

MIDDLE BRONZE AGE POTTERY KILNS AT
ŞARAGA HÖYÜK

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Introduction

Firing of ceramic vessels, which is an essential stage of the pottery production process, has been accomplished by two different methods since the Neolithic period. The first method is open-air firing,¹ which has been used since the earliest periods of ceramic production and continues to be practiced in present day; however, it is challenging to recover evidence for open-air firing in archaeological contexts.² In this method, the fuel used for firing is in direct contact with the ceramic vessels, yielding non-homogenous results.³ A further disadvantage of this method is the difficulty in controlling the firing temperatures. The second method for firing ceramics is the use of kilns, for which the earliest archaeological evidence dates back to the 7th millennium BC.⁴

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¹ Streily 2000, 69; Moorey 1994, 144.

² Moorey 1994, 144.

³ Streily 2000, 79.

⁴ For an extensive literature on the pottery kilns found in Iran and Mesopotamia, see Majidzadeh 1975; Alizadeh 1985; Moorey 1994; Streily 2000.

The technological and typological characteristics of pottery kilns in the ancient Near East are a well-studied subject.⁵ The two main kiln types known in the Near East are “single-chamber kilns”, in which the combustion and firing chambers are one and the same, and “double-chamber kilns”, in which these two chambers are separate.⁶ Delcroix, who has studied pottery kilns in detail, further distinguishes the pottery kiln types found in the ancient Near East on the basis of the location of the combustion chamber below or above floor level.⁷ Other criteria used for kiln typologies include the rectangular, oval, or circular ground plan of the kiln; the location of the combustion chamber below or above floor level; the presence of a pre-chamber annexed to the combustion chamber or the presence of twin combustion chambers; and the positioning of the heat transmission duct.⁸ In general, the superstructure for the single or double chamber kilns is dome-shaped,⁹ which is also supported by depictions of kilns on seal impressions.¹⁰ The domed superstructure evenly distributes air circulation in the firing chamber and improves the quality and the homogeneity of the firing process.¹¹ The superstructure of kilns can rarely be recovered in archaeological excavations. Besides obvious preservation issues, the lack of physical evidence for the superstructure of kilns has led scholars to believe that the superstructure may have been rebuilt after each firing event.¹² Various examples of kilns have been constructed with sun-dried mud-bricks, baked bricks, or using the *pisé* technique.¹³ Pottery workshops where open-air firing facilities and kilns are found together are also known.¹⁴

⁵ Delcroix 1972; Majidzadeh 1975; Alizadeh 1985; Moorey 1994; Streily 2000.

⁶ Hauptmann 1987, 206; Moorey 1994, 144; Streily 2000, 79, fig. 3-10, 12-16.

⁷ Delcroix 1972, 79. Besides this main distinction, Delcroix categorizes pottery kilns into six main types based on other typological differences. For the details of this typology and diagrams, see Delcroix 1972, 79-81, fig. 9.

⁸ Streily 2000, 79-80; Moorey 1994, 144-146; Alizadeh 1985, fig. 8; Majidzadeh 1975.

⁹ Hauptmann 1985, 205; Delcroix 1972, fig. 4C1, C6; Majidzadeh 1975, 220; Alizadeh 1985, 39; Moorey 1994, 142; Streily 2000, 71.

¹⁰ Moorey 1994, 142, fig. 8c.

¹¹ Majidzadeh 1975, 220.

¹² Streily 2000, 70.

¹³ Alizadeh 1985, 39, 44, 46; Streily 2000, 72-73; Moorey 1994, 306.

¹⁴ Moorey 1994, 144.

Pottery Kilns at Şaraga Höyük

Şaraga Höyük lies on the western bank of the Euphrates river within the borders of Gaziantep province. The site is located 15 km south of the Birecik district of the province of Şanlıurfa and 7 km north of Karkamış. The settlement sequence on the mound begins in the Late Chalcolithic and continues uninterrupted until the Medieval period.¹⁵ Excavations at the site have been conducted as part of the TAÇDAM¹⁶ salvage dam project between 1998-2002 and with the support of the Governorship of Gaziantep in 2003.¹⁷ Two pottery kilns were found at the site during the 2003 excavation season (Figure 1). The rising water level of the Karkamış dam reservoir presented challenges during the excavations because the area where the kilns were recovered is located on the edge of the Euphrates. Despite logistic difficulties, we were able to recover the architectural plan of the kiln structures in their entirety and precisely document their functions.

