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Material entanglements in the Early Islamic southern Levant (AD 650-1000): A view from the rural site of Tell Abu Sarbut, Jordan

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In studying the archaeology of the Early Islamic period (7th to 11th century), it is crucial to understand how, and if, the rural settlements changed or adapted in response to the shift of rule in the southern Levantine region. Following the Islamic conquest, the tendency of the Islamic governing body was to gradually move the country's administrative centres eastwards and farther inland.¹ Yet the impact of the relocation of the provincial capitals on the rural landscape, and on establishing new bonds of socio-economic dependencies among settlements, seems to be absent from the current archaeological discourse on the southern Levant. In textual sources, one finds only scant mentions referring to the emergence of rural settlements, some of which emerge as a result of the state-driven agricultural endeavours within the Islamic Empire.² However, the nature of these top-down influences on rural landscape, and their archaeological implications, remain poorly understood.³ Only recently have regional studies begun to address the archaeology of rural settlements in Jordan, opening up possibilities of further inquiries into the entangled material spheres of urban and non-urban sites alike.⁴

Using the site of Tell Abu Sarbut in the northern part of Jordan Valley as a case-study, this work explores the distinctive archaeological dimensions of rural sites in the Early Islamic southern Levant (Fig. 1).⁵ Tell Abu Sarbut was inhabited intermittently from the Early Roman into the Mamluk era, with notable occupation levels from the 7th to the 11th centuries.⁶ The site's ceramic assemblages derive from well-stratified contexts and provide a unique opportunity to study the complex features of this small

rural site as well as the material entanglements between rural settlements in general and their urban counterparts. The extent to which the rural settlements adopted, rejected, or perpetuated regional material traditions offer some insights into product distribution to non-urban sites and into socio-economic networks in the Early Islamic southern Levant at large.⁷ Ergo, Tell Abu Sarbut will not be discussed as a single, isolated site but rather as part of a network that existed within the wider provincial sphere of the region.⁸

Focusing on a rural site, this study aims to complement rather than rebuke the prevalent urban-centric scholarship on the Islamic southern Levant. We argue that: (A) a shared material culture demonstrates that Early Islamic urban and rural settlements were deeply connected and dependent on each other; (B) rural settlements were a unique product of their natural, cultural, socio-economic and historical environment, and that this uniqueness is reflected in the diversity of their material culture; and (C) that investigating rural settlements not as a generic category but as idiosyncratic, yet integrated entities can help us to better understand the past dynamics of the Islamic southern Levant.

UNDERSTANDING THE HISTORICAL BACKGROUND

The Early Islamic period (AD 650-1100) in the southern Levant is marked by numerous significant developments, including the dynastic changes from the Umayyad to the Abbasid and then to the Fatimid dynasties, respectively, as well as structural reorganisations of the caliphal holdings. During this time, the rural site of Tell Abu Sarbut found itself in the newly created administrative unit Jund al-Urdunn, one of the three newly established administrative provinces within the southern Levant.⁹ Jund al-Urdunn was further subdivided into fourteen units, thirteen of which consisted of a chief town and its dependent villages and lands.¹⁰

The region surrounding Tell Abu Sarbut rarely features in historical descriptions: the 13th-century Islamic geographer al-Yāqūt, for example, makes a generalised reference to the agricultural lands of the province north of al-Balqā (i.e. al-Sawād) while the 10th-century work by al-Muqqadasī mentions the Jabal Jarash area, surrounding the ancient site of Jerash, as being littered with many agriculturally potent villages.¹¹ These historical sources, however underscore the Islamic Empire's continuous interests in developing agricultural estates throughout its territory in the form of land endowments to military personnel, as well as by supporting the acquisition of lands by tribal aristocracy and local allies.¹² Moreover, encouraging the occupation of vacant areas (*mawāt* lands) by Muslims through land grants (sing. *qaṭī'a*) is historically documented in the Levant already in the Abbasid and Fatimid periods.¹³ However, the

archaeological manifestations of these endowments, or those of other state-driven activities in the countryside, are not at all understood.

Archaeologists long regarded the period following the establishment of the Umayyad empires as one characterised by a decline in settlements; in light of recent scholarship, however, such narratives can no longer be accepted.¹⁴ Instead, we see increasing evidence for continuity of site habitation as well as increasing investments in caliphate-driven building projects, agricultural expansion, the establishment of new government centres, and the resumption of road construction between administratively significant urban settlements such as Jerusalem and Damascus.¹⁵ Moreover, the 7th century appears to have undergone an economic shift from market production for export to commerce on a regional and local level.¹⁶ It is against this historical backdrop of the Early Islamic Levant, and in light of the concurrent changes to economy and trade networks, that we should understand the formation of the new ties of economic dependencies between urban and rural settlements. From an archaeological viewpoint, these relations are reflected in ceramic assemblages, as these allow us to trace the formation and evolution of material interconnections.

EARLY ISLAMIC CERAMICS CONSIDERED: THE LEVANTINE REGIONAL CERAMIC TRADITION

Extensive scholarly discourse on Early Islamic pottery has been ongoing for many years, with only a cursory examination of the southern Levantine pottery presented here for the purpose of establishing a foundational reference for further discussion of ceramic assemblages. One of the earliest works on Early Islamic ceramics was a stylistic study of Iraqi pottery, compiled by the German scholars Friedrich Sarre and Ernst Kühnel.¹⁷ At around the same time in the area of today's Jordan, the Early Islamic pottery was often misidentified as Byzantine, and it was only in the second half of the 20th century that works in Amman and Pella allowed archaeologists for the first time to distinguish between Byzantine and Early Islamic ceramics. It took the next couple of decades for further stylistic studies of Islamic pottery in Jordan to emerge.¹⁸

In his seminal work on Abbasid ceramics, Donald Whitcomb contemplates the difficulties associated with establishing a good chronology for very early Islamic pottery, mainly because little archaeological data from Abbasid Jordan were available in the 1990s. Moreover, the use of these scarce data was further obstructed by the practice of dating ceramics by means of broad-brush dynastic labels, which resulted in inaccurate diachronic sequencing of pottery types.¹⁹ Thirty years later, we have not yet been able to resolve this chronological caveat, but our understanding has advanced significantly thanks to excavations yielding ceramics from stratigraphic sequences dating to

the Early Islamic periods.²⁰ In spite of the new wealth of data, the common method for assigning a chronological designation to ceramic assemblages continues to be based on internal site stratigraphy and reliable parallels from other sites, with little absolute dates being available to reinforce and nuance the chronological sequence of Early Islamic pottery.

During its gradual expansion, the Islamic Empire encountered and organically incorporated various cultural aspects of its newly conquered regions into its material culture, including pottery. New ways of pottery production and decoration appeared, and such influences are visible in the archaeological record.²¹ The diffusion of novel features in Early Islamic pottery is still only little understood, yet by the late 8th-early 9th century, new ceramic types became recognisable and rather prevalent at sites in the southern Levant.²² Between the late 8th and mid-10th century, pottery gained its own distinct forms defined by a variety of wares and shapes.²³ The 9th century witnessed the massive spread of glazed wares as well as the introduction of new pale cream wares and subtle but noticeable changes to the older ceramic styles.²⁴ Both cream comb-incised ware (in southern Jordan known as Mahesh Ware) and moulded cream ware (colloquially called Mafjar Ware) came to be identified as diagnostic features of the Abbasid period.²⁵ Other hallmark features of Early Islamic pottery include moulded lamps and thumb impressions. Although the thumb-impression decorative technique precedes the 8th century, it is believed to have reached new heights of intricacy during the Abbasid era, as evidenced by its deeper impressed design found on *pithoi* typical of this period.²⁶

Currently, three distinct regional clusters of ceramic culture have been identified in Jordan: (1) – a northern area around Jerash; (2) – the al-Balqā and Ma'āb regions spreading east of the Dead sea; and (3) – southern Jordan, with its centre in Aqaba.²⁷ These are not rigid clusters, and wares common to each of the regional ceramic tradition spread beyond their respective locales.²⁸ A case in point is the excavation at Gharandal, which revealed evidence of material exchange and cultural permeation from the northern regions within the site's ceramic assemblage. This challenges previous scholarly assertions that the Early and Middle Islamic periods in southern Jordan were distinct and isolated from those in the north.²⁹ Early Islamic red-painted jars and bowls were initially thought to be a feature limited to northern regions,³⁰ but subsequent archaeological explorations have also revealed their presence at sites in central and southern Jordan, albeit in limited quantities. This led to a re-evaluation of the distribution of red-painted ware and expanded its known geographic range.³¹

Rather than being a mere dating tool, the regional ceramic traditions should be recognised as 'the material ties that bind' and as socio-economically significant. Alan Walmsley has suggested that the shared ceramic traditions identified at Pella, Jerash,

and other sites in northern Jordan are symbolic of the close economic relations that existed between these settlements in the first half of the 8th century.³²

However, the scholarly discourse on Early Islamic ceramics outlined above primarily revolves around assemblages from urban contexts; only little attention has been paid to what a rural pottery assemblage might look like, and how new influences, brought about by the expansion of the Islamic Empire, manifested themselves in rural pottery assemblages.

