

The Material Evidence from al-Wu'ayra: A Sample of Pottery

1.1. Introduction

The work presented here illustrates some of the results of the research project that a team from the University of Florence has been carrying out since 1986: *Mediaeval Petra: Settlements of the Crusader and Ayyubid Periods in Transjordan*. This historical and archaeological project aims at analysing the patterns of the Western settlement system in the territories of the 12th century *Seigneurie* of Transjordan; it also aims at comparing these patterns with the settlement model of the Ayyubid period.²

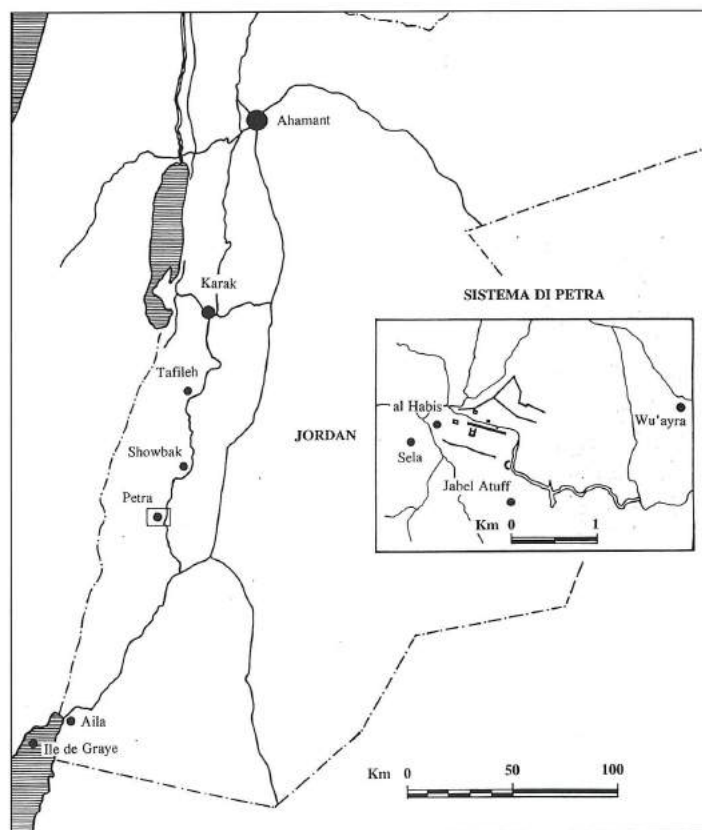
After a wide ranging survey and surface reconnaissance in the region between Syria and the Gulf of 'Aqaba, the research concentrated on the Petra region (FIG. 1). Evidence indicated that features related to the earliest phase of the Crusader presence in the Holy Land are better preserved and easier to identify from a stratigraphic point of view in the *Seigneurie* of Transjordan, as all the fortifications were definitely abandoned by the Crusaders in the aftermath of the battle of Hittin (1187). Moreover, on the basis of preliminary survey work it clearly appeared that the valley of Petra played a significant role as the focal point for the Western occupation of Transjordan after a long period of abandonment which started in the early Middle Age.

Investigations concentrated then on the site which has been recognised as the most important element in the Crusader settlement system at Petra, the castle of al-Wu'ayra.

1.2. The castle of al-Wu'ayra: Summary of the Results

Archaeological evidence showed that the site of al-Wu'ayra played a very peculiar role in the settlement system at Petra as a whole. This is not only true in relation to the Crusader period; in fact, archaeological investigations indicated that the site had been a monumental

sacred and funerary area in the Neolithic period. Its function in the Nabataean, Roman and Byzantine period has yet to be established: no structural remains of these phases have been identified yet in the sondages,³ but a significant quantity of pottery in secondary deposition which can attributed to these periods has been found.



1. General map showing the location of Petra and the fortified sites of the area (al-Wu'ayra, al-Habis).

¹ Parts 1, 2.1 and 2.2 are by C. Tonghini; 2.3 by A. Vanni Desideri; Part 3 by both authors.

² For the most recent publication on some of the results achieved in the course of the University of Florence archaeological research at Petra, and for a complete bibliography relating to the project, see: Vannini and Vanni Desideri 1995; Vannini and Tonghini 1997a and

1997b.

³ A phase which can very likely be ascribed to the Byzantine period has been recently identified on a number of structures at the castle of al-Wu'ayra. The chronology of this phase which preceded the Crusader period needs further evidence to be assessed with a certain degree of precision.

Therefore, the Crusader re-occupation of the site confirms that Petra had regained strategic significance within the framework of the new political situation which developed when the Crusader Kingdoms were established in the core of the Islamic territories.

This site was studied in terms of horizontal stratigraphy (and included a systematic survey of the standing structures) and of vertical stratigraphy (and included the excavation of trenches, sondages and open area sondages) (FIG. 2) (see note 2).

Excavations at this site were conducted in those areas which were shown to be of crucial significance for the understanding of the site on the basis of the survey work. More specifically, excavations concentrated on the various accesses to the *cassero* (the central and more strongly fortified area) and on the fortified church (Vannini and Tonghini 1997a; 1997b).

The fortified church was central to the internal organisation of the entire fortification. The church projects from the north-east corner of the *cassero* and dominates part of the external fortification from above; it also guards the main access to the water (i.e., the great cistern underneath). To the north, the church is connected to the lower bailey by the north postern gate, and, to the south, by a ramp which leads to the main access to the church; a burial area dating to the Crusader period was located on the access ramp. Another entrance to the church was identified on the western wall, in front of yet another postern gate connecting the *cassero* to the external part of the fortification. The study of the burials discovered provided relevant anthropological new evidence.

Nine phases were identified in the course of the excavations of the sondages. This phasing only relates to the Mediaeval castle and in particular to the stratigraphic formations in primary deposition identified so far; in the final interpretation of phases the Neolithic and Nabataean/Roman/Byzantine occupation or frequentation of the site will also have to be included.

Three of the nine phases mentioned above, with occupation levels in primary deposition, can be ascribed to the Crusader period (two phases can be dated to the mid-12th century). The fourth phase is characterised by a sporadic occupation of the site and can be attributed to the end of the 12th-beginning of the 13th century (i.e., the post-1187, Ayyubid period). The last five phases are related to the abandonment of the site as a military installation: they consist of a perfectly clear stratigraphy of collapses together with contexts related to a number of re-occupation activities (Vannini and Tonghini 1997a: 373-378).

Given the number of sondages excavated at the site (10 in three different areas), the phasing offered for the

Mediaeval castle may be expected to be reliable and precise for the interpretation of the whole site.

2.1. The Material Evidence from al-Wu'ayra: A Sample from the Pottery Assemblage

Excavations provided a precise sequence of occupation levels and related artefacts.

To illustrate the assemblage of the finds, and the pottery in particular, the sample chosen for this paper consists of the pottery from a number of Stratigraphic Units excavated in the area of the church.

This paper will especially concentrate on the *handmade pottery* production, which is better represented among the finds (see below). The characteristics of this production, especially in relation to its evolution through time, will be better understood when the results of archaeological investigations conducted at multi-stratified sites in the area will be made available. The assemblage excavated at al-Wu'ayra cannot be expected to provide data in this respect, given the limited span of time of its occupation and the limited quantity of the assemblage of finds. However, it illustrates in detail a specific moment of this production, which can be placed very precisely in the framework of the handmade pottery production and its evolution. Data from al-Wu'ayra will acquire in fact more value when a more detailed picture of the pottery production of the area will be available.