The kilns are located on the northwestern edge of the mound, in grid squares M-N/22-23.¹⁸ The northern kiln (Kiln 1) in M-N/22-23 is larger than the southern kiln (Kiln 2) in N-23 (Figure 2).

The preserved portion of the larger kiln (Kiln 1) measures approximately 3.5 m in width and 3 m in length. The combustion chamber is preserved to a height of 1.5 m above the floor level. The kiln structure has an ovoid ground plan, tapering towards the door in the front and with slightly rounded corners at the back. The superstructure that would have covered the firing chamber was not preserved; however, the combustion chamber could be clearly identified and 15 ducts were recovered on the platform that separates the combustion and firing chambers. The northern (back) and northwestern portions of the structure were destroyed where there may have originally been more ducts. The destruction debris of the structure was uncovered behind the kiln on the northern side, along the edges of the preserved ducts (Figure 3).

¹⁵ Sertok et al 2007, 346, fig. 6a-b.

¹⁶ TAÇDAM: Center for Research and Assessment of the Historic Environment.

¹⁷ Şaraga Höyük excavations were directed by M. Kemal Sertok on behalf of the Gaziantep Museum with the active participation and scientific advisory of Prof. Dr. Fikri Kulakoğlu. I thank Prof. Dr. Fikri Kulakoğlu for allowing me to study the material presented in this article and to use certain documents from the Kültepe excavation archives, as well as for having shared with me his ideas and suggestions regarding the topic.

¹⁸ Sertok et al. 2005, 285, fig. 1, 9, 10, 13.

During the excavations, some of the ducts were emptied and the articulation of the combustion chamber with the firing chamber was documented. The ducts on both sides of the kiln were placed at an angle sloping downwards toward the center of the combustion chamber. With this construction method, a much wider surface area was created in the firing chamber to facilitate an even thermal distribution and atmosphere. The eastern and southern walls of the kiln were built using mudbricks. The kiln door, which is located on the southern side, was built with two rows of mudbricks forming an arched construction. The door was placed off center, close to the western wall of the kiln. Large ceramic sherds were found concentrated around Kiln 1, indicating that this kiln was used for firing large vessels. Within the kiln structure itself, unfired ceramic sherds were recovered, which must have belonged to vessels yet unfired¹⁹ (Figure 4). A thick ash deposit was found covering the floor of the combustion chamber. After excavating the ash deposit, the floor construction of the combustion chamber was exposed, consisting of a packed layer of broken potsherds (Figure 5). This construction technique would have helped preserve high temperatures within the combustion chamber. The ground plan of the combustion chamber resembles the shape of a pear, widening towards the back of the kiln structure. In the construction of the foundation, medium-size stones were used below the layer of potsherds. The interior surfaces of the kiln walls, the floor of the combustion chamber, and the surfaces of ventilation flues had gained a range of colors in hues of green and red indicating high temperatures during firing events (Figure 6). Moreover, vitrified mudbrick fragments broken off from the interior surfaces of the combustion chamber were found scattered within the kiln debris.

Two human burials were found on the floor of the combustion chamber of Kiln 1 (Figure 7). One of the skeletons was recovered intact, while in the other burial, only the upper portion of the skeleton was preserved. The individual that is closer to the door of the kiln was lying in a *hocker* position, facing west. The other, partially recovered skeleton was disturbed and the original orientation of the body could not be determined. In the intact burial, a bronze pin was placed as a burial gift

¹⁹ The large number of pithos with grooved rim, which was found in the MBA layers of Saraga Hoyuk and the grooved rim ceramic group which was found in the Euphrates Valley settlements from Saraga Hoyuk to Haradum proved that the grooved rim ceramic group was produced locally at Saraga Hoyuk. See Ezer 2010, 41-43.

close to the head of the individual (Figure 8).²⁰ The irregularity in these burial contexts indicates disturbance by upper archaeological strata, as well as disturbance by the high water table, which have presented challenges during the excavation of these contexts.

