

Finger-impressed jar handles at Khirbet Qeiyafa: new light on administration in the Kingdom of Judah

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Excavations at Khirbet Qeiyafa in 2007–13 revealed an extraordinary number of finger-impressed jar handles of the Iron Age. They are classified into six types and their geographical and chronological distributions examined. Although some excavators define them as potter's marks, this is not the case. It is also clear that the number of impressions is not related to the jars' capacity. This paper attempts to understand the finger-impressed handles as part of the Judean tradition of stamped jar handles, and we suggest that they may be a precursor of the LamMeLeKh (LMLK) jars and a marker of administration in the early Iron Age IIA. The impressed jar handles are indicative of a major change in political organization, from Bronze Age Canaanite city states to Iron Age nation states.

Keywords jar handles, Khirbet Qeiyafa, administration, LMLK jar, Judah

Introduction

In the Late Bronze Age the political landscape of the Levant was characterized by what are often interpreted as 'city states', each controlling a rather limited territory around a central settlement. The Amarna archive of the 14th century BC illuminates this situation and provides a vivid picture of this era. After political turmoil and destruction of main centres at the end of 13th and early 12th century BC (Rainey and Notley 2006: 104), the Bronze Age Canaanite city-state system was replaced by a new social and ethno-political structure (Mazar 1990: 295). Later in the Iron Age II, parts of the Levant were characterized by political units that controlled territories that were more extensive than those associated with individual Late Bronze Age city states. Polities of this kind were founded west (Israel, Judah), and east of the River Jordan (Ammon, Moab, Edom) and formed the Aramaic Kingdoms

of Syria (Ahlström 1982; Joffe 2002; Routledge 2000). We might expect the new political order to have had implications for the administration of these kingdoms. The best-known example of this is the royal (LMLK) stamped jars of the 8th century BC. In this paper we suggest that the phenomenon of impressed jar handles related to administrative practices that had originated in the Kingdom of Judah by the early 10th century BC. In this early phase, the handles were marked by simple finger impression. Later, more official marks with formalized texts or images were used. We argue that the marking of the jars indicated that they were royal property, thus enabling better control of their distribution, recycling of the jars after use, and the prevention of corruption.

Although finger-impressed jar handles have occasionally been reported from archaeological sites, the subject has so far escaped the attention of most excavators.¹ In some cases finger-impressed jar

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¹This paper focuses only on impressed jar handles. For different types of markings on pottery, see the following: an incised 'X' on cooking pots (Maier 2010); punctures, reed impressions and incisions in the Samaria region in the Iron Age I (Cohen 2008); incisions of different types on cooking pots in the Iron Age I (Ben-Tor *et al.* 2005: 311–12, fig. II.36); an epigraphic seal-impressed jar handles (Keel and Mazar 2009). In addition,

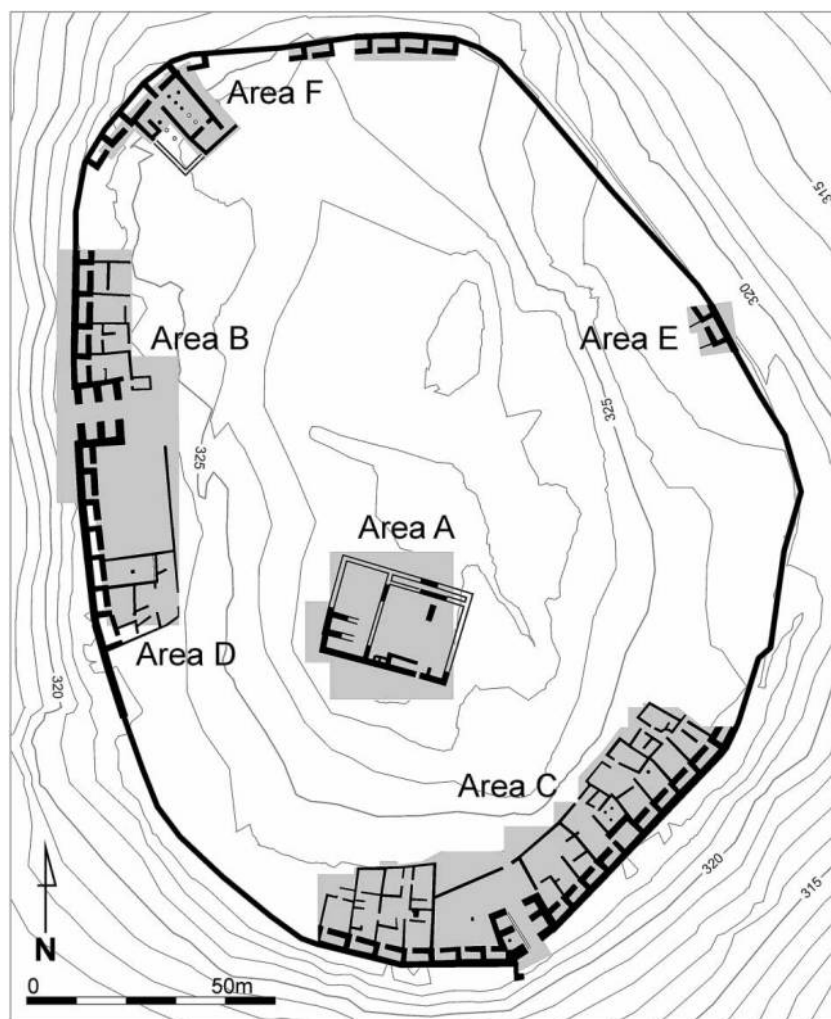


Figure 1 Plan of excavated areas at Khirbet Qeiyafa.

handles were simply not collected, and in others they were not considered worthy of study and publication. They are occasionally mentioned in the texts of excavation reports but not shown in the figures, for example at Sahab (Ibrahim 1978: 117) and Tel 'Ira (Beit-Arieh 1999: fig. 6.79:3). Until recently, excavated sites have not provided any statistical data on the subject and as a result the following discussion must be based only on the limited corpus of published examples. Clearly, these impressions were made during the production process, i.e., prior to firing, and so were a deliberate choice on the part of the potter, which implies that they had some functional significance.

Khirbet Qeiyafa is located *c.* 30 km south-west of Jerusalem in the core area of the early biblical

finger-impressed handles on other forms such as cooking pots, kraters, jugs and even bowls are not treated in this paper (see below). At Khirbet Qeiyafa, a single impressed jug handle has been found thus far; all the other impressions appear exclusively on storage vessels, either jars or pithoi.

Table 1 Numbers of impressed jar handles found in different areas of Khirbet Qeiyafa 2007–10

	Areas					Total
	Area A	Area B	Area C	Area D	Area E	
No.	2	128	137	63	7	337
Percentage	0.6%	38.0%	40.6%	18.7%	2.1%	100%

Kingdom of Judah. An Iron Age city, 2.3 ha in area, was constructed on bedrock and surrounded by massive fortifications of megalithic stones. During seven seasons of excavation, carried out 2007–13, six areas of the site (Areas A–F) were examined, with over 25% of the city uncovered. The expedition excavated the city wall, two gates, two gate piazzas, a pillar building (a small stable?) and 10 houses (Fig. 1). The city came to an end in a sudden destruction, as indicated by hundreds of restorable pottery vessels, stone utensils and metal objects left on the

Table 2 Numbers of impressed jar handles found in different areas of Khirbet Qeiyafa 2011–13

	Area A	Area C	Area D	Area F	Total
2011	20 (all in Type A1)	162 (Type A1: 149, Type A2: 10, Type A3: 2, Type B1: 1)	52 (Type A1: 50, Type A2: 2)	–	234
2012	14 (all in Type A1)	78 (Type A1: 73, Type A2: 3, Type A3: 1, Type B1: 1)	–	9 (all in Type A1)	101
2013	12 (Type A1: 11, Type A2: 1)	–	–	9 (all in Type A1)	21
Total	46	240	52	18	356

floors of the houses. The city is dated by 10 radiometric dates to *c.* 1020–980 BC (Garfinkel and Ganor 2009; Garfinkel *et al.* 2012a; 2012b).