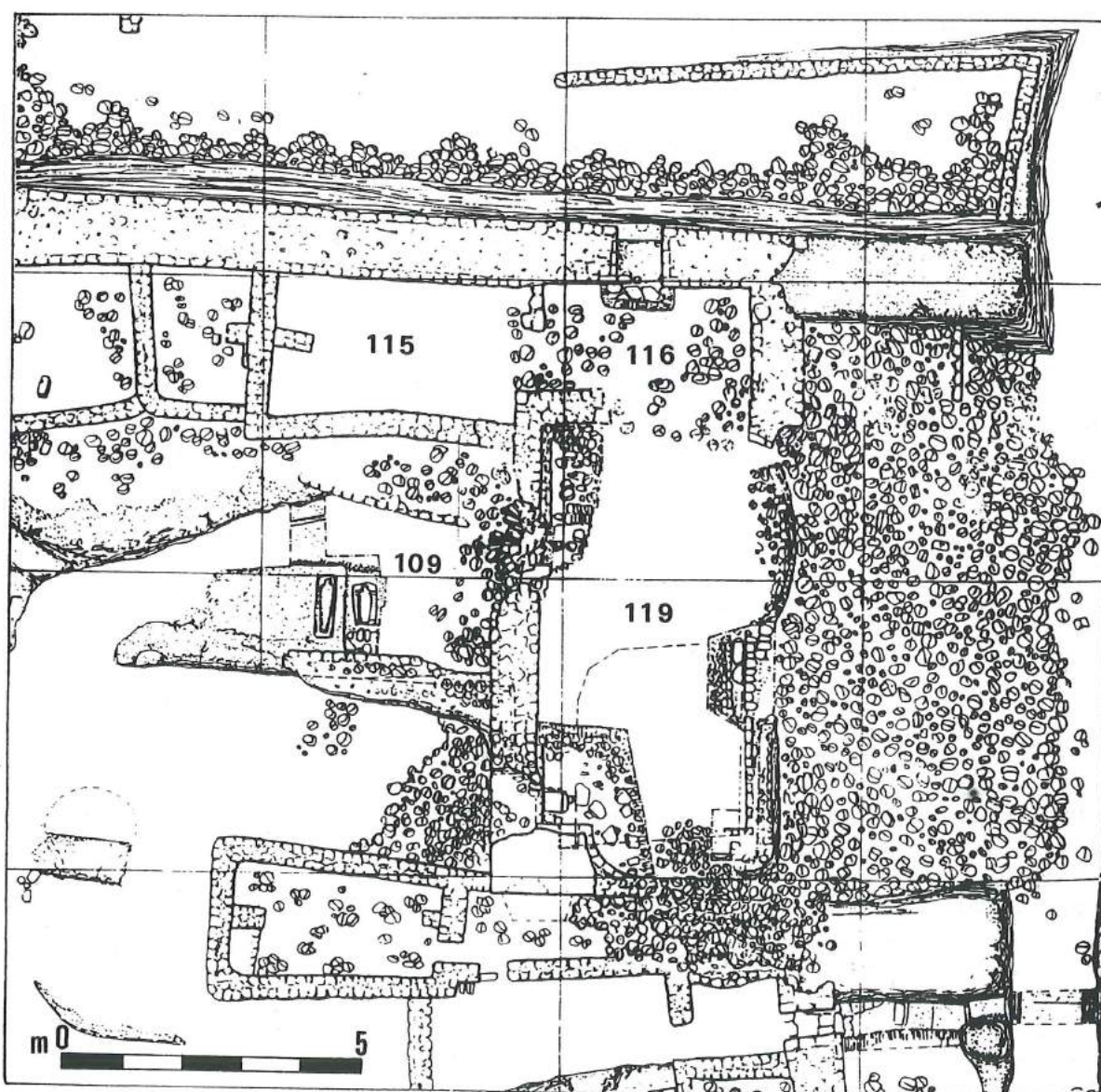
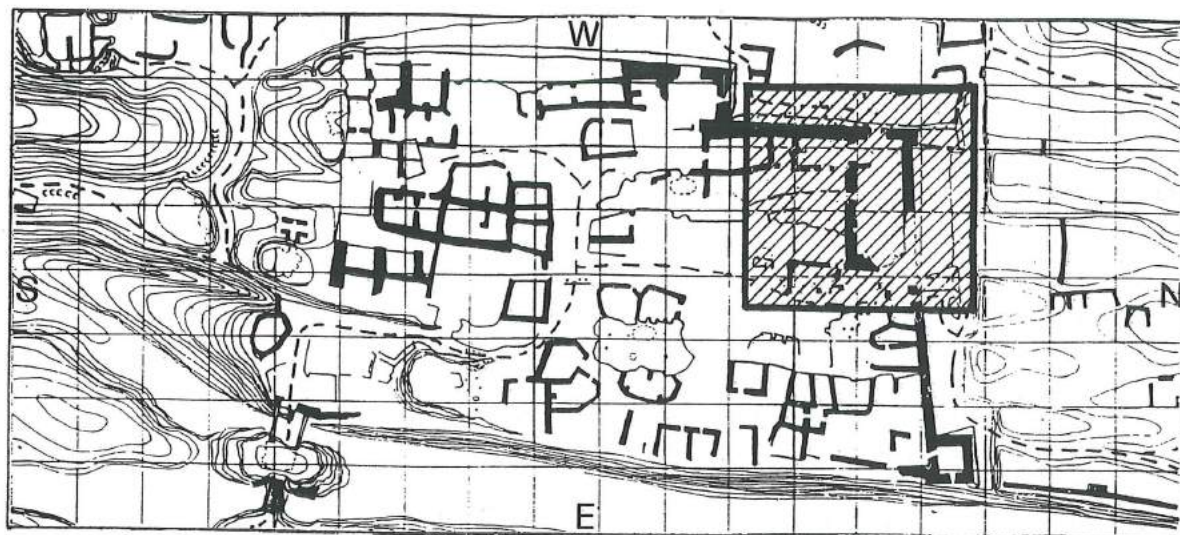
This paper will illustrate in detail the pottery finds from 12 stratigraphic units (US), which represent two highly significant moments in the phasing of al-Wu'ayra: the earliest phase of the Crusader occupation of the castle (S 6, UT 116, US 23) and the latest occupation of the site (UT 109, US: 3, 4, 52, 58, 62, 72, 73, 80, 85, 89, 90).

The major groups of pottery identified at the site consists of handmade pottery, wheel-thrown pottery and glazed pottery:⁴

Handmade pottery: quantitatively, this is the most significant of the pottery assemblage. Handmade pottery represents a rudimentary ceramic production: vessels were produced by slow-wheel method, many displaying marks of manufacture. The fabric shows a wide range of colours, from pale yellow-brown to light red and grey, depending upon firing. There are frequent inclusions of basalt, quartzite and calcite, and temper of crushed quartzite/shell and vegetable temper. Products are characterised by thick black cores, poor levigation, heavy mineral inclusions and chaff-pocked surfaces. There are also better levigated products, with finer walls and more accurately finished. Among these, one can count the group with a painted decoration (Brown 1987: 284-287; 1992: 189-203, 243-256; Franken and Kalsbeek 1975:

nini and Tonghini 1997a: 378-383.

⁴ For a more detailed description of the pottery groups excavated at al-Wu'ayra, see Vannini and Vanni Desideri 1995: 529-537, and Van-



2. General plan of the al-Wu'ayra cassero, showing the location of the church and of sondages 6 (UT 116) and 8 (UT 109).

167-203; Pringle 1984: 97-99; 1985: 176; 1986: 140-142). Another variety is represented by a group with abundant calcareous inclusions.

The majority of the assemblage consists of closed forms. Products seem to have played a basic utilitarian function, as can be seen from the shapes.

This pottery has been attested at various archaeological sites of Jordan and Palestine, and it may have been in production for a considerable span of time: it occurs already in 11th century contexts (Ayla: Whitcomb 1988: 212; Khirbat al-Mu'allaq; Lindner *et al.* 1996: 132) and it seems to have been still produced in the Ottoman period (Brown 1992: 189-198, 256-259, 310-336; Franken and Kalsbeek 1975: 143-159 in particular; Pringle 1984: 95; 1986: 139-140).⁵ This pottery does not seem to specialise labour; it probably did not reach distribution markets, but it was consumed within the area of production, although no evidence in this respect has been identified so far.

Taking into consideration the whole assemblage excavated at the site, and comparing the Crusader phases with the phases related to its abandonment and re-occupation, no significant variations seem to have occurred through time (Vannini and Tonghini 1997: Figs. 15 and 18). This may be the result of the 'long duration' character of the pottery production in the area represented by this handmade pottery group. At the same time, its gradual and slow development through time may thus provide a further indication about the character of this area, basically peripheral in relation to the rest of the Islamic territories, and especially after the Islamic reconquest.

Wheel-thrown pottery: in this group are classified a number of different productions, including Nabataean, Roman and especially Byzantine wares. All this pottery was found in secondary deposition and its quantity is fairly significant. This pottery seems to have been extensively used at the site together with mortar in masonry, especially for laying water tanks (Vannini and Tonghini 1997: 381 and Fig. 19).

Glazed pottery: glazed pottery represents a very small proportion of the pottery assemblage. A number of different types do occur in the assemblage. Glaze is generally associated with wheel-thrown pottery, either with an earthenware body or with a body very rich in silica (so-

called fritware). A change over time was noted in the assemblage of glazed pottery: fritware seems to appear only in the Crusader phases (phase III, for instance), while glazed-slipped pottery (with an earthenware body) occurs in later phases.

This can be interpreted in relation to the changes in the control over the site; during the Crusader occupation, the presence of fritware may indicate that the site was not isolated from the circulation of technologically specialised products.⁶ In the following phases, glazed pottery consisted on the glazed and slipped type, corresponding to a fairly common group which circulated and was extensively produced in the southern Levant between the 12th and the 15th century (Brown 1988: 237; 1987: 284; 1992: 267-280; Franken and Kalsbeek 1975: 131-141; Pringle 1984: 99-103; 1985: 177-179; 1986: 147-149) and which was very likely supplied by more local markets.

2.2. The Pottery from US 24, Sondage 6

This Stratigraphic Unit consists of the fill from a deep cut dug from a floor (US 22) which has been interpreted as the level of use employed during the building of the church (FIG. 3). This surface is sealed by a wall contemporary with the wall of the church.