The small Kiln 2 measures approximately 1 x 1 m and the height of the door is *ca.* 40 cm. The combustion chamber of this kiln has a rectangular plan. The walls of the upper portion of the combustion chamber were raised using mudbricks, creating a support for the vessels that were placed in the firing chamber and keeping them from scattering during the firing events. The superstructure over the firing chamber rises above the rows of mudbrick that define the edges of the chamber. Seven ducts were identified between the combustion and the firing chambers. The ducts were lined up in two parallel rows, with 3 ducts in the front and 4 in the back. The door of the small kiln was facing east.

As is the case in Kiln 1, the door of Kiln 2 was placed off the central axis of the structure, closer to the southern side of the kiln. We were not able to identify what the functional purpose of this asymmetry could have been. The door in Kiln 1 faces southwest, while the door in the smaller Kiln 2 faces east. As such there is no unity in the orientation of the doors in the two kilns. As opposed to Kiln 1, Kiln 2 was used for firing small vessels. The miniature vase that was used for blocking one of the ventilation flues, found *in situ* (Figure 9), gives us clear evidence for the size of the vessels that were fired in Kiln 2. This miniature vase in Kiln 2 represents one of the typical vessel forms found in the Middle Bronze Age graves in the region. We may hypothesize that Kiln 2 was used for firing small size vessels to be used in rituals or as funerary gifts. The red coloring observed within the combustion chamber and around the ventilation flues indicates the high temperatures that were reached during firing. Another indication of the high temperatures achieved in these kilns is the high quality of firing observed in the local MBA ceramic assemblages of Şaraga Höyük. In this assemblage, the sherds have clear breaks; there are no dark cores in the sections;

²⁰ Burials found in the kilns have been interpreted on the basis of the Middle Bronze Age graves found at the site. Accordingly, the Middle Bronze Age graves at the site do not display any unity in form or spatial organization. The graves are distributed around the site without any clear pattern, which has been interpreted as the result of a possible event. For details see Sertok et al. 2005, 283; 2007, 343.

and the surfaces are homogeneous in color. We can infer from these lines of evidence that temperatures over 800 °C were reached in these kilns and a high quality of firing was achieved.²¹

We were not able to define with certainty the relationship of the kilns to the rest of the architectural complex or their relative positions to the general architectural plan of the site. This was mainly due to the small size of the excavation area, the lack of knowledge about the architectural sequence of the much disturbed eastern slope of the mound, and the short excavation seasons of the salvage project. However, the kilns are located close to and north of the monumental MBA building, which contains storage vessels. Besides abundant ceramics, moulds for casting metal tools and a rotary stone were retrieved from around the kilns and were concentrated in a restricted area (Figures 10-11). Based on these multiple lines of evidence, the kilns belonged to the workshops annexed to the monumental building, which must have had an administrative function.²²

Comparisons

Current knowledge on Middle Bronze Age pottery kilns in Southeast Anatolia and neighboring regions is rather scarce. Comparative examples for Şaraga Höyük pottery kilns are nearly nonexistent at contemporary sites that have been archaeological investigated. Within the region of Southeast Anatolia itself, Şaraga Höyük pottery kilns are the only examples datable to the Middle Bronze II period.²³

²¹ For other factors that alter the firing quality of ceramic vessels, see Ökse 1999, 14-20.

²² Sertok 2001, 457; Sertok et al. 2005, 283.

²³ A kiln with an ovoid ground plan was found in Level XIV of Samsat, dating to the Middle Bronze Age. However, only the floor of this kiln was preserved, which was constructed with a single row of stones and paved with gravel. The function of this kiln could not be identified; see Özgüç 2009, 68, fig. 317. On the other hand, a rotary stone has been found in the Middle Bronze Age levels of Samsat, which presents evidence for pottery production at the site; see Özgüç 2009, 67, Lev. 144: 312. Prof. Dr. Aliye Öztan, who has participated in Samsat excavations since the beginning of the project, states that there is no evidence to indicate whether the kiln was used for pottery production or not (personal communication). I thank Prof. Dr. Aliye Öztan for sharing with me her views on the subject.

