapienza University of Rome¹

This chapter presents some considerations on the tools found at Tell Zurghul. After a brief explanation of the objects inventory process, we will discuss clay and stone tools in detail with particular attention to fishing net weights, sickles, worked and chipped stone.

Keywords: Southern Mesopotamia; Tell Zurghul; tools; clay objects; worked stone objects

1. INTRODUCTION

The present chapter aims at presenting, in the most comprehensive way, the objects recovered during the campaigns in 2015, 2016 and 2017. During these three years, approximately 600 objects were collected on the site while excavating areas A, B, D and during the survey of area C. Those objects include stone objects, clay objects, stone and clay tools, sealings and stone vessel's fragments. During the expeditions, all objects were registered on the field using dedicated sheets: on them, the finding date was written down and a unique progressive number was assigned to every single object. The number was associated with the excavation area and Stratigraphic Unit (SU). Typology and raw material were also registered on the sheets.² Every day, an inventory of the objects was made: each one of them was signed following a unique and progressive enumeration and registered in an Access database. In the latter, a univocal entry and number (the same as the signature on the object) were assigned to each object. In each database entry measures, raw material, state of preservation, colour (following the Munsell colour chart for clay objects), weight (if relevant) and every information that was on the object sheet. For each object, a short description was written down together with any additional notes. All objects were later photographed, and a drawing was made for the most relevant ones.

Given that the objects are still under study, this chapter will be organized mainly in a descriptive way, by subdividing the objects by raw material, highlighting their finding context and dating (when possible). Some comparisons with relevant sites and areas will also be carried out when possible. We will present here only a selection of objects that can be defined as “tools”: this is because a more detailed presentation of all the objects from the site of Tell Zurghul would require more time and space.

2. CLAY OBJECTS

We will present here all clay tools recovered during campaigns 2015-2017. Clay tools and objects are the majority of objects recovered during the excavations (roughly 53% of objects are made of clay): in fact, 320 clay objects were recovered during the three years (171 in 2015, 31 in 2016, and 118 in 2017), of which 162 can be classified as tools. A

¹ Alessandra Caselli wrote §§ 2.3., 3-3.2.; Andrea Titolo wrote §§ 2., 2.1.-2.2., both have written §§ 1. and 4.

² As common in the Near East, it often happens that some objects are recovered from workers or visitors around the site (e.g. Stone - Zimansky 2004); for those objects it was followed the same procedure described above. Of course, it wasn't possible to register the exact finding spot of the objects.

detailed description of the most significant objects (net weights and sickles) will be provided here, while all the other objects will be listed in tab. 1. This choice is because, at the current state of the excavation, only these two types of objects can provide interesting results, as they were recovered in a significant number in respect to other clay objects.

2.1. *Fishing net weights* (figs. 1-3)

During the three years of excavations, a surprisingly large number of rounded or oval clay objects with one or two holes were recovered. Sometimes linear traces of use incised in the clay are present at the edges of these holes. In some cases, on the surface of these objects traces of thin bitumen coating were preserved. All objects were found during the excavation of area B, in Ubaid 4 archaeological contexts.³ From 2015 campaign only 4 weights were found, of which 2 are fully preserved. It is from the 2017 campaign that most of the objects come from: in fact, 82 objects were recovered. Many of these weights were found in SU 706 and 705 in the North sector of the area, associated with a large number of faunal remains, in particular, fish bones.⁴ Three objects were also found in the Southern sector of the same area.⁵ Given the archaeological context in which the objects were found and thanks to comparisons with other sites like Eridu,⁶ Ur,⁷ Khafaja⁸ and Ubaid,⁹ these tools can be interpreted as clay weights for fishing nets. Their obvious function would be to help the net to sink into the water (therefore they are also known as “sinkers”).

Here we can separate objects according to their morphology and number of holes, even if it is worth remembering that this subdivision should not be taken as a functional division or something indicating different typologies of objects, as we will see later. On a more general level, the objects are never perfectly rounded, and their dimensions vary from being very small (ca. $4 \times 3 \times 1.6$ cm) to be almost three times larger (the largest weight – SG.17.BS.063 – measures $11.2 \times 11.7 \times 2.2$ cm). In between these two, the remaining 84 weights are uniformly distributed and do not show dimensional clusters that can indicate different typologies. For obvious reasons, we will take into consideration here only the completely preserved objects or those that can be reconstructed for at least 90% of their original shape.¹⁰

For the 51 complete or reconstructed weights, 18 have only one hole, while 33 have two. The almost rounded weights are 36, of which 24 have two holes and 12 only one. Oval shaped weights are, on the contrary, 15, of which 10 show two holes and 5 show one hole only. No uniformity can be recognised in the choice of using one or two holes in relation to

³ See the contributions by Nadali and Volpi in this volume, respectively.

⁴ See the contribution by Carosi - Lorenzoni in this volume.

⁵ Additional SU in which fishing net weights were found are SU 716, 717, 719, 720 (1 for each SU). Objects found in SU 706 and 705 are therefore 75.

⁶ Safar - Mustafa - Lloyd 1981.

⁷ Woolley 1955.

⁸ Delougaz 1940.

⁹ Hall - Woolley 1927.

¹⁰ Even if the presence of one or two holes can be clearly hinted in fragmentary weights, we decided not to include them in this description, so to have a more coherent picture of the relation between dimensions and holes.

the dimensions of the object: as a matter of fact, there are both small weights with two holes and larger weights with one hole. The dimensions of the holes themselves are not helpful in reconstructing a typology: the diameter of the holes can reach from 0.7 cm to 1.9 cm. Larger holes are obviously found in larger weights, but it could simply be a choice dictated by the larger surface available more than a different kind of choice. Moreover, it is impossible to guess which difference the dimensions of the hole could have in relation to the purpose of the weights. In this way, it can be noted how rounded weights do not have any substantial difference with the oval ones, as the dimensions of both categories are relatively similar and, moreover, it doesn't seem to exist a relation that ties dimensions and weights morphology. The weight of the objects does not seem to be a good discerning parameter either: the objects found during the excavation weight between 40g and 180g but both weights with one hole and weights with two holes are evenly distributed between these two measures. Thus, this category of objects seems to be extremely functional and not tied to specific choices for the use of one or two holes, or of a specifically circular or oval shape. It must be also stressed that, with our present knowledge and the lack of sources on the practical use of the weights, it is difficult to hypothesize if the number of holes or the morphology could have had a significant role when it comes to the use of the objects themselves.

Objects of the same type as those just described but labelled "net sinkers" were found during the excavations at Eridu, in particular in the hut sounding and sometimes simply labelled as "pottery discs with two holes". Nine objects of this type come from levels X-XIII, dated to Ubaid 3-4 (and contemporaries to levels XI-IX of the Temple), and they were associated with faunal remains as at Tell Zorghul. It seems that at the site of Eridu only weights with two holes were found, even if no information were given about the dimensions of these objects.¹¹ Similar objects to the net weights of Tell Zorghul were found at Ur, where *net sinkers* were reported inside Grave EE (2 objects), from the so-called habitation levels of Pit F, Pit K, Pit Z and in Merejib 10 miles from Ur.¹² Unfortunately, the exact number and dimensions of the objects are rarely mentioned here too, as in the case of Eridu. Nonetheless, it is mentioned that two types of these objects exist: simple ring type and disc type with two holes. It is this latter type that can be compared with the weights from Tell Zorghul, as they appear (at least from the published drawings) similar to those found by the Italian Expedition at Nigin.¹³ Another Lower Mesopotamian site from which comparisons can be made on these weights is that of Ubaid: 6 flat clay discs come from the

¹¹ See Safar - Mustafa - Lloyd 1981, 249, 260 and fig. 127. The total number of weights in the sounding is 17, the remaining 8 objects were found in the later levels (VII-I), but no clarification about the context was given. It is interesting to note that, together with the clay net sinkers, there were also other objects labelled as net sinkers, but in stone. The latter are most common in the oldest levels of the hut sounding, decreasing in number in the later levels (Safar - Mustafa - Lloyd 1981, 260).

¹² See Woolley 1955, 11, 20, 84.

¹³ Woolley 1955, fig. 4. At Merejib Woolley reports that there was a greater number of objects belonging to the second type (disc with two holes), sometimes with pieces of net preserved inside the hole. Here as well, unfortunately, no more details were given.