The interest of the assemblage excavated from this fill is that it is probably related to a very limited span of time, possibly a few months, during which the church was under construction. At the present state of our knowledge, the construction of the church has been attributed to Phase I, on the basis of the assumption that a church would have been the first monumental building the Crusaders would have devoted their effort to. Phase I has been ascribed to a 1109-1116 date on the basis of written sources (Vannini and Tonghini 1997: 376). Another possibility is that the building of the church relates to the following phase, Phase II. This would only postpone the chronology of a few decades, since Phase II has been assigned to a post 1116-mid-12th century date (Vannini and Tonghini 1997: 376-377).

There is no evidence for structural modification of the church, but for a single and unique building phase.

An abundant assemblage of pottery was recovered from this fill, together with large amount of animal bone and charcoal, currently under study, arrow-heads, fragments of nails, and one single fragment of glass.⁷

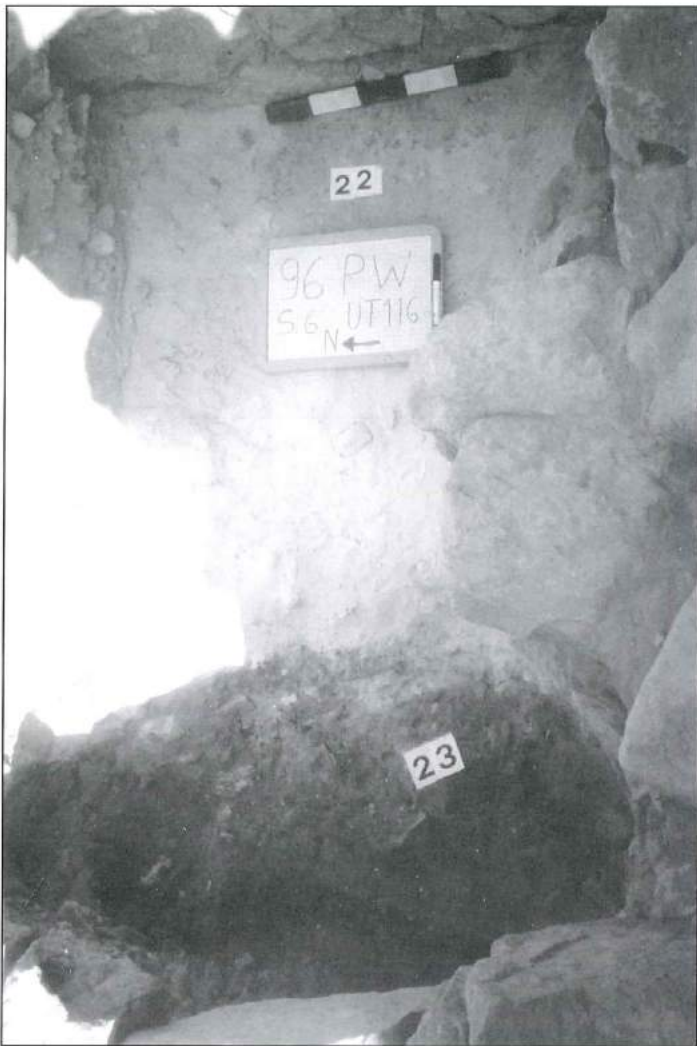
The graphics illustrate the occurrence of the various

⁵ A description of this type of pottery can be found in Brown 1987: 277-287, and Vannini and Vanni Desideri 1996: 530. See also Pringle 1985: 176; Johns *et al.* 1989: 89.

⁶ See Vannini and Tonghini 1997: 382-383. It would be interesting to be able to ascertain the presence of fritware at other contemporary sites in the area, but data of this kind are not available yet. A stronger connection with markets supplied with fritware products (presumably from the Syrian coast) may in fact be one of the peculiar-

ities of Crusader settlements which may not be expected to be found at other Islamic sites of this frontier land. Obviously, more specific evidence is necessary to reach conclusive observations on this subject.

⁷ No significant botanical remains were identified in the flotation of the soil from this fill. Archaeobotanical investigations were conducted by John Meadows, La Trobe University, Australia.

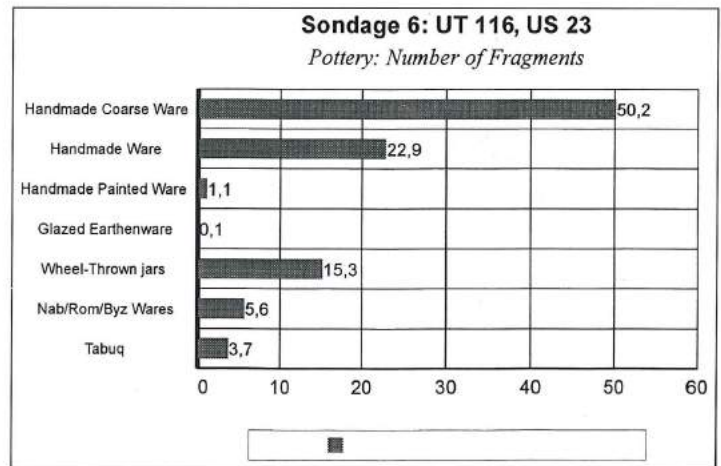


3. Sondage S6, UT 116, US 23 during excavation and floor US 22.

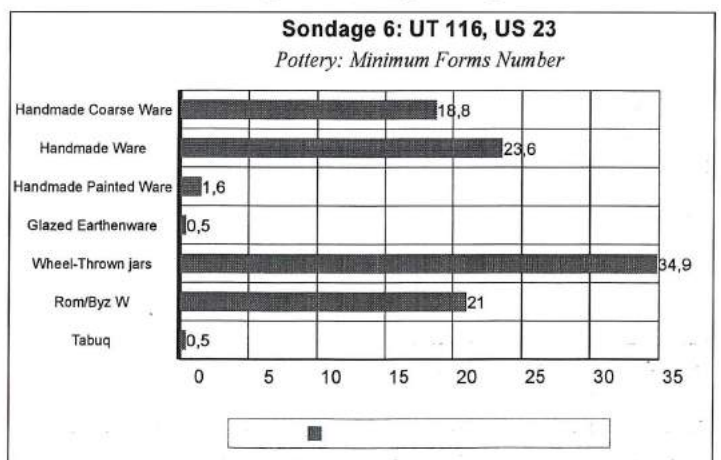
groups of pottery (FIGS. 4-5). Since it is often very difficult to assess the quantity of very different wares, and, in particular, when evaluating and comparing handmade and wheel-thrown vessels quantity, both the Number of Fragments and the Minimum Forms Number are provided.

A group of pottery wares which have been interpreted as residual (Nabataean, Roman and Byzantine wares) seems to represent a very significant proportion of the pottery assemblage excavated from US 23. As noted above, two different kinds of pottery quantity assessment are provided: the remarkable difference between these two figures may also confirm the residual character of these wares (the number of estimated vessels is very close to the number of fragments). In this group a high proportion is represented by fragments from jars with rather thick walls (FIG. 9b), with a well levigated, reddish and well-fired body; they have been tentatively attributed to the Byzantine period.

It is the *handmade pottery* group which seems to rep-



4. Graphic illustrating the occurrence of the various pottery wares in US 23: Number of Fragments (806), percentage.



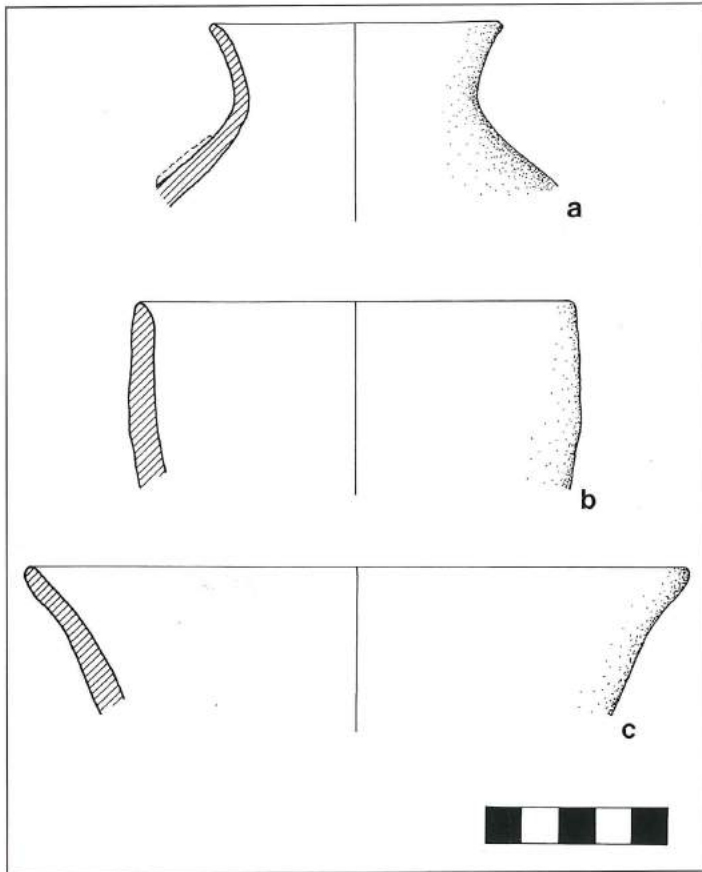
5. Graphic illustrating the occurrence of the various pottery wares in US 23: Minimum Forms Number (186), percentage.

resent the pottery in use at the site by the time of the building of the church by the Crusaders. The handmade pottery group occurs in two varieties: the *Handmade Ware* is characterised by a finer and better levigated body, and often thinner walls (FIGS. 6, 7, 8a-b, 9a) if compared with the *Handmade Coarse Ware* (FIGS. 8c-d, 9c-d, 10a). The finer variety can also be associated with a painted decoration (FIG. 7a).