Eyüp Ay, who is the head of the Müslümantepe excavations in Bismil, a town within the borders of the city Diyarbakır, told in a private communication that kilns which belong to the MBA have been found at the site. However, no information was provided regarding which part of the MBA those kilns may belong.

Among Southeast Anatolian sites, Lidar Höyük, which is very close to Şaraga Höyük, has well-preserved and well-documented archaeological strata that date to the Early and Middle Bronze Ages. At Lidar Höyük, 19 pottery kilns have been excavated, dating to the Early Bronze Age; however, despite the wide range of the Middle Bronze Age ceramic repertoire of the site, no pottery kilns were encountered in MBA levels during the excavations. Two types of pottery kilns are seen in the EBA levels of Lidar Höyük. The first type consists of simple, horseshoe-shaped kilns, in which the combustion and firing take place in a single chamber and the second type is represented by more complex examples, where the combustion and firing chambers are separate.²⁴ The complex Lidar Höyük kilns are similar to the Şaraga Höyük examples in terms of their technical aspects, and yet they are typologically different than the Şaraga Höyük kilns. The complex Lidar Höyük kilns have a circular ground plan, the firing chamber is divided into two compartments, and they have elongated antechambers annexed to the door of the combustion chamber.²⁵ The simpler, horseshoe-shaped kilns at Lidar Höyük, which are not represented at Şaraga Höyük, have parallels at Megiddo.²⁶ A pottery kiln with an ovoid ground plan, dating to the end of the Early Bronze Age, was found at the site of Gaziantep-Kalehöyük, *ca.* 65 km west of Şaraga Höyük, in a restricted excavation area on the slope of the mound that aimed at documenting the prehistoric stratigraphy of the site.²⁷ To the south of Şaraga Höyük, along the Euphrates, the pottery kiln found in Level 10 (Late Chalcolithic) of Habuba Kabira,²⁸ and the kilns excavated at Tell Halawa and Tell es Sweyhat, dating to the end of the Early Bronze Age can be cited as other examples of pottery kilns found in the region. The kiln at Tell Halawa differs from Kiln 1 at Şaraga Höyük in its circular ground plan and in the irregularity of its ducts,²⁹ while the kiln at Habuba Kabira be-

²⁴ Hauptmann 1987, 206.

²⁵ Hauptmann 1982, 95-96, Fig. 5-6; Hauptmann 1999, 71-72, fig. 12.

²⁶ Delcroix 1972, 94, fig. 8: E.9-10.

²⁷ Kulakoğlu et al. 2008, 348, fig. 15. Prof. Dr. Fikri Kulakoğlu states that this kiln has been excavated only down to the floor of the firing chamber and that the combustion chamber has not been exposed during excavations (personal communication).

²⁸ Strommenger 1980, 77; Moorey 1994, 145, fig. 9a.

²⁹ Orthmann 1981, Tafel 6.

ars typological and technical similarities to the Şaraga Höyük Kiln 1.³⁰ At Tell es Sweyhat, only the walls of the horseshoe-shaped combustion chambers were preserved, however, the excavators indicate that originally these structures were most probably double-chamber kilns like the Şaraga Höyük examples.³¹ At Tell Sabi Abyad in the Balikh valley to the south, 10 pottery kilns have been excavated and are divided into two categories as small and large kilns.³² These kilns date to the Late Bronze Age and postdate the Şaraga Höyük examples.³³ Some of the examples at Tell Sabi Abyad have a rectangular ground plan, similar to Kiln 2 Şaraga Höyük.³⁴ As is the case in Şaraga Höyük Kiln 1, two burials have been found in one of the Late Bronze Age pottery kilns at Tell Sabi Abyad.³⁵ This situation can be interpreted as a secondary use of the abandoned kiln as a grave structure after the kiln has stopped functioning, rather than indicating a particular cultural practice.

