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The Ground Stone Tools from Tel Bet Yeraḥ

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Introduction

A total of 19 ground stone artifacts were recovered from Tel Bet Yeraḥ, Area AG (see Golani, this volume). Two of these items, a Ghassulian Chalcolithic-period basalt bowl(?) and a basalt spindle whorl of unknown date, were found in topsoil, while the remaining 17 items were recovered from four out of five Early Bronze Age strata (see Golani, this volume): most of the implements (13 items) were found on living surfaces of rooms and open spaces of late EB II–EB III (Loci 104, 118, 124, 126, 131, 132, 136, 139, 141; Strata III–II); three items were recovered from two living surfaces of EB II (Loci 134, 138; Stratum IV); and one item was found atop W213, in a locus dated to EB II–III (L145; Strata IV/III). No ground stone tools were recovered from the relatively small EB IB exposure (Stratum V).

The ground stone assemblage was sorted into seven main categories (see Table 1), based on the classification system developed by Wright (1992) and modifications in definitions of the grinding implements (Milevski 1998). Nearly all categories, except for that of rubbing stones, included items made of basalt raw material, while the mortars and perforated stones

Table 1. Typological Classification of the Ground Stone Tools, according to Chronology

		Topsoil	EB III	EB III–II	EB II	*Total*
Grinding Stones	Lower		1	1		*2*
	Lower/Upper		1			*1*
Rubbing Stone			1			*1*
Mortars	Mid-Sized		2			*2*
	Large		1	1		*2*
	Pebble Mortars		1	1		*2*
Pounders			2	1		*3*
Perforated Stones		1		1	2	*4*
Multiple Use Stones					1	*1*
Vessels		1				*1*
Total		2	9	5	3	*19*

were mainly made of limestone; one item, a rubbing stone, was made of pumice. Four of the items, two mid-sized and two pebble mortars, were complete, while all others were found in a fragmentary state; the fragments were ascribed to either of two categories, more or less than 50% of the original object. The finds presented in this report are compared to those described in previous reports on the ground stone tool assemblages from Tel Bet Yeraḥ (Getzov 2006; Rosenberg and Greenberg 2014).

THE FINDS

Grinding Stones (Fig. 1:1, 2).— The grinding stones (n = 3, 18%) were all made of basalt and found in accumulations upon living surfaces of EB II–III. Two of the items, Fig. 1:1 and another which is not illustrated, were identified as lower grinding stones