Iron Age I Remains at Khirbet el-Maqatir: A Preliminary Report

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Abstract

Excavations at Khirbet el-Maqatir (KeM) near et-Tell have yielded modest but meaningful remains of a settlement apparently dating to early Iron Age I as well as substantial Middle Bronze-Late Bronze and Late Hellenistic-Early Roman remains. Much of the Iron Age settlement was apparently destroyed by later building activity, but a small row of one-room homes survived on the western side of the site. These homes were built against the Middle Bronze-Late Bronze fortification wall, much like at Shiloh. The homes included silos, simple pottery, and reflect rather poor building technique, all suggesting a date early in Iron Age I. On the eastern side of KeM, a few surviving Iron Age structural remains and pottery suggest that Iron Age habitation existed there in Iron Age I as well, and continued into Iron Age IIA in a limited area.

Location and Overview of Remains

Khirbet el-Maqatir (KeM) is located a. 15 km north of Jerusalem, 1 km west of et-Tell, near modern Deir Dibwan, just east of Highway 60 (fig. 1).

Fig. 1: Location of Khirbet el-Maqatir
Excavations at KeM began in 1995 in an effort to find a site near et-Tell with Late Bronze Age remains that could have borne the name of 'Ai and served as the location of the events described in Joshua 7–8. In 14 years of excavation from 1995–2000 and 2009–2016, the site has indeed yielded a fortress of ca. 1.0 ha (2.5 ac) established in Middle Bronze III and destroyed in Late Bronze I (fig. 2; Wood 2016). Additionally, a substantial Late Hellenistic-Early Roman settlement of ca. 2.0 ha (5.0 ac) has been uncovered, dating from second century BCE to 69 CE (Peterson & Stripling 2017). A Byzantine church and monastery dating from the fourth to eighth centuries CE were later built on top of the hill, some 125 m to the northwest (ABR Staff 2011).

Somewhat surprisingly, the site also contained a meaningful settlement dating to Iron Age I (shown in blue in fig. 2), which will be the focus of this paper. The settlement appears to date to early in the Iron Age I and represent a re-settlement of the site after a gap of ca. 200 years, by people with a significantly poorer material culture (for a recent discussion of the transition from Late Bronze to Iron Age I in the central highlands, see Finkelstein 2013, 21–22). This report will describe the
line of one-room homes that survived on the western side of the site, discuss the available data bearing on the population of the Iron Age I settlement, and give an initial report on the pottery and other associated finds. The information on the Iron Age I settlement at KeM can now join that of other contemporary settlement sites in the highlands of Benjamin including et-Tell (Marquet-Krause 1949; Callaway 1969; 1970), Beitin (Kelso 1968), Kh. Raddana (Lederman 1999), Tell en-Nasbeh (McCown 1947; Wampler 1947), el-Jib (Pritchard 1962), Tell el-Ful (Sinclair 1960; Lapp 1981), and Kh. ed-Dawwara (Finkelstein 1990).

Extent of Settlement
The extant Iron Age homes follow the line of the Middle-Late Bronze Age wall west of the fortress gate (see fig. 2 above). Other Iron Age homes, since destroyed, probably followed the wall east of the gate as well. While small quantities of Iron Age I pottery were found throughout much of the site, most of the highest concentrations\(^1\) were along the proposed northern wall of the Middle-Late Bronze Age wall.

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\(^1\) Most of the squares with Iron Age I pottery outside of the two areas of presumed habitation had one to three diagnostic Iron Age I sherds, whereas those in the areas of focus often had 15 to 55.
fortifications, apart from the gate itself and the area just west of the gate (fig. 3). As stated earlier, this suggests that Iron Age I homes may well have followed the northern Bronze Age fortress wall east of the gate, like on the west. Unfortunately, only a few fragments of Iron Age walls remain east of the gate (described below), preventing a complete analysis of Iron Age settlement for the overall site.

Additionally, a much smaller amount of Iron Age IIA pottery came from the squares in the proposed northeast corner of the Middle-Late Bronze fortress, suggesting that a smaller settlement continued into or was reestablished in Iron Age II in this part of the site.

The excavated homes allow for an estimate of the site’s population, at least west of the gate. The remains seem to show three single-room homes. If one can assume an average of four persons/home (Finkelstein 1986, 114, no. 3), this suggests a population of ca. twelve on the west, with an additional – unknown – number east of the gate.2

**Extant Iron Age I Homes**

East of the Bronze Age gate, only parts of three walls remain from Iron Age I buildings (see fig. 2 above). All were one stone wide (ca. 0.5 m), 1–3 courses high, with lengths of 4.6 m (in square O21), 2.8 m (in P22), and 0.5 m (in Q22; not shown). These remains were not substantial enough to posit floor plans, but the walls were wider and better built than most of the Iron Age walls found in the homes on the west.