A pottery kiln has been excavated at Tell Brak in the Khabur basin, contemporary with the kilns at Şaraga Höyük. The Tell Brak kiln differs typologically from the Şaraga Höyük examples with its circular plan and its regularly built mudbrick walls.³⁶

In recent years, three rectangular kilns have been excavated at Tell Atchana in the Amuq plain, dating to the Late Bronze Age. These pottery kilns are found in close proximity to other pyrotechnological installations in a special-function area used for craft production.³⁷ In this workshop area at Tell Atchana, abundant evidence has been found for pottery production, such as ash deposits, ceramic slag, wasters, clay preparation tanks, and craft production tools.³⁸ At Ziyaret Tepe in Diyarbakır province, the pottery kilns found in "Areas D and "G" are da-

³⁰ Strommenger 1980, 76-77, Abb. 74-75; Heinrich et al 1973, 56, Abb. 20.

³¹ Cooper 2006, 188, fig. 7-8.

³² Duistermaat 2008, 489, 503, Table B.1.

³³ Duistermaat 2008, 489.

³⁴ Duistermaat 2008, fig. B.24-25, fig. B.27.

³⁵ Duistermaat 2008, 492.

³⁶ Oates et al. 1997, 22.

³⁷ Yener 2010, 31, fig. 2.11-2.12.

³⁸ Yener 2010, 31. Yener indicates that chaff and reeds have been used as inclusions in the mudbrick mix used for the construction of Tell Atchana pottery kilns, which is also paralleled in the construction of the Tell Kurdu pottery kilns, dating to the 5th millennium BC. For the numerous pottery kilns found at Tell Kurdu, see Yener et al. 2000, 55-57, fig. 3.

ted to the Late Bronze Age.³⁹ The kiln in “Area G” bears typological and technical similarities to Şaraga Höyük Kiln 2.⁴⁰

Further west, in Central Anatolia, a kiln has been excavated in Level I of the Karum area at Kültepe; however, the specific function of this kiln could not be identified.⁴¹ Typologically, this kiln at Kültepe is significantly different than the Şaraga Höyük examples (Figure 12). Likewise, the pottery kilns found at Boğazköy, further north, are typologically different from Şaraga Höyük kilns, as well as dating to a later period.⁴²

In the wider geography of the Near East, we see numerous examples of pottery kilns in the regions of Levant and Iran, although the ones datable to the Middle Bronze Age appear to be relatively fewer than other periods.⁴³ In coastal Israel, pottery kilns have been found at many settlements around Tel Aviv, dating to Middle Bronze Age II.⁴⁴ At Tel Michal, for example, two kilns have been found facing each other (L.466 in the north and L.481 in the south), which bear close typological and technical similarities to Kiln 1 at Şaraga Höyük.⁴⁵ Likewise, the pottery kilns found at the Middle Bronze Age II levels of Ramat Aviv and Ben-Nun resemble Kiln 1 at Şaraga Höyük in terms of size and technical aspects. However, these kilns have certain typological differences in plan and details in comparison to the Şaraga Höyük examples.⁴⁶

Discussion and Conclusions

I have tried to present above a survey of pottery kilns dating to different chronological periods and found at various sites in Southeast

³⁹ Matney et al. 2002, 61-62; Matney et al. 2005, 29.

⁴⁰ Matney et al. 2005, fig. 9.

⁴¹ Prof. Dr. Kutlu Emre states that no ceramic sherds or ash deposits were encountered around this kiln, although a trefoil-mouth jug, dating to Karum Level I, was found very close to the kiln (personal communication). I thank distinguished Prof. Dr. Kutlu Emre for allowing me to publish the drawings and photographs of this unpublished kiln in the Kültepe excavations archive and for sharing with me her views on this subject.

⁴² Müller-Karpe 1988, 7-11, Taf. 63-64, Plan 5. Müller-Karpe dates the kilns found in the Upper City of Boğazköy to ca. 1200 BC. For details on dating, see Müller-Karpe 1988, 161-162.

⁴³ For extensive studies on pottery kilns dating to various chronological periods found in Iran, see Alizadeh 1985, Majidzadeh 1975.

⁴⁴ Kletter et al. 2001.

⁴⁵ Kletter et al. 2001, 96, fig. 2-3.