The majority of the identifiable forms from the *handmade pottery* group consist of closed forms; open forms occur more occasionally (Figs 6 c, 8 c, 9 d). Ware and form suggest that the vessels may have served very utilitarian purposes, such as the storage of food or liquid and the preparation of food.

One single fragment of glazed pottery was found: it is slipped and it is covered with a monochrome green glaze. This variety of glazed pottery, as noted above, seems to have been in use in the southern Levant for a long period of time, between the 12th and the 15th century.

As noted above, this assemblage represents the pottery in use at the site in the very limited period of time related

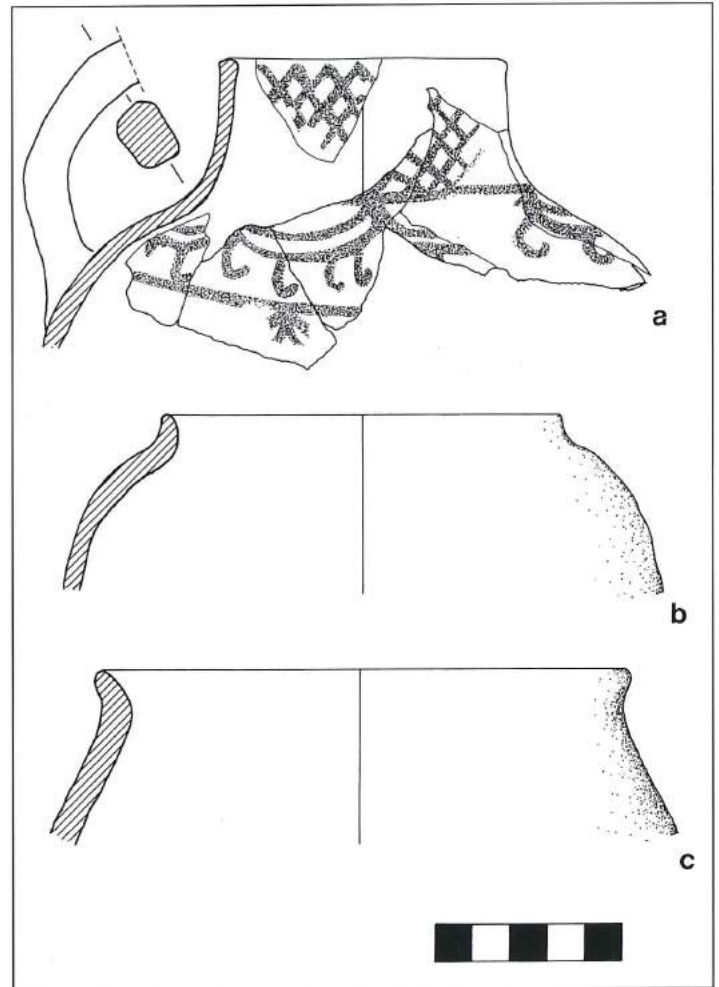


6. The pottery from sondage 6, UT 116, US 23: a-c) *Handmade ware*.

to the building of the church; this activity has been tentatively ascribed to the first Crusader phase, Phase I, but an attribution to Phase II is also plausible. In the first case, the assemblage discussed here would represent the pottery in use in the area at the arrival of the Crusaders. In the second case, it would represent the pottery in use at the site by the time of the Crusader occupation. This is obviously a question of great importance, particularly in relation to an attempt at identifying the characteristics of Crusader material evidence from the area.

At present, the evidence is still insufficient to clarify this point. On the one hand, only the study of the whole pottery assemblage excavated at the site, still in progress, will allow to clarify if the pottery discussed here can be considered representative of the pottery in use by the Crusaders (and therefore be attributed to Phase II), or whether it differs from the pottery excavated from the other Crusader contexts (in which case it could be assigned to Phase I). It must be added, however, that given the limited quantity of the pottery excavated from the whole site, this comparison may not allow to reach a conclusive interpretation.

On the other hand, very little comparative evidence is



7. The pottery from sondage 6, UT 116, US 23: a) *Handmade Painted ware*; b, c) *Handmade ware*.

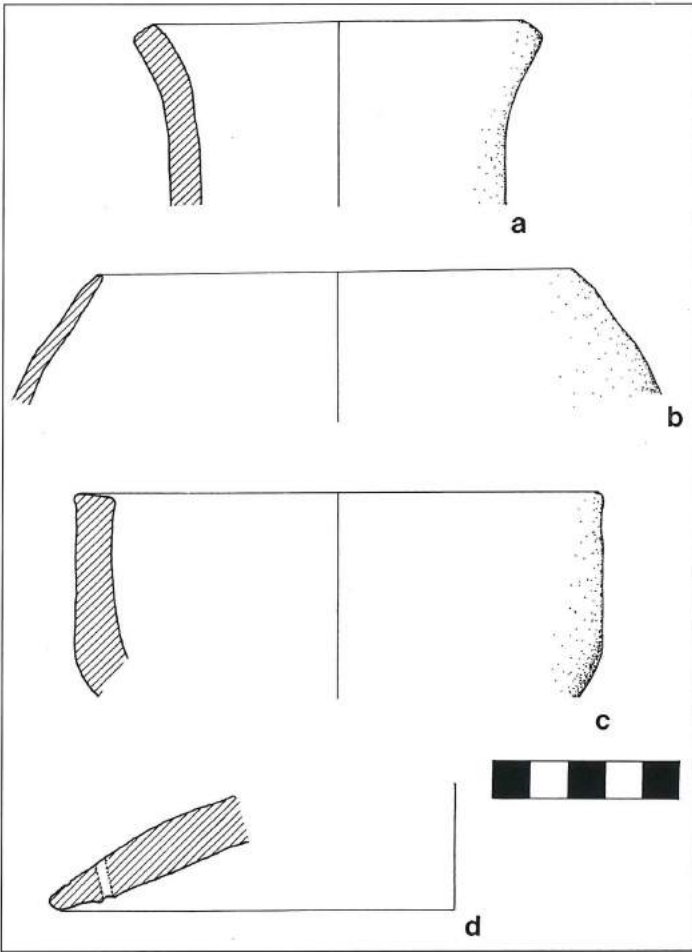
available at present for contemporary Islamic sites in the area; it is at the moment virtually impossible to identify the characteristics of pottery productions at the time of the arrival of the Crusader and their later evolution in the Islamic territories.

To conclude, very little evidence is available at present to allow the identification of those elements which can be regarded as specific to the Crusader culture in terms of material evidence, and to determine in which terms they differ from local culture as far as pottery is concerned.

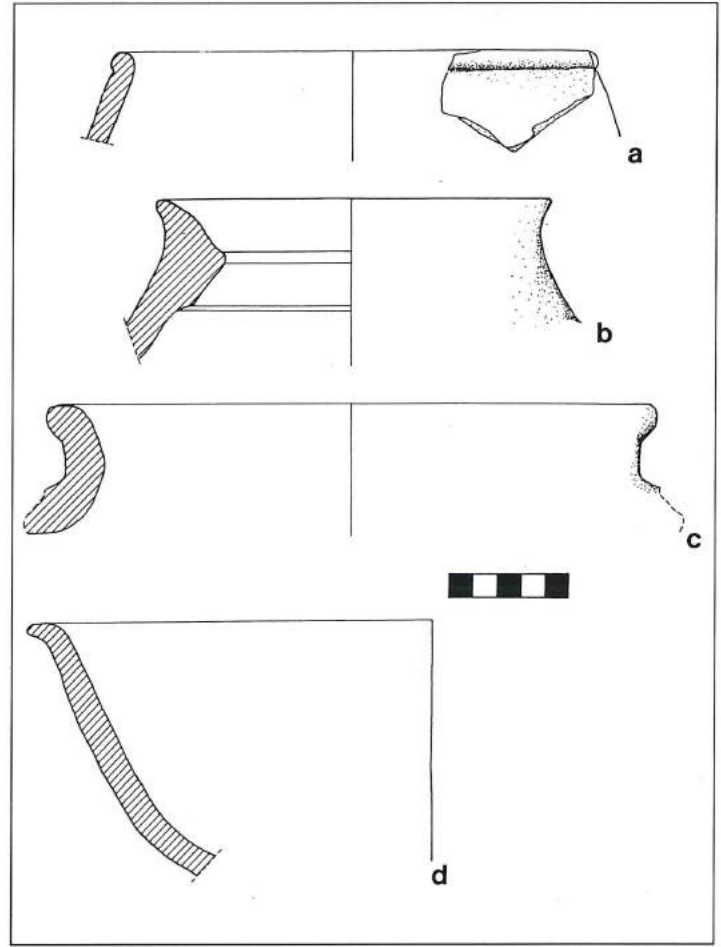
The evidence from excavations conducted in the area is still insufficient to make an attempt in this respect. From what is available at present, however, one may form the impression that the pottery in use at Crusader sites is not substantially different from that in use at contemporary Islamic sites.