West of the gate, the Iron Age I homes were quite small and mostly poorly made, but fortunately were not destroyed by later construction. They were also preserved, in part, by piles of cobbles and earth rising as much as 2 m above the extant walls, apparently cast there over the centuries by local farmers clearing their fields. Each of these Iron Age homes was built using the outer wall of the Middle-Late Bronze fortress as the home’s back wall (fig. 4), much like the more-substantial Iron Age I construction at Shiloh (Finkelstein 1988, 220–225). However, at Shiloh the Iron Age construction abutted the outside of the Middle Bronze fortification wall, whereas at KeM, the Iron Age homes sat inside. In both cases, the Iron Age

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2 The three extant houses on the west fit well with the analysis of the regional survey (identifying KeM as SCR 9: 17–14/36/02), which described the site as consisting of a “few houses” (Finkelstein 1988, 162; Sherds identified were Middle Bronze (36), Iron I (57), and Iron II (7)). The survey further estimated the site as 1.5 dunams in size (ibid.; Finkelstein et al. 1997, 521). If one assumes a population density of 25 persons/dunam (100 persons/acre) (Finkelstein 1986, 114; 1988, 331–332), the survey would suggest a total Iron Age I population of ca. 37.
construction sat below the Bronze Age wall on the slope of the hill.

In addition to using the Middle-Late Bronze wall as the back of their homes, the Iron Age I builders at KeM also may have utilized a parallel Middle-Late Bronze wall for some of the front of their homes. Excavation in squares M7–9 southwest of the Iron Age area of habitation appeared to show inner and outer lines of the Middle-Late Bronze fortress wall ca. 3.5–4.0 m apart with a fill of large field stones in between. Excavation in the area of the Iron Age habitation consistently shows the outer Middle-Late Bronze wall, built of 2–3 small-to-medium boulders 1.1–1.4 m wide (see W56A in fig. 4). In some of the squares with Iron Age remains (R11, and perhaps R12), sections of a parallel, narrower, well-built wall 0.4–0.5 m, one-stone wide (W56B), were used for the front walls of the Iron Age homes. If the Middle Bronze wall construction did use such parallel lines, the Iron Age builders apparently emptied the stone fill and utilized the outer wall and sometimes the inner wall as well (fig. 5). They then constructed mostly poorly-built, one-stone (0.35–0.5 m) wide walls perpendicular to the Middle-Late Bronze walls much like casemate dividers, to serve as side walls as well as other partitions. The best preserved Iron Age I wall (W75 in Q10) remained standing to a height of 1.65 m (11 courses) and was constructed entirely of stone, without mudbrick superstructure, as were the nearby Iron Age I homes at et-Tell and Raddana (Callaway 1970, 12–18; Lederman 1999, 49–52).
This line of Iron Age I homes appears to consist of three very small, one-room houses with adjacent courtyards on the front or side. The center home (in Q10-R11) covers an area of ca. 22m² and has a broad-room plan with the entrance in the front (fig. 6). The homes on either side (Q9 and R11-12) are only ca. 16m² and have long-room plans with entrances on the southeast (figs. 7–8; cf. discussion of types and characteristics in Herzog 1980, esp. 82).

Curiously, the easternmost home in R11-12 showed no trace of an eastern closing wall. The lines of cobbles labeled W92 and W93 in fig. 4 apparently served as retaining walls, supporting the well-packed floor of the triangular courtyard that
was a continuation of the floor of the home farther west. Later, wall W94 was built on top of W96, suggesting a subsequent building phase. Perhaps the eastern wall of the home was removed to change the home to a covered work area connected to the courtyard to the east.

In contrast to these small, poorly built Iron Age I homes at KeM, the homes of nearby Iron Age I sites are much larger and reflect more sophisticated building plans and techniques. At et-Tell, 1 km to the east, the Iron Age settlers also utilized Bronze Age remains (though Early Bronze), but constructed three- and four-room, pillared homes as large as 110 m² (Marquet-Krause 1949, pl. XCVII). Although the floor plans and sizes of the homes at Beitin, 1.5 km to the northwest, are unclear, those builders used pier construction (pillars as parts of walls; Kelso 1968, pl. 4). At Kh. Raddana, 3.5 km to the west, excavation uncovered groups of three-room, pillared buildings centered around courtyards, with the most complete homes averaging ca. 110 m² (Lederman 1999, 39b, 48). Kh. ed-Dawwara, 7 km to the southeast, had four-room, pillared houses averaging ca. 120 m² around the perimeter of that site (Finkelstein 1990, 169–172). Thus, the simple stone wall construction at KeM appears more primitive than the pillared construction of the homes at these nearby sites, and the homes were ca. one-fifth the size.