Ubaid cemetery, pierced once or twice. Dimensions – usually 7 cm of diameter and roughly 1.5 cm of thickness – are consistent with the weights from Nigin.¹⁴

Finally, it must be said that fishing net weights were found also in the Diyala region, at Tell Asmar and Khafaja. At Khafaja, they were associated with the remains of a net.¹⁵ The weights belong to the first typology found at Ur, that is the simple ring weight and cannot be properly compared with the materials from Zorghul.¹⁶

In the end, it can be stated that the weights from Tell Zorghul can be inserted in a well-known category of objects produced for fishing activities. It should be remembered that no systematic study has been carried out on these types of objects and that the sheer number of weights found by the MAIN – until now the largest finding (or at least the largest registered finding) for Southern Mesopotamia – will surely offer additional data on this particular typology of artifacts, still poorly known in the Mesopotamian context.

Even if the material is different, we should also mention the presence of two objects found in the same context of the weights (Area B, SU 706, Ubaid 4). They seem to belong to the same typology of fishing net weights but made entirely in bitumen. Weights and dimensions of the only complete object, relatively small ($5.5 \times 5.3 \times 1.7$ cm and 45g) are consistent with those of the clay weights. Given the extremely limited number of objects of this type, it is impossible to elaborate further hypotheses, but the presence of these objects it's surely worth noting as it may hint at a different use of the two bitumen weights, maybe in conjunction with the clay weights.

	Round Weights	Oval Weights
Number of Weights	36	15
Mean Length (cm)	7.6	7.9
Mean Width (cm)	7.5	5.7
Mean Diameter (cm)	7.6	-
Number of Weights (1 Hole)	12	5
Number of Weights (2 Holes)	24	10
Mean Weight (g)	92	111
Mean Thickness (cm)	1.7	1.5
Mean Holes Diameter (cm)	1	1.3

Tab. 1 - Data on Round and Oval fishing net weights.

¹⁴ Hall - Woolley 1927, 210, pl. XXXVII. These clay objects were unfortunately recovered out of their context.

¹⁵ Delougaz 1940, 55, figs. 54-55.

¹⁶ Delougaz 1940, 54-56.

2.2. Sickles (fig. 4)

During the three excavation seasons, 17 clay sickles were recovered, all belonging to that typology of objects said to be typical of the Ubaid period.¹⁷ These objects should have appeared in the Lower Mesopotamia during the Ubaid 2 period while becoming more common during Ubaid 3-4.¹⁸ They have been always considered to witness agricultural activity (harvesting in particular) but use-wear analyses have proven that some sickles have been used for cutting more resistant, siliceous plant, like marsh plants.¹⁹

During the excavation seasons, clay sickles were recovered in excavation areas A, B, and D, and from the survey in area C. The majority of sickles (11) were found in Area B, from layers dated to Ubaid 4 period. Only one sickle comes from Area D, while the remaining 5 sickles were found in Area A, from layers dated to Uruk and Jemdet Nasr period. All sickles were found in a fragmentary state of preservation, even if those coming from Area B are usually better preserved than the others. These objects are usually found associated with Ubaid bent-nails,²⁰ but during the excavations at Zorghul sickles were never directly associated with this kind of artifacts. An interesting archaeological context is that of SU 705 and SU 706, in the Northern sector of Area B (excavated in 2017): the association of sickles – found almost preserved with only the tip of the blade missing – with fishing net weights and numerous fish bones (see above), could support the hypothesis that some sickles may have been used to cut the plants and reeds of marshes, which probably formed the main part of the ancient landscape of Zorghul.²¹ Detailed studies on the sickles from Oueili demonstrated that at least one sickle with a “closed shape” and a thin blade was used for cutting reeds, while another with an “open shape” was used for harvesting the wheat. Data from Tell Zorghul show how the sickles are rarely longer than 20 cm, with the only exception of those from the SU 705 and SU 706 which are between 20 and 22 cm long.²² The blade of these two artifacts is between 4 and 5 cm wide and their shape seems to be a “closed” one. It should be noted that the absence of better-preserved sickles from the other areas of the site makes the internal comparison impossible.

As already said, clay sickles are a common finding in Ubaid and Uruk context in Southern Mesopotamia; in fact, comparisons with the tools from Zorghul are found in many nearby sites. At Eridu, from levels VIII-I of the hut sounding, more than one hundred

¹⁷ Moorey 1994, 165.

¹⁸ It should be noted that these objects were recorded at least until the Uruk period, while it is not clear whether the samples from Jemdet Nasr and Early Dynastic contexts were only strays of earlier productions or they were still in use (Moorey 1994, 165-166).

¹⁹ Moorey 1994, 165; Anderson-Gerfaud 1983, 180-181.

²⁰ Moorey 1994, 165.

²¹ The hypothesis of the use of the sickles for cutting marsh plants was already proposed for the sickles from Tell Oueili, see Anderson-Gerfaud 1983. On the ancient landscape of Southern Iraq with reference to the Ubaid period, see Pournelle 2003, 195-211.

²² A sickle found in 2015 (SG.15.B.108) shows interesting differences between those found in 2017. Even if the shape of the former seems partially similar (the fragmentary state of preservation prevents from a precise comparison), the darker colour of the clay could have been caused by the different kind of heating, while the blade seems to be slightly larger than those of Area B North. Thickness and manufacture seem to be also different, but it is difficult to assess if all of this could depend on a different function of the sickle.

sickles were found, but no detailed description was given.²³ Many other sickles were found in different soundings at the site of Ur, almost always associated with bent-nails,²⁴ while more details were given for those found at the site of Tell Oueili. Here, from layers dated to Ubaid 3 and 4, many sickles were recovered, and some of them seem to show chronological differences: those dated to older levels are usually larger (with a blade max. 7 cm large), while those coming from later levels possess a blade rarely larger than 5 cm.²⁵ From the site of Ubaid 19 sickles were found but here too, no clear information on the context of the finding was given.²⁶ As far as the Uruk contexts are concerned, from the site of Abu Salabikh and more precisely from the Uruk Mound, more than one thousand sickles were found, even if only 28 come from excavation.²⁷

The sickles from Tell Zurghul, in particular those found in Area B, have characteristics similar to those reported from Oueili. It is impossible, for now, and without more detailed studies and a larger sample of objects to assess if the objects found in Ubaid and Uruk layers show morphological and dimensional differences. It is nonetheless interesting to note that the finding of sickles with a “closed shape” and a thin blade associated within a context of the activity of fishing (probably in the marshes) may allow to support the hypothesis obtained from the wear-use analyses, that is that these objects might have been produced for uses others than harvesting.

2.3. Spindle whorl and loom weights (fig. 5)

During the excavations at Tell Zurghul, a number of loom weights and spindle whorls was also found. They come from Area D (SG. 16.D.29; SG. 16.D.82) and Area C (SG.16.C.16). The size of these objects is mostly fixed, with a maximum diameter of ca. 7 cm and a 2 cm-wide hole at the centre. Different from the others is object SG.16.A.82, made of stone and quite larger than the others, as it reaches a width of 11 cm. It is interesting to note that the only spool found on the site comes from Area B North (SG.17.BN.60), from the same levels of the aforementioned fishing net weights. The spool has a diameter of 2.8 cm and a concave body with both endings flattened. Similar objects were found also in a Late Uruk building at Tell Brak, in a room where flints tools were probably worked.²⁸ The spool from Tell Zurghul was found in a productive area and was linked to the activities performed in the room where fish bones and fishing net weights were found.²⁹

²³ Safar - Mustafa - Lloyd 1981, 252, fig. 72.

²⁴ Woolley 1955, 67-75, 84. Woolley mentions the presence of sickles decorated with a black painted band that he interprets as votive objects. No examples of this type were found at Tell Zurghul.

²⁵ Huot 1985, 123; Breniquet 1991.

²⁶ Hall - Woolley 1927, 48, pl. XV.4. Other illustrations of similar findings are given in Parrot 1948, 37, fig. 7.4.

²⁷ Benco 1992, 121. Sickles found in Uruk layers seem to be slightly bigger than the Ubaid ones, a fact that may point to chronological differences (Benco 1992, 131). At present it is impossible to properly compare these data with those of Tell Zurghul, as here no complete sickles were found in Late Uruk/Jemdet Nasr layers of Area A.

²⁸ Emberling - McDonald 2003, 3.

²⁹ The object is the only spool found in the site from 2015. R. Koldeway, during his expedition collected some spools but unfortunately it is not clear in which context he found them (see Huh 2008).

3. STONE OBJECTS

3.1. *Worked stone*

During the three years of excavation, few grinding stones were recovered. This could probably be related to the difficulties of finding stones in Lower Mesopotamia. It is nonetheless possible to highlight different kinds of stones, as both limestone and basalt objects were found. The scarcity of worked stone objects does not allow to notice a different use of limestone and basalt for this kind of tools.

