Preliminary report on a salvage campaign at Jiyeh, 2004: the pottery production area

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I. Introduction

Rescue excavations carried out at Jiyeh in 2004 were focused on recording remains of ancient structures in the northern part of the site. This paper presents the traces of pottery production which took place in the investigated area. The material embraces rich assemblages of common pottery, including numerous wasters dated to the Late Hellenistic and Early Roman periods. More detailed and comprehensive study of the recent discoveries will be prepared for the forthcoming Bulletin d'Archéologie et d'Archéologie Libanaise (BAAL), the annual of the Lebanese Directorate General of Antiquities.

The modern town of Jiyeh lies on the seashore about 20 km due south of Beirut. The site situated within the boundaries of the present Jiyeh and Nebi Younis was identified by several scholars as the Graeco-Roman polis area, in September 2004. The team consisted of: Mahmoud El-Tayeb (Institute of Archaeology, Warsaw University), Sophie Garreau (Institut Français du Proche-Orient), Karolina Cichocka (Cardinal Stefan Wyszyński University), Beata Capik (registrar, National Library, Warsaw), as well as the students of the students of the Polish Centre for Mediterranean Archaeology of Warsaw University, Cardinal Stefan Wyszyński University, Adam Mickiewicz University in Poznan and Warsaw Polytechnical University: Jolanta Górnia, Karol Juchniewicz, Marcin Klebba, Jolanta Krajewska, Karol Ochmio, Krzysztof Napłóbkowski, Justyna Radzik.

The excavations were carried out under the guidance of Roger Saidah.
Accordingly, a rescue campaign was launched in the destroyed part of the necropolis in September 2004. The aim of this work was to record the ruined Late Roman tombs (which will be a subject of a separate report) and to collect all the available evidence of pottery manufacturing activities in this area.

Destruction affected all the Roman-Byzantine graves except two (Fig. 2). However, this great loss led to a pleasant surprise. It transpired that the layer beneath the destroyed graves contained enormous quantities of pottery sherds. Additionally, in several places traces of burning and ash were noted. Of special interest was one feature where a considerable concentration of sherds was observed near an indistinct, rounded structure consisting of ash and other burned materials. It was suspected that this structure represented the remains of a destroyed pottery kiln. Thus it became obvious that some trial trenches should be dug to provide some more information and a better understanding of this part of the site. The whole level beneath the necropolis is hereafter referred to as Industrial Area B (or simply Area B on the general plan of the site) while the necropolis itself is referred to as Area A (numbers of graves are not indicated on the plan in Fig. 1).

II. Structures

Trial pits B 1-3

Three trial pits (B 1, 2, 3) were explored in the southern part of the necropolis where concentrations of pottery fragments were the highest in order to record the stratigraphy, collect locally made pottery fragments for further analysis, and obtain some dating material (Fig. 3).

The main trial pit (B1), measuring 12 x 4 m, bisected the ambiguous rounded structure in an attempt to examine half of it. Unfortunately, exploration of the gray spot where traces of burning and ashes were found, has quickly came to an end, as no sign of any structural elements which could be attributed to a pottery kiln was found. The refuse pit noted nearby, in the northern stratigraphic section was explored after enlarging the trench by two meters due north. The pit was full of broken pieces of kitchen pottery and over-fired fragments. This assemblage, comprising vessels of various form and size, was strongly dominated by two types of cooking pots and other common ceramics (described below). Single examples of local imitations of some imported fine ware vessels and oil lamps were also found.

Two other trial pits (B2, B3), located about 15-20 m due south of B1, revealed also a substantial level of destruction. Pottery sherds were found in large numbers, as were the traces of burning on the exposed layer, or occasionally in the layers that had been truncated by the bulldozer. In both B2 and B3 exploration reached the virgin soil (similarly as in the case of B1), revealing the homogeneous nature of both cultural material and stratigraphy in all the examined pits. The rich collection of common pottery sherds represented all the types known from the pit B1.