Additionally, if one looks beyond Benjamin to more of the earliest Iron Age I settlements in Israel, the one-room style at KeM still appears smaller and more primitive, and perhaps earlier. The early dwellings at Giloh (Mazar 1981, fig. 3), Tel Masos (Fritz & Kempinski 1983, fig. 5), and 'Izbet Sartah (Finkelstein 1986, fig. 3) are all larger and more complex and have at least two, usually three rooms (see also discussion in Netzer 1992, 193–195).

The extant Iron Age homes at KeM also differed from those of nearby settlements and from Iron Age I settlements in general in that no cisterns were found associated with the homes on the west. Excavations on the eastern side of KeM did reveal numerous cisterns, but given the extensive building there in the Late Hellenistic-Early Roman period, the dating of those cisterns was unclear. Either the Iron Age homes on the west had cisterns not found during excavation or perhaps the inhabitants at KeM brought their water from one or two of the nearest springs ca. 1 km away.³

³ As per Finkelstein (1988, 162; Finkelstein et al. 1997, 521) one spring lay 1.1 km to the northeast in Wadi el-Gayeh and the other was 1.0 km to the west on the west bank of Wadi Sheban. Analysis of data from the regional survey suggests that fetching water from 1 km away was common for the region in early Iron Age I, as 36% of all early Iron Age I sites surveyed were situated 0.5–1.0 km from permanent water sources and another 34% lay 1.0–3.0 km from such sources (Finkelstein 1988, 195).
In contrast to the absence of cisterns, excavation of the Iron Age I homes at KeM did expose three grain silos (plus a fourth in the east, described later), another characteristic of early Iron Age I sites (Finkelstein 1988, 264–267). A small, stone-lined silo built on the south side of the remains of W56B in the middle home measured ca. 0.7x1.0x0.45 m. This silo apparently had gone out of use by the final phase of habitation. It was the only silo at KeM that contained meaningful finds (fig. 9), perhaps because the inhabitants used it as a trash pit. Perhaps a more obvious indication of the silo’s later disuse was that the assumed floor plan of the home shows the front wall of the home built over part of the silo (see fig. 5 above). This silo may have gone out of use when the inhabitants built two stone-lined silos in the adjacent area to the southwest, a (possibly roofed) courtyard (fig. 10). The courtyard sat between the westernmost two homes and yielded these two silos, a fire pit, sherds of numerous storage vessels, and other small finds connected to domestic activity apparently associated with the homes’ inhabitants. The larger, stone-lined silo in the northwestern corner of the courtyard (fig. 9, lower right) cut well into the line of the Middle-Late Bronze wall (W56A), almost to the wall’s outer line, and was defined by a ring of boulders just above the apparent floor level of the home. The silo was 1.5 m deep and barrel-shaped with average diameters of 1.23 m at the surface, 1.51 m in the center, and 1.19 m at the flagstone bottom, making a volume of ca. 2.57 m$^3$. Excavation of the silo produced only a few Iron Age I sherds and some bone and tooth fragments.
The smaller, shallower, cylindrical silo to the east was ringed with boulders and cobbles and was founded on bedrock. It averaged 0.63 m in diameter and was 0.48 m deep for a volume of ca. 0.15 m$^3$. It yielded only a few Middle Bronze Age III and Iron Age I sherds. Perhaps this silo had been built after a good harvest when the larger silo proved too small. Neither silo had significant finds, suggesting they may have been in use when the site was abandoned and were emptied by the departing inhabitants.4

A fourth stone-lined silo apparently dating to Iron Age I was uncovered in P22 on the eastern side of KeM. Its builders dug through the earlier Middle-Late Bronze floor and constructed a fully enclosed, beautifully built, beehive-shaped silo (fig. 11), 1.36 m high, the top of

4 Assuming that these two silos stored grain, how many people could they have supported? If a person consumed 200 kg of grain/year (Finkelstein 1988, 268) and 1 m$^3$ holds ca. 770 kg of wheat (Finkelstein 1986, 172), then a person would need 0.26 m$^3$ grain/year. Adding 30% to account for spoilage and seed requirements for the following year (ibid, 173) means one person would need 0.34 m$^3$. The two silos together would have held enough grain to feed eight people for one year (2.57 m$^3$ + 0.15 m$^3$ = 2.72 m$^3$/0.34 m$^3$ = 8). This number accords well with the estimated number of inhabitants for two homes, perhaps those on either side of the silos in the last stage of habitation. As noted earlier, the third home lacked an eastern closing wall in its final stage, suggesting that perhaps only two homes were inhabited in western KeM at the end. Alternately, if this line of homes included more than eight inhabitants, they could have stored more grain in pithoi and storage jars, which were well represented in the pottery.
which lay 0.7 m below the Bronze Age floor. Its volume measured approximately 0.73 m³, enough to feed 2.2 people for a year. As with the silos on the west, this one contained no significant finds.