For example, on the basis of a superficial and preliminary examination, the pottery assemblage found at Khirbat Fāris⁸ does not seem to differ from that excavat-

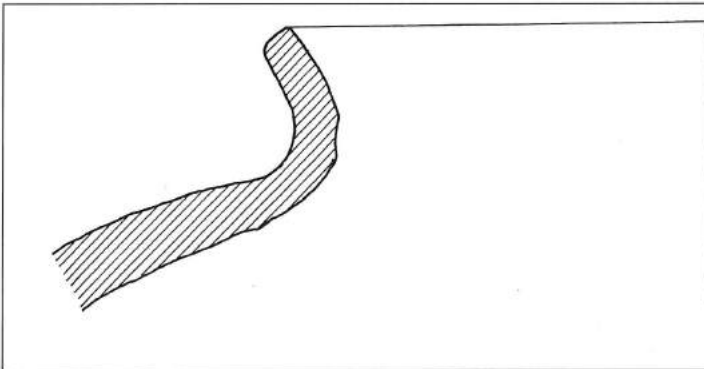
⁸ The authors would like to thank Alison McQuitty for generously providing access to the pottery excavated at Khirbat Fāris.



8. The pottery from sondage 6, UT 116, US 23: a, b, d) *Handmade ware*; c) *Handmade Coarse ware*.



9. The pottery from sondage 6, UT 116, US 23: a) *Handmade ware*; b) *Wheel-Thrown jar*; c, d) *Handmade Coarse ware*.

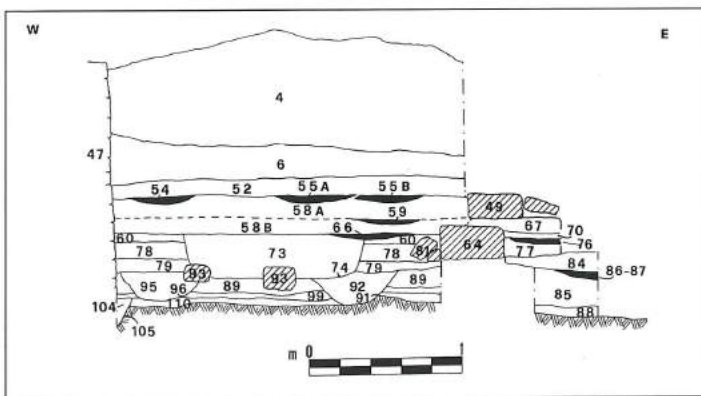


10. The pottery from sondage 6, UT 116, US 23: a) * *Handmade ware*.

ed at al-Wu'ayra (referring to the entire assemblage), except that the first is far richer in terms of shapes and varieties of painted pottery. The difference noted between the assemblage from al-Wu'ayra and assemblage from Khirbat Fāris may be determined by the different function of the two settlements. The assemblage of pottery from al-Wu'ayra really reflects the character of the site as a military installation provided with no more than the essential equipment, but does not seem to show features which can be specifically connected with Crusaders.

2.3. A Post-Crusader Sample. The Pottery from Sondage 8, UT 109

In the course of previous excavations in the southern ditch of the castle, evidence of a phase clearly belonging to a post-Crusader period had already emerged. An iron smelting workshop had been located in the area of the ditch, clearly belonging to a phase during which the ditch itself had lost its defensive function, i.e., after the Ayyubids had conquered the whole region in 1189 (Vannini and Vanni Desideri 1995). More recent sondages (in particular sond-



11. Part of the W-E Section of sondage 8, UT 109 (1998 season; drawing by S. Tuzzato).

age 8, corresponding to UT 109, carried out in the 1994-1998 seasons, FIG. 11) provided new data about the post-Crusader settlement at al-Wu'ayra in relation to the re-use of the site, its characteristics and phases of occupation.

The stratigraphy of UT 109, which corresponds to the external area next to the southern entrance of the church, shows a number of phases dating from Crusader time to the latest Islamic occupation of the site. Thus the topography of the site and the substantial modifications of its use make the features of the settlement particularly clear, including the finds related to it. The Crusader phases of UT 109 include the setting and the use of the cemetery, without buildings, accumulation of levels, or wasting of materials from domestic activities; thus the finds coming from these phases are quantitatively rather limited.

On the contrary, stratigraphic evidence indicates that a first Islamic occupation of the site, started as a simple reuse of the still standing Crusader buildings, is followed by the setting of new structures over the cemetery using materials coming from the collapsing walls of previous phases, mainly from the church; in a later phase the settlement increased its extension. Therefore, the stratigraphic units which seal the cemetery are to be related to post-Crusader phases and they provide data on the features of the post-Crusader material culture that can be compared with that related to Crusader phase.

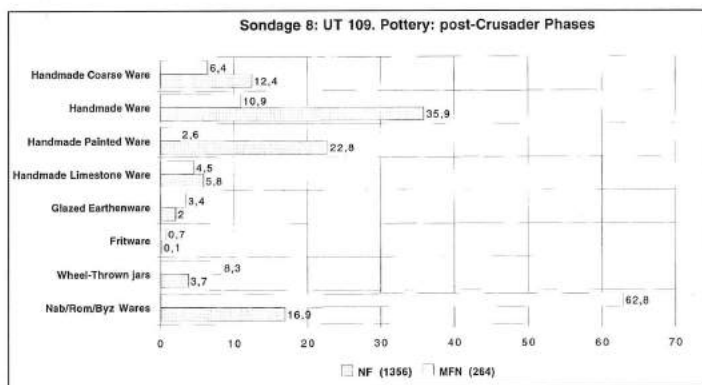
Taking into consideration the whole assemblage of pottery from Sondage 8, the most evident feature is the inversion of the usual proportions between the handmade coarse ware and the handmade ware, the first being less conspicuous than the second one. Whether the latter is due to cultural reason or to the deposition of the fills is not yet clear. Nevertheless, one can note that the stratigraphy is regularly formed, without gaps and well sealed, thus providing a high degree of reliability.

The pottery finds indicate at least three occupation phases of UT 109 corresponding to the last phases of life on the whole site. Some of the earlier levels could have accumulated during the use of a house (UT 115) perhaps

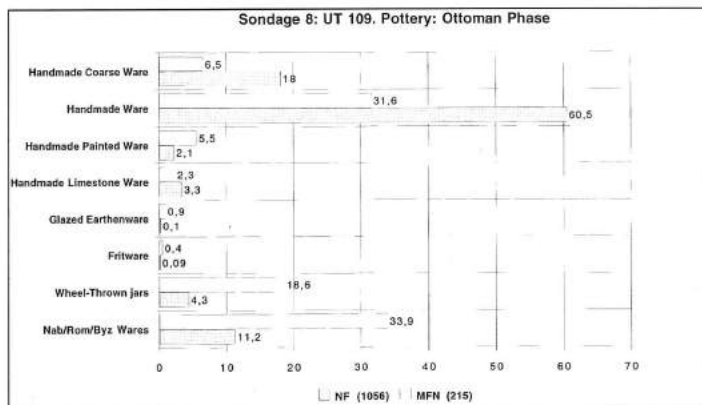
built up when the southern wall of the church was already damaged, if not collapsing. The next phases consist of the use of a new small building close to the earlier one, in its modifications and abandonment.

If the occurrence of tobacco pipes can be assumed as a chronological indicator, it is then possible to identify at least three levels (US 52, 58, 90) dating to the Ottoman time. Thus the levels which stand between this phase and the Crusader cemetery are to be related to phases dating to a generic post-Crusader period.

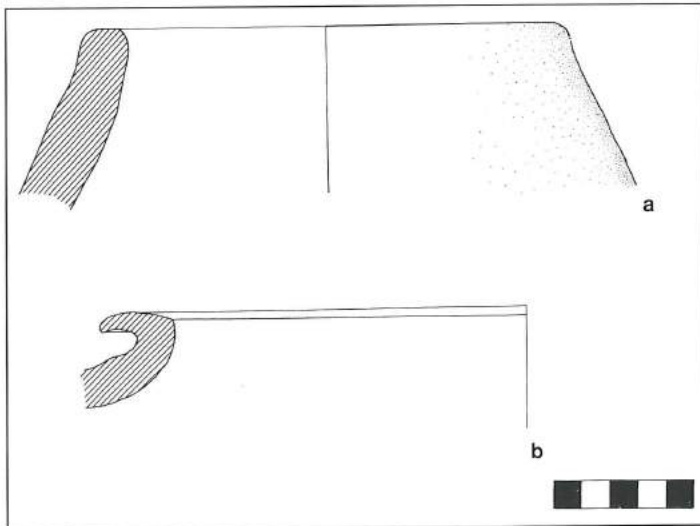
The trend of percentages of the pottery groups from the Ayyubid-Mamluk to the Ottoman periods allows some interesting observations to be formulated, which, however, should be treated with caution owing to the fact that the two assemblages related to different types and numbers of phases (FIGS. 12, 13). The more significant trend is the tendency to increase, shown in percentage by certain pottery wares, while the total amount of pottery fragments decreases from the post-Crusader phases to the Ottoman phase. The most evident feature is the increasing of the handmade ware and a contemporary decreasing of the handmare painted ware. The divergence of these trends possibly means that the two groups could really reflect



12. Sondage 8, UT 109: Graphic showing the occurrence (1356 Number of Fragments and 264 Minimum Forms Number) of the various pottery wares in the post-Crusader US of UT 109.