At Khirbet Qeiyafa, 693 impressed handles were recovered from the six different areas in the course of seven excavation seasons conducted from 2007 to 2013 (Tables 1, 2). The present paper has two purposes:

- (1) to classify them by type and present their typological characteristics, the frequency of occurrence of each type and their geographical distribution;
- (2) to offer a discussion of the cultural, functional and historical significance of this corpus.

Impressed jar handles from Khirbet Qeiyafa

Definition of the impressions

Although impressed jar handles have previously been referred to as thumb impressions, the present study shows that these indentations were produced using not only the thumb, but also the forefinger or middle finger. The widely varying shapes, depths and sizes clearly indicate that they were not all impressed by the same person. Closer examination reveals that in some cases the shape of the indentation is hemispherical and cannot have been produced by a human digit; perhaps a round-ended tool of some kind was utilized. The sections of certain broken handles clearly show that they were impressed by such a rounded tool.

Characteristics of the impressed jar handles from Khirbet Qeiyafa

The finger-impressed handles from Khirbet Qeiyafa are unique in the following characteristics.

Firstly, their number: 693 impressed handles were found in six different areas during the 2007–13 excavation seasons. 48 handles were discovered in Area A, 128 in Area B, 377 in Area C, 115 in Area D, 7 in Area E and 18 in Area F (Tables 1, 2). The ratio of impressed handles to the other pottery found in each area is generally similar and varies only in proportion to the size of each excavated area. A conservative estimate, based on the proportion of the site

excavated so far, suggests that the remaining built-up area of the city, if excavated, would yield around 1200 additional impressed jar handles. Despite the lack of comparable statistical data from other sites, this remains a remarkable quantity. If we compare this with the total corpus of LMLK jars, around two thousand examples from almost eighty sites, such a volume from a single site is quite outstanding.

Secondly, at Khirbet Qeiyafa impressed handles are found almost entirely on jars or pithoi, although a very few exceptions appear on a jug and a krater. At other sites, they are seen on numerous vessel types: cooking pots², kraters³, jugs⁴ and even bowls⁵. Similarly, only a certain percentage of the storage jars recovered has impressed handles (Kang and Garfinkel 2009: figs 6.23:2–4, 8–9). That the impressions are found only on storage vessels, but that some jars lack such impressions, argues against their interpretation as potter's marks (contra Yadin *et al.* 1961: Pl. CCXIII:12–13; Zuckerman 2012). All of the Khirbet Qeiyafa wares, apart from the Ashdod Ware, were produced from the same local clay (Ben-Shlomo 2009). If these handle impressions were potter's marks, it would be difficult to explain why only some storage jars, and no other ceramic types, were so indicated.

Thirdly, another unusual characteristic of the Khirbet Qeiyafa corpus is the complete absence of incised handles⁶. Incised potter's marks are well

²Yoque'am (Ben-Tor *et al.* 2005: fig. II.27:19, Photo II.15), Kadesh Barnea 3 and 2 (Cohen and Bernick-Greenberg 2007: pls 11.81:9, 11.136:9–12), Jericho (Kenyon and Holland 1983: fig. 24:9).

³Hazor (Yadin *et al.* 1961: pl. CCXXI:2), a Megiddo Iron Age I tomb (Guy 1938: pl. 39:5) and Beth Shean S-3a (Panitz-Cohen and Mazar 2009: pl. 49:12).

⁴Tell Beit Mirsim Tomb 500 (Ben-Arieh 2004: fig. 2.54:59), Kadesh Barnea 3 and 2 (Cohen and Bernick-Greenberg 2007: pl. 11.136:14), Tell el-'Umeiri (Herr *et al.* 2002: fig. 4.27), Dor (Gilboa 2001: pl. 5.57:8).

⁵Ashdod Iron Age I (Dothan and Freedman 1967: fig. 27:12), Tel 'Eton II (Zimhoni 1997: fig. 4.1:11).

⁶Incised handles, formerly interpreted as potter's marks, first appear in the 4th millennium BC in the ancient Near East at Ayalirini (Bikai 1984) and continuously in the Early Bronze Age at Tell Abu el-Kharaz (Fisher 2008: 391–98), Bab edh-Dhra, Numayra and Jericho (Lapp 1995). Incised marks have been found very frequently in other regions on Early Bronze Age pottery, mainly holemouth jars and pithoi but also occasionally other types (bowls, jugs or juglets): Tel Kabri (Kempinski 2002: fig. 5.9:1–9, 10–11?), Tel Harasim (Givon 1993: figs. 13:3, 14:9?, 15:1, 16:13), a Megiddo tomb (Guy 1938: pls 6:12–13, 14?, 7:5), Tell el-Hesi (Petrie 1891: pl. V:48–50), Arad (Amiran 1978: pl. 112:1–11), Tel 'Ira (Beit-Arieh 1999: fig. 6.9:4, 6–7), Jericho (Kenyon 1960: figs 9–11, 13; Kenyon

known in the Iron Age; they were incised either before or after firing (Ben-Tor *et al.* 2005: 310–12) and they continued to appear in later periods as well (Nadelman 1989). At some sites incised handles were found alongside impressed ones; for example, Tel Yoqne‘am, the site closest to Khirbet Qeiyafa in its abundance and variety of impressed handles, yielded various types of incised handle marked either with an ‘x’ or with mere lines alongside its impressed handles. At Khirbet Qeiyafa we have recovered only impressed handles.

Fourthly, Khirbet Qeiyafa has, thus far, yielded six different types of impressed handle, classified by the number of impressions and their position on the handle. In Type A only one handle is impressed, in Type B both of two handles present are impressed and in Type C each of four handles is impressed (Figs 2, 3). Sub-types are described as follows.

Types of the impressed jar handles

Type A-1 (Fig. 2:1) designates storage jars with a single impression appearing on the upper part of the handle. The orientation of the impression is sometimes aligned with the axis of the handle, and in other examples perpendicular to it. The depth of the impression also varies widely, being in some cases very shallow (*c.* 1.5 mm) and in others deep (3–5 mm); the maximum depth of impression is *c.* 7 mm. It is also notable that even in impressions of similar depth there are variations in size, suggesting that a number of potters with fingers of different sizes took part in the production process. The extent of variation suggests that the number of potters involved was greater than in a typical household industry and probably reflects a workshop industry mode