3.1.1. Grinding Slabs (figs. 6-7)

Most of these objects were recovered in a fragmentary state of preservation and it is impossible to reconstruct their original size. Some grinding slabs are composed of flat quern, four samples are made of limestone and were found in areas D (SG.16.D.81; SG.16.D.84) and B (SG.17.BN.135, SG.17.BN.77, SG.17.BS.169); the other 2 objects are made of basaltic stone and were found in areas C (SG.16.C.31) and D (SG.16.D.97). Some saddle-quern are also attested: one is made of limestone and was found in Area D (SG.16.D.79); the others are made of basaltic stone and come from Areas C (SG.16.C.15, SG.15.C.109) and A (SG.17.A.173).

Among the aforementioned objects, a notable one is SG.16.C.15, which is very different from the others as the surface is well smoothed and the basaltic stone of which is made is of better quality than that the other querns. A last note has to be made for the highly fragmented object SG.15.A.129, which is too small to be identified as saddle-quern or a flat quern.

3.1.2. Handstone (figs. 7-8)

Different types of handstone were recovered during the excavation, but most of them can be identified as polishing tools. The objects recovered during the 2016 season mainly come from Area D and the survey in Area C. Among the objects found, we can mention a worked stone, possibly a limestone *pounder* (SG.16.D.80), a polishing tool made of hard stone (possibly limestone as well) and with an ovoid shape and smoothed surface (SG.16.C.8), or with a circular shape (SG.17.C.54), a pounder in hardstone (possibly limestone) SG.16.D.102, and finally limestone pounder of spherical shape (SG.17.C.163; SG.17.C.76; SG.17.C.95).

3.1.3. Pestles (fig. 8)

Among the handstones it is possible to identify a limestone pestle from the 2016 excavation in Area D (SG.16.D.77). This object has a roughly ovoid shape, a smoothed surface and one side smoother and more flattened than the others, probably because of its use.

3.1.4. Mortars (fig. 8)

During the excavation only one basaltic mortar was recovered: it comes from the 2016 excavation of Area D on the main mound (SG.16.D.85). Its fragmentary state of

preservation, however, makes any reconstruction of the shape or estimation of its diameter impossible.

Given these descriptions, it is interesting to note that the majority of grinding stones from 2017 excavation come from the older levels of Area B, dated to the Ubaid period. The stone objects were found in the same layers where the fishing net weights and animal (fish) bones were found. This could suggest a functional use of the rooms where these artefacts were found, possibly dedicated to productive activities.

Unfortunately, earlier reports of excavations from nearby sites from the beginning of the 20th century do not provide any information on this kind of stone objects, so it is impossible to understand whether there is any difference in the style or manufacturing technique of these tools or not. It is nonetheless possible to highlight some differences among the objects found at Tell Zorghul, either in the type of stone used (basalt or limestone) or in their different shapes. As an example, even if most of the grinding slabs has a flattened shape, the saddle-shaped grinding stones are also attested (e.g. SG.16.C.15). It is unfortunate that, at the present day, it is impossible to distinguish any typology that could be linked to a precise historical period.

3.1.5. Mace heads (fig. 8)

During the three years of excavations, only one mace head was recovered (SG.16.A.52). It was found in Area A during the excavation of the Jemdet Nasr levels and it is made of white hard stone; only half of the object is preserved, but it is possible to highlight its slightly pointed spherical shape.

3.2. *Chipped stones*

Both flint and obsidian blades and scrapers were recovered during the excavation. Flint and obsidian tools come mainly from Area B and Area A, respectively the Ubaid complex and the Late Uruk/Jemdet Nasr structure.

3.2.1. Flint blades (figs. 9-10)

Most of the chipped stone objects are blades in a fragmentary state of preservation: they are usually retouched on both sides and can be divided in blades with a flat rib or blades with a triangular section.

The larger group of blades is composed of those that are less than 1 cm thick and show a barely emphasized triangular section or a flattened surface. 70% of these objects come from Area A, while the remaining 30% were found in Area B North.

There are also blades with a thickness bigger than 1 cm: these are characterized by a thinner upper part and a larger lower part. These are highly fragmented tools that show only a triangular section. Two of those objects were found in Area A, two in Area B North and only one in Area B.

Few blades with a trapezoidal section were also found, two of them in Area A and one in Area D.

Denticulate flint blades are present among the findings as well. Among these, one object from Area C has a maximum width of ca. 1 cm and shows a denticulate blade on both sides (SG.16.C.19). Another one, from Area A (SG.16.A.62), has a maximum width of ca. 1.5

cm and shows a denticulate blade only on the left side; this object seems to be part of a sickle blade, judging also by the curve and direction of the object towards the left. In these two tools, the thickness of the portions of the blade and the space between them is somewhat regular: the teeth are ca. 1mm thick and the space between them is roughly 3 mm.

3.2.2. Flint burins (fig. 10)

During the excavation two small stone objects were found: these tools can be identified as burins or arrowheads. One object was found in Area A (SG.16.A.66), the other in Area B North (SG.17.BN.165).

3.2.3. Obsidian

While it is still not sure where the obsidian sources were located in Mesopotamia during ancient times, it is known that obsidian was used for ornaments and to create tools, thanks to its chemical and physical characteristics. As a matter of fact, the obsidian fractures conically as the flint, a behaviour that makes it easier to use. Moreover, even if less resistant than the flint, it allows the making of thinner and sharper blades.³⁰ From the beginning of the 4th Millennium BC, the use of obsidian for making tools diminishes, to the advantage of metal, but it was still employed to make ornaments.³¹ In Southern Mesopotamia, obsidian objects were found in many sites but only rarely their finding was registered and inserted in the publications of the excavations. As an example, Woolley noted the use of obsidian during Ubaid and later periods at Ur to make personal ornaments. Indications of the use of this material are present also in the publications of the sites of Eridu, Oueili ad Ubaid.³²

3.2.4. Obsidian blades (fig. 11)

Most of the objects recovered during excavations at Tell Zorghul are blades which can be divided into two main types, just as the flint blades.

The first type encompasses very narrow blades (max. 1 cm wide) with a trapezoidal section. The blades show a more or less accentuated curve towards one of the sides, due to their possible use as part of sickle blades. More specifically, one of them (SG.17.BN.170), from Area B North, seems to belong to the upper end of a sickle. The other objects of this type were found in Area B (SG.17.BN.184, SG.15.B.234) and Area A (SG.16.A.59), which are the areas with the oldest attested occupations at the site.

The second type encompasses those blades characterized by a larger blade compared to those of the first group (even more than 1 cm wide) with trapezoidal section. In this case, the blades do not show any curve towards one the sides. Blades of this type were found in Area B North (SG.17.BN.62, SG.17.BN.194), Area A (SG.15.A.145) and Area D (SG.16.D.99, SG.16.D.91).

³⁰ Moorey 1994, 64.

³¹ Finds from Tell Zorghul testify this tendency. In fact, most of the obsidian blades come from Area B (66%), where the Ubaid phase was investigated.

³² Moorey 1994, 69.

At Tell Zburghul no obsidian cores were found: this data suggest that obsidian blades weren't realized locally but were probably crafted close to the sources and then traded. The trade of obsidian was performed since the Neolithic period and, at the beginning, it was mainly a utilitarian trade. In fact, obsidian was used to realize blades with sharp edges and it was observed that obsidian was not imported where flint was available. Sources of obsidian were located mainly in Anatolia and, during Neolithic and Chalcolithic, objects were exchanged through a "person-to-person" trade,³³ mainly overland.³⁴

4. CONCLUSIONS

The analysis of the tool assemblages from 2015-2017 expeditions at Tell Zburghul could be important to delineate the functionality of the excavated contexts of the site. For this reason, one of the main aims of this study was to analyze the distribution of the different typologies of objects in the areas. The first interesting data was the presence of around 80 fishing net weights (51 of them were intact) in the Area B North. Those objects were found together with many fish bones and pottery sherds.³⁵ The peculiarity of the context is testified also by the other typologies of objects collected in the Area B North. In fact, during the 2017 campaign, the majority of the worked stone tools, used for productive activities, were found in the same context,³⁶ as much as two clay sickles and the spool. This data suggest that Area B North had a productive function.³⁷

In the following catalogue the details of the objects already described. The table (tab. 2) includes the excavation number, the context where the object was found, a synthetic description and some comparisons based on published data from other Southern Mesopotamia sites.

³³ On the trade routes in the Ancient Near East see Wilkinson 2014.

³⁴ Despite this tendency, during his investigation in South Arabia, J. Oates recognized Southern Mesopotamian Ubaid pottery in the Gulf repertoire, and he suggested that the trade was performed also through the Gulf (Oates *et al.* 1977, 221). Later, several archaeological evidences testified the existence of the trade through the Gulf (Ratnagar 2006, 24-25).