13. Sondage 8, UT 109: Graphic showing the occurrence (1056 Number of Fragments and 215 Minimum Forms Number) of the various pottery wares in the late Ottoman US of UT 109.

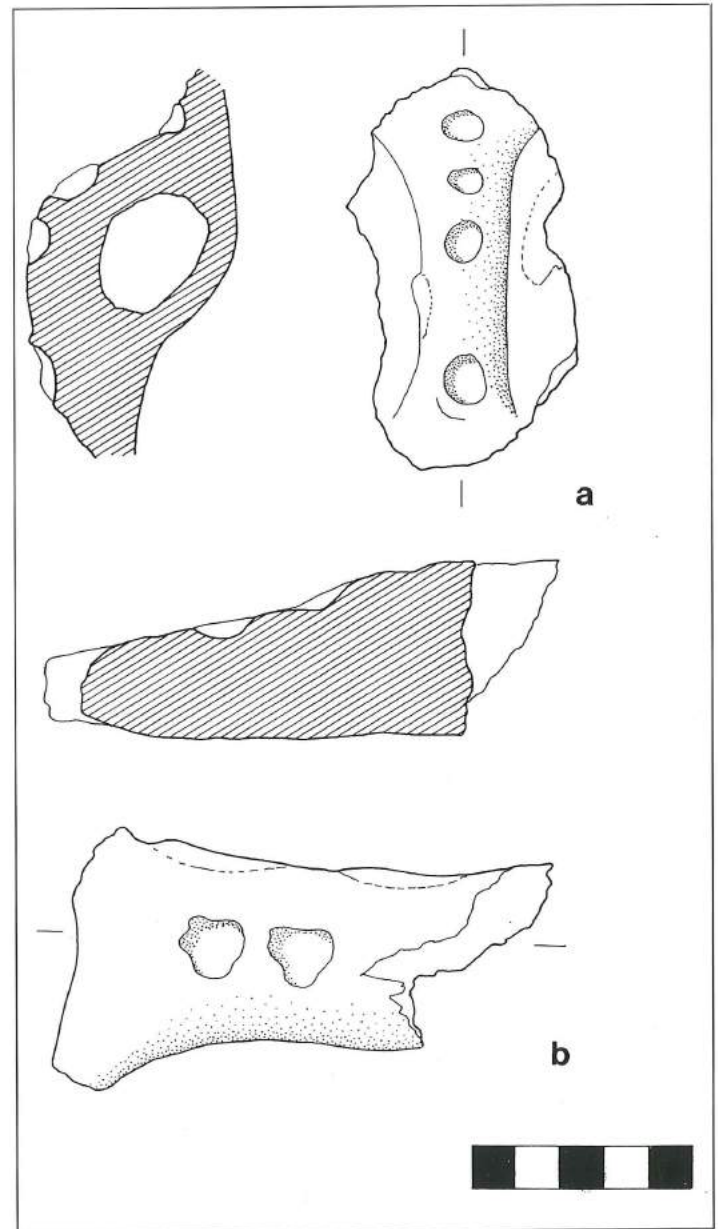


14. The pottery from sondage 8, UT 109: a) US 85: *Handmade Coarse ware*; b) US 52: *Handmade Coarse ware*.

two different kinds of products.⁹ At the same time, the amount of handmade coarse ware does not vary its proportion, meaning that traditional pottery production is still well established. The amount of residual pottery (Nabataean, Roman and Byzantine) is decreasing, probably reflecting the different features through which the settlement evolved (from several building activities to a simple reuse of still-standing structures). One fragment of a roof-tile comes from US 52.

Among the handmade coarse ware group, hole-mouth jars (FIG. 14a) occur in the post-Crusader assemblage while a different type with an elaborated outcurved rim appears in the Ottoman time (FIG. 14b) probably an indication of wheel-thrown examples. Applied finger-stamped ridges and necked jars (FIG. 17a) with handles are to be noted. Loop handles and lug handles sometimes are finger-stamped (FIG. 15a), in one case the lining of such prints suggests the use of wood or bone as a stamp instead of a finger (FIG. 15b). This group also includes loop handles with a vertical groove, conical lids and hemispherical cups (FIG. 16a).

It has been suggested that the handmade limestone tempered ware may characterise the post-Crusader assemblages (Vannini and Vanni Desideri 1995: 530) and indicate a change in the source of raw material: limestone beds are widely scattered on top of the mountains all around the village of Wādī Mūsā and east of al-Wu'ayra itself (Bender 1975). This type of pottery could actually have been locally produced: the poor technological features do not seem to indicate that this was an imported product. It is likely that the presence of limestone in the



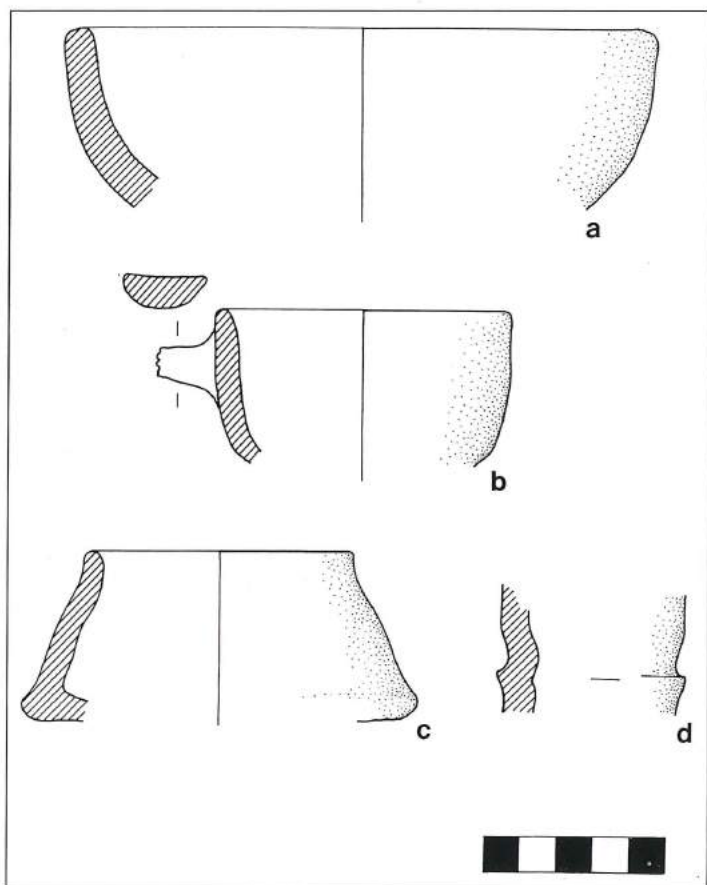
15. The pottery from sondage 8, UT 109: a) US 3: *Handmade Coarse ware*; b) US 4: *Handmade Coarse ware*.

clay body would be natural, already mixed with the clay, when collected from the foot of the conoids flowing from the top of the mountain around Wādī Mūsā. Anyhow the new data confirm that this kind of pottery is peculiar of post-Crusader time at least in the surrounding area of the castle¹⁰ and its occurrence is continuous until the Ottoman period. More difficult is to explain the reason of this new raw material source which anyhow never entirely substitutes the more traditional ones.

⁹ This possibility was already taken into consideration in the first stage of the research during the setting of the methods for the grouping of pottery. At that time the authors supposed that the handmade ware fragments could possibly have been unpainted or

vanished painted parts of painted vessels on the basis of the close similarities in the ceramic body between the two groups.

¹⁰ The absence of this kind of pottery at Khirbat Fāris dating from Crusader time seems to strengthen this point.