and Holland 1983: figs 38:13, 82:12, 1983: figs 148:9, 158:27) and Yarmouth (de Miroschedji 1988: pls 26:6–9, 31:9–11, 36:1–2, 39:5, 7, 9–11, 41:10, 44:13–14). They are defined as potter’s marks by the excavators. In the Middle Bronze Age, Jericho yielded several potter’s marks found in the settlement as well as in tombs (Kenyon 1965: figs 178:4, 224:1; Kenyon and Holland 1983: fig. 159:3; 1983: figs 172:7, 189:3, 202:2). An incised ‘X’ was found in Area R at Tel Beth Shean (Mazar and Mullins 2007: pls 6:37, 34:3) as well as at Tell Apeh (Beck 2000: fig. 8.16:11–12?). In addition, the tombs of Tell Beit Mirsim yielded potter’s marks (Ben-Arieh 2004: figs 2.2:15, 2.3:18, 2.24:49, 2.26:53). Interestingly, three latter marks, originating in two different tombs (7 and 33), are almost identical to the Hebrew shin, suggesting that there was a formal mark at Tell Beit Mirsim in the MB II. In the Late Bronze Age, potter’s marks are rare, at Beth Shean VII (James and McGovern 1993: figs 11:1, 14:11–12, 24:4–5, 29:4), Tel Yin’am XIA (Liebowitz 2003: fig. 35:11) and Tel Batash IX–VIII (Panitz-Cohen and Mazar 2006: pls 18:10, 22:5–8, 26:3, 29:3, 36:1–2), and in tomb contexts at Megiddo (Guy 1938: pl. 61:7), Deirel-Balah (Dothan 1979: fig. 15) and Tell Beit Mirsim (Ben-Arieh 2004: fig. 2.44:131). It is interesting that the last item is of *Bucchero* Ware, a Cypriote LB II import. The incised potter’s mark appears throughout the Iron Age: ‘IzbetSartah III (Finkelstein 1986: fig. 9:1), Tel Batash IVB–II (Mazar and Panitz-Cohen 2001: pls 1:22, 17:6, 59:15, 65:9, 66:8, 88:4, 95:3–4), Lachish III (Zimhoni 1997: figs 5.6:4,6, 5.15:2), Horbat Rosh Zayitla-I (Gal and Alexandre 2000: 133), Beth Shean S-4, S3a (Panitz-Cohen and Mazar 2009: pls 28:9, 30:8; 51:11) and Tel ‘Ira VI (Freud 1999: fig. 6.62:18).

(van der Leeuw 1976: Table 14; cf. Arnold 1985: 225–31; Wood 1990: 34). Type A-1 is found on storage jars ranging in size from small to regular, which suggests that the handle impressions are not related to the vessel capacity.

Type A-2 designates storage jars on which one of the two handles bears a double impression. This type is subdivided into Type A-2a, on which the impressions are positioned one beside the other (Kang and Garfinkel 2009: fig. 6.24:16–18), and Type A-2b, on which they sit one above the other (Kang and Garfinkel 2009: fig. 6.24:20). In the case of Type A-2b, the upper impression is positioned close to the upper joint of the handle with the body, while the lower one is slightly above the middle of the handle and is generally smaller and shallower. There is no reason to associate the markings with vessel capacity, as a single small storage jar bears double impressions (Fig. 2:3) while some of the double-impressed jars are relatively large (fig. 2:4; Kang 2012: fig. 5.28:7). Double impressions of Type A-2b appear at either the top or bottom of the handle, but not in the middle.

Type A-3 designates a storage jar with three impressions in a horizontal row across one of its handles. In addition to a single handle of this type from an unrestored vessel reported previously (Kang and Garfinkel 2009: fig. 6.24:21) a second example has been recovered from Area C and, although its rim and base are missing, it appears to belong to a triple-impressed handle (Fig. 2:5).

Type B-1 designates jars with two handles each bearing a single impression. Interestingly, at Khirbet Qeiyafa this type is seen on a pithos with a capacity of around 44 litres, almost double that of a regular jar (Kang and Garfinkel 2009: fig. 6.23:6). However, other examples found in Area A (Kang 2012: figs 5.1:6–7), Area B (Fig. 2:6–7) and Area C (Fig. 2:8) are from storage jars of regular capacity.

Type B-2 is a storage jar on which each of the two handles has a different number of impressions. During the 2010 season, a restorable jar was found in Area D (Fig. 4); two handles were collected, one with a single impression and the other with two. Although the jar has yet to be restored, these handles most probably belong to the same jar.

Finally, Type C-1 designates a four-handled jar on which each handle has a single impression. This type was discovered in Area B in 2010 (Locus 416, Basket 970); although one handle is missing, all of the other three each bear a single impression (Fig. 2:9).

Thus, Khirbet Qeiyafa has six types of impressed handles over all. No other site has revealed all of

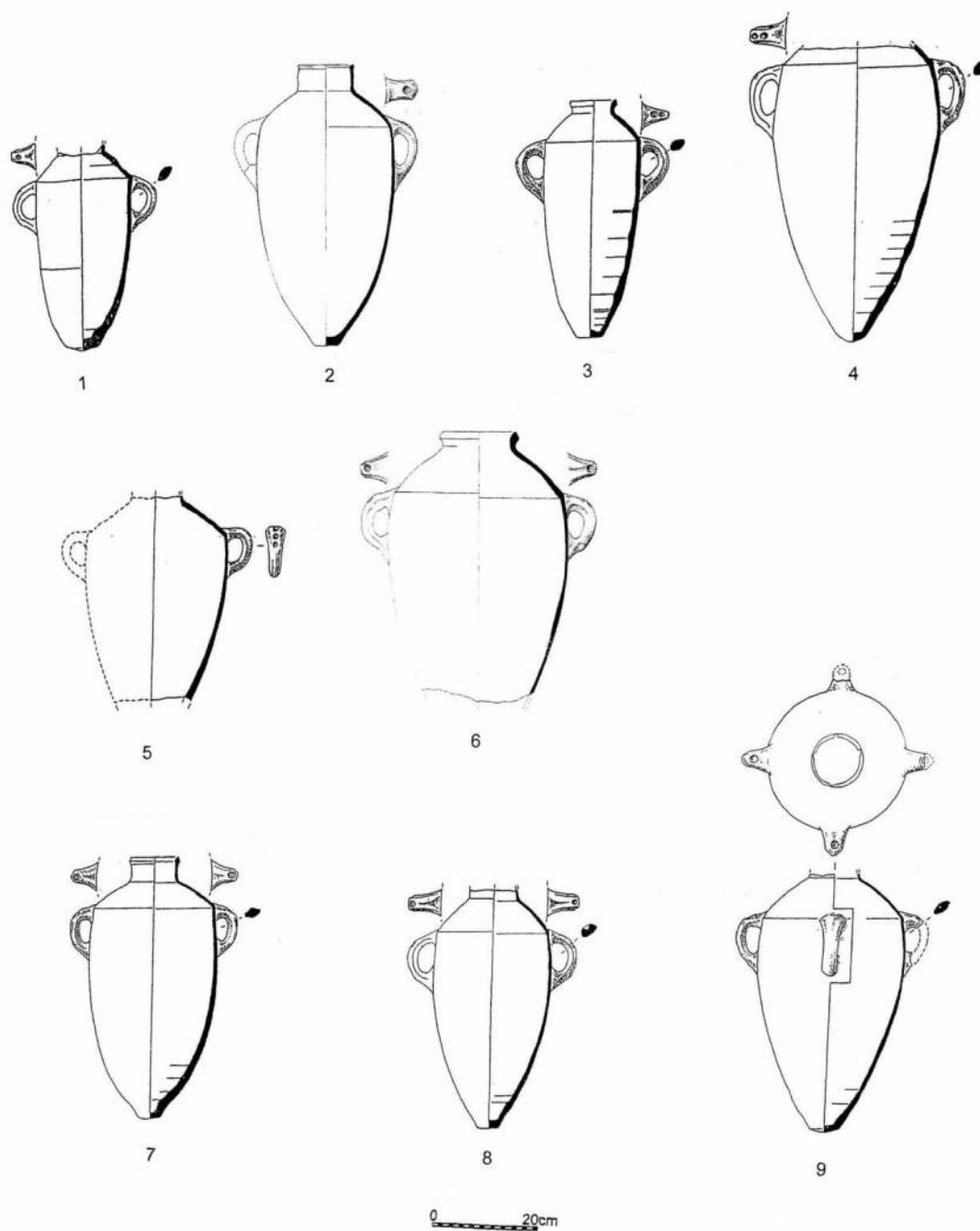


Figure 2 Typology of finger-impressed jar handles at Khirbet Qeiyafa.

these types, although Tel Yoqne'am is the closest, as it exhibits four types from A-1 through A-3 and B-1.