The basic dating evidence for the above mentioned pottery dumps and other remains of producing activity was provided by the imported fine ware fragments, including oil lamps found in the same layers among the locally made sherds. They indicate that the dumps were made in the late 2nd or early 1st century BC (cf. below). This date is confirmed by observations of common ware types discovered in pits B1-3, known from other sites of the region (mainly from Beirut), according to which they can be generally dated from the 2nd century BC to the 1st century AD.

Rectangular structure (B5)

Further destruction by the bulldozers brought to light a rectangular structure situated next to the trial pits B1-3, on the far western edge of the necropolis. It measured ca. 8 x 6 m and its walls were preserved up to two rows of rough sandstone blocks (ca. 0.7 m). One meter gap between the blocks of the southern wall, covered with a compact layer of earth of similar nature to the rest of the floor inside, suggested existence of a doorway. However, the general appearance of the structure gave the impression that it could have been a sort of platform rather than a room. No architectural elements of any kind were found around this feature. The ground surface was composed of very compacted earth containing numerous pot sherds, charcoal and other organic materials. At the northern part of the platform charcoal remains evidenced long-term burning processes. Traces of burning were also apparent to a depth of ca. 0.7 m in the east stratigraphic section of the platform. As it was not possible to explore this feature to the end, its function remains unknown.

Well No. 1 (B 4)

The most impressive find was made by a bulldozer in the northern part of the necropolis. The scene was amazing (Fig. 4): the earth-moving machine brought down part of a natural sandstone formation, bringing to light hundreds of large fragments of amphorae and other pottery vessels (Fig. 5).

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* Personal communication by Abdallah Ala’eddine.
The exposed feature was a well, horseshoe-shaped in plan (Fig. 5). Its upper section measured about 1.30 m along the east-west axis, and 1.10 m along the north-south axis. At its base the well measured 1.60 x 1.30 m. The upper part of the well was built of sandstone blocks to the depth of about 2.40 m. Its lower part was cut in the sandstone bedrock, reaching the maximum depth of about 7 m.

The whole well was filled up with pottery sherds. The upper part of the filling contained exclusively large fragments of amphorae (Fig. 6). The lower layers revealed sherds of other common ware vessels mixed with earth, sand, sometimes mud and gray soil. This filling continued to the bottom of the well.

The special importance of this discovery is due to the unusual type of the well, the huge amount of sherds found in it (estimated at about 10.35 cubic meters), and to the rich diversity of vessel forms. The ceramic assemblage included ample quantities of amphorae, cooking pots, jugs, juglets, bowls, dishes, cooking pans, and potstands. In most cases these were diagnostic fragments, but occasionally complete or almost complete vessels were also found. It is worth noting that most of the forms were represented by only a few examples, though nonetheless, there is evidence for their local origin, in form of over-fired pieces.

Most probably the discovered well was dug in an industrial area so as to provide water for pottery production. For some natural reasons the well dried up. Thereafter it functioned as a dump until it became completely filled with broken and rejected material but no usual rubbish ever was thrown into it, apart from a limited number of red bricks, some shells and animal bones of small species. Strangely enough one human upper jaw bone (maxilla) was also found in the fill of the well.

**Well No. 2 and basin (B 6)**

Another well was found 10 m due south-west of the first one. Its upper part, built of regular sandstone blocks was destroyed by a bulldozer. The well was cleaned only to a depth of about 4 m from the surface level. Its diameter was about 2.40 m, and the sides were straight from the top to the reached depth. For technical reasons it was not possible to explore it down to the bottom. The excavated part was full of very fine white sea sand.

Remains of what seems to be a basin associated to the well were discovered on its western side (Fig. 7). Part of the eastern and southern walls of the basin was excavated, while the northern part which lies under the temporary road remained uncovered.