³⁵ See the contribution by Volpi in this volume.

³⁶ Among the 2017 worked stone assemblage, the 66% of the grinding tools come from Area B North.

³⁷ See the contribution by Nadali in this volume.

Fig.	Exc. No.	Area	Description	Parallels
1:1	SG.17.BN.18	B North	Fishing Net Weight	
1:2	SG.17.BN.64	B North	Fishing Net Weight	
1:3	SG.17.BN.32	B North	Fishing Net Weight	
1:4	SG.17.BN.38	B North	Fishing Net Weight	
1:5	SG.17.BN.42	B North	Fishing Net Weight	
1:6	SG.17.BN.45	B North	Fishing Net Weight	
2:1	SG.17.BN.50	B North	Fishing Net Weight	Hall - Woolley 1927, pl. XXXVII, T.O.385; Huh 2008, pl. 12:187
2:2	SG.17.BN.37	B North	Fishing Net Weight	Woolley 1955, fig. 4; Huh 2008, pl. 12:187
2:3	SG.17.BN.56	B North	Fishing Net Weight	Hall - Woolley 1927, pl. XXXVII, T.O.385; Huh 2008, pl. 12:187
2:4	SG.17.BN.64	B North	Fishing Net Weight	Hall - Woolley 1927, pl. XXXVII, T.O.385; Huh 2008, pl. 12:187
3:1	SG.17.BN.66	B North	Fishing Net Weight	Woolley 1955, fig. 4
3:2	SG.17.BN.65	B North	Fishing Net Weight	
3:3	SG.17.BN.69	B North	Fishing Net Weight	Hall - Woolley 1927, pl. XXXVII, T.O.385
3:4	SG.17.BN.92	B North	Fishing Net Weight	
3:5	SG.17.BN.25	B North	Fishing Net Weight	
4:1	SG.17.BN.110	B North	Sickle	Hall - Woolley 1927, pl. XV:4; Parrot 1948, fig. 7q
4:2	SG.17.BN.133	B North	Sickle	Hall - Woolley 1927, pl. XV:4; Parrot 1948, fig. 7q
5:1	SG.16.C.16	C	Loom weight	Hout 1983, 53, pl. C; Huh 2008, pl. 33:184-185
5:2	SG.16.A.82	A	Loom weight	Hout 1983, 53, pl. C; Huh 2008, pl. 33:184-185
5:3	SG.16.D.29	D	Loom weight	Hout 1983, 53, pl. C; Huh 2008, pl. 33:184-185
5:4	SG.17.BN.60	B North	Spool	Hout 1996, 161, pls. V.5; C; Emberling - McDonald 2003, 7, fig. 6; Huh 2008, pl. 12:178-179
6:1	SG.16.D.81	D	Flat quern (limestone)	Huot 2003, 117, fig. 46
6:2	SG.16.D.84	D	Flat quern (limestone)	Huot 2003, 117, fig. 46
6:3	SG.17.BN.177	B North	Flat quern (limestone)	Huot 2003, 117, fig. 46
6:4	SG.17.BN.135	B North	Flat quern (limestone)	Huot 2003, 117, fig. 46
6:5	SG.17.BS.169	B South	Flat quern (limestone)	Huot 2003, 117, fig. 46
6:6	SG.16.C.31	C	Flat quern (basalt)	Huot 2003, 117, fig. 46
6:7	SG.16.D.96	D	Flat quern (basalt)	Huot 2003, 117, fig. 46
7:1	17.A.173	A	Limestone quern	Huot 2003, 117, fig. 46
7:2	16.D.79	D	Limestone quern	Huot 2003, 117, fig. 46
7:3	15.C.109	C	Basalt quern	Huot 2003, 117, fig. 46
7:4	15.A.129	A	Basalt quern	Huot 2003, 117, fig. 46
7:5	16.C.15	C	Basalt quern	Huot 2003, 117, fig. 46
7:6	16.D.80	D	Limestone handstone	Hall - Woolley 1927, pl. XIV, fig. 6
7:7	16.D.102	D	Limestone handstone	Hall - Woolley 1927, pl. XIV, fig. 6
8:1	SG.16.C.08	C	Handstone/polishing tool	Stone - Zimanski 2004, 129-131, figs. 75- 77; Matthews 2002, fig. 43:1-10
8:2	SG.17.BS.54	B South	Handstone/polishing tool	Matthews 2002, fig. 43:1-10
8:3	SG.17.BN.163	B North	Handstone/polishing tool	Matthews 2002, fig. 43:1-10

8:4	SG.17.BN.76	B North	Handstone	Matthews 2002, fig. 43:1-10
8:5	SG.17.BN.95	B North	Handstone	Matthews 2002, fig. 43:1-10
8:6	SG.16.D.77	D	Handstone/ pestle	Stone - Zimanski 2004, 129-131, figs. 75-77; Matthews 2002, fig. 43:1-10
8:7	SG.16.D.85	D	Basalt mortar	Hout 2003, fig. 46:1
8:8	SG.16.A.52	A	Macehead pierced stone	Matthews 2002, fig. 44:4; Emberling - McDonald 2003, fig. 15
9:1	SG.17.A.179	A	Flint blade	Huot 1996, 297, fig. 1:11
9:2	SG.17.BN.05	B North	Flint blade	Huot 1996, 297, fig. 1:11
9:3	SG.16.A.64	A	Flint blade	Huot 1996, 297, fig. 1:11
9:4	SG.16.A.46	A	Flint blade	Huot 1996, 297, fig. 1:11
9:5	SG.16.A.22	A	Flint blade	Huot 1996, 297, fig. 1:11
9:6	SG.17.BN.51	B North	Flint blade	Huot 1996, 297, fig. 1:09
9:7	SG.17.BN.62	B North	Flint blade	Huot 1996, 297, fig. 1:09
9:8	SG.16.A.69	A	Flint blade	Wright 1981, 44, fig. 25:m
9:9	SG.17.BN.178	B North	Flint blade	Huot 1996, 297, fig. 1:11; Emberling - McDonald 2003, fig. 65
9:10	SG.17.A.222	A	Flint blade	Wright 1981, 44, fig. 25:m; Huh 2008, pl. 2:55
9:11	SG.16.A.70	A	Flint blade	Wright 1981, 44, fig. 25:m
9:12	SG.17.A.183	A	Flint blade	Wright 1981, 44, fig. 25:m
9:13	SG.16.A.64	A	Flint blade	Huot 1996, 297, fig. 1:11
9:14	SG.16.A.06	A	Flint blade	Huot 1996, 297, fig. 1:11
10:1	SG.16.A.63	A	Flint blade	Woolley 1955, pl. 12:b
10:2	SG.16.D.106	D	Flint blade	Woolley 1955, pl. 12:b
10:3	SG.17.BN.195	B North	Flint blade	Huot 1996, 297, fig. 2:14
10:4	SG.17.BN.132	B North	Flint blade	Woolley 1955, pl. 13
10:5	SG.16.A.65	A	Flint blade	Hall - Woolley 1927, pl. XIII:5
10:6	SG.16.A.44	A	Flint blade	Woolley 1955, pl. 12:b
10:7	SG.16.A.40	A	Flint blade	Woolley 1955: pl. 12:b; Emberling - McDonald 2003, fig. 65
10:8	SG.16.A.66	A	Flint burin/point	Wright 1981, 45, fig. 26:l; Hall - Woolley 1927, pl. XIII:5
10:9	SG.17.BN.165	B North	Flint burin	Hall - Woolley 1927, pl. XIII:5
10:10	SG.16.C.19	C	Flint blade	Stone - Zimanski 2004, 126, fig. 74 AbD 90-232; Woolley 1955, pl. 12:b; Huh 2008, pl. 21:500
10:11	SG.16.A.62	A	Flint blade	Woolley 1955, pl. 12:b
11:1	SG.15.B.234	B	Obsidian sickle blade	Huot 1996, 297, fig. 1:06
11:2	SG.17.BN.170	B North	Obsidian sickle blade	Huot 1996, 297, fig. 1:06
11:3	SG.17.BN.184	B North	Obsidian blade	Huot 1996, 297, fig. 1:02
11:4	SG.16.A.59	A	Obsidian blade	Huot 1996, 297, fig. 1:06; Khalidi 2014: fig. 5:13e
11:5	SG.17.BN.194	B North	Obsidian blade	Huot 1996, 297, fig. 1:03; Khalidi 2014, fig. 5:16a
11:6	SG.16.D.99	D	Obsidian blade	Huot 1996, 297, fig. 1:03; Khalidi 2014, fig. 5:16a
11:7	SG.17.BN.62	B North	Obsidian blade	Huot 1996, 297, fig. 1:06
11:8	SG.16.D.91	D	Obsidian blade	Huot 1996, 297, fig. 1:03
11:9	SG.15.A.145	A	Obsidian blade	Huot 1996, 297, fig. 1:03

Tab. 2 - Catalogue of the objects with reference to the figures.