UNDERSTANDING A RURAL ASSEMBLAGE: THE CASE OF TELL ABU SARBUT

Tell Abu Sarbut is a low tell situated in the central Jordan Valley (Fig. 2), with an occupational history spanning the Early Roman, Early Islamic and Middle Islamic periods.³³ Two multi-season archaeological expeditions were centred on the investigation of the tell. Between 1988 and 1992, a team from Leiden University conducted four seasons of excavations at Tell Abu Sarbut.³⁴ The aim of the project was to excavate a rural site from the Islamic period in order to collect pottery to establish a typo-chronology of common household wares. The excavations concentrated on the western top of the tell, where mainly Middle Islamic occupation levels were uncovered (squares K-M, P and S).³⁵

In 2012 the excavations were resumed under the auspices of Groningen University, with the aim of uncovering more of the earlier Roman building.³⁶ This time, the excavation focused on the middle and eastern parts of the tell (squares F, G, H, N and X) (Fig. 3). Three seasons of excavations were conducted since, revealing a series of built structures, courtyards, and bread ovens (Fig. 4). Several rooms of the Roman building were uncovered, which could be firmly dated to the Early Roman period (1st century BC–2nd century AD), a period not well known in the Eastern Jordan Valley (Fig. 5).

More pottery from the Ayyubid-Mamluk period was also found and could be dated to the 13th and 14th centuries.³⁷ Whilst archaeological remains from the Early Islamic period were not encountered in the earlier project, the renewed excavations in the 2010s exposed extensive occupation levels associated with this era in all excavated squares.³⁸ Several buildings (Buildings C–E) were found, but these do not appear to have been all in use at the same time. Of the Early Islamic remains, three main phases could be distinguished (viz. Stratum IIa, Stratum IIb and Stratum IIc), comprising a total of eight sub-phases (Figs. 6–8). It is the Early Islamic phases that are of concern in this article.

The earliest Early Islamic structure – Building C (Stratum IIa) – covered the eastern side of square G and the western side of square H (see Fig. 3). Two phases of occu-

pation could be discerned. The first consisted of an open courtyard on the south side (room 8) and a larger area to the north (room 9), the function of which is unclear. In a later phase, the northern area was made smaller (room 9b), and a new white plaster floor was laid containing two or four stone pillar bases. The presence of burnt debris consisting of pieces of mudbrick, ash, and wood remains of different sizes, strewn across the floor, implies that the enclosed space had been roofed. East of this room, another small room or hallway existed, the floor layers of which have not been reached.

Building C was occupied for two short phases before it was abandoned. Cracks in the floor and wall sections indicate that the building was abandoned as result of an earthquake, possibly that of AD 749.³⁹ The nearby settlements of Pella, Jerash, and Khirbat al-Mafjar were likewise impacted by this seismic event.⁴⁰ The floor of Building C was covered in a layer of burned debris, probably caused by earthquake damage to a burning bread oven, and thus destroyed in a manner similar to Area IV at Pella.⁴¹ However, it is also possible that the building was burned down intentionally after it collapsed or was seriously damaged by the earthquake. The earlier earthquake of AD 659/660 could also have led to the abandonment of Building C, but the ceramic assemblage contains wares of a later date, thus supporting the likelihood of the abandonment in the 8th century. In conclusion, the seismic event and specific ceramic corpus serve as an important chronological and stratigraphic marker for the occupational history of Tell Abu Sarbut.

No structures contemporary with Building C were found in the eastern part of square H, where the courtyard associated with Stratum IIb was laid directly on top of the Roman debris layers, although in square F some remains of this earlier, pre-AD 750 phase were touched upon. The occupation moved to squares F and X, where Building E was raised and continued to be in use until the site's abandonment around the late 10th to the early 11th century.⁴² Six separate occupational phases could be discerned in Building E, with only the first phase being associated with Stratum IIb. Building E Stratum IIc, consisting of the successive occupational phases within Building E ranging from phases 2 to 6, exhibits a stratigraphic distribution of ceramic assemblages that dates to between 800 and 1000. This stratum constitutes the predominant occupation layer at Tell Abu Sarbut. The ceramic assemblage recovered from Phase 2 (n=112) is notably larger in comparison to the subsequent Phase 3. The assemblage primarily comprises cooking vessels (n=58) and slipped table wares (n=32). The diversity of the assemblage is further emphasised by the presence of plain wares, along with a Fine Byzantine bowl rim, an Islamic Cream Ware rim fragment, and a Black Swirl Painted jug fragment. The ceramic assemblage from Phase 3 of Tell Abu Sarbut is small, consisting of 38 fragments, including Islamic Cream Ware and Cream Slipped Fine Ware juglets. The oil

lamp fragments found in this phase are also surprisingly limited, with only one from Phase 2 and three from Phases 3 and 4. The shapes of the preserved oil lamp fragments seem to reflect the almond-shaped lamps of the Umayyad and Abbasid periods.

In Phase 4 (n=104), mainly cooking pots and jugs were found, and Room 18 of Building E Phase 4 contained pottery in quantities almost three times greater than that retrieved from the remaining parts of the building. This phase is characterised by a lack of Islamic Cream Ware and Geometric Painted Ware pottery, with a significant increase in the presence of these wares in Phase 5, along with Brittle Ware cooking pots and the notable presence of a swirl-painted grey jar (Fig. 7.7), used for transport and storage of condiments such as wine or olive oil.⁴³ Once emptied, the bag-shaped jars such as the one from Tell Abu Sarbut likely continued to be in use for storing water and other contents.⁴⁴ Phase 6 yielded a sphero-conical container discussed below, alongside a neck-piece of a cream-ware jar with the leaf-stamped decoration of the Khirbat al-Mafjar type. This ceramic piece belongs to a wider tradition of moulded wares correlated with the urban middle class of medieval Syria.⁴⁵ Phase 6 marks the end of the Early Islamic occupation at Tell Abu Sarbut.

All in all, three metres of occupation layers running up to the outer walls were excavated. Building E was in use for centuries, exhibiting several phases of intra-structural rebuilding. A tentative dating based on the ceramic assemblages places the span of its use between the second half of the 8th and the 10th century. Most of the excavated areas can be interpreted as small residential rooms, with multi-functional open courtyards containing pits for rubbish disposal and bread ovens for cooking. Some spaces yielded very little to no pottery, suggesting that their floors were swept regularly. How the Early Islamic occupation at Tell Abu Sarbut came to an end is not clear, but a combination of environmental and political factors, such as the earthquake of 1068 with its epicentre in Wadi Arabah and the concurrent political turmoil in the region, may have contributed to the site's demise.⁴⁶

The inhabitants of Tell Abu Sarbut left behind a complex ceramic corpus in three excavated strata, and their respective eight occupational phases. Altogether, these yielded more than 1600 diagnostic sherds and fifteen semi-complete vessels that were classified and registered as small finds at the time of the excavations (Fig. 6). The corpus is dominated by unglazed, plain, wheel-made ceramics; handmade pottery is rare. The composition of the ceramic corpus is complex and includes a variety of wares, each characterised by a specific *chaîne opératoire*. The overall pottery corpus conforms well to regional ceramic traditions of northern Jordan and exhibits a high standardisation in shape. Surface treatments include slip, painting, and incision. Glazed pottery is present, but only in very small quantities. The cooking and table wares are relatively

similar in their quantities, with the pottery further reflecting a multitude of uses, such as food preparation, consumption and serving, as well as storage of various condiments. Cooking wares were present in the largest quantities, closely followed by table wares and storage containers. Evidence for pottery production on site is absent, and the site appears to have relied heavily on imported ceramics. No material associated with industrial production has been found.