⁴⁶ Kletter et al. 2001, 98; for Ramat Aviv; 97-98, fig. 4-5; for Ben-Nun; 100, fig. 7.

Anatolia and culturally related neighboring regions. This survey demonstrates the scarcity of the physical evidence on kilns at Bronze Age sites in Southeast Anatolia. The sporadic distribution and the scarcity of the excavated examples preclude a detailed reconstruction of the technical and typological development of pottery kilns in Southeast Anatolia. However, when we consider the general trends in the development of firing technology of ceramics in the Ancient Near East since the 7th millennium BC, we may infer certain conclusions about the development of pottery kilns in Southeast Anatolia. Accordingly, we see a continuity in the working principles and typological aspects of pottery kilns since the Neolithic until the Late Bronze Age—a long period where no radical shift has been empirically observed in the pottery firing techniques in the region. Although the main technical principles of the kilns have not changed, we observe that the pottery kilns increase in size and number as a result of regional socioeconomic changes. This results in the emergence of formal pottery workshops. Beginning with the Early Bronze Age, pottery kiln technology became relatively more standardized and sophisticated in comparison to earlier periods. This trend is also supported and paralleled by the standardization of final ceramic products of the period. The widely attested wheel-made, light-colored, monochrome, and hard-fired ceramic assemblages of Southeast Anatolia and North Syria, which begin emerging in the Early Bronze Age (namely the “plain simple ware”, “simple ware”, and “metallic ware”), reflect the high temperatures that were achieved in the pottery kilns.

The archaeological evidence for pottery kilns along the Turkish Euphrates and in the neighboring regions, in chronological order, come from the following sites: Habuba Kabira and Tell Kurdu in the Chalcolithic, Lidar Höyük, Gaziantep-Kalehöyük, Tell Halawa and Tell es Sweyhat in the Early Bronze Age, Şaraga Höyük in the Middle Bronze Age, and finally Tell Atchana, Tell Sabi Abyad and Ziyaret Tepe in the Late Bronze Age. In all of these examples, the working principles of the double-chamber kilns show unity. In all cases, the heat produced in the combustion chamber is transferred to the firing chamber by way of a complex heat transmission duct.

Typologically speaking, all the pottery kilns found at sites that are located in the same culture area as Şaraga Höyük, such as Lidar Höyük, Tell es Sweyhat, Tell Halawa and Habuba Kabira, display similarities. All these examples have a circular or ovoid ground plan and doub-

le chambers. As such, we can conclude that the Middle Bronze Age Kiln 1 at Şaraga Höyük demonstrates the continuity in the pottery firing techniques that developed in the region during the earlier periods.

As for Kiln 2 at Şaraga Höyük, which has a rectangular ground plan, no comparable example is known at Early Bronze Age sites in Southeast Anatolia and the Euphrates valley. However, kilns with rectangular ground plans do exist in later periods in the region, such as the examples known from the Late Bronze Age levels at Ziyaret Tepe and Tell Sabi Abyad.⁴⁷

To reiterate, pottery kilns can be typologically categorized in various ways considering their various features, such as single or double-chambers, large or small size, circular, ovoid or rectangular ground plan, single or double firing compartments, and subterranean or above ground firing chambers. In terms of these features, the typological specifications of Kiln 1 at Şaraga Höyük can be summarized as having an ovoid ground plan, double-chambers separated for combustion and firing, a single firing compartment, a subterranean combustion chamber, and an arched doorway built with mudbricks rising above the floor level. Kiln 2, on the other hand, appears as a rather different structure than Kiln 1 with a small size and rectangular ground plan.

It has been shown that the grooved rim ceramic group found in the Euphrates Valley from Saraga Hoyuk to Haradum was produced locally at Saraga Hoyuk. The Middle Bronze Age level of Şaraga Höyük yielded material evidence for all stages of ceramic production at the site, including rotary stone, lumps of unbaked clay, pottery kilns of small and large sizes, scatters of ceramic wasters concentrated around the kilns, as well as intact ceramic vessels found *in situ* in the kilns.