Pottery
Excavations at KeM uncovered only two restorable Iron Age I vessels, again suggesting that the homes may have been abandoned peaceably and the inhabitants took their usable vessels with them (cf. discussion in Finkelstein 1990, 166; 2013, 40–41). The first silo described above included a ring-base Iron Age I jug (figs. 12, 14: 7). The other restorable vessel was a collar-rim pithos (fig. 13), found sunk 0.44 m into the floor of the home in R11-12. Excavation recovered the whole vessel from the handles down and ca. 40% above, including several pieces of the rim and one piece of the collar. The upper portion resembles fig. 15: 19.

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5 This silo was 1.36 m high and barrel-shaped on a north-south axis (top 0.84 m, middle 0.97 m, bottom 0.84 m). On an east-west axis the silo was more domed-shaped (top 0.66 m, middle 0.78 m, and bottom 0.97 m); thus it more closely resembled the frustum of a cone than a barrel, so the volume was computed using $V = \pi \times \text{height}/3 \times (\text{top radius}^2 + \text{bottom radius}^2 + \text{top radius} \times \text{bottom radius})$. The author of this article thanks colleague and retired math professor William Eppright for computing the volumes of this silo and the barrel-shaped silo excavated in Q10.

6 The silo had just one sherd, which dated to Iron Age II and may have fallen in after the silo was abandoned. The silo was dated by the Iron Age I pottery in the surrounding locus.

7 Cf. similar style at Dawwara (Finkelstein 1990, figs. 15: 6; 18:6), dated by the excavator to the mid-eleventh to end-tenth centuries BC.
Other Iron Age I pottery recovered from KeM includes many pithoi (with and without collars, many neckless), storage jars, cooking pots, and jars (figs. 14–15; cf. discussion in Mazar 2015, 9). Most were poorly fired and had large white grit. No red burnished ware or Philistine pottery was recovered, tentatively suggesting a date early in the Iron Age I.\(^8\) The only pottery with surface decoration was a jug handle with three impressed holes (fig. 16). As discussed earlier, some Iron Age II A pottery was recovered in a limited area on the east side of KeM, suggesting continued or renewed habitation in that area.\(^9\)

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8 A fuller comparison of the pottery with that of nearby contemporary sites for the final report on KeM should further clarify the date of habitation.

9 Iron Age II pottery also recovered at the regional survey (Finkelstein et al. 1997, 521).
Small Finds

Like the pottery, the small finds appear typical for an early Iron Age I settlement. Tools include pounders, grinding stones, flints (fig. 17), a roof roller (fig. 18), and a mortar and pestle (figs. 19–20). Metal items were rare and included a bronze arrowhead and a tool made of bronze and ceramic (fig. 21). Finds related to manufacture of textiles included spindle whorls (fig. 22) and a loom weight (fig. 23) made from repurposed pottery sherds, and a needle. An oblate carnelian bead (fig. 24) bore an irregular outer shape, another reflection of the relatively poor material culture during Iron Age I. More than a dozen sling stones (fig. 25) were also recovered in the squares with Iron Age homes, but these and the arrowhead may have remained from the destruction of the earlier Middle-Late Bronze fortress utilized by the homes’ builders.

Fig. 17: Flint blade (Obj. #2204) (Photo: M.C. Luddeni)
Fig. 18: Roof roller (Obj. #344) (Photo: M.C. Luddeni)
Fig. 19: Mortar (Obj. #345) (Photo: M.C. Luddeni)
Fig. 20: Pestle (Obj. #348) (Photo: M.C. Luddeni)
Fig. 21: Bronze and ceramic tool (Obj. #1551) (Photo: M.C. Luddeni)
Fig. 22: Spindle whorl (Obj. #1043) (Photo: M.C. Luddeni)
Fig. 23: Ceramic loom weight (Obj. #239) (Photo: M.C. Luddeni)
Fig. 24: Oblate carnelian bead (Obj. #308) (Photo: M.C. Luddeni)
Fig. 25: Sling stone (Obj. #836) (Photo: M.C. Luddeni)
Conclusions
The Iron Age I settlement at KeM near et-Tell may represent one of the earliest Iron Age I settlements in the highlands of Benjamin and beyond. The extremely small, one-room homes built utilizing walls from the earlier Middle-Late Bronze fortress, plus simple, one-stone-wide walls are the smallest and least-advanced homes in the region. Only three such homes remain at what was probably a rather small settlement. The stone-lined silos and simple, poor-quality pottery plus associated small finds also reflect the rudimentary material culture of an early Iron Age I settlement.

A few more-substantial building remains from Iron Age I and pottery as late as Iron Age IIA on the eastern side of KeM attest to additional habitation into Iron Age IIA. Unfortunately, extensive building in the Late Hellenistic-Early Roman period largely erased the Iron Age building remains in that area.

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