Altogether, the pottery assemblage comprises mostly undecorated plain sherds; decorated pieces (e.g. painted, incised) of somewhat meagre quantities were collected continuously throughout all phases of occupation.⁴⁷ Brittle coarse ware, found throughout the Levant but little discussed in connection with rural sites, was found in great quantities, so was Islamic Cream Ware in a multitude of its forms: moulded, combed or egg-shell. The locally available Jerashi pottery, such as the White-Painted Grey Ware, is also abundantly present in the ceramic assemblage from Tell Abu Sarbut. Jerash was a major local pottery production centre and in the recent publication on the pottery from the site, the total quantification method results indicate an extreme dominance (>99 percent) of locally produced ceramics across different depositional contexts spanning some six centuries.⁴⁸ This is in striking contrast to the assemblage from Tell Abu Sarbut, located some 40 kilometres away. Here, the assemblage is everything but homogeneous, yet the pottery does display shapes and forms typically found at other Early Islamic sites.⁴⁹

Bag-shaped storage jars associated with the kilns at Beth Shean were found in limited but significant quantities (for an example, see Fig. 7.7).⁵⁰ A handful of brown-glazed coarse ware fragments, characteristic of post-8th century contexts, were retrieved from the latest phases of occupation. These appear to have come from the kilns of Tiberias or Caesarea Maritima, both of which produced glazed vessels during the Early Islamic era.⁵¹ Other vessels associated with production in Tiberias and Caesarea Maritima were likewise recognised in the corpus from Tell Abu Sarbut.⁵²

Of note is also a specific type of sphero-conical vessels, found in a remarkably well-preserved condition (Fig. 8.7). Commonly referred to as 'grenade jars', these sphero-conical vessels have been uncovered at numerous sites within the Levant (and beyond), including Tiberias and Khirbat al-Mafjar.⁵³ As their name evokes, 'grenade jars' were frequently associated with weaponry, but such an interpretation appears to be the least probable. Rather, they have been suggested to have served as beer gourds, hash pipes, or containers for mercury and perfumes, among other uses.⁵⁴

A unique creamware find was retrieved at Tell Abu Sarbut (Fig. 8.1); this fragment decorated with engraved leaf- or teardrop-motif might be interpreted as evidence for the mimetic chain of ceramic production in which a new product or technology is developed and adopted by different actors in the production process, such as suppli-

ers, manufacturers, and distributors. Its roughly finished ornamentation needs to be viewed in the context of the regionally popular Moulded Cream Ware vessels with characteristic leaf-decoration.⁵⁵

Moulded cream wares themselves were, arguably, ceramic copies of metal vessels with similar motifs.⁵⁶ Undergoing a transformation into a simple form, the piece from Tell Abu Sarbut would still be recognisable by its pattern and ware, even though it lacked the elaborate manufacturing of its original counterpart. Could it be that the vessels of this type were designed for smaller markets, in a fashion similar to today's cheaper product knockoffs? Little research has been done on the matter of pottery 'imitations', but the aforementioned example is not an isolated phenomenon, and the Islamic stoneware versions of more expensive porcelain imports from the Far East only further exemplify the existence of mimetic chains of pottery production.⁵⁷

How the ceramic vessels originating from the pottery production centres all over the southern Levant were introduced to Tell Abu Sarbut is unclear. Perhaps, the pottery came to be part of the site's assemblage through local urban markets and was either directly purchased by the inhabitants of the site or acquired by itinerant pedlars that further distributed these goods to rural sites.⁵⁸ It has long been suggested that Pella, located some 30 km away from Tell Abu Sarbut, was one of the main targets of the Beth Shean pottery market. The ceramic findings from Tell Abu Sarbut suggest that products, such as Beth Shean pottery, were distributed to non-urban sites, likely through a process facilitated by cities like Pella, which acted as local hubs for material exchange networks. The outlined evidence makes it clear that the inhabitants of Tell Abu Sarbut actively engaged with the ceramic material culture of the Early Islamic Empire, which was disseminated through established trade routes. These channels facilitated the circulation of a variety of cultural and commercial goods, including ceramics, which appear to have been eagerly acquired and adopted by local communities. The utilisation of such ceramics by the inhabitants of Tell Abu Sarbut serves as a testament to the site's involvement in the larger social and economic systems that were developing during this period.

Very few non-ceramic artefacts were found within the Early Islamic layers of Tell Abu Sarbut. In Phase 5 of Building E, a basalt grinding stone of less than 20 centimetres in diameter was found, in addition to a handful of unidentifiable glass and stone vessel fragments. In Building E Phase 6, another fragment of glass was found in the same context as a bronze spatula; an iron fragment was also recovered from the same phase. Earlier phases identified at Tell Abu Sarbut were likewise nearly devoid of non-ceramic artefacts, with the exception of Building E Phase 3 which yielded a spindle whorl and stone objects that might have been used as tools of some sort. The general scarcity

of non-ceramic finds might be the result of poor preservation, a preference for using perishable materials (such as leather, basketry, and so on), or habitational spaces being situated outside of the excavated areas during certain occupational phases.

The small quantities of non-ceramic material are striking when we take into account the considerable amounts of pottery that were unearthed from the site's Early Islamic contexts, but more so when we look at other contemporary rural settlements in the area of southern Levant.⁵⁹ In southern Jordan, the multiperiod rural settlement of Khirbat Faris yielded blade fragments from Byzantine and Early Islamic levels, as well as simple open-ended bracelets of copper alloy dating to the Early Islamic period.⁶⁰ Coinage was rare, with only a single contemporary dirham, struck in the name of al-Ma'mūn and dated 825-826, being found; this coin, however, is assigned little significance in the final publication on Khirbat Faris' archaeology.⁶¹ At Khirbat 'Adasa, a rural site located in the vicinity of Jerusalem, the excavation produced mosaic paving, metal, stone, and bone objects: a bronze ring, an iron nail, bone buttons, a copper needle, and basalt loom weights were found, as well as a considerable amount of glazed ceramics and clay oil lamps.⁶² Khirbat Ibreica, situated within the Sharon plain, generated unique finds such as a conical bronze bell with a suspension loop, four gold dinars and one silver dirham dating back to the end of the 8th and the beginning of the 9th century, and a small piece of turtle body armour.⁶³ Discovered at Nahal Shahaq in the northern Arava region bordering Jordan were small but significant quantities of metal and stone artefacts and bone tools as well as a wooden box, sixteen coins, and a lead *bullā*.⁶⁴ Apart from pottery, the site of Nahal Mitnan in the Negev Highlands yielded objects made of metal and glass, alongside a few pieces of jewellery.⁶⁵

A short comparative excursion into the assemblages of sites classified as 'rural' reveals how uniquely different these are. Whilst Nahal Mitnan produced jewellery finds, these are absent from other sites. Coins, too, are not uniformly present at all excavated rural settlements and this is in spite of the postulated spread of the cash system across the Islamic empire: in the 7th century, wages in the rural areas were partially paid in food items, and this is believed to have changed in the Islamic times with the monetisation of the countryside.⁶⁶ The introduction of cash in the rural areas must have been a gradual process and it is therefore surprising that the absence of Early Islamic coins from Khirbat Faris were interpreted by the site's excavators as evidence that the Arab conquests isolated the place from urban centres and markets in southern Jordan (and beyond) where Umayyad coinage was relatively common.⁶⁷

Similar to Khirbat Faris, no Early Islamic coins were retrieved from Tell Abu Sarbut, and considering the site's strong entanglement with the material culture of the region, it seems unlikely that this was a result of the site being isolated as has been suggested for its regional counterpart.⁶⁸

Historical sources attest for non-monetary means of economic exchange being acceptable even as payments for taxes that continued to be paid in cash as well as in kind well into the 10th century.⁶⁹ The lack of coinage may thus signify the diverse ways in which rural sites adapted to the changes in the Islamic Empire – some accepting the coinage quicker than others. Additional interpretations should be considered: (a) – the possibility of bartering being the preferred mode of economic exchange at these sites; (b) – a slower spread of the monetisation to the countryside at sites east of the Jordan River; and (c) – coins being available only in such small quantities that these would not leave a trace in the archaeological record.

Tell Abu Sarbut would have had plenty to barter with: the site is situated amidst fertile agricultural land, with relatively good access to water supply through the Wadi Zarqa and several springs.⁷⁰ Whether the irrigation was used in this period is not proven, but likely.⁷¹ Al- Muqqadasī describes several agricultural products that were grown in the area east of the Jordan River.⁷² Whilst in his account grain, fruit, olives, vines, and honey are characteristic products of the higher Jordanian plateau regions, the production of dates, rice, bananas, and indigo was associated with the Jordan Valley and the lowlands surrounding the Dead Sea. Research into the botanical remains retrieved from the Early Islamic levels at Tell Abu Sarbut shows that mainly bread wheat, barley and emmer were cultivated, just as in the Early Roman period.⁷³ Flax and safflower were also recovered, and used for either oil extraction, textile production and/or dye production.⁷⁴ It is possible that these agricultural yields from Tell Abu Sarbut served as a commodity exchanged for money or other goods.

DISCUSSION AND CONCLUDING REMARKS

The Early Islamic ceramic assemblages from Tell Abu Sarbut display a strong (but not exclusive) connection to the ceramic traditions of the northern regions. Most vessel parallels derive from the 8th to early 11th century ceramic assemblages excavated at sites in its vicinity, primarily Jerash, Amman, and Pella. This suggests that Tell Abu Sarbut had established socio-economic ties or at the very least was engaged with the pottery supply from these three sites during that period. However, other close parallels to the ceramic vessels from Tell Abu Sarbut can be found at sites all over north Jordan and beyond, such as Tiberias, Caesarea Maritima and Abila. Such a strong material entanglement demonstrates that Tell Abu Sarbut was part of a larger network of economic circulation of ceramic vessels and their contents. Through ceramics, Tell Abu Sarbut was actively entangled with the regional socio-economic sphere of the southern Levant. Perhaps what we are seeing is a regional ‘globalisation’ of the ceramic material culture, both within the urban and the rural sphere. Rural settlements were active, not

passive, actors that engaged, by way of pottery, with the influences that came about through the expansion of the Early Islamic Empire as well as with the popular contemporary Islamic pottery fashions, such as the prevalent, and perhaps somewhat cheaper and more readily available, stylistic mimetic form of the more luxurious Mafjar Ware.