REFERENCES

- ANDERSON-GERFAUD, P.
- 1983 L'utilisation de certains objets en céramique de Tell el 'Oueili (Obeid 4): Rapport préliminaire sur les microtraces: J.-L. HUOT (ed.), *Larsa et 'Oueili, Travaux de 1978 – 1981*, Paris 1983, pp. 77-91.
- BENCO, N.L.
- 1992 Manufacture and Use of Clay Sickles from the Uruk Mound, Abu Salabikh, Iraq: *Paléorient* 18/1 (1992), pp. 119-134.
- BRENIQUET, C.
- 1991 Les petits objets de l'époque d'Obeid découverts à Tell El 'Oueili en 1985: J.-L. HUOT (ed.), 'Oueili, *Travaux de 1985*, Paris 1991, pp. 313-315.
- DELOUGAZ, P.
- 1940 *The Temple Oval at Khafajah* (Oriental Institute Publication 53), Chicago 1940.
- EMBERLING, G.- MC DONALD H.
- 2003 Excavations at Tell Brak 2001-2002: Preliminary report: *Iraq* 65 (2003), pp. 1-75.
- HALL, H.R. - WOOLLEY, C.L.
- 1927 *Ur. Excavations al Ubaid, Vol.1. A report on the work carried out at Al-Ubaid for the British Museum in 1919 and for the joint expedition 1922-3*, Oxford 1927.
- HUH, S.K.
- 2008 *Studien zur Region Lagash: Von der Ubaid- bis zur altbabylonischen Zeit* (Alter Orient und Altes Testament 345), Münster 2008.
- HUOT, J.-L.
- 1983 *Larsa et Oueili. Travaux de 1978-1981*, Paris 1983.
- 1985 Travaux en basse Mésopotamie. Les fouilles françaises à Larsa et 'Oueili: *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 129 (1985), pp. 300-318.
- 1996 *Oueili. Travaux de 1987 et 1989*, Paris 1996.
- 2003 *Larsa. Travaux de 1987 et 1989*, Beyrouth 2003.
- HUOT, J.L. - ARNAUD, D. - BACHELOT, L. - BRAUN, J.-P. - CALVET, Y. - CHEVALIER, J. - COURTOIS, L. - DESSE, J. - FOREST, J.-D. - GIRARD, M. - INIZAN, M.-L. - SEIGNE, J. - TIXIER, J.
- 1981 Larsa. Rapport préliminaire sur la huitième campagne à Larsa et la deuxième campagne à Tell el 'Oueili (1978): *Syria* 58 (1981), pp. 101-148.
- MATTHEWS, R.
- 2002 *Secrets of the dark mound. Jemdet Nasr 1926-1928*, Warminster 2002.
- KHALIDI, L.
- 2014 Fifth-millennium B.C. Obsidian Production and Consumption in Area TW, Tell Brak: MC MAHON, A.- CRAWFORD, H. (eds.), *Preludes to Urbanism. The Late Chalcolithic of Mesopotamia. In honour of Joan Oates*, Cambridge 2014, pp. 69- 87.
- MOOREY, P.R.S.
- 1994 *Ancient Mesopotamian materials and industries. The archaeological evidence*, Oxford 1994.
- OATES, J. - DAVIDSON, T.E. - KAMILI, D. - MCKERREL, H.
- 1977 Seafaring merchants of Ur?: *Antiquity* 51 (1977), pp. 221-234.
- PARROT, A.
- 1948 *Tello, vingt campagnes de fouilles (1877-1933)*, Paris 1948.

- POURNELLE, J.
- 2003 *Marshland of Cities: Deltaic Landscapes and the Evolution of Early Mesopotamian Civilization*. Ph.D Dissertation, San Diego 2003.
- RATNAGAR, S.
- 2006 *Trading encounters: from the Euphrates to the Indus in the Bronze Age*, New Delhi 2006.
- SAFAR, F. - MUSTAFA, M.A. - LLOYD, S.
- 1981 *Eridu*, Baghdad 1981.
- STONE, E. - ZIMANSKI, P.
- 2004 *The anatomy of Mesopotamian city. Survey and soundings at Mashkan Shapir*, Winona Lake 2004.
- WILKINSON, T.C.
- 2014 *Tying the Threads of Eurasia: Trans-regional Routes and Material Flows in Eastern Anatolia and Western Central Asia, c. 3000-1500BC*, Leiden 2014.
- WOOLLEY, C.L.
- 1955 *Ur Excavations. The Early Periods. Vol. 4. A report on the sites and objects prior in date to the Third Dynasty of Ur discovered in the course of the excavations*, Philadelphia 1955.
- WRIGHT, H.T. (ed.)
- 1981 *An Early Town on the Deh Luran Plain. Excavations at Tepe Farukhabad*, Ann Arbor 1981.

Fig. 1	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)
1:1	SG.17.BN.18	B North	Fishing Net Weight	5.5 × 5.5 × 1.4 cm
1:2	SG.17.BN.64	B North	Fishing Net Weight	5.4 × 5.3 × 1.7 cm
1:3	SG.17.BN.32	B North	Fishing Net Weight	7.2 × 6.8 × 1.2 cm
1:4	SG.17.BN.38	B North	Fishing Net Weight	6.7 × 6.6 × 2.2 cm
1:5	SG.17.BN.42	B North	Fishing Net Weight	7.3 × 7 × 1.5 cm
1:6	SG.17.BN.45	B North	Fishing Net Weight	6.7 × 6.4 × 2.3 cm

Caselli - Titolo

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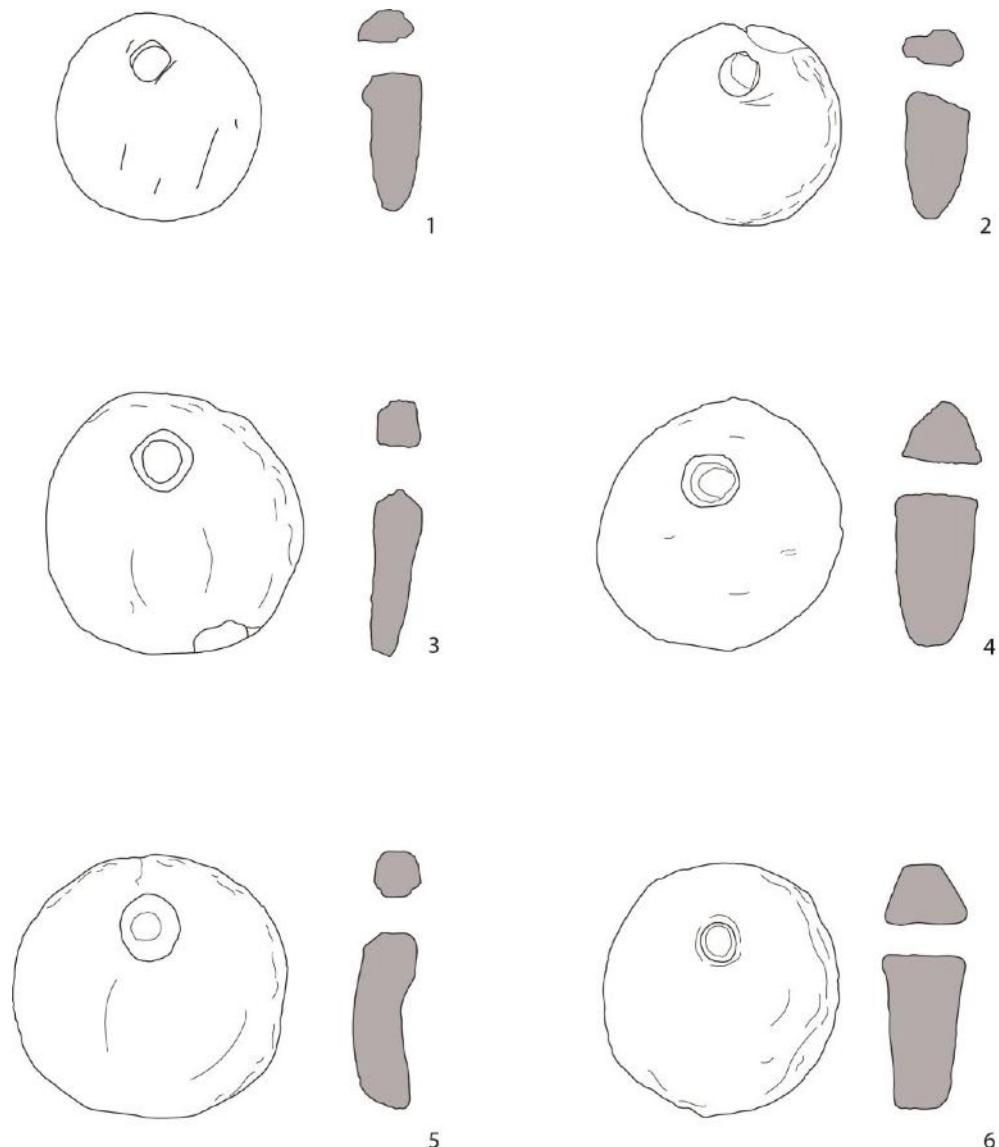


Fig. 1 - Fishing net weights.