Frequency, geographical and chronological distribution of types

The relative numbers of these different types seem to be significant; 653 of the total of 693 impressed handles were of the most common Type A-1, which makes up nearly 95% of the total corpus; 28 examples of Type A-2 with double impressions were found,

slightly over 4%, and only five examples of Type A-3, four of Type B-1, and one each of Types B-2 and C-1 (Table 3). The diminishing quantities of the types seem to express a hierarchy, possibly indicating that different types designated to whom the storage jars should be given, perhaps according to a specific social status or function.

Type A-1 has the widest geographical distribution, as well as being the most frequent type, with numerous parallels reported from Sarepta in Phoenicia to



Figure 3 Selected examples of finger-impressed jar handles.

Kuntillet 'Ajrud in the Negev⁷. Examples appear at Sarepta and Tyre in Phoenicia, Dan and Hazor in Upper Galilee, 'En Hagit and Tel 'En Zippori in Lower Galilee, Tell Keisan and Horbat Rosh Zayit in the Acco Plain. There are two regional

⁷Galilee: Dan V (Ilan 1999: pl. 21:3), Hazor XI?, IX-X, IX (Yadin *et al.* 1961: pls CCIII:22, CCXIII:12-13) and an Iron Age I pit in the renewed excavations (Ben-Ami 2003: fig. 5:8), 'En Hagit (S. Wolff, pers. com.), 'En Zippori (Dessel 1999: fig. 12); Akko Plain: Tell Keisan 13 and 10 (Burdajewicz 1994: pls 11:15; 26:22-23), Horbat Rosh Zayit IIB-IIa (Gal and Alexandre 2000: figs III.74:19, III.92:6); Jordan and Beth Shean Valleys: Yoqne'am XVII-XV, XIV and XIIb (Ben-Tor *et al.* 2005: figs I.12:9, I.16:8, I.47:12-13, I.54:7, I.61:21, I.69:9, I.83:15), Megiddo VI, V, III-II and I (Lamon and Shipton 1939: pls 41:1, 9, 24; 42:49-50; Finkelstein *et al.* 2000: fig. 11.4:6; Finkelstein *et al.* 2006: figs 13.62:6, 15.2:1), a Megiddo tomb (Guy 1938: pl. 13:13), Tel Kedesh IV (Stern and Beit-Arieh 1979: fig. 11:2), Afula IIIB-IIIa (Dothan, 1955: figs 11:3, 29, 32; 16:25, 27), Taanach IA, IB, IIB (Rast 1978: figs 4:5, 6:2, 10:12-14, 32:4), Tel Jezreel (Zimhoni 1997: fig. 2.10:1, 4), Beth Shean VII, S-4 and 4 (James and McGovern 1993: fig. 45:8; Panitz-Cohen and Mazar 2009: pl. 27:4; Yadin and Geva 1986: fig. 30:1), Tel Rehov D 4-5, VII-IV, I (A. Mazar, pers. com.); Sharon Plain: Dor I/II (Gilboa 2001: pls 5.53:9, 5.61:6), Tell Mevorakh VIII-VII (Stern 1978: figs 20:10, 16:15, 17), Joppa (Fantalkin and Tal 2008: fig. 6:18); Judean Highlands: Bethel (Kelso 1968: pl. 40:2, 7), Tell el-Ful II (Lapp 1981: pl. 48:4), Jerusalem City of David, fill of Str. 14B (De Groot and Bernick-Greenberg 2012: fig. 5.10:6), Jerusalem, Ophel (Mazar, 2011: 132, nos 26-27), Beth Zur Iron Age I or IIA (Sellers 1933: fig. 30); Negev: Beersheba IX (Herzog 1984: fig. 19:1) and II (Aharoni 1973: pl. 70:19), Tel Masos I (Givon 1996: fig. 12:13), Nahal Boker (Cohen and Cohen-Amin 2004: fig. 8:5), Kadesh Barnea 4c, 3, 2 (Cohen and Bernick-Greenberg 2007: pls 11.136:14; 11.136:15-16), Tel 'Ira (Beit-Arieh 1999: fig. 6.153:1), Kuntillet 'Ajrud (Ayalon 2012: fig. 7.6:5). Shephelah: Gezer VIII (UG-2, Holladay 1990: fig. 11:30), Tel Batash VIII? and V (Panitz-Cohen and Mazar 2006: pls 29:5?, 79:5), Tel Beth Shemesh III (Grant and Wright 1938: pl. XL:11), Khirbet Qeiyafa (Kang and Garfinkel 2009: figs 6.23:1, 5, 7, 10, 6.24:5, 19, 6.36-39), Lachish VIIB-VIIA, VIIA and VI (Yannai 2004: figs 19.23:3, 19.39:5, 19.49:7) and IV (Zimhoni 1997: fig. 3.46:6), Tel 'Eton (Zimhoni 1997: fig. 4.7:11; Katz and Faust 2011: fig. 9:5, 7); Philistia: Deir el-Balah III (Iron Age I, Dothan and Brandl 2010: pl. 62:22-23), Ashdod XIII and XI (Dothan and Ben-Shlomo 2005: figs 3.6:19, 3.60:1-2), Tell es-Safi A4 (Zuckerman 2012: pls 13.8:14, 13.8:15), post-Str. A4 (Zuckerman 2012: pl. 13.9:10), pre-Str. A3 (Zuckerman 2012: pl. 13.11:17-18); unknown provenance: three impressed jar handles in the pottery collection of the Institute of Archaeology, Hebrew University of Jerusalem.

concentrations: one in the Jezreel and Beth Shean Valleys (Yoqne'am, Megiddo, Afula, Taanach, Tel Qadesh, Beth Shean and Tel Rehov) and the other in the Shephelah (Gezer, Tel Miqne, Tel Batash, Tel Beth Shemesh, Tell es-Safi, Khirbet Qeiyafa, Lachish and Tel 'Eton). The extent of the geographical gap between these two regions is surprising; in the area between Tel Mevorakh, Tel Qadesh and Tel Rehov in the north and Gezer, Bethel, Tell el-Ful, Jerusalem and Tell el-'Umeiri in the south, not a single example has been reported so far. This gap will be discussed below.

Type A-2 occurs at fewer sites⁸. One example comes from Tyre in Phoenicia. The Jezreel and Beth Shean Valleys and the Shephelah maintain their tradition of impressed handles. At most sites double impressions are placed horizontally one next to the other across the handle; examples are found at Dan, Hazor, 'En Hagit, Tel 'En Zippori, Megiddo, Tel Mevorakh, Tel Qasile, Tel Ashdod, Tell es-Safi and Beth Zur. At only two sites, Khirbet Qeiyafa and Tyre, are double impressions placed vertically along the handle's axis.

⁸Qasile X (Mazar 1985: fig. 48:3), Ashdod XV (Dothan and Freedman 1967: fig. 18:10), Megiddo VIA (K-4) (Finkelstein *et al.* 2006: figs 13.55:4, 13.62:7, 13.70:4) and V (Lamon and Shipton 1939: pls 20:120, 42:31, 47-48), Tel Rehov VII and I (A. Mazar, pers. com.), Dor late Iron Age IA (Gilboa 2001: pl. 5.4:1), late Iron Age IB (Gilboa 2001: pl. 5.33:11, 21-22?), Iron Age I/II (Gilboa 2001: pl. 5.61:4), Dan V (Ilan 1999: pl. 26:1), Tel Mevorakh VII (Stern 1978: fig. 16:16), Tyre XIII-1 (Bikai 1978: pl. XXXVI:2), Hazor, unstratified but dated to MB II-LB I by the excavators (Yadin *et al.* 1961: pl. CCXLV:17), 'En Hagit (S. Wolff, pers. com.), Tel 'En Zippori (Dessel 1999: fig. 12), Bethel (Kelso 1968: pl. 1), Beth Zur Iron Age I or IIA (Sellers 1933: fig. 30), Tell es-Safi A4 (Zuckerman 2012: pl. 13.7:22).