In this article, we have presented the advantages and exercised the possibilities of a ruralocentric focus on the archaeology of the southern Levant, using Tell Abu Sarbut as a case study. We have argued that the socio-economic and material relationships between urban and rural settlements should not be inferred solely from their spatial proximity, although the distance is often a major factor. By focusing on Tell Abu Sarbut in relation to the material culture of other urban and rural sites, we identified the material entanglements the rural site shared with other urban sites in the region, and pointed out the differences and similarities that the rural sites shared in terms of their material assemblages. This approach enabled us to develop some new ideas on the socio-economic, political, and cultural influences on rural settlements.

This work serves as a preliminary attempt at exploring the limits of and possibilities within the current archaeological knowledge of rural settlements. More research and archaeological work are always needed, but this should not stop theoretical enquiries into the excavated data. For us, one step towards achieving this goal was to focus on how the urban and rural milieu co-existed in a mutually dependent way, and how this could be approached archaeologically. The material entanglements in this work were viewed as the archaeologically tangible means through which sites formed and maintained new ties of socio-economic dependency, which could be inferred from the close comparative study of site- and region-specific ceramic assemblages. In this work, we only just touched upon the intricate complexity of the urban and rural spheres within the Early Islamic Empire. More work has to be done before we can even start understanding how the settlements interacted with and depended on each other on both local and regional levels.



NOTEN

- 1 Kennedy 2016: 26; Taxel 2018a, 157.
- 2 The *iqṭā'* system was recorded to have existed in Palestine already in the Abbasid and Fatimid periods (see: Khalidi 1984, 183-86; Lancaster & Lancaster 1999, 35-36; Taxel 2013, 96-99; *Idem* 2018a, 168).
- 3 Walmsley 2005, 513.
- 4 Among the noteworthy recent works addressing the rural sphere of the Islamic Near East are: Taxel 2013, McPhillips 2014; McPhillips & Wordsworth 2016; McQuitty 2020; Petersen 2020 and Walker 2021.
- 5 Other notable rural sites excavated in the southern Levant are Khirbet Faris (McQuitty 2020), Dhiban (Winnet & Reed 1964; Tushingham 1972), Khirbet Yajuz (Khalil & Kareem 2002) and el-Quweisima (identified as a village, though only the churches were excavated; see, Schick & Suleiman 1991; Schick 1995). For a list of rural sites excavated east of the Jordan River, see Avni 2014: appendix II.
- 6 Steiner *et al.* 2023, 3-4.
- 7 Answering the complex question of 'what is rural' is beyond the scope of our paper and requires a separate scholarly treatment. Both terms, 'urban' and 'rural' entail a variety of settlement types: 'urban site' could be a city or a town, or a port and so on. The 'rural site', as we understand it in this work, likewise represents a variety of settlement types such as villages, hamlets, farmsteads, agricultural watchtowers, and so on. Because of these terminological ambiguities, the differences in urban and rural must be understood through their specific historical context. See Nol 2020 for a useful discussion on terminologies used for early Islamic settlements in Palestine.
- 8 In this work, the term 'Southern Levant' stands for the area roughly delineating modern Israel, Palestine, Jordan and southernmost Syria and this geographical term is henceforth used here as it best encompasses the area of study in our work.
- 9 *Jund* (pl. *ajṇād*) was a primarily military unit also functioning as an administrative framework in the early Islamic empire. A *jund* was further divided into smaller districts (*kūra*), and each *jund* was bound by their economic and cultural affinity (Walmsley 1987, 46-47). In southern Syria, three *ajṇād* were established: Jund al-Urdunn, Jund al-Dimashq and Jund al-Filastīn.
- 10 These are: Ṭabariyya, al-Sāmira, Baysān, Fiḥl, Jarash, Bayt Rās, Jadar, Ābil, Sūsiya, Ṣaffūriya, 'Akkā, Qadas, and Ṣūr (Walmsley 1988, 144).
- 11 Walmsley 1987, 91.
- 12 Taxel 2018a, 160
- 13 One such instance of *qaṭī'a* granting is recorded in the work of Fatimid writer al-Musabbihī, cited in Khalidi 1984, 183-86; Taxel 2018a, 168. See also Lancaster & Lancaster 1999, 35-36.
- 14 Instances of 'decline' attitude can be found in Harding 1967, 52; Sauer 1973; Smith 1973.
- 15 Avni 2014, 339.

- 16 *Ibid.* Given the limited number of studies on Early Islamic market economy, however, this statement is in no way conclusive and should be taken with caution.
- 17 Kühnel 1934; Sarre 1923.
- 18 Franken 1969; Sauer 1973.
- 19 Whitcomb 1992.
- 20 See: Amman Citadel (Northedge 1992), Khirbat Yajuz (Khalil & Khareem 2002), Pella (McNicoll *et al.* 1982; *Eadem* 1985; Watson 1992), Jerash (Walmsley 1992; *Idem* 1995; Uscatescu 1996; Gawlikowski 2004; Lichtenberger & Raja 2018; *Eadem* 2019), Tell Hisban (Walker 2012), Tall Jawa (Daviau 2010), Deir 'Ain Abata (Grey & Politis 2012), Tiberias (Stacey 2004; stratum IV-V; Stern 2018), Caesarea Maritima (Arnon 2008; stratum VI-VIIIa), Ramla (Tal & Taxel 2008), Jericho (Golofast 2016), Khirbat al-Mafjar (Baramki 1944; Whitcomb 1988) and Baysan / Beth Shean (Bar-Nathan 2011).
- 21 Such as the above-mentioned Moulded Cream Ware, see: Mulder 2014.
- 22 Walmsley 2022, 89.
- 23 Grube 1994, 11.
- 24 For a useful summary of research on Early Islamic ceramics of Jordan and the changes to the regional ceramic wares, see Walmsley 2022.
- 25 Whitcomb 1988, 64-65.
- 26 Al-Sababha 2018, 67.
- 27 Walmsley 2022, 89-90.
- 28 *Ibid.*, 95.
- 29 Walmsley & Grey 2001, 162.
- 30 Schick 1998, 90.
- 31 See Waliszewski 2001; Walmsley & Grey 2001.
- 32 Walmsley 1992, 380.
- 33 See the site's stratigraphy and chronology in Steiner *et al.* 2023, 9-53.
- 34 The project was directed by Hubert de Haas, Edouard LaGro & Margreet Steiner.
- 35 See Steiner & Van der Steen 2008.
- 36 The excavations were directed by Jeannette Boertien, Noor Mulder-Hymans and Margreet Steiner.
- 37 Mokránová 2023.
- 38 In the earlier project, in the western part of the tell, whenever the 'Byzantine period' phases were touched upon, excavations would stop on reaching those levels (LaGro 2002, 382).
- 39 Tsafrir & Foerster 1992.
- 40 *Ibid.*, 18.
- 41 Walmsley 2008, 265.
- 42 The occupation seems to have only again resumed around the 13th-14th century AD (Steiner 2008).
- 43 McNicoll *et al.* 1982, 149; Golofast 2016, 382.
- 44 Taxel 2018b, 57.
- 45 See Mulder 2014, 188.
- 46 Klinger *et al.* 2015.
- 47 The ceramic yields of all excavated squares show that there were six times as many plain sherds as the decorated ones, see Mokránová 2023, fig. 2.
- 48 Romanowska *et al.* 2022.
- 49 For more on the pottery of Tell Abu Sarbut, see Mokránová 2023.
- 50 For examples of Beth Shean production, see: Bar-Nathan *et al.* 2011. Regarding specific quantities of pottery from Tell Abu Sarbut, see Mokránová 2023.