Fig. 2	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
2:1	SG.17.BN.50	B North	Fishing Net Weight	5.7 × 6.3 × 2.3 cm	Tell Zorghul (Huh 2008, pl. 12:187); Al-Ubaid (Hall - Woolley 1927, pl. XXXVII, T.O.385)
2:2	SG.17.BN.37	B North	Fishing Net Weight	9.4 × 9.7 × 1.6 cm	Tell Zorghul (Huh 2008, pl. 12:187); Ur (Woolley 1955, fig. 4)
2:3	SG.17.BN.56	B North	Fishing Net Weight	6.6 × 6.8 × 1.7 cm	Tell Zorghul (Huh 2008, pl. 12:187); Al-Ubaid (Hall - Woolley 1927, pl. XXXVII, T.O.385)
2:4	SG.17.BN.64	B North	Fishing Net Weight	5.4 × 5.3 × 1.7 cm	Tell Zorghul (Huh 2008, pl. 12:187); Al-Ubaid (Hall - Woolley 1927, pl. XXXVII, T.O.385)

Caselli - Titolo

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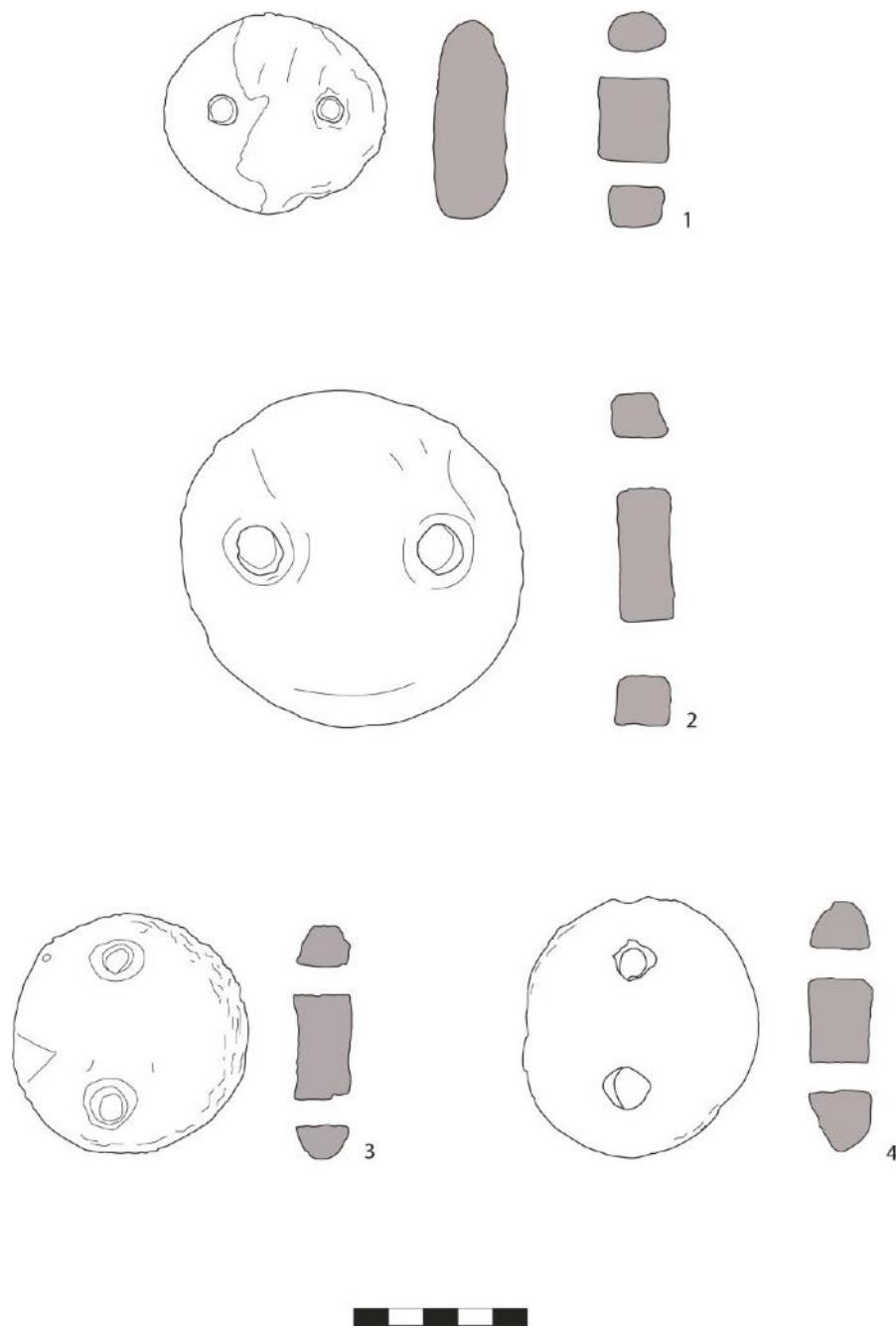


Fig. 2 - Fishing net weights.

Fig. 3	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
3:1	SG.17.BN.66	B North	Fishing Net Weight	6.9 × 7.1 × 2.1 cm	Ur (Woolley 1955, fig. 4)
3:2	SG.17.BN.65	B North	Fishing Net Weight	6.2 × 5.4 × 1.5 cm	-
3:3	SG.17.BN.69	B North	Fishing Net Weight	5.2 × 5 × 1.8 cm	Al-Ubaid (Hall - Woolley 1927, pl. XXXVII, T.O.385)
3:4	SG.17.BN.92	B North	Fishing Net Weight	7.9 × 6.3 × 1.8 cm	-
3:5	SG.17.BN.25	B North	Fishing Net Weight	5.5 × 5.3 × 1.7 cm	-

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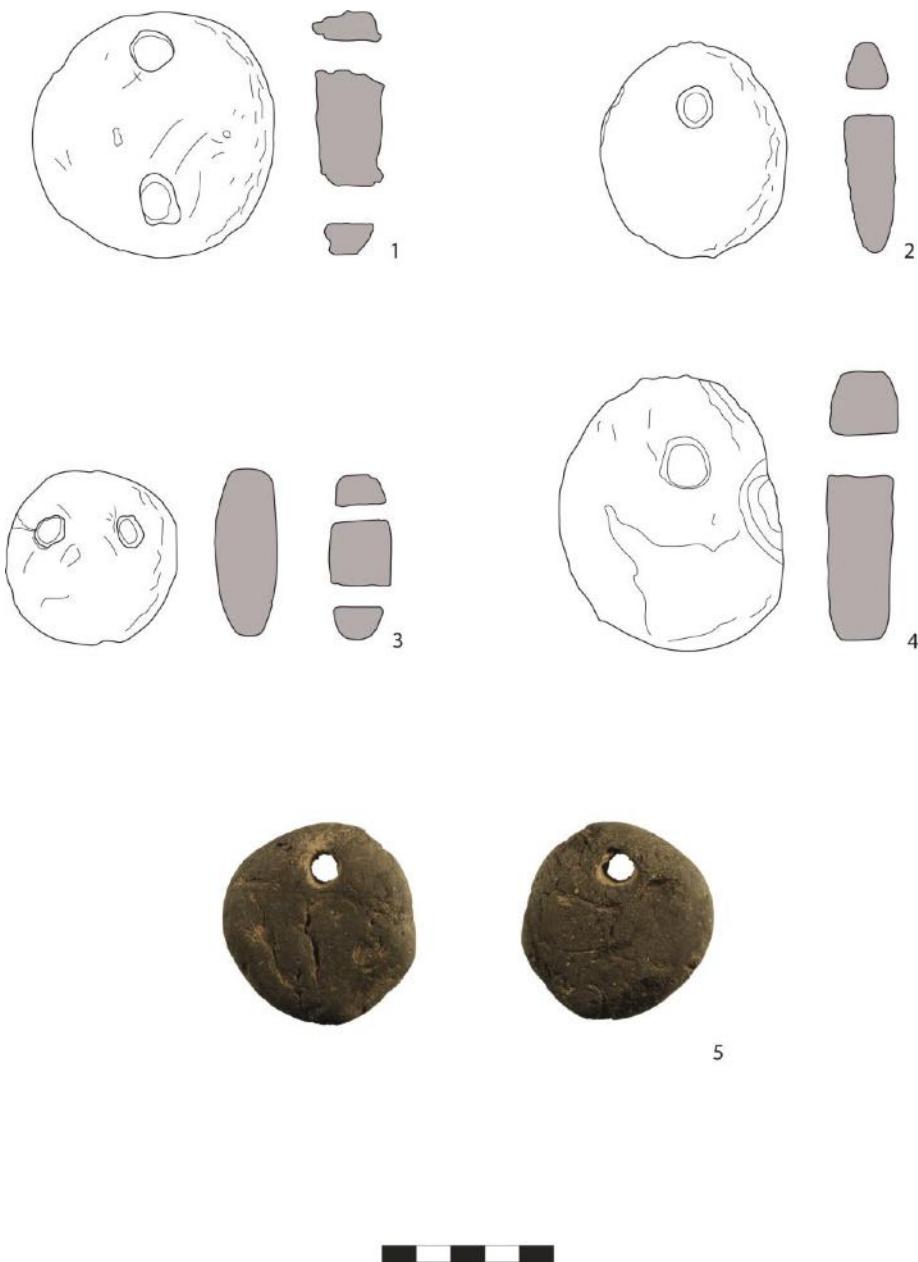