It is possible that the basin lost its function as a result of the drying up of the nearby well. Hence, it was filled with a layer of earth with other artefacts such as pottery sherds, charcoal, glass, and other organic materials. Altogether nine layers were noted between the original ground beneath the basin and the modern ground surface. It is worth mentioning that after the basin had been filled another type of structure was erected at the same place. Remnants of the floor composed of gravel and lime indicate that they belonged to a chamber measuring 4.28 x 2 m. Of great interest is the layer beneath the room surface, about 10-15 cm thick, consisting of pure white sea sand. It suggests that the level of the sea used to be higher than it is today, hence shore sand accumulated and formed a natural layer over the last ancient occupation layer dated to the Hellenistic period. Therefore, the well could also date from this period as it had been filled with the same type of sand. This can only be assumed providing it is true that in the Roman or Byzantine period the level of the sea was about 3 m higher than today. It is obvious that the whole area had been submerged beneath sea sand and that the site was deserted for a period of time, and well No. 2 was never used again.

**III. Pottery Assemblages**

Locally produced common and fine pottery from the trial pits B1-3

Huge quantities of strongly fragmented sherds of brittle ware vessels provided evidence that the following forms were manufactured in the nearby located workshops: cooking pots, pot stands, flat-based bowls, lids and transport amphorae. The fabric was rather similar in all cases, rough in section and gritty on the surfaces. The colour depended on firing conditions and was from greyish, greenish and brownish to reddish and orange. Most of the wasters represented by deformed vessels and amorphous clay blocks were of greenish hue.

Two main types of globular cooking pots (Fig. 8) clearly dominate in the assemblage: the first one is characterised by plain collar type rim and the second one by the outcurved rim. Fragments of the first type strongly prevailed.

Pot stands (Fig. 9), flat based bowls or dishes and lids (Fig. 10) were rather similar in shape, differing mainly in size. It is worthwhile to note that almost all of the lids had their handles pierced with a sharp nail-like tool.

Amphorae (Fig. 11) could be divided into several types differing in profiles of rim, handle and base. They were generally un stamped as the only two stamps on the handles were found in comparison to several hundreds of unstamped ones.

Moreover, several complete loom-weights and some fragments of different types of braziers were also found. It is unclear if the braziers were also locally made as their number was much less than the above mentioned forms and their fabrics varied.

Single fragments of unfinished and deformed,
rather thin walled vessels of tableware type such as bowls, as well as oil lamps, allow to assume that the local production embraced also a small series of vessels imitating fine pottery shapes. The most evident is the case of a watch-shaped oil lamp found with unpierced nozzle (Fig. 12). Moreover, several fragments of jugs, unguentaria and terracottas were also collected. All they are characterised by fabric very similar to the above mentioned common ware forms found in mass quantities.

**Imported fine pottery from the trial pits B1-3**

The non-numerous fragments of imported fine pottery and lamps discovered in all trial pits among the sherds of locally made vessels provided the basic dating evidence. Most frequently encountered were fragments of tablewares belonging to the so-called Late Hellenistic Colour-coated Ware A type of possibly south-east Aegean origin (Hayes 1991: 23-24). They are characterised by red-and-black or uniform red slip. Besides, black gloss Campana A Ware fragments, imported from the western coast of the Italian peninsula (Morel 1981) were also present. The first group was represented by undecorated bowls with incurved rims, plates (including fish-plate form) and the most characteristic conical-bodied bowls or skyphoi with two pinched loop handles. Campanian vessels with intensive metallic black gloss, also bowls and plates, were decorated with stamped palmettes and rouletted bands on the bottom. The repertoire of forms and the quality of vessels allow to date them to the 2nd century and possibly early 1st century BC.

**Common ware from well No. 1 (B 4)**

The pottery obtained through the exploration of the well No.1 constitutes an unusually impressive assemblage.