Table 3 Impressed jar handles by type

Type	Number of impressed jar handles	%
A-1	654 (Area A: 46, Area B: 118, Area C: 354, Area D: 111, Area E: 7, Area F: 18)	94.37
A-2	28 (Area A: 1, Area B: 7, Area C: 17, Area D: 3)	4.04
A-3	5 (Area B: 1, Area C: 4)	0.72
B-1	4 (Area A: 1, Area B: 1, Area C: 2)	0.58
B-2	1 (Area D: 1)	0.14
C-1	1 (Area B: 1)	0.14
Total	693	100

Table 4 Types of impressed jar handles by periods

Type	MB/LB	LB	IA I	IA IIA	IA IIB	IA IIC
A-1	○	○	○	○	○	○
A-2	○	–	○	○	–	–
A-3	–	–	○	○	–	–
B-1	–	–	○	○	–	–
B-2	–	–	○	○	–	–
C-1	–	–	–	○	–	–

Type A-3 is less common, appearing at Yoqne'am, Megiddo, Tel Rehov, Beth Zur, Jerusalem (G. Gilmour, pers. com.⁹), Tel Masos and Khirbet Qeiyafa. With the exception of Khirbet Qeiyafa, handles from all of these sites bear the triple impressions arranged vertically along the handle, or in a triangle.

Type B-1 has been found at only four sites. At Yoqne'am XVII (Ben-Tor *et al.* 2005: I.15:5) and Tell el-'Umeiri (Herr *et al.* 1997: fig. 4.18) the type was found in Iron Age I contexts (to date, there is no example of this type in earlier periods). Tel Rehov is the only site other than Khirbet Qeiyafa that has yielded this type in an Iron Age IIA context, with an example from Str. V, dated to the second half of the 10th century BC (A. Mazar, pers. com.).

Type B-2 is very rare. Like Type B-1, both handles are impressed, but whereas Type B-1 has a single impression on each handle, on Type B-2 one handle has a single impression and the other a double impression. No parallels to the single example from Khirbet Qeiyafa have been found so far, other than from Megiddo Stratum K-4 (Finkelstein *et al.* 2006: fig. 13.62:7).

Type C-1 is unique Khirbet Qeiyafa: we know of no parallels.

⁹My thanks to G. Gilmour, who informed me that object No. PEF 171 found in the PEF 1923–25 expedition to Jerusalem is an Iron Age II jar handle with triple finger (?) impressions horizontally impressed, although no stratigraphic information is available. See also Yoqne'am Str. XVII, XV and XIV (Ben-Tor *et al.* 2005: figs I.47:14, I.55:24, II.36:3), Beth Zur II, 11th century BC (Sellers *et al.* 1968: 6–7, 44–53), Megiddo V (Lamon and Shipton 1939: pl. 42:46, 52), Tel Rehov VI (A. Mazar, pers. com.), Tel Masos II (Fritz and Kempinski 1983: pl. 153:8).

Chronologically (cf. Table 4), the tradition of impressed handles starts during the Middle Bronze Age, as demonstrated by a handle found in Beth Shean Phase R-5, which is dated to the MB IIB. An example from Hazor, although unstratified, is dated to the MBA or LB I (Fig. 5). Examples appear in LBA contexts at five or six sites, extending from Sarepta in the north to Lachish in the south (Fig. 6). Impressed handles appear continuously from the Middle Bronze to the Late Bronze Age at Beth Shean and at Lachish from Strata VIIIB to VI: that is until the last phase of the Late Bronze Age.

In the Iron Age I impressed handles become more common (Fig. 7), with their numbers increasing to almost threefold those of the previous period. They are absent, however, from sites in the central highlands such as Shechem, Shiloh, Tell en-Nasbeh and Giloh, with the exception of examples from Beth Zur and Bethel, both of which may be dated to Iron Age I or IIA. It is also worth noting that impressed handles have been found on collared-rim jars only at 'En Hagit in Cisjordan (S. Wolff, pers. com.) and in small numbers at sites in Transjordan such as Sahab (Ibrahim 1978: 117) and Tall el-'Umeiri (Clark 1997: figs 4.16–4.18; 2002: figs 4.18–4.21; London 2011: fig. 4). It is also noteworthy that impressed handles begin to appear at Negev sites such as Beersheba and Tel Masos in this period.

During the Iron Age IIA, the popularity of impressed handles continues, with finds concentrated at sites in the Jezreel and Beth Shean Valleys. Only a few examples have been reported from Jerusalem and the nearby site of Motza. In the Judean Shephelah finger-impressed handles were found not only at Khirbet Qeiyafa, but also on the survey of nearby Socho (Hasel and Garfinkel, pers. com.) and Tel Azeka (Lipschits, pers. com.). Sites in the Negev such as Tel Masos (Givon 1996: fig. 12:13), Nahal Boker (Cohen and Cohen-Amin 2004: fig. 8:5) and Kadesh Barnea (Cohen and Bernick-Greenberg 2007: pl. 11.136:14) also reveal impressed handles during this period (Fig. 8). In contrast to the situation in Iron Age I, during Iron Age IIA the tradition of impressed handles appears more common in the south than in the north.

The number of sites with impressed handles declines in the Iron Age IIB to five¹⁰, the same number as in the

¹⁰Even though final reports of some sites are not published yet, they are found in clear Iron Age IIB contexts, either in a destruction layer that is stratigraphically well defined (for example, Tel Kedesh Stratum IV, Stern and Beit-Arieh 1979: 5–9; Tel Eton, Katz and Faust 2011: figs 7–12). The others were uncovered in clear Iron Age IIB loci (for example, Tel Kadesh-Barnea locus 801, Cohen and Bernick-Greenberg 2007: 109–10 and Plan 7; Tel Beersheba locus 25, Aharoni 1973: 35–36, pl. 94).



Figure 4 Smashed storage jar of Type B-2 from Area D, Locus 2298 (photograph courtesy of area director Dr M. Hasel). Note the double-impressed handle *in situ*, directly below the arrow.

Late Bronze Age, with the addition of Kuntillet 'Ajrud to previous sites (Fig. 9). This decrease continues in the Iron Age IIC with only two sites maintaining the tradition, Kadesh Barnea and Tel 'Ira, both in the Negev (Fig. 10).

A plot of their chronological distribution (Fig. 11) shows that impressed jar handles make their first appearance at the end of the Middle Bronze Age, increase in the Late Bronze Age and reach a numerical peak during the Iron Age I and IIA (12th to 9th centuries BC). They then decline sharply in the Iron Age IIB and IIC.

Understanding impressed jar handles in longue durée

In Canaan, Philistia and the Kingdom of Israel the systematic use of storage jars with impressed handles was unknown: we view this as a Judean practice. The concept of storage jars as indicators of an early taxation system is well attested in Judah by a long tradition that includes the LMLK jars of the 8th century BC (Barkay and Vaughn 2004; Garfinkel 1985; Ussishkin 2004). Later, jars with rosette stamps appeared in the 7th century BC (Cahill 1995; Koch and Lipschits 2010; Yellin and Cahill 2004). After the fall of the Judean kingdom, this administrative concept continued into the Persian period with the Gibeon inscribed jar handles of the 6th century BC (Cross 1962; Pritchard 1960), the 'lion' and *msh* impressions of the 6th–5th centuries BC (Ariel and

Shoham 2000: 140–44; Stern 1971) and the *yhd* impressions of the 5th–4th centuries BC (see, for example, Ariel and Shoham 2000: 146–55; Lipschits and Vanderhooft 2009). Finally, jars of the Hellenistic period stamped with a five-pointed star should be mentioned (Ariel and Shoham 2000: 161–63; Bocher and Lipschits 2013).