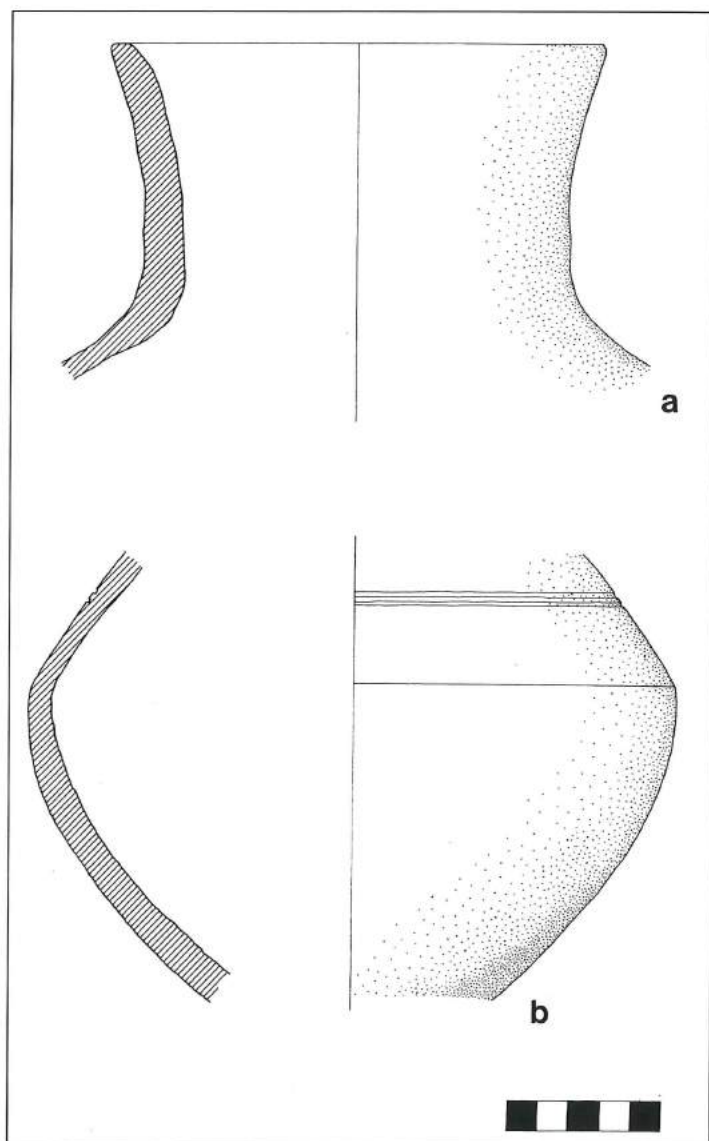


16. The pottery from sondage 8, UT 109: a) US 80: *Handmade ware*; b) US 73: *Handmade ware*; c) US 62: *Handmade ware*; d) US 72: *Wheel-Thrown ware*.

Handmade ware includes necked forms with outcurved rim (FIG. 14b) sometimes provided with a strainer. Some loop handles show an applied knob on the top. One sherd may be related to a lamp with a conical shape (FIG. 16c).

One residual fragment of neck belonging to a wheel-thrown jug, coming from US 72, bears a *round stamp* with a cross-hatching pattern whose poor preservation unfortunately does not allow a clear drawing of it (FIG. 16d). While the shape of the neck and the fabric is quite common in the area from the Umayyad (Sodini and Ville-neuve 1990) to the Ayyubid periods, the stamp appears to be more distinctive. It is known on the neck of jugs coming from the excavations at Bethany (Saller 1957: 16, Pl. 129, b1-4, 6) and at 'Imwās al-Qubayba (Emmaus el-Qubeibeh, Bagatti 1947). Although the type of decoration is very simple and it could not allow us to consider it a distinctive feature, both in terms of cronology and production, it is interesting to note that stamps perfectly similar to these are very characteristic of pottery productions from Pisa commonly dated to the 12th-13th centuries. These stamps never appear elsewhere in Italy and the type seems to be shortlasting and distributed in a small area around the town. In one case surface archaeological re-

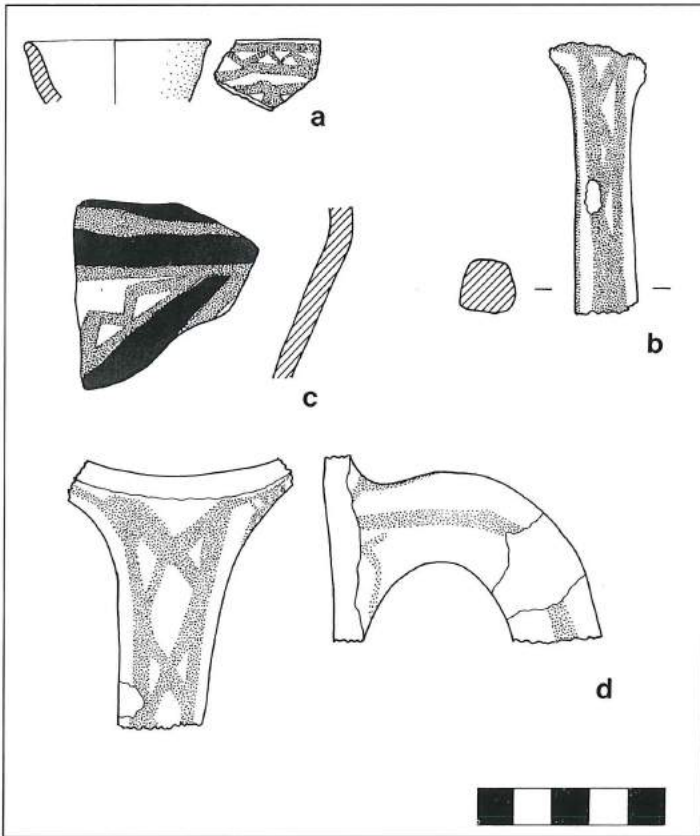
¹¹ A specific study on the subject is in progress, conducted by A. Vanni Desideri.



17. The pottery from sondage 8, UT 109: a) US 72: *Handmade Painted ware*; b) US 72: *Yellow-glazed wheel-thrown pottery; with slip*.

search recognized a kiln waist coming from a small pottery factory near Fauglia, south of Pisa (Dani and Vanni Desideri 1981). The main difference between the eastern and the western stamps seems to be the position: in the first case they are placed around the neck of jugs while in Italy they are nearly always on the upper part of the handle. In both cases the decoration was made by impressing on the leather-hard clay body a round wooden stamp on which a series of crossing grooves were carved. No conclusion can be drawn at this stage; for example, it is not clear whether the two types are contemporary and in such a case if they are due to a mere phenomenon of cultural convergence or to trading and cultural relationships between Italy and *Oulremer*.¹¹

The handmade painted pottery group includes both ex-

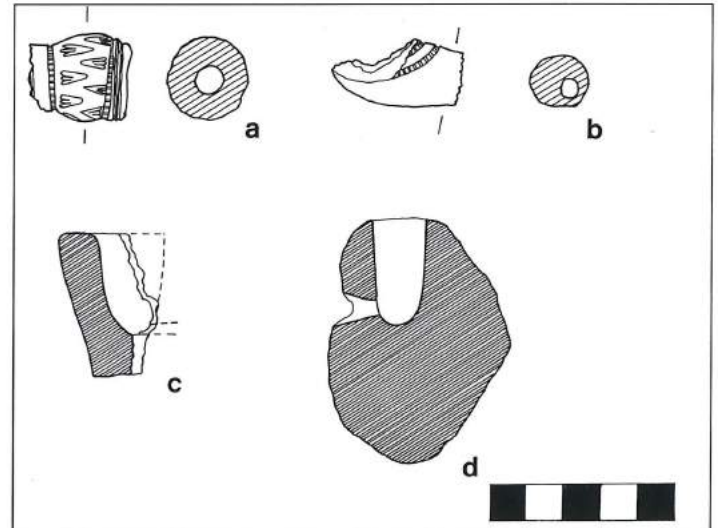


18. The pottery from sondage 8, UT 109: a) US 85: *Handmade Painted ware*; b) US 73: *Handmade Painted ware*; c) US 52: *Handmade Painted ware*; d) US 89: *Handmade Painted ware*.

amples of the so-called “linear painted” and “geometric painted” (Brown 1987: 1988) decorated in brown and reddish paint and mainly represented by closed forms sometimes with spouts (FIG. 18).

Pottery with green or yellow glaze is widely scattered through the whole stratigraphy and it appears as imported good rather than local production also in considering the poor amount of fragments that just in one case allow the reconstruction of a form (FIG. 17b). As previously stated (Brown 1988: 237; Vannini and Tonghini 1997a: 382) the monochrome glazed types are almost well known in Mamluk Transjordan but the poor preservation of this pottery here and its association with tobacco pipes seems to point out its character of residual material. Two fragments of fritware are obviously residual also in consideration of the fact that one of them comes from the same level (US 52) where two pipes have been recovered.

One interesting feature of the stratigraphy of UT 109 is the presence of smokers pipes in US 52, 58 and 90 attributed to the last phase of settlement at the site. They consist of poorly made stone pipes, carved into yellow local sandstone, no more than a simple stone with two holes (FIG. 19c, d). In addition, some ceramic pipes are to be



19. The pottery from sondage 8, UT 109: a) US 90: Clay pipe; b) US 52: Clay pipe; c) US 52: Sandstone pipe; d) US 58: Sandstone pipe.

mentioned. Since smokers pipes have never been recovered from Ayyubid-Mamluk sites and there is no historical evidence of the practice of smoking tobacco into the Ottoman empire prior to the early 17th century (Simpson 1990: 8; Tonghini 1998) we may thus consider this data as a *terminus post quem* for these objects. On the other hand the presence of stone and clay pipes in UT 109 indicates that these objects are not residual and therefore their chronology could be extended to levels 52, 58 and 90.