The ceramic filling was dominated by amphora type forms down to a depth of about 2 m (Fig. 13). Six types of amphorae can be distinguished in this collection, including three types which were represented by only one example. Amphora form type 1 (Fig. 25) is characterized by a brown-reddish fabric with a light gray core, medium texture and hardness, a lot of very small and a few large white lime grains, in addition to some black grains and quartz (Fig. 14). It has quite thin walls with a ribbed profile. Thus its most characteristic features are a medium length, broad neck, plain, down-turned rim and a conical pointed base (Fig. 27). The vessels are remarkably lightweight, a feature which clearly indicates some innovation and technical improvement in manufacturing containers assigned to long-distance trade transport (J. W. Hayes, personal communication, Beirut 2003). Dr. Hayes's remarks on this matter seem to be quite convincing and acceptable. Apparently, in long-distance trade lightweight amphorae replaced heavy ones, such as the earlier type (Fig. 20) produced in Beirut, and differing only in the form of their handles. Undoubtedly, amphora form type 1 was locally produced. This assumption is attested by the existence of enormous quantity of over-fired and destructed fragments of this form. Within this form some minor differences can be observed in rim construction, but essentially all are related to one main type.

It is worth noting that almost all fragments found in the fill of the well bear no sings of daily usage, which means that for some reasons they were rejected during the production process. Nonetheless, some single fragments of imported amphorae (from North Africa, probably Tunisia or Libya) were also amongst the finds.

The most interesting observations on pottery were made thanks to the possibility of comparing Jiyeh and Beirut materials, as well as field consultation with Abdallah Al'eddine. The conclusion arrived at is that both materials are quite similar in form and fabric. Beirut amphorae produced in the 2nd century AD can be taken as a good example (this is according to visual observation only and not physico-chemical analyses). However, amphorae shoulders from Jiyeh bear no potter's marks as is the case in Beirut (Reynolds 2003: 120-131). Nevertheless, we can regard Jiyeh as the second known coastal amphora production centre after Beirut.

At a depth below the third meter another type of amphorae began to appear, as well as several types of utility wares, such as cooking pots, bowls, pans, jugs, juglets, dishes and pot-stands. Many of these forms were represented by only a few sherds, and the majority of them were present in form of over-fired fragments. It is important to note that nearly all of the mentioned types have a distinctive subtype, especially recognizable by the rim and neck area.

The majority of the kitchen ware are cooking pots (Fig. 22, 32) with sagging or rounded bases, without any traces of soot or blackening from hearths. Four their basic variants can be distinguished (Fig. 16). The majority of the material has been dated to mid-1st century AD, with only one exceptional early example which first appearance could be as early as the 3rd century BC (Fig. 32) (Berlin 1997: pl. XXIV, PW 208).

The third group – after the amphorae and cooking pots – which is strongly represented in this assemblage, both in quantity and variety, are bowls. One of the bowl types that occurs less frequently has a very large diameter, in some cases reaching up to 40 cm. It is characterized by a flat rim and base (Fig. 24). Another example is a bowl with a grooved rim (Fig. 29), dated to the 1st century BC. Although few examples of this type were found, over-fired fragments were also noted in the fill.

Next represented type is the orlo-bifido pan (Fig. 30) (Berlin 1997: pl. XXXII, PW 279, 283). This is a very characteristic form that was produced in Cyprus from the 3rd century BC to the 1st century AD, however, only imitations of this form were found at Jiyeh.
Large numbers of dish form were also found (Fig. 17). This form is distinguished by a flat rim with deep grooves (Fig. 23), some having an additional decoration applied on the outer edge of the rim in the form of impressed, twisted rope-like patterns executed by finger pressing (Fig. 23).

Jugs forms are represented by a small group of vessels which is nevertheless the largest group of almost complete forms to be found in the whole assemblage (Fig. 18). They are distinguished by a rounded rim and in particular by one handle attached to the rim and shoulder (Fig. 26). Another type of jug form which totally differs from the first one was also noted. It is quite interesting to observe existence of two elements from different forms joined together in one vessel, as in case of a vessel (Fig. 21) with a jug body and a bottle neck and mouth (Fig. 19) (NEGEV 1986: 100). Both types of form have the same characteristic fabric, observed in the majority of the vessels from the well No.1.