We suggest that the nearly 700 impressed jar handles of the Iron Age IIA found at Khirbet Qeiyafa ought to relate in some way to this long-lasting Judean tradition¹¹. During Iron Age IIA the finger-impressed type was the only form of standardized marked jar for which there is evidence, so if a system of administratively managed storage jars existed at Khirbet Qeiyafa during this period, those with finger-impressed handles are the most plausible candidates.¹² Of course, this suggestion cannot be proven absolutely until we find jars with impressed handles bearing clear indications of a connection with an administration, such as a royal inscription, or a demonstrable connection between the impressed jars of the Iron Age IIA and the LMLK jars of the subsequent period. There is currently no evidence for the first of these, although we have some indirect evidence for the latter, as explained below.

Kuntillet 'Ajrud locus 73, Ayalon 1995: fig. 2; Meshel 2012: 43, figs 2.12, 2.48).

¹¹For the arguments in favour of Khirbet Qeiyafa as a Judean site (see Garfinkel and Ganor 2009: 12–15, 243–57; Kang 2012: 204–11).

¹²It is obviously beyond the scope of this chapter to deal with the full range of issues concerned with administration (literacy, weights, seals, etc.; see Ahlström 1982; Kletter 1998; Keel and Mazar 2009). It is limited to the administrative use of storage jars, a well-known tradition of the later Judean administration.



Figure 5 Distribution of finger-impressed jar handles in the Middle Bronze Age.

A possible connection between the finger-impressed jars of Khirbet Qeiyafa in the Iron Age IIA and LMLK jars is found in the stylistic continuity between the Khirbet Qeiyafa vessels and LMLK jars. This is expressed in two distinct aspects: typology

and production. Recently scholars have defined a 'pre-LMLK' storage jar type dated to the 9th century BC (Gitin 2006; Shai and Maeir 2003). Some of the storage jars found in clear Iron Age IIA contexts at Khirbet Qeiyafa show much the same



Figure 6 Distribution of finger-impressed jar handles in the Late Bronze Age.

typological characteristics as these ‘pre-LMLK’ jars (Kang and Garfinkel 2009: 144, fig. 6.24:9); the simple rim and inclined neck are almost identical, not only with ‘pre-LMLK’ jars, but also with fully fledged LMLK jars from Tel Beersheba Str. IV, Tell

es-Safi Str. A3 and Tel Lachish Str. III (Gitin 2006: figs 1:2–3, 2:8).

Provenance study of the LMLK jars has indicated that they were manufactured in a single central pottery workshop (Mommsen *et al.* 1984), while



Figure 7 Distribution of finger-impressed jar handles in the Iron Age I.

petrographic analysis (Ben-Shlomo 2009) suggests that even though a few of the jars with impressed handles from Khirbet Qeiyafa appear to have been made in the southern Shephelah, most of them were produced somewhere in the central Shephelah close to the site.

We suggest that this argues for a tradition of centralized production of administrative jars continuing from the Iron Age IIA to IIB. As our knowledge of the 9th century BC in Judah is quite limited, it is not clear how long the finger-impressed jars were in use,



Figure 8 Distribution of finger-impressed jar handles in the Iron Age IIA.

although it seems logical to suggest that their production would have continued until they were

superseded by the new system of LMLK jars. While it is well known that the LMKL jars were extensively

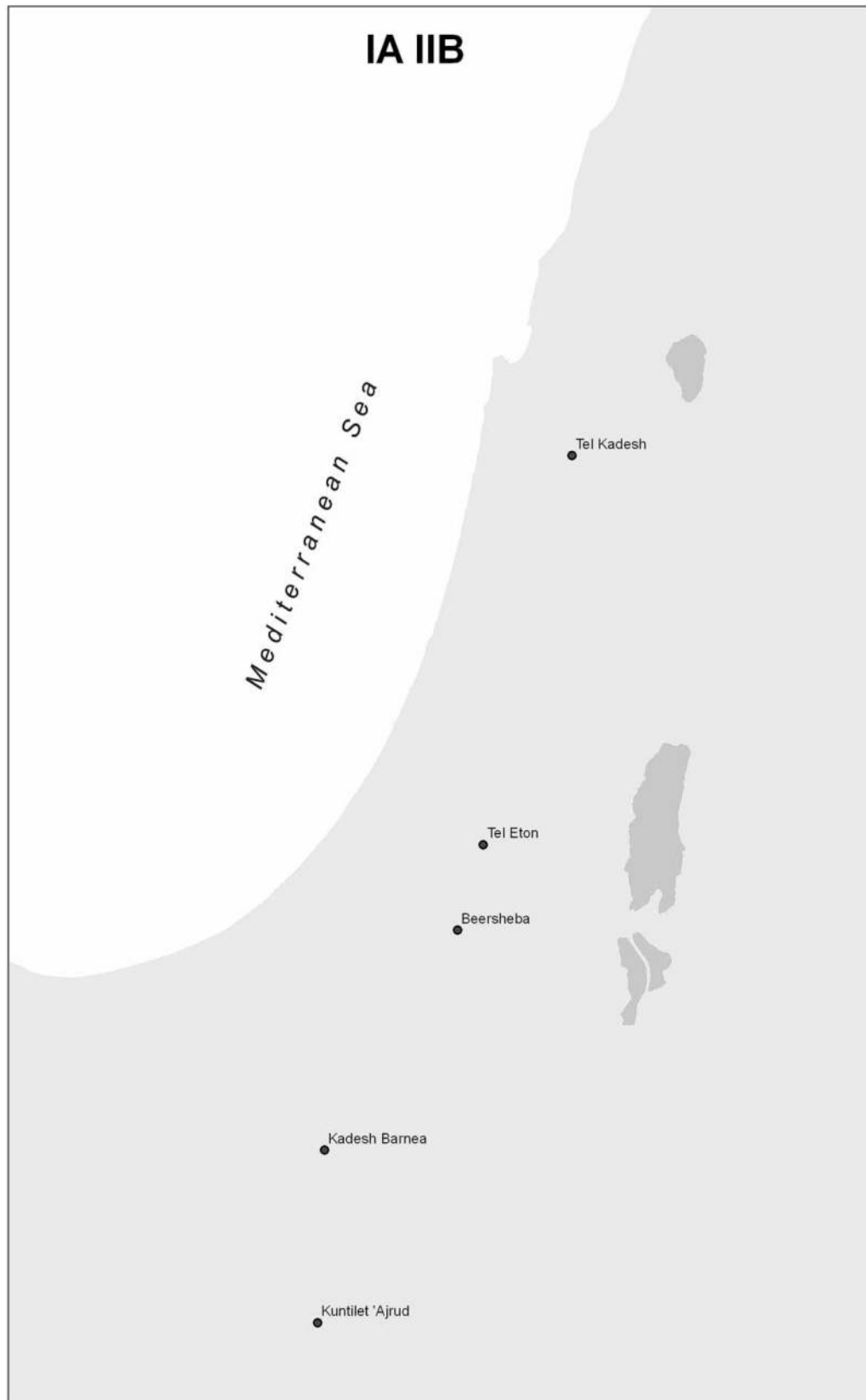


Figure 9 Distribution of finger-impressed jar handles in the Iron Age IIB.

used in Judah before 701 BC, it is, however, less clear when this system was introduced.