Fig. 3 - Fishing net weights.

Fig. 4	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
4:1	SG.17.BN.110	B North	Sickle	20 × 5.5 × 2.4 cm	Tello (Parrot 1948, fig 7:q); Ubaid (Hall - Woolley 1927, pl. XV:4)
4:2	SG.17.BN.133	B North	Sickle	22.5 × 4.6 × 1.7 cm	Tello (Parrot 1948, fig 7:q); Ubaid (Hall - Woolley 1927, pl. XV:4)



1



2



Fig. 4 - Clay sickles.

Fig. 5	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
5:1	SG.16.C.16	C	Loom weight	2.1 cm (thickness); 6.9 cm (diameter)	Oueili (Huot 1983, 53, pl. C); Tell Zorghul (Huh 2008, pl. 33:184-185)
5:2	SG.16.D.82	D	Loom weight	11.9 × 5.5 × 5.6 cm	Oueili (Huot 1983, 53, pl. C); Tell Zorghul (Huh 2008, pl. 33:184-185)
5:3	SG.16.D.29	D	Loom weight	1.8 cm (thickness); 7 cm (diamater)	Oueili (Huot 1983, 53, pl. C); Tell Zorghul (Huh 2008, pl. 33:184-185)
5:4	SG.17.BN.60	B North	Spindle whorl	1.5 × 2.8 × 1.6 cm	Oueili (Huot 1996, 161, pl. V:5); Tell Brak (Emberling - McDonald 2003, 7, fig. 6); Tell Zorghul (Huh 2008, pl. 12:178-179)



Fig. 5 - Loom weights (1-3), spindle whorls (4).

Fig. 6	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
6:1	SG.16.D.81	D	Flat quern (limestone)	10 × 6.8 × 3.5 cm	Larsa (Huot 2003, 117, fig. 46)
6:2	SG.16.D.84	D	Flat quern (limestone)	3.4 cm (thickness)	Larsa (Huot 2003, 117, fig. 46)
6:3	SG.17.BN.77	B North	Flat quern (limestone)	10 × 9 × 4.4 cm	Larsa (Huot 2003, 117, fig. 46)
6:4	SG.17.BN.135	B North	Flat quern (limestone)	23.8 × 20.7 × 4.7 cm	Larsa (Huot 2003, 117, fig. 46)
6:5	SG.17.BS.169	B South	Flat quern (limestone)	10.2 × 6.4 × 2.6 cm	Larsa (Huot 2003, 117, fig. 46)
6:6	SG.16.C.31	C	Flat quern (basalt)	9.1 × 4.8 × 4.1 cm	Larsa (Huot 2003, 117, fig. 46)
6:7	SG.16.D.96	D	Flat quern (basalt)	19.9 × 13.3 × 2 cm	Larsa (Huot 2003, 117, fig. 46)

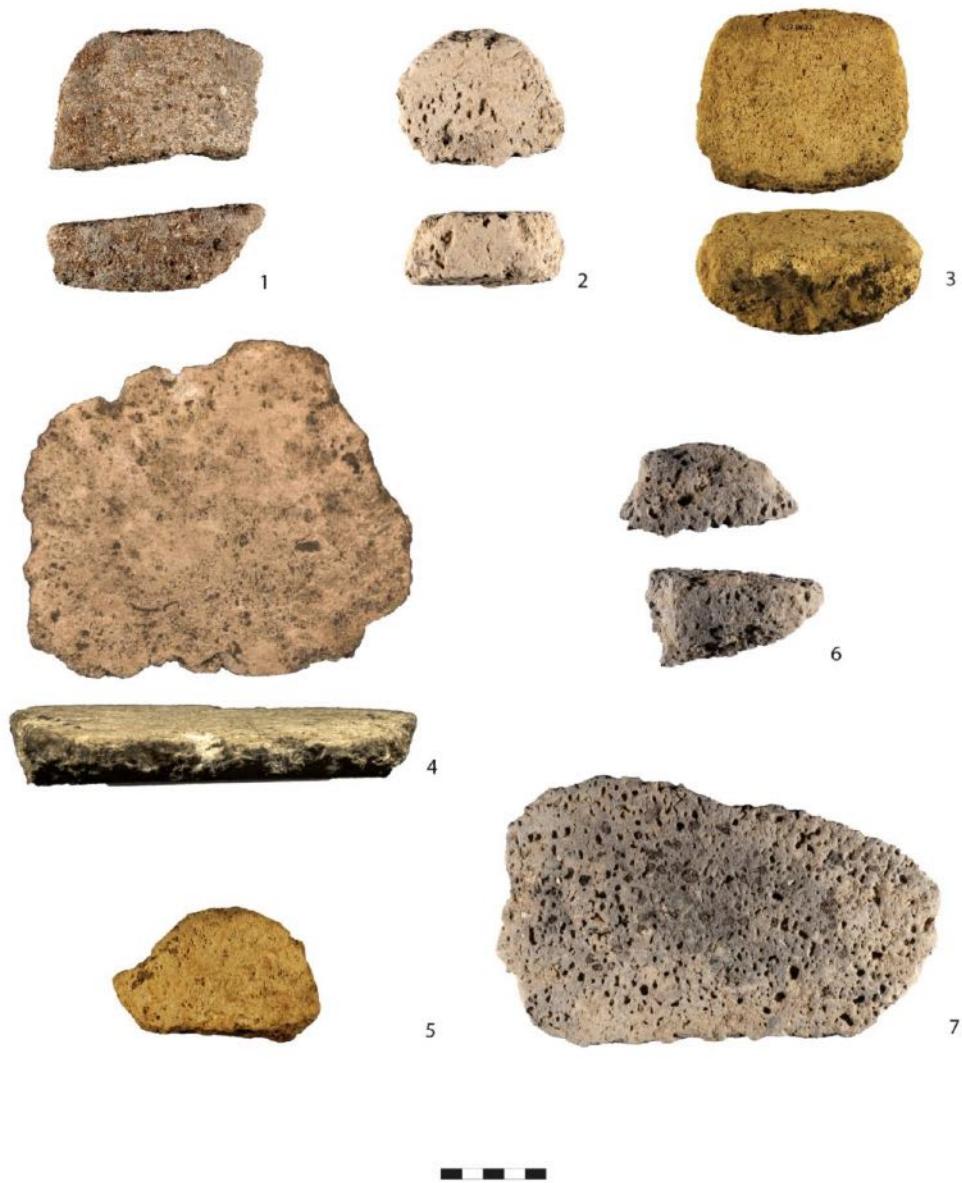


Fig. 6 - Grinding stones (flat querns).