- 51 Bull *et al.* 1991; Stern 1995; Stacey 2004, 125; Arnon 2008, 41.
- 52 Mokránová 2023.
- 53 Baramki 1944, fig. 5:1; Stacey 2004, 138, fig. 5:52.
- 54 For more information on the interpretation of these vessels, see Pradines 2016 as well as contributions by Vroom and Nol in this volume.
- 55 See Mulder 2014 for a comprehensive overview on Moulded Cream wares.
- 56 Walmsley 2007, 54; Holmqvist 2019, 38.
- 57 For an example of the knockoffs of Safavid incised-line blue-and-white wares, see Golombek & Reilly 2014, 32–33.
- 58 While these forms of trade are difficult to trace archaeologically, the existence of peddling activities distributing goods from urban to rural sites in pre-industrial Syria (alongside trade in between rural sites) is attested by several 20th-century ethnographic studies (see Sweet 1960, 135, 146–47; Kamp 2000, 91).
- 59 Formal comparisons between the pottery assemblages from the listed rural sites are not possible since the publications only provide a selection of pottery or, as is the case for Khirbat Faris, the pottery reports are upcoming and thus not yet available.
- 60 Parton 2020.
- 61 *Ibid.*, 153.
- 62 Khalaily *et al.* 2008.
- 63 Taxel & Feldstein 2006.
- 64 Israel *et al.* (1995, 113) interpreted the presence of the lead *bullae* as evidence for the site being part of a deliberate official policy intended to provide goods and services along the caravan route.
- 65 Haiman 1995.
- 66 Shatzmiller 2011, 146.
- 67 Parton 2020, 153.
- 68 A coin hoard, once wrapped in a textile of some sort, was retrieved from an undatable context (H+). Lacking any identifiable attributes, the coins might perhaps be related to the Ayyubid-Mamluk era during which Tell Abu Sarbut was a prosperous industrial site known for its sugar production.
- 69 For instance, Ibn Khaldūn (Ibn Khaldūn, vol. I, 361–62), referring to an earlier source written in the 10th century AD, records that around 135,000 kg of raisins were collected as a tax-in-kind for Palestine. For an overview of Abbasid taxes, see Shatzmiller 2011, table 2.
- 70 Glueck 1951, 311.
- 71 Kaptijn 2009, 322.
- 72 Walmsley 2001, 634.
- 73 For a report on botanical remains from Tell Abu Sarbut, see Van der Steen 2023.
- 74 *Ibid.*



BIBLIOGRAPHY

- Arnon, Y.D. 2008. *Caesarea Maritima, the Late Periods (700-1291 CE)*, Oxford.
- Avni, G. 2014. *The Byzantine-Islamic Transition in Palestine: An Archaeological Approach*, Oxford.
- Baramki, D.C. 1944. The pottery from Khirbat al-Mafjar. *Quarterly of the Department of Antiquities in Palestine* 10, 65-103.
- Bar-Nathan, R. 2011. The pottery corpus, in: R. Bar-Nathan & W. Atrash, *Bet She'an II. Baysān: The Theater Pottery Workshop*, IAA Reports 48, Jerusalem.
- Bull, R.J., E.M. Krentz, O.J. Storvick & M. Spiro 1991. The joint expedition to Caesarea Maritima: Tenth season, 1982, *Bulletin of the American Schools of Oriental Research. Supplementary Studies* 27, 69-94.
- Daviau, P.M.M. 2010. *Excavations at Tall Jawa, Jordan, Vol. 4: The Early Islamic House*, Leiden.
- Franken, H.J. 1969. *Excavations at Tell Deir 'Alla 1: A Stratigraphical and Analytical Study of the Early Iron Age Pottery, with contributions by J. Kalsbeek*, Leiden.
- Gawlikowski, M. 2004. Jerash in early Islamic times, *Oriente moderno* 84.2, 469-76.
- Glueck, N. 1951. *Explorations in Eastern Palestine*, Part IV, Annual of the American Schools of Oriental Research 25-28, Newhaven.
- Golofast, L.A. 2016. Pottery assemblage and the glass finds, in: L. Belyaev (ed.), *Byzantine Jericho: Excavations after a Century*, Moscow, 359-492.
- Golombek, L. & E. Reilly 2014. Safavid society and the ceramic industry, in: L. Golombek, R.B. Mason, P. Proctor & E. Reilly, *Persian Pottery in the First Global Age: The Sixteenth and Seventeenth Centuries*, Leiden, 11-55.
- Grey, D. & K.D. Politis 2012. The Late Antique period: The pottery, in: K.D. Politis & M.J. Beech (eds.), *Sanctuary of Lot at Deir 'Ain 'Abata in Jordan: Excavations 1988-2003*, Amman, 175-204.
- Grube, E.J. 1994. *Cobalt and Lustre: The First Centuries of Islamic Pottery, vol. 9: The Nasser D. Khalili Collection of Islamic Art*, London.
- Haiman, M. 1995. An Early Islamic period farm at Nahal Mitnan in the Negev Highlands, *Atiqot* 26, 1-13.
- Harding, G.L. 1967. *The Antiquities of Jordan*, (1st ed. London 1959), New York.
- Holmqvist, E. 2019. *Ceramics in Transition: Production and Exchange of Late Byzantine - Early Islamic Pottery in Southern Transjordan and the Negev*, Oxford.
- Ibn Khaldūn, *The Muqaddimah: An Introduction to History*, trans. by F. Rosenthal, 3 vols., New York 1958.
- Israel, Y., D. Nahlieli & Y.B. Michael 1995. The Naḥal Shaḥaq site: An Early Islamic settlement in the northern 'Arava, *Atiqot* 26, 1-14 (in Hebrew), 113.

- Kamp, K. 2000. From village to tell: Household ethnoarchaeology in Syria, *Near Eastern Archaeology* 63.2, 84-93.
- Kaptijn, E. 2009. *Life on the Watershed: Reconstructing Subsistence in a Steppe Region Using Archaeological Survey: A Diachronic Perspective on Habitation in the Jordan Valley*, Leiden.
- Kennedy, H. 2016. *The Early Abbasid Caliphate: A Political History*, Abingdon.
- Khalaily, H., M. Avissar, H. Sokolov & G. Bijovsky 2008. Khirbat 'Adasa: A farmstead of the Umayyad and Mamluk periods in northern Jerusalem, *Atiqot* 58, 69-71.
- Khalidi, T. 1984. Tribal settlement and patterns of land tenure in early Medieval Palestine, in: T. Khalidi (ed.), *Land Tenure and Social Transformation in the Middle East*, Beirut, 181-88.
- Khalil, L. & J. Kareem 2002. Abbasid pottery from Area E at Khirbat Yajuz, Jordan, *Levant* 34.1, 111-50.
- Klinger, Y., M. Le Béon & M. Al-Qaryouti 2015. 5000 yr of paleoseismicity along the southern Dead Sea fault, *Geophysical Journal International* 202.1, 313-27.
- Kühnel, E. 1934. Die 'abbāsīdischen Lüsterfayencen, *Ars Islamica* 1.2, 148-59.
- LaGro, H.E. 2002. An Insight into Ayyubid-Mamluk Pottery: Description and Analysis of a Corpus of Mediaeval Pottery from the Cane Sugar Production and Village Occupation at Tell Abu Sarbut in Jordan, *unpublished* doctoral dissertation, University of Leiden, 2002.
- Lancaster, W. & F. Lancaster 1999. *People, Land and Water in the Arab Middle East: Environments and Landscapes in the Bilād ash-Shām*, Amsterdam.
- Lichtenberger, A. & R. Raja (eds.) 2018. *The Archaeology and History of Jerash: 110 Years of Excavations*, Turnhout.
- Lichtenberger, A. & R. Raja (eds.) 2019. *Byzantine And Umayyad Jerash Reconsidered: Transitions, Transformations, Continuities*, Turnhout.
- McNicoll A., H.R. Smith & B. Hennessy 1982. *Pella in Jordan 1: An Interim Report on the Joint University of Sydney and the College of Wooster Excavations at Pella 1979-1981*, Canberra.
- McNicoll, A.W., P.C. Edwards, J. Hosking, P.G. Macumber, A.G. Walmsley & P.M. Watson 1985. Preliminary report on the University of Sydney's seventh season of excavations at Pella (Tabaqat Fahl) in 1985, *Annual of the Department of Antiquities of Jordan* 30, 155-98.
- McPhillips S. 2014. Rural life in Islamic archaeology, in: C. Smith (ed.), *Encyclopedia of Global Archaeology*, New York, 6386-98.
- McPhillips, S. & P.D. Wordsworth (eds.) 2016. *Landscapes of the Islamic World: Archaeology, History, and Ethnography*, Pennsylvania.