The pottery fill contains a relatively large amount of pot stands whose fabric and homogenous form could also be interpreted as an indication of their local origin.

Undoubtedly, the discovery of this pottery assemblage provided a very good opportunity to gain better understanding of the pottery of the period in question, both at Jiyeh in particular, as well as in the wider region.

Imported fine pottery from well No.1

Very few fine ware sherds of imported vessels were found among the masses of common pottery. They embrace some small and worn remnant fragments of black gloss bowls and plates of the Late Hellenistic period, coming from Italy (Campana A Ware) and some other unidentified, most probably Asia Minor, centres'. The majority of material comprised of the Eastern Sigillata A (ESA) imported from the region of Antioch (HAYES 1985: 9-48, pls. 1-XI). It included some early pieces, representing forms 37 and 47, including one bowl base with a stamp XAPIC. Thus, the latest artifacts indicate that the filling of the well took place in the late 1st century AD.

IV. Conclusions

The ample ceramic material which was obtained from the different features of sector B, especially from trial pits 1-3 and well No.1, provides good evidence of the long-lasting tradition of pottery manufacture at Jiyeh. Unfortunately, not a single structure which could be related to an ancient pottery kiln was found in the area destroyed by the present constructing activity. However, one should bear in mind that pottery kilns were most probably already destroyed in the ancient times prior in date to the Roman necropolis. Nonetheless, the existence of a very large quantity of over-fired and waste pottery fragments indicates intensive local production. It is important to note the richness of the repertoire of forms and diversity of the produced vessels.

This discovery offers a good opportunity for the study and better understanding of pottery production in this part of the Lebanese coast. A further scrutiny of this material might make it possible to follow the range and direction of this pottery distribution in the hinterland.

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5 Similar fragments were also recorded in the trenches B 1-3; see above.
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Fig. 1. Plan of ancient site at Jiyeh
Fig. 2. Part of the destroyed necropolis at Jiyeh

Fig. 3. Pottery production area
Fig. 4. Discovery of well No. 1 (B4)

Fig. 5. Well No. 1 (B4) seen from the west
Fig. 6. Pottery sherds from the fill of well No.1, at the moment of their uncovering.

Fig. 7. Well No. 2 and basin (B6)
Fig. 8. Fragments of cooking pots from trial pits B1-3

Fig. 9. Fragments of pot stands from trial pits B1-3
Fig. 10. Fragments of lids from trial pits B1-3

Fig. 11. Wasters of amphorae from trial pits B1-3
Fig. 12. Oil lamp with unpierced nozzle from trial pit B1

Fig. 13. Fragments of different types of amphorae from well No. 1 (B4)
Fig. 14. Upper fragment of amphora type 1 from well No. 1 (B4)

Fig. 15. Fragments of cooking pots and casseroles from well No. 1 (B4)
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Fig. 17. Jug from well No. 1 (B4)

Fig. 18. Fragment of a jug type from well No. 1 (B4)
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Fig. 20. Jug from well No. 1 (B4)

Fig. 21. Cooking pot from well No. 1 (B4)
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Fig. 23. Bowl from well No. 1 (B4)
Fig. 24. Amphora type 1 from well No. 1 (B4)

Fig. 25. Jug from well No. 1 (B4)
Fig. 26. Amphora type 1 from well No. 1 (B4)

Fig. 27. Dish from well No. 1 (B4)

Fig. 28. Bowl rim from well No. 1 (B4)
Fig. 29. *Orlo bifido* pan from well No. 1 (B4)

Fig. 30. Cooking pot from well No. 1 (B4)

Fig. 31. Cooking pot from well No. 1 (B4)