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⁴⁷ Duistermaat 2008, 500, fig. B.24-25; Matney 2005, 61, fig. 9.

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Figure 1 - Pottery kilns 1 and 2 at Şaraga Höyük

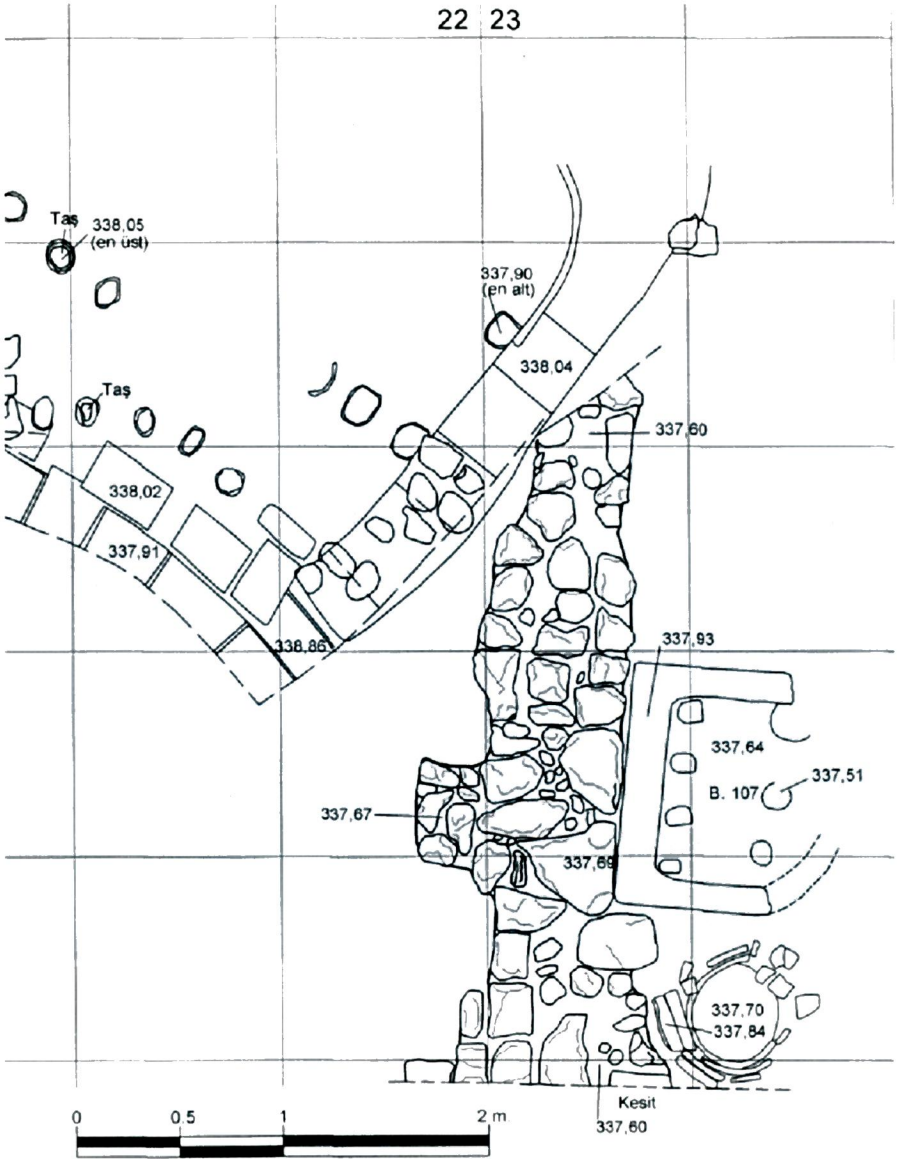


Figure 2 - Top plan of pottery kilns 1 and 2 at Şaraga Höyük



Figure 3 - Destruction along the back of Kiln 1 at Şaraga Höyük

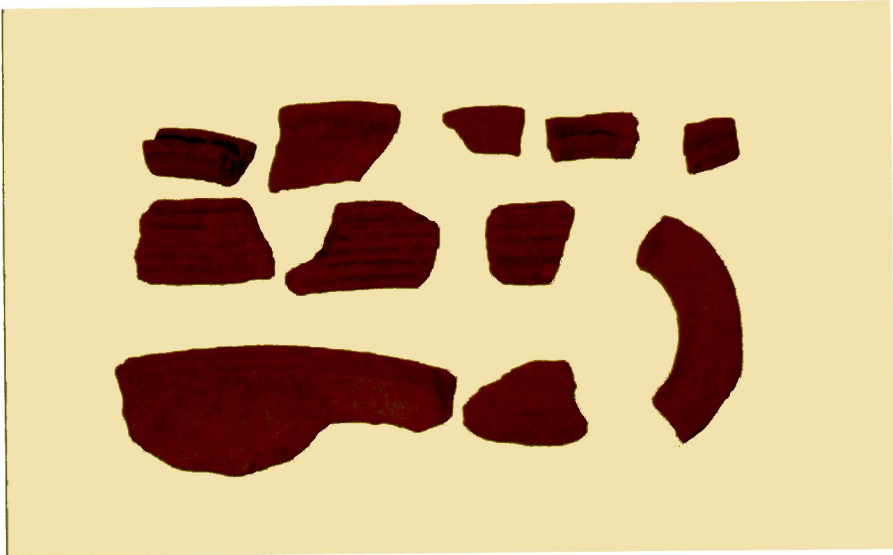


Figure 4 - Unfired ceramic sherds found in Kiln 1 at Şaraga Höyük



Figure 5 - Ceramic sherds used in the floor construction of Kiln 1 at Şaraga Höyük