- McQuitty, A., H. Parton, A. Petersen, D. Baird, D. Collon, J. Johns & M. Khoury 2020. *Khirbat Faris: Rural Settlement, Continuity and Change in Southern Jordan. The Nabatean to Modern Periods (1st century BC–20th century AD): Volume 1: Stratigraphy, Finds and Architecture*, Oxford.
- Mokráňová, K. 2023. Early Islamic pottery, in: M.L. Steiner, E.J. van der Steen, N. Mulder-Hymans & J. Boertien, *A Village from the Roman and Islamic Periods in the Eastern Jordan Valley: Excavations at Tell Abu Sarbut 2012 - 2015*, BAR Int. Ser. 3155, Oxford, 53-80.
- Mulder, S. 2014. A survey and typology of Islamic Molded Ware (9th–13th centuries) based on the discovery of a potter's workshop at medieval Balis, Syria, *Journal of Islamic Archaeology* 1.2, 143-92.
- Nol, H. 2020. Cities, ribāṭs and other settlement types in Palestine from the seventh to the early thirteenth century: An exercise in terminology, *al-Masāq* 32.3, 243-74.
- Northedge, A. 1992. *Studies on Roman and Islamic Amman I: Site and Architecture*, Oxford.
- Parton, H. 2020. Metal objects, in: A. McQuitty, H. Parton, A. Petersen, D. Baird, D. Collon, J. Johns & M. Khoury (eds.), *Khirbat Faris: Rural Settlement, Continuity and Change in Southern Jordan. The Nabatean to Modern Periods (1st century BC–20th century AD): Volume 1: Stratigraphy, Finds and Architecture*, Oxford, 152-73.
- Petersen, A. 2020. Reflections on the archaeology of Khirbat Faris and rural Jordan, in: A. McQuitty, H. Parton, A. Petersen, D. Baird, D. Collon, J. Johns & M. Khoury (eds.), *Khirbat Faris: Rural Settlement, Continuity and Change in Southern Jordan. The Nabatean to Modern Periods (1st century BC–20th century AD): Volume 1: Stratigraphy, Finds and Architecture*, Oxford, 226-33.
- Pradines, S. 2016. The Sphero-conical vessel: A difficult interpretation between historical sources and archaeology, *Journal of Islamic Archaeology* 3.2, 153-62.
- Romanowska, I., T. Brughmans, P. Bes, S. Carrignon, L. Egelund, A. Lichtenberger & R. Raja 2022. A study of the centuries-long reliance on local ceramics in Jerash through full quantification and simulation, *Journal of Archaeological Method and Theory* 29.1, 31-49.
- Al-Sababha, H.M.H. 2018. Pottery and Communal Identity: Archaeometrical Study of Islamic Ceramic Assemblages in Northern Jordan, *unpublished* doctoral dissertation, University of Bonn, 2018.
- Sarre, F. 1923. *Die Ausgrabungen von Samarra Volume II: Die Keramik von Samarra*, Berlin.
- Sauer, J.A. 1973. *Heshbon Pottery 1971: A Preliminary Report on the Pottery from the 1971 Excavations at Tell Heshbān*, Michigan.

- Schick, R. 1995. *The Christian Communities of Palestine from Byzantine to Islamic Rule: An Historical and Archaeological Study*, Princeton.
- Schick, R. 1998. Archaeological sources for the history of Palestine: Palestine in the Early Islamic period: Luxuriant legacy, *Near Eastern Archaeology* 61.2, 74-108.
- Schick, R. & E. Suleiman 1991. Preliminary report of the excavations of the lower church at El-Quweisma, 1989, *Annual of the Department of Antiquities of Jordan* 35, 325-40.
- Shatzmiller, M. 2011. Economic performance and economic growth in the Early Islamic world, *Journal of the Economic and Social History of the Orient* 542, 132-84.
- Smith, R.H. 1973. *Pella of the Decapolis 1: The 1967 Season of the College of Wooster Expedition to Pella*, Pennsylvania.
- Stacey, D. 2004. *Excavations at Tiberias, 1973-1974. The Early Islamic Periods*, Jerusalem.
- Steiner, M.L., E.J. van der Steen, N. Mulder-Hymans & J. Boertien 2023. *A Village from the Roman and Islamic Periods in the Eastern Jordan Valley: Excavations at Tell Abu Sarbut 2012 - 2015*, BAR Int. Ser. 3155, Oxford.
- Van der Steen, E.J. 2023. Botanical remains, in: M.L. Steiner, E.J. van der Steen, N. Mulder-Hymans & J. Boertien, *A Village from the Roman and Islamic Periods in the Eastern Jordan Valley: Excavations at Tell Abu Sarbut 2012 - 2015*, BAR Int. Ser. 3155, Oxford, 117-23.
- Steiner, M.L. 2008. Tell Abu Sarbut: The occupation of a rural site in the Ayyubid / Mamluk periods, in: M.L. Steiner & E.J. van der Steen (eds.), *Sacred and Sweet; Studies in the Material Culture of Tell Deir 'Alla and Tell Abu Sarbut*, Leuven, 157-96.
- Steiner, M.L. & E.J. van der Steen (eds.) 2008. *Sacred and Sweet; Studies on the Material Culture of Tell Deir Alla and Tell Abu Sarbut*, Leuven.
- Stern, E.J. 1995. An Early Islamic kiln in Tiberias, *Atiqot* 26, 57-59.
- Stern, E.J. 2018. Tiberias, Aviv Hotel: Domestic and industrial pottery from the Abbasid and Crusader periods, *Atiqot* 92, 193-216.
- Sweet, L.E. 1960. *Tell Toqaan, a Syrian village*, Michigan.
- Tal, O. & I. Taxel 2008. *Ramla (South): An Early Islamic Industrial Site and Remains of Previous Periods*, Salvage Excavation Reports 5, Tel Aviv.
- Taxel, I. 2013. Rural settlement processes in central Palestine, ca. 640–800 CE: The Ramla-Yavneh region as a case study, *Bulletin of the American Schools of Oriental Research* 369.1, 157-99.
- Taxel, I. 2018a. Early Islamic Palestine: Toward a more fine-tuned recognition of settlement patterns and land uses in town and country, *Journal of Islamic Archaeology* 5.2, 153-80.

- Taxel, I. 2018b. *Fragile Biography: The Life Cycle of Ceramics and Refuse Disposal Patterns in Late Antique and Early Medieval Palestine*, Leuven.
- Taxel, I. & A. Feldstein 2006. Khirbet Ibreica: A rural settlement in the southeastern Sharon Plain, *Salvage Excavation Reports* 3, 40-68.
- Tsafrir, Y. & G. Foerster 1992. The dating of the 'earthquake of the sabbatical year' of 749 C.E. in Palestine, *Bulletin of the School of Oriental and African Studies* 55.2, 231-35.
- Tushingham, A.D. 1972. The excavations at Dibon (Dhiban) in Moab: The third campaign 1952-53, *Annual of the American Schools of Oriental Research* 40, 6-26.
- Uscatescu, A. 1996. *La Cerámica del Macellum de Gerasa (Yaras, Jordania)*, Madrid.
- Waliszewski, T. 2001. Céramique byzantine et protoislamique de Khirbet edh Dharih (Jordanie du Sud), in: E. Villeneuve & P. Watson (eds.), *La céramique byzantine et proto-islamique en Syrie-Jordanie (IV^eme–VIII^eme siècles apr J-C)*, Beirut, 96-106.
- Walker, B.J. 2012. The Islamic age, in: J.A. Sauer & L.G. Herr (eds.), *Ceramic Finds: Typological and Technological Studies of the Pottery Remains from Tell Hesban and Vicinity*, Michigan, 507-94.
- Walker, B.J. 2021. Peasants, rural economy, and cash crops in medieval Islam, in: J.C.M. García (ed.), *Markets and Exchanges in Pre-Modern and Traditional Societies*, Oxford, 91-114.
- Walmsley, A.G. 1987. The Administrative Structure and Urban Geography of the Jund of Filasṭīn and the Jund of al-Urdunn: The Cities and Districts of Palestine and East Jordan during the Early Islamic, 'Abbāsid and Early Fāṭimid Periods, *unpublished* doctoral dissertation, University of Sydney, 1987.
- Walmsley, A.G. 1988. Pella/Fihl after the Islamic conquest (AD 635-c. 900): A convergence of literary and archaeological evidence, *Mediterranean Archaeology* 1, 142-59.
- Walmsley, A.G. 1992. Fihl (Pella) and the cities of north Jordan during the Umayyad and Abbasid periods, in: M. Zaghoul & K. 'Amr (eds.), *Studies in the History and Archaeology of Jordan, Vol. IV: Sites and Settlement in Jordan*, Amman, 377-84.
- Walmsley, A.G. 1995. Tradition, innovation, and imitation in the material culture of Islamic Jordan: The first four centuries, in: K. 'Amr, M. Zaghoul & F. Zayadine (eds.), *Studies in the History and Archaeology of Jordan, Vol. V: Art and Technology throughout the Ages*, Amman, 657-68.
- Walmsley, A.G. 2001. Restoration or revolution? Jordan between the Islamic conquest and the Crusades: Impressions of twenty-five years of archaeological research, *Studies in the History and Archaeology of Jordan, Vol. VII: Jordan by the Millennia*, Amman, 633-40.
- Walmsley, A.G. 2005. The village ascendant in Byzantine and Early Islamic Jordan: Socio-economic forces and cultural responses, in: J. Lefort, C. Morrisson & J.-P.