The pipes appear to belong to two main types, possibly reflecting different chronology or productions. The first one belongs to the so-called lily-shaped type; the surface of the fabric is black while the section is grey and around the lower part of the bowl, close to the stem-socket, there is a rouletted dots decoration (FIG. 19b). This type appears to be common from the middle of the 18th century on the basis of examples coming from the excavations at Istanbul and Varna and several examples have been found at the Kerameikos in Athens (Robinson 1983). The last type is of an almost short shape with a large bowl and a thick stem-socket. The fabric is light buff and has more elaborated stamped decorations around the stem and the bowl consisting of dots and petals-like patterns (FIG. 19a). Although lacking the bowl, the shape of the stem-socket could be compared with Turkish types dating from the 18th to the 19th century (Hayes 1980) and with an example coming from Athens possibly dating from the 18th century (Robinson 1983: 275, 11, Taf. 52) but the fabric is quite different possibly indicating a different production.¹² The evidence extends the chronological range of the Islamic settlement at al-Wu'ayra which had been

¹² For a recent assessment about the various problems concerning the study of clay pipes in the Near East see Tonghini 1998.

suggested in previous publications. This is particularly interesting, since it constitutes the first clear archaeological evidence of Burckhardt's statement of a bedouin settlement at this site in 1812.

3. Conclusions

The analysis of the results achieved in the course of several years of archaeological excavations conducted at the site of al-Wu'ayra is still in progress. In order to illustrate in part these results, a very small proportion of the assemblage of finds has been presented and discussed here.

In particular, two specific assemblages have been selected as a sample; they represent the material evidence related to two highly significant moments in the history of al-Wu'ayra: the earliest phase of the Crusader occupation of the castle and the latest occupation of the site, very likely belonging to the Ottoman period.

In the Stratigraphic Units analysed, the presence of a very high proportion of residual pottery on the one hand, and the limited quantity of the assemblages of pottery on the other hand does not allow to formulate conclusive hypothesis on the pottery in use in the two periods considered and to clearly isolate the differences between the two assemblages.

However, some preliminary remarks could be offered at this stage.

A significant percentage of residual pottery, which has been preliminarily classified as belonging to the Nabataean/Roman/Byzantine period characterises both assemblages and has already been noted in previous publications (Vannini and Vanni Desideri 1995; Vannini and Tonghini 1997a).

The pottery variety which is better represented in the two assemblages is the *handmade pottery* production. The most conspicuous difference between the two assemblages analysed so far seems to be the different proportion of the *Handmade Painted Ware*, very low in the early Crusader phase, much higher in the later Islamic phases. However, the fact that it is not possible to clearly isolate residual late Crusader and Ayyubid painted pottery in the late Islamic assemblage should be taken into account. The handmade ware seems to increase from early Crusader to the late Islamic period but the difficulty at isolating residual pottery in the *handmade pottery group* does not allow at the moment to be more conclusive in relation to the evolution of forms through time: the absence of certain forms in the late Islamic assemblage may not necessarily indicate their falling out of use, but may simply be related to the limited size of the assemblage considered here.

In the post-Crusader phases and in the late Islamic phase the presence of a variety which does not appear in the early Crusader phase has been recorded: the *Hand-*

made Limestone Ware. This may thus correspond to a pottery production in use in these periods only.

Glazed-slipped pottery occurs in both assemblages; its presence in the late Islamic assemblage may be residual, while its occurrence in the early Crusader assemblage testifies to its early introduction in the southern Levant pottery production.

Fritware only appears in the late Islamic assemblage, where it should be considered residual. Its absence from the early Crusader assemblage should be treated with caution, given the limited size of this group of pottery. However, since fritware can be regarded in this region as an import, its presence has been interpreted as an indication of a connection with markets supplied with technologically specialised products, presumably the Syrian and Palestinian coast (Vannini and Tonghini 1997, pp. 382-383), a situation which could be established with the creation of the Crusader Kingdom. Its absence from the early Crusader phase may confirm that the phase we are dealing with is the earliest of the Crusader phases, which may correspond to a period during which connections with the coastal area were evolving and were not as well established as in the following Crusader phases.

In the late Islamic phase, the absence of a ware which has been associated with *ṭawābīn*, the bread ovens, may not necessarily be interpreted as an indication of the abandonment of this kind of technique in the later period, but may be related to the different function of the area investigated.

The continuation of the study of the results from al-Wu'ayra, together with further evidence provided by archaeological research conducted at other sites in the regions it is hoped will provide more conclusive evidence to define the characteristics of pottery production in the region and its evolution through time.

References

- Bagatti, B. 1947. *I monumenti di Emmaus el-Qubeibeh e dei dintorni. Risultati degli scavi negli anni 1873, 1887-90, 1900-2, 1940-44*. Studium Biblicum Franciscanum, Collectio Maior, 4. Jerusalem.
- Bender, F. 1975. *Geologic Map of Jordan*, 1:500,000, United States Department of the Interior Geological Survey, Reston.
- Brown, R. 1987. A 12th Century A. D. Sequence from Southern Transjordan Crusader and Ayyubid Occupation at el-Wu'eira. *ADAJ* 31: 267-288.
- 1988. Summary Report of the 1986 Excavation: Late Islamic Shobak. *ADAJ* 32: 225-245.
- 1989. Excavations in the 14th Century A.D. Mamluk Palace at Kerak. *ADAJ* 33: 287-304.
- 1992. *Late Islamic Ceramic Production and Distribution in the Southern Levant: a socio-economic and political interpretation*. Ph.D. dissertation, State University of New

- York.
- Dani, A. and Vanni Desideri, A. 1981. Uno scarico di fornace medievale presso Fauglia (Pisa). *Archeologia Medievale* 8: 475-482.
- Franken, H. and Kalsbeek, J. 1975. *Potters of a Medieval Village in the Jordan Valley*. Amsterdam, Oxford, New York.
- Hayes, J. W. 1980. Turkish Clay Pipes: A Provisional Typology. *BAR*: 3-10.
- Johns, J. 1992. Islamic Settlement in Ard al-Karak. Pp. 363-368 in *SHAJ* IV. Amman: Department of Antiquities.
- Johns, J., McQuitty, A. *et al.* 1989. The Faris Project: Preliminary Report upon the 1986 and 1988 Seasons. *Levant* 21: 63-95.
- Lankester Harding, G. 1959. *The Antiquities of Jordan*, fifth impression 1984.
- Lindner, M., Knauf, E. A. and Zeitler, J. P. 1996. An Edomite Fortress and a Late Islamic Village near Petra (Jordan). Khirbat al-Mu'allaq. *ADAJ* 40: 111-135.
- Pringle, D. 1984. Thirteenth Century Pottery from the Monastery of St. Mary of Carmel. *Levant* 16: 91-111.
- 1985. Medieval Pottery from Caesarea: the Crusader period. *Levant* 17: 171-202.
- 1986. *The Red Tower (al-Burj al-Ahmar). Settlement in the Plain of Sharon at the Time of Crusaders and Mamluks, A.D. 1099-1516*. London: B.S.A.J.
- Robinson, R. 1983. Clay Tobacco Pipes from the Kerameikos. *Athenische Mitteilungen* 98: 265-285.
- 1985. Tobacco Pipes of Corinth and of the Athenian Agora. *Hesperia* 54: 149-203.
- Rose, J. C., Al-Awad, F., Al-Horani, S. and Vannini, G. 1998. Crusader Period Disease in Jordan. 12th European Meeting of the Paleopathology Association, Prague, Czech Republic, 26-29 August.
- Saller, S. 1957. *Excavations at Bethany (1949-1953)*. Jerusalem: Studium Biblicum Franciscanum.
- Simpson, S. J. 1990. Ottoman Clay Pipes from Jerusalem and the Levant: A Critical Review of the Published Evidence. *Society for Clay Pipe Research, Newsletter* 28: 7-16.
- Sodini, J. P. and Villeneuve, E. 1990. Le passage de la céramique byzantine à la céramique ommeyyade en Syrie du Nord, en Palestine et en Transjordanie. Pp. 195-218 in *La Syrie de Byzance à l'Islam*. Actes du Colloque International de Lyon-Paris.
- Tonghini, C. 1998. *Qal'at Ja'bar Pottery: A Study of a Syrian Fortified Site of the Late 11th-14th Centuries*. British Academy Monographs in Archaeology 11. Oxford: Oxford University Press.
- Vannini, G. and Vanni Desideri, A. 1995. Archaeological Research on Medieval Petra: a preliminary report. *ADAJ* 39: 1-32.
- Vannini, G. and Tonghini, C. 1997a. Mediaeval Petra. The stratigraphic evidence from recent archaeological excavations at al-Wu'ayra. Pp. 371-384 in *SHAJ* VI. Amman: Department of Antiquities.
- 1997b. Mediaeval Petra. Settlements of the Crusader and Ayyubid period in Transjordan. *AJA* 101: 534-535.
- Whitcomb, D. 1988. A Fatimid Residence in Aqaba, Jordan. *ADAJ* 32: 207-224.