Fig. 7	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
7:1	SG.17.A.173	A	Limestone quern	6.4 × 4.4 × 2.9 cm	Larsa (Huot 2003, 117, fig. 46)
7:2	SG.16.D.79	D	Limestone quern	7.6 × 4.9 × 2 cm	Larsa (Huot 2003, 117, fig. 46)
7:3	SG.15.C.109	C	Basalt quern	31.9 × 14.4 × 5.1 cm	Larsa (Huot 2003, 117, fig. 46)
7:4	SG.15.A.129	A	Basalt quern	13.8 × 8.5 × 4 cm	Larsa (Huot 2003, 117, fig. 46)
7:5	SG.16.C.15	C	Basalt quern	8.1 × 5.8 × 4.7 cm	Larsa (Huot 2003, 117, fig. 46)
7:6	SG.16.D.80	D	Limestone handstone	5.8 × 8.2 × 3.5 cm	Al-Ubaid (Hall - Woolley 1927, pl. XIV, fig. 6)
7:7	SG.16.D.102	D	Limestone handstone	5.2 cm (thickness)	Al-Ubaid (Hall - Woolley 1927, pl. XIV, fig. 6)



Fig. 7 - Grinding stones (1-5 saddle querns; 6-7 handstones).

Fig. 8	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
8:1	SG.16.C.08	C	Handstone/ polishing tool	6.9 × 5.3 × 3.5 cm	Jemdet Nasr (Matthews 2002, fig. 43:1-10); Mashkan- shapir/Tell Abu Duwari (Stone - Zimanski 2004, 129-131, figs. 75-77)
8:2	SG.17.BS.54	B South	Handstone/ polishing tool	0.9 cm (thickness)	Jemdet Nasr (Matthews 2002, fig. 43:1-10)
8:3	SG.17.BN.163	B North	Handstone/ polishing tool	4.7 × 5.2 cm	Jemdet Nasr (Matthews 2002, fig. 43:1-10)
8:4	SG.17.BN.76	B North	Handstone	8.7 × 7 × 5 cm	Jemdet Nasr (Matthews 2002, fig. 43:1-10)
8:5	SG.17.BN.95	B North	Handstone	8.6 × 7 × 5.5 cm	Jemdet Nasr (Matthews 2002, fig. 43:1-10)
8:6	SG.16.D.77	D	Handstone/ pestle	4.5 cm (height)	Jemdet Nasr (Matthews 2002, fig. 43:1-10); Mashkan- shapir/Tell Abu Duwari (Stone - Zimanski 2004, 129-131, figs. 75-77)
8:7	SG.16.D.85	D	Basalt mortar	7.6 × 7.4 × 2.6 cm	Larsa (Huot 2003, fig. 46:1)
8:8	SG.16.A.52	A	Macehead/ pierced stone	8.5 × 11.1 × 7.8 cm	Jemdet Nasr (Matthews 2002, fig. 44:4); Tell Brak (Emberling - McDonald 2003, fig. 15)

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Fig. 8 - Grinding stones (1-6 handstones; 7 mortar); 8 mace-head.

Fig. 9	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
9:1	SG.17.A.179	A	Blade	2.6 × 0.7 × 0.4 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:2	SG.17.BN.05	B North	Blade	3.5 × 0.9 × 0.4 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:3	SG.16.A.54	A	Blade	3.4 × 0.9 × 0.2 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:4	SG.16.A.46	A	Blade	3.1 × 1.2 × 0.3 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:5	SG.16.A.22	A	Blade	1.9 × 1.4 × 0.4 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:6	SG.17.BN.51	B North	Blade	2.2 × 1.2 × 0.4 cm	Oueili (Huot 1996, 297, fig. 1:09)
9:7	SG.17.BN.62	B North	Blade	1.9 × 0.9 × 0.2 cm	Oueili (Huot 1996, 297, fig. 1:09)
9:8	SG.16.A.69	A	Blade	3.9 × 1.1 × 0.3 cm	Tepe Farukhabad (Wright 1981, 44, fig. 25:m)
9:9	SG.17.BN.178	B North	Blade	4.6 × 1.6 × 0.5 cm	Oueili (Huot 1996, 297, fig. 1:11); Tell Brak (Emberling - McDonald 2003, fig. 65)
9:10	SG.17.A.222	A	Blade	3.5 × 1.2 × 0.7 cm	Tell Zorghul (Huh 2008, pl. 2:55); Tepe Farukhabad (Wright 1981, 44, fig. 25:m)
9:11	SG.16.A.70	A	Blade	2.8 × 1.4 × 0.4 cm	Tepe Farukhabad (Wright 1981, 44, fig. 25:m)
9:12	SG.17.A.183	A	Blade	4 × 2.1 × 0.8 cm	Tepe Farukhabad (Wright 1981, 44, fig. 25:m)
9:13	SG.16.A.64	A	Blade	1.3 × 1.2 × 0.3 cm	Oueili (Huot 1996, 297, fig. 1:11)
9:14	SG.16.A.06	A	Blade	1 × 0.8 × 0.2 cm	Oueili (Huot 1996, 297, fig. 1:11)

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Fig. 9 - Flint blades.

Fig. 10	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
10:1	SG.16.A.63	A	Blade	3.2 × 1.6 × 0.4 cm	Ur (Woolley 1955, pl. 12:b)
10:2	SG.16.D.106	D	Blade	3.9 × 1.9 × 0.4 cm	Ur (Woolley 1955, pl. 12:b)
10:3	SG.17.BN.19 5	B North	Blade	3.5 × 1.2 × 0.4 cm	Oueili (Hout 1996, 297, fig. 2:14)
10:4	SG.17.BN.13 2	B North	Blade	2.3 × 1.2 × 0.3 cm	Ur (Woolley 1955, pl. 13)
10:5	SG.16.A.65	A	Blade	2.4 × 1.2 × 0.5 cm	Al-Ubaid (Hall - Woolley 1927, pl. XIII:5)
10:6	SG.16.A.44	A	Blade	4.7 × 1.6 × 0.6 cm	Ur (Woolley 1955, pl. 12:b)
10:7	SG.16.A.40	A	Blade	6 × 2.3 × 0.3 cm	Tell Brak (Emberling - McDonald 2003, fig. 65); Ur (Woolley 1955: pl. 12:b)
10:8	SG.16.A.66	A	Burin/ Arrowhead	3.8 × 2.8 × 1 cm	Al-Ubaid (Hall - Woolley 1927: pl. XIII.5); Tepe Farukhabad (Wright 1981, 45, fig. 26.1)
10:9	SG.17.BN.16 5	B North	Burin	1.9 × 1.1 × 0.3 cm	Al-Ubaid (Hall - Woolley 1927, pl. XIII:5)
10:10	SG.16.C.19	C	Blade	2.5 × 0.8 × 0.2 cm	Lagaš/al-Hiba (Huh 2008, pl. 21 n. 500); Mashkan- shapir/Tell Abu Duwari (Stone - Zimanski 2004, 126, fig. 74 AbD 90-232); Ur (Woolley 1955, pl. 12:b)
10:11	SG.16.A.62	A	Blade	2.9 × 1.3 × 0.3 cm	Ur (Woolley 1955, pl. 12:b)

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Fig. 10 - Flint tools (1-7, 10-11 blade; 8-9 burin/arrowhead).

Fig. 11	Exc. No.	Area	Description	Dimensions (Height/Length × Width × Thickness)	Comparanda
11:1	SG.15.B.234	B	Sickle blade	4 × 1 × 0.2 cm	Oueili (Huot 1996, 297 fig. 1:06)
11:2	SG.17.BN.170	B North	Sickle blade	3.1 × 0.8 cm	Oueili (Huot 1996, 297 fig. 1:06)
11:3	SG.17.BN.184	B North	Blade	1.7 × 0.5 × 0.2 cm	Oueili (Huot 1996, 297, fig. 1:02)
11:4	SG.16.A.59	A	Blade	1.2 × 0.9 × 0.2 cm	Oueili (Huot 1996, 297 fig. 1:06); Tell Brak (Khalidi 2014; fig. 5:13e)
11:5	SG.17.BN.194	B North	Blade	2.5 × 0.9 × 0.3 cm	Oueili (Huot 1996, 297, fig. 1:03); Tell Brak (Khalidi 2014, fig. 5:16a)
11:6	SG.16.D.99	D	Blade	2.1 × 1 × 0.3 cm	Oueili (Huot 1996, 297, fig. 1:03); Tell Brak (Khalidi 2014, fig. 5:16a)
11:7	SG.17.BN.62	B North	Blade	1.9 × 0.9 × 0.2 cm	Oueili (Huot 1996, 297 fig. 1:06)
11:8	SG.16.D.91	D	Blade	3.7 × 1.9 × 0.5 cm	Oueili (Huot 1996, 297, fig. 1:03)
11:9	SG.15.A.145	A	Blade	3 × 1.6 × 0.4 cm	Oueili (Huot 1996, 297, fig. 1:03)

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Fig. 11 - Obsidian blades.