The most obvious difference between the LMLK jars and the finger-impressed jars is the nature of the



Figure 10 Distribution of finger-impressed jar handles in the Iron Age IIC.

markings on the handle. Although some inscriptions are known during the Iron Age IIA in Judah, such

as those from Eshtemoa (Renz 1995: 65–66), Beth Shemesh (Bunimovitz and Lederman 1997: 48), Tel

Batash Str. IVA (Mazar and Panitz-Cohen 2001: pl. 6:3) and Khirbet Qeiyafa (Misgav *et al.* 2009), together with the Arad ostraca from Str. XII and XI (Renz 1995: 44–47), the Kingdom of Judah did not initiate the use of inscribed seal impressions on jar handles before the advent of the LMLK storage jar¹³. It is worth noting that a recently excavated assemblage of over 180 stamped clay sealings from the City of David in Jerusalem, dated to the early 8th or late 9th century BC (i.e., prior to the likely introduction of LMLK inscriptions), has produced no evidence for writing (Reich *et al.* 2007).

There are a number of inscribed storage jar handles from sites in the Kingdom of Israel such as Samaria, Tel Dan, Tel Bethsaida and Tel Dothan. Although inscriptions were already current in the Northern Kingdom in the 10th and 9th centuries BC (Mazar and Ahituv 2011; Renz 1995), inscribed handles on storage jars begin to appear only in the 9th century BC¹⁴. It is significant that these originate from contexts earlier than those of the LMLK jars. A jar handle with an upside-down seal impression on its uppermost part discovered at Tel Dothan has six characters in two lines, '(belonging) to *šmryw* (Shemaryau)'. On the basis of palaeographic and typological considerations, it is dated to the first half of the 8th century BC (Barkay 2005). Another inscribed jar handle impression from Locus 929 in Area C of Tel Bethsaida, destroyed by Tiglath-pileser III in 733/732 BC (Brandl 2009: 142), displays the name *zkryw* (Zekaryau) without a *lamed* ('belonging to') prefix; interestingly, another impression with an identical name was found in Tel Dan in a destruction context of the 8th century BC (Biran 1994: 15, fig. 1–14; Brandl 2009: 138). Lastly, an enigmatic seal-impressed jar handle from the Str. P-7 Locus 28641, in Building

28636 in Area P of Beth Shean, displays at least 10 characters inside a rectangular frame and was dated earlier than 732 BC by the excavators (Mazar 2006: 511–12). We might speculate that these seal-impressed jar handles may have served as a catalyst for the appearance of the LMLK jar handle in Judah.

In chronological terms, the practice of seal-impressed jar handles may have been the precursor of the LMLK jar handles in the late 8th century BC (Barkay 2005: 172), an opinion with which Brandl (2009: 142) concurs. In Judah, the evidence of finger-impressed jar handles on a LMLK-type jar found at Tel 'Eton, but lacking LMLK seals, might lead us to assume that the use of finger impressions predates that of the LMLK seal on jar handles. Although the excavators suggest that the Iron Age IIB destruction layer should be dated to the end of the 8th century BC (Katz and Faust 2011; contra Zimhoni 1997), it is possible that the destruction layer at Tel 'Eton actually preceded Lachish Str. III¹⁵.

It is argued that the two-winged disc, or four-winged beetle, is probably inspired by the Assyrian model in the late 8th century BC, when the Kingdom of Judah had a direct or indirect relationship with Assyria (Millard 1972; Ornan 2005). However, the idea of the seal-impressed jar handle such as those on the LMLK jars could well indicate influence from the Northern Kingdom. This is borne out by the fact that (1) seal impressions with personal names do not appear in Judah prior to the LMLK phase and (2) the 'to PN' seal impression appears prior to the LMLK phase only in the north.

Royal administrative activities are well attested in the Iron Age southern Levant, as in Moab and northern Israel in the 9th century BC, as attested, for example, by the Mesha Stele (as noted by Ahlström 1982). We argue that the settlement of Khirbet Qeiyafa was constructed according to a centralized plan during the early Iron Age IIA (Garfinkel and Kang 2011; contra Finkelstein and Piasezky 2010; Singer-Avitz 2010; 2012). In our view, the design and positioning of the gates, the size of the casemates and the enclosing walls all reflect a centralized concept (the two gates are almost identical). We interpret these features as indicating that the city-building

¹³Epigraphic Israelite seal impressions are found as early as the Iron Age I. At Tel Shiloh, a lion-motif impression on a jar handle was discovered in Locus 1322, Area C, Stratum V, a clear Iron Age I context (Finkelstein *et al.* 1993: 215–16). The well-known Shema seal from Megiddo, bearing the same lion motif with the inscription '(belonging) to Shema, servant of Jeroboam', though it lacks a clear archaeological context, could date from the reign of Jeroboam II (782–742 BC/784–748 BC, contra Ussishkin 1994). Along with the impressed jar-handles discussed below, it appears that inscribed impressions were used in the Kingdom of Israel prior to the LMLK phase.

¹⁴The northern tradition of epigraphic seal impressions on jar handles first appeared in the late 10th through to 9th centuries BC, as shown by six rectangular impressions found at Tel Rehov. Two were found in Str. IV, two in Str. V, and the other two outside an Iron Age context (Keel and Mazar 2009). It is notable that these impressions were utilized only to mark handles of 'hippo' jars; they probably indicate some kind of administrative system at the site. In chronological perspective, despite the fact that there is one exceptional seal from Revadim dated to Iron Age I or IIA (Avigad and Sass 1997: 400, No. 1067), the above finds could be a *terminus post quem* for the use of inscribed seal impressions in the Northern Kingdom, i.e., no tradition of inscribed seal impression on jar handles is found prior to 830 BC (Avigad and Sass 1997: 64*–66*). This point is relevant to discussion of the existence of administration in the Kingdom of Israel, for it is unreasonable to argue from the lack of inscribed seal impressions like LMLK jar handles that there was no administration in the period of Omri and Ahab.

¹⁵In new excavations directed by A. Faust, two levels attributed to the Iron Age IIB were discerned in Area A. Level A3 is characterized by a few installations (F1107, F1099 and F1187) above the A4 destruction layer (Faust 2011: 203–04) and the pottery types show parallels with Lachish IV as well as Lachish III. In addition, the predominant surface treatment is red slip with hand burnish rather than wheel burnish (Katz and Faust 2011: 270). All of these indicate, in our opinion, that this level predates the destruction of Lachish III by Sennacherib.

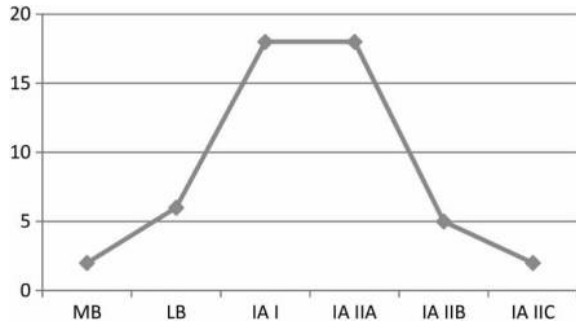


Figure 11 Number of sites that have produced finger-impressed jar handles: Middle Bronze Age to Iron Age.

process was initiated and controlled by a central authority.

In addition, spatial analysis has demonstrated regularity in the distribution of vessels. Apart from those buildings that had been disturbed by later occupation, each contained the following; one baking tray, two or three cooking pots, seven or eight bowls, four to six jugs and at least ten storage jars. This pattern is reflected in each building: Room G in Building C1, Room G in Building C3, Room H in Building C4, and Rooms G, I and K in Area C (Fig. 12). The same phenomenon is seen in Area B, where Buildings B1 and B2 revealed 12 and 15 storage jars, respectively; jars with impressed handles appear consistently in every house. Such a regular distribution of impressed jars suggests that they were not arbitrarily

placed there by individual householders, but rather distributed or controlled by a particular authority, such as a governor or ruler of the city.