- Sodini (eds.), *Les villages dans l'Empire byzantin, IVe-XVe siècle* (Réalités byzantines), Paris, 511-22.
- Walmsley, A.G. 2007. *Early Islamic Syria: An Archaeological Assessment*, London.
- Walmsley, A.G. 2008. Households at Pella, Jordan: Domestic destruction deposits of the mid-8th c., *Late Antique Archaeology* 5.1, 239-72.
- Walmsley, A.G. 2022. The Early Islamic period (Umayyad, Abbasid, Fatimid), in: J. Haron & D.R. Clark (eds.), *The Pottery of Jordan: A Manual*, Amman, 89-107, 151-56.
- Walmsley, A.G. & A.D. Grey 2001. An interim report on the pottery from Gharandal (Arindela), Jordan, *Levant* 33.1, 139-64.
- Watson, P. 1992. The Byzantine period: Byzantine domestic occupation in Areas III and IV, in: A. McNicoll, H.R. Smith & B. Hennessy (eds.), *Pella in Jordan 1: An Interim Report on the Joint University of Sydney and the College of Wooster Excavations at Pella 1979-1981*, Canberra, 163-81.
- Whitcomb, D. 1988. Khirbet al-Mafjar reconsidered: The ceramic evidence, *Bulletin of the American Schools of Oriental Research* 271.1, 51-67.
- Whitcomb, D., 1992. Reassessing the archaeology of Jordan of the Abbasid period, in: M. Zaghoul & K. 'Amr (eds.), *Studies in the History and Archaeology of Jordan, Vol. IV: Sites and Settlement in Jordan*, Amman, 385-90.
- Winnet, F. & W. Reed 1964. *The Excavations at Dibon (Dhiban) in Moab: The First and Second Campaigns (1950-1952)*, Amman.





FIG. 1 – An overview of the southern Levant and the sites discussed in this work (K. Mokránová & Tell Abu Sarbut Project).



FIG. 2 – A low tell of not more than 7m in height rises only slightly above the surrounding agricultural fields. View of Tell Abu Sarbut to the west (Tell Abu Sarbut Project).

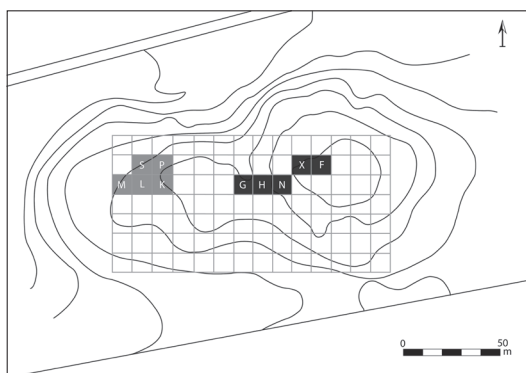


FIG. 3 – Plan of Tell Abu Sarbut depicting the location of the trenches for each of the respective archaeological field-works. The late 20th century excavations (light grey squares) took place in the western part of the Tell, whilst the 2010s works (dark grey squares) focused on the eastern part (K. Mokránová & Tell Abu Sarbut Project).



FIG. 4 – A bread oven, so-called tannūr, was found in an excellent state of preservation in Courtyard D dating to the 8th century AD (Tell Abu Sarbut Project).



FIG. 5 – Early Islamic floors of Building E Phase 4 shown here inlaid with the reused early Roman sherds (Tell Abu Sarbut Project).

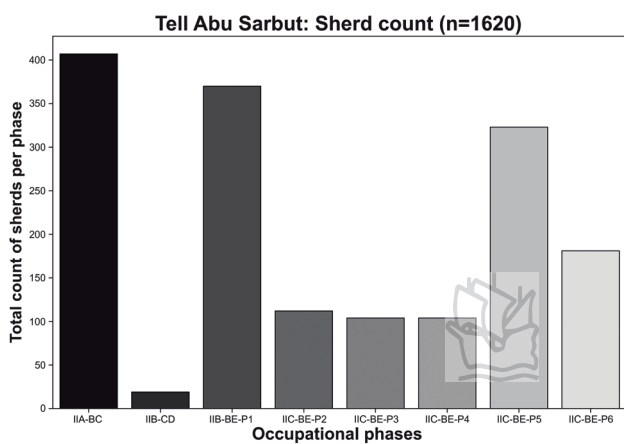


FIG. 6 – A graph showing the sherd count broken down per occupational phase of Tell Abu Sarbut in the Early Islamic period. In total 1620 diagnostic sherds were collected during the 2010s excavations from Stratum IIA, IIB and IIC (K. Mokránová & Tell Abu Sarbut Project).

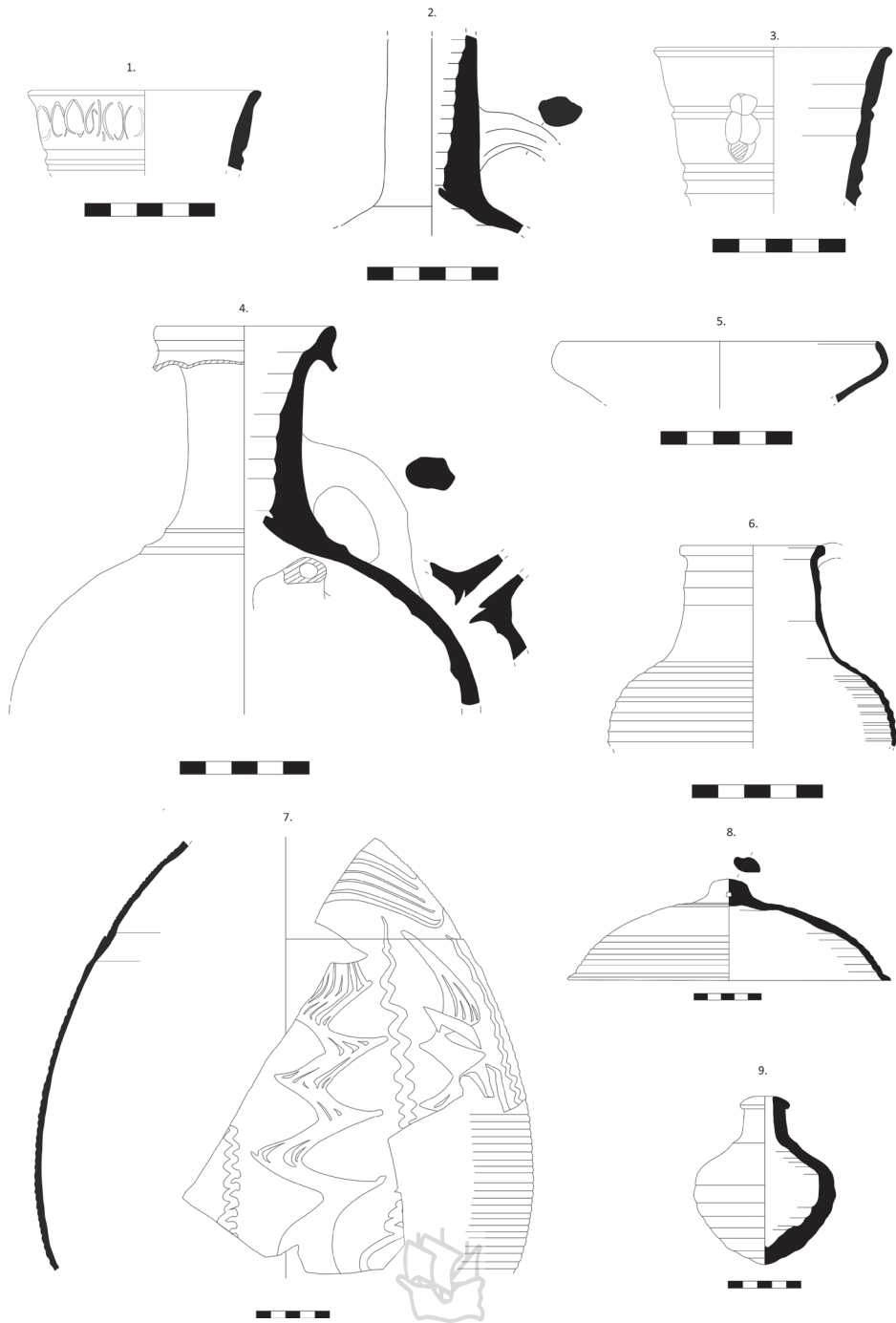


FIG. 7/8 – A selection of Early Islamic pottery from Tell Abu Sarbut (K. Mokránová & Tell Abu Sarbut Project).

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*

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FIG. 1 – Qanat shafts near Ma'an, APAAME_20070419_FFR-0136 (Photography: F. Radcliffe, APAAME).

FIG. 2 – Map of main sites mentioned in the introduction (H. Nol).

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FIG. 1 – Map of the Vega of Granada, showing the archaeological sites mentioned in the text (J. Rouco Collazo).

FIG. 2 – Known shapes of the ceramic type *olla* in the Vega of Granada between 650 and 925 (not to scale. All vessels have a volume between 2 and 3 litres) (J.C. Carvajal López. *Olla* S: M. Jiménez Puertas & Á. González Escudero).