Figure 6 - Heat transmission ducts in Kiln 1 at Şaraga Höyük, viewed from the interior of the combustion chamber



Figure 7 - Human skeletons found on the floor of Kiln 1 at Şaraga Höyük

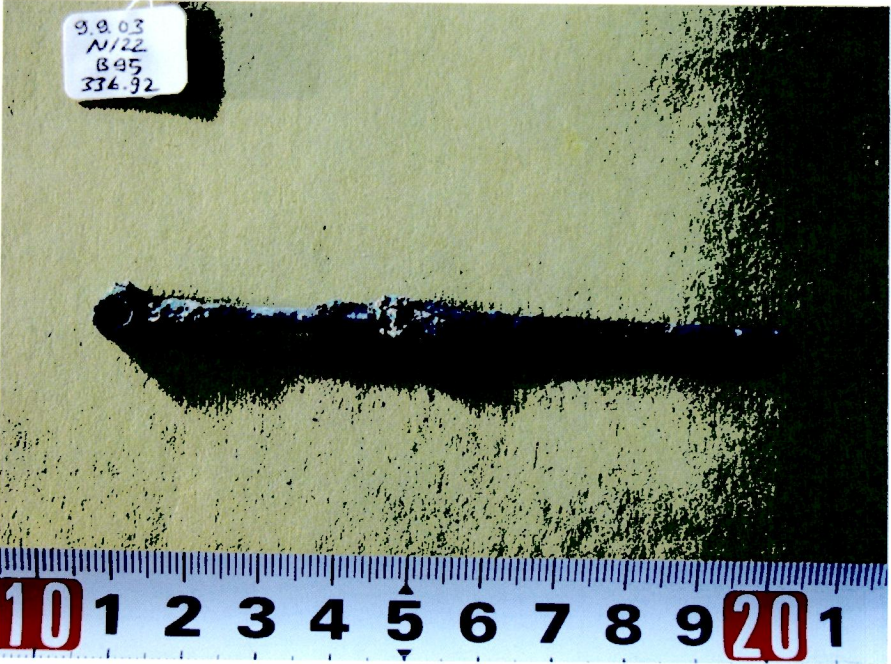


Figure 8 - Bronze pin left as a burial gift in Kiln 1 at Şaraga Höyük



Figure 9 - Miniature vase found in situ in a heat transmission duct of Kiln 2 at Şaraga Höyük



Figure 10 - Moulds for metal tools found close to the pottery kilns at Şaraga Höyük



Figure 11 - Rotary stone at Şaraga Höyük



Figure 12 - Kiln at Kültepe-Karum Level I