On the basis of the above evidence, we infer that finger-impressed jars fulfilled an administrative function in Iron Age IIA. We believe that this role was superseded by the advent of the seal-impressed LMLK jar in the Iron Age IIB. The result was a rapid decline in finger-impressed jars during the Iron Age IIB and C, as seen in Fig. 11.

Data relevant to this matter were recovered at the site of Motza, located in a prominent position above the Soreq Valley, 7 km west of Jerusalem. In this area the valley is wider than usual, providing hundreds of hectares of flat, fertile alluvial soil. This is the closest large-scale agricultural land to Jerusalem and must have been the main source of food for the nearby city.

In advance of planned development, a salvage excavation was conducted at the site in the early years of the present century. Four layers are dated to the Iron Age II: Layer VII to the 10th century BC, Layer VI to the 9th century BC, Layer V to the 8th century BC and Layer IV to the 7th and early 6th centuries BC (Greenhut and de Groot 2009). Throughout this sequence the site functioned as an important administrative centre, as indicated by the numerous large, rounded, stone-lined silo pits with a

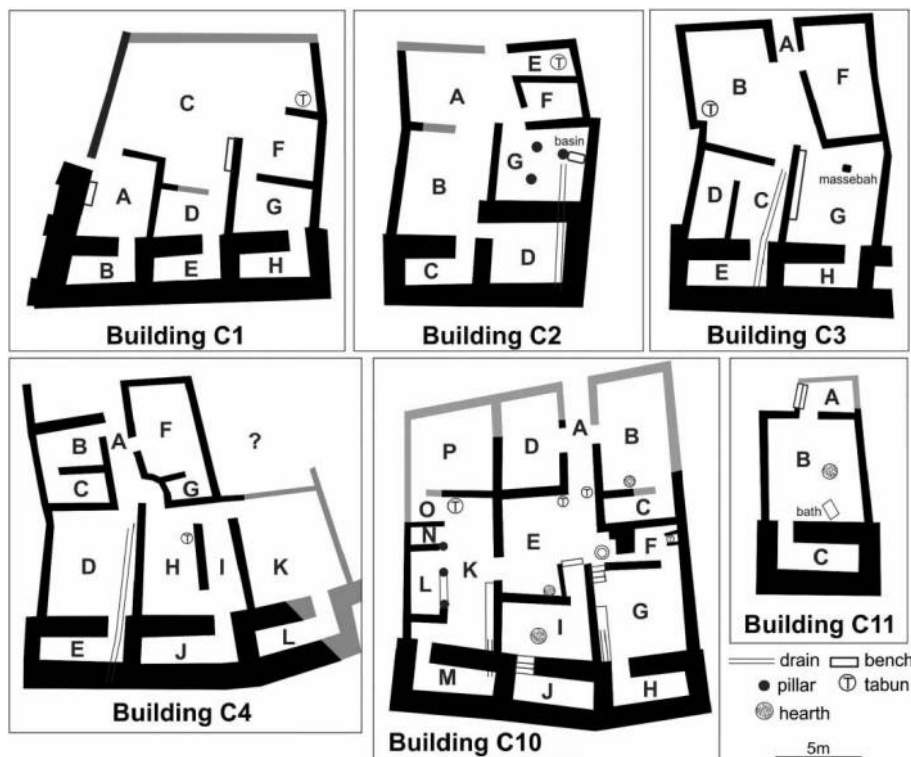


Figure 12 Iron Age buildings in Khirbet Qeiyafa, Area C.

storage capacity of hundreds of tons of grain. The finds included seals and storage jar handles bearing various impressions: finger impressions in the earlier layers, royal (LMLK) impressions in the 8th century BC and rosette impressions in the final Iron Age layer. This has clear implications for our interpretation of the impressed jar handles at Khirbet Qeiyafa, and the answer may relate to the particular geopolitical circumstances prevalent in the Shephelah during the transitional Iron Age I–IIA period.

The historical environment of Khirbet Qeiyafa

At the end of the Iron Age I, the Philistine cities of Tell Qasile and Ekron were destroyed, with Ekron reduced to an area of only 5 ha. Mazar and Panitz-Cohen (2001: 278) suggested that in contrast to Ekron, Ashdod grew from 8 to 20 ha during the 10th century BC. However, we are inclined to think that the shrinking of Ekron is related to the expansion of Tell es-Safi, biblical Gath, which expanded significantly to reach around 40 ha in extent (Garfinkel 2007; Uziel and Maeir 2012). The pressure of the Gath polity on the eastern hills of Judah would, we believe, have been a contributory factor in driving a process state formation in Judah during the late 11th and early 10th centuries BC. In this light, Khirbet Qeiyafa can be understood as a western stronghold of an emergent kingdom of Judah (see, for example, Garfinkel 2011; Maeir 2012: 25, 40).

Khirbet Qeiyafa was constructed during the post-Philistine Bichrome phase, therefore dated to the Iron Age IIA (Garfinkel and Kang 2011; contra Singer-Avitz 2010). At this stage the locus of relations between the Israelites and Philistines shifted from the earlier axis of Ekron–Tel Batash–Beth Shemesh, along the Sorek Valley, to the region between Gath and Khirbet Qeiyafa in the Elah Valley (Garfinkel *et al.* 2012a: 52–56). Khirbet Qeiyafa was strongly fortified, with a city wall built of megalithic stones founded on solid bedrock to deflect frontal attack and preclude undermining of the wall. It can, therefore, be characterized as a military outpost. We argue that it was established in that location by the population of Judah in order to block possible Philistine penetration from Gath into the central hill country through the Elah Valley. The foundation of a city as a military centre (soldiers were known as ‘men of the king’) is also consistent with the site’s destruction shortly after it had been established and with the large assemblage of weapons uncovered during the excavations (Garfinkel *et al.* 2012a: pls 47–49).

Based on the above evidence and observations, we propose, with due caution, that the storage jars with impressed handles from Khirbet Qeiyafa were intended for distribution by an administrator to supply grain, wine or oil to soldiers. We suggest that jars with impressed handles were distributed empty to civilians, who would have returned them full to the authorities by way of tax, who then issued the jars to the garrison at the site. On this basis, we interpret finger-impressed handles on storage jars as a marker of administrative activity in the early Iron Age IIA¹⁶.

Conclusions

The tradition of finger-impressed jar handles originated in the southern Levant. Appearing first, and infrequently, in the Middle Bronze Age, they increased in number in the Late Bronze Age, becoming particularly common in the Iron Age I, and remained prominent in the Iron Age IIA. Their popularity declined in the Iron Age IIB, when they were replaced by LMLK jars. The specific characteristics of the Khirbet Qeiyafa handles include their remarkable quantity and the regularity of their distribution across the various structures on the site. We take this evidence, along with the geopolitical context of the site, to indicate that finger-impressed handles were directly related to the administrative practices of the early Iron Age IIA. We further argue that these jars point to the existence of a centralized administration in early Iron Age II Judah.

To move discussion forward, it will be necessary to collect more relevant evidence, in particular from unpublished and current excavations. Moreover, petrographic analysis of impressed handles found at other sites will be required to map the nature of production. However, we hope that this preliminary statement will motivate other excavators to publish fully quantified data on this class of ceramic artefact.

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¹⁶The archaeological context of Tel ‘En Zippori may also indicate that impressed handles are related to administrative or small-scale redistribution; the excavator reports that a number of such handles were found in a large, probably public building (Dessel 1999: 30). Despite the location of a cultic room and objects in Area C at Khirbet Qeiyafa, it is unlikely that the impressed jar handles are related to cult administration, as these handles are not restricted to the cultic area but distributed throughout the site.

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