FIG. 3 – Known shapes of great containers in the Vega of Granada between 650 and 925 (not to scale, relative sizes are approximate) (J.C. Carvajal López).

FIG. 4 – Known shapes of other forms introduced in the Islamic period in the Vega of Granada, between 650 and 925 (not to scale, relative sizes are approximate) (J.C. Carvajal López).

FIG. 5 – Diagram explaining the relation between the lines of flight (territorialisation) of one assemblage T and the topography (coding) of another assemblage S in stratification with T (J.C. Carvajal López).

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FIG. 1 – Fleur-de-lys blazon in an inscriptional register, Glazed Relief bowl from Tall Ḥisbān Citadel storeroom (University of Bonn project archives).

FIG. 2 – Inscriptional 'mistakes' on Glazed Relief bowls from Tall Ḥisbān (N. Oezdilmac, University of Bonn).

FIG. 3 – Distribution of Egyptian Barracks Sgraffito Ware, excavated finds in southern Syria (L. Pinchetti, University of Cologne).

FIG. 4 – Glazed Relief Ware bowl with in-turned rim, from Tall Ḥisbān Citadel storeroom (N. Oezdilmac, University of Bonn).

FIG. 5 – Distribution of Glazed Relief Ware, excavated finds in southern Syria (L. Pinchetti, University of Cologne).

- 1 – Acre; 2 – ‘Afūla; 3 – ‘Ayn Kārim; 4 – ‘Ayn Shams; 5 – ‘Azariyya (Bethany); 6 – Baysān; 7 – Damascus; 8 – Dāmiya; 9 – Dhibān; 10 – Dusaq; 11 – Fayfā; 12 – Giv’at Dani; 13 – Hama; 14 – Hebron; 15 – Ḥisbān; 16 – Jaffa; 17 – Jerusalem (Old City); 18 – Karak; 19 – Khirbet Beit Mazmil; 20 – Khirbet Birzeit; 21 – Lajjun; 22 – Mā‘anit; 23 – Melabes; 24 – Nahal Yattir; 25 – Nāsira/Nazareth; 26 – Ramla; 27 – Safad; 28 – Shobak; 29 – Tabaqat Fahl (Pella); 30 – Tall Abu Qādān; 31 – Tall al-Mutassalim; 32 – Tall Nimrīn; 33 – Tawāḥīn al-Sukkar; 34 – Zir‘īn.
- FIG. 6 – Distribution of sites with both Egyptian Barracks Sgraffitos and Glazed Relief Wares (L. Pinchetti, University of Cologne).
- FIG. 7 – Tall Ḥisbān on the Madaba Plains (D. Sherwin, Andrews University).
- FIG. 8 – Aerial photo of Tall Ḥisbān (B. Bewly, Aerial Photographic Archive for Archaeology in the Middle East).
- FIG. 9 – Mamluk Governor’s ‘palace’ in Ḥisbān Citadel (Andrews University project archives, 1970s).
- FIG. 10 – Floor plan of Field O farmhouse complex, Tall Ḥisbān (N. Pini, Université libre de Bruxelles).
- FIG. 11 – Glazed Relief Ware bowls from Tall Ḥisbān with inscriptional faults, in *nāskhī* script (N. Oezdilmac, University of Bonn).
- FIG. 12 – Rim of a Glazed Relief Ware bowl from Tall Ḥisbān, with non-heraldic inscription (A. Thamnopoulou, University of Bonn).
- FIG. 13 – Egyptian Barracks sgraffito sherds from Ḥisbān Citadel midden (A. Thamnopoulou, University of Bonn).
- FIG. 14 – Egyptian Barracks Ware sgraffito sherd and firing tripod with petrographic match (S. Kassem, University of Bonn).
- FIG. 15 – Petrographic thin-section photos, Egyptian Barracks Ware (left) and tripod (right) compared (University of Bochum).
- FIG. 16 – Possible Egyptian Barracks Ware (slip-painted) sherds from village middens, Tall Ḥisbān (N. Oezdilmac and A. Thamnopoulou, University of Bonn).
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ELENA SALINAS

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JOANITA VROOM

- FIG. 1 – Map of Ephesus, indicating the Artemis Temple and the Ayasoluk Hill (in red circles). The photo right below shows the remains of the Artemis Temple in the front and the Isabey Mosque and Ayasoluk Hill in the back (Map: öai; photo: J. Vroom).
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HAGIT NOL

- FIG. 1 – The research area (H. Nol).
- FIG. 2 – Nodes with Early Islamic remains in Ramla (H. Nol).
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KATARÍNA MOKRÁNOVÁ & MARGREET L. STEINER

- FIG. 1 – An overview of the southern Levant and the sites discussed in this work (K. Mokranova & Tell Abu Sarbut Project).
- FIG. 2 – A low tell of not more than 7m in height rises only slightly above the surrounding agricultural fields. View of Tell Abu Sarbut to the west (Tell Abu Sarbut Project).
- FIG. 3 – Plan of Tell Abu Sarbut depicting the location of the trenches for each of the respective archaeological fieldworks. The late 20th century excavations (light grey squares) took place in the western part of the Tell, whilst the 2010s works (dark grey squares) focused on the eastern part (K. Mokranova & Tell Abu Sarbut Project).
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VALENTINA VEZZOLI

- FIG. 1 – Geographical map illustrating the main centres of the region (V. Vezzoli).
- FIG. 2 – Approximative location of the discussed survey programs (V. Vezzoli).
- FIG. 3 – Plan of the Bustan Nassif area in Baalbek (H. Lehmann, C. Schreiber & O. Tziagidis).
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- FIG. 6 – Slip Painted Ware and Incised Ware (DAI – Deutsches Archäologisches Institut).
- FIG. 7 – Slip Painted Ware (V. Vezzoli).
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- FIG. 9 – Unglazed ware: jars and jugs (DAI – Deutsches Archäologisches Institut).

PETER M.M.G. AKKERMANS, MEREL L. BRÜNING
& AHMAD ALGHIZAWAT

- FIG. 1 – Map of Jordan showing the location of the Jebel Qurma region and the main sites mentioned in the text (Map: Jebel Qurma Project Archive).

- FIG. 2 – Landscape of Jebel Qurma. Basalt-covered table mounds and plateaus alternate with sandy gravel plains, cut by erosion gullies and wadis (P. Akkermans, Jebel Qurma Project Archive).
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- FIG. 4 – Large stone-walled Mamluk-period enclosure at the site of QUR-372 (P. Akkermans, Jebel Qurma Project Archive).
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- FIG. 7 – The small and highly rudimentary Mamluk-period mosque at the site of QUR-162, with (in brown) the *qibla* wall and its *mihrab*, made of basalt boulders. Opposite the *mihrab*, Arabic inscriptions RA27 and RA28 (M. Brüning, Jebel Qurma Project Archive).
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- FIG. 14 – A basalt boulder with two similar inscriptions (RA444) at the site of QUR-2 (P. Akkermans, Jebel Qurma Project Archive).
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- FIG. 16 – Inscription RA416 at the site of QUR-2 (P. Akkermans, Jebel Qurma Project Archive).
- FIG. 17 – Inscription RA27 in the small, rudimentary mosque at the site of QUR-162 (P. Akkermans, Jebel Qurma Project Archive).
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- FIG. 19 – Late Medieval pottery from various sites in the Jebel Qurma region (M. Brüning and T. Vijgen, Jebel Qurma Project Archive).
- 1-4 – hand-made vessels; 5-11 – wheel-made ceramics; 12-13 – Chinese Blue-on-White Porcelain.
- FIG. 20 – Fragments of Late Medieval glass bangles from various sites in the Jebel Qurma region (M. Brüning, Jebel Qurma Project Archive).

IRINI BIEZEVELD & BLEDA S. DÜRING

- FIG. 1 – Overview of the sites mentioned in the text. Note the Wādī al-Jizzī corridor in the mountain range, providing a natural passage from Buraymī to Şuḥār (after Google Maps).
- FIG. 2 – The upper part of the Falaj al-Mu'tariḍ and the location of WAJAP-site 1, 18, and 65 (after Bing).
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*

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- [p. 69] – Painted bag-shaped storage jar/amphora of the Early Islamic period, ca. 9th century, found at Tell Arbu Sarbut, Jordan (photo: Tell Abu Sarbut Project).
- [p. 155] – Detail of inscription RA 416 with incised horseman found at the site of QUR-1, Jebel Qurma Project, Jordan (photo: P. Akkermans; Jebel Qurma Project Archive).
- [p. 351] – Painted bag-shaped storage jar/amphora of the Early Islamic period, ca. 8th century, found at Tell Arbu Sarbut, Jordan (photo: Tell Abu Sarbut Project).





*Painted bag-shaped storage jar/amphora of the Early Islamic period, ca. 8th century,
found at Tell Arbu Sarbut, Jordan (photo: Tell Abu Sarbut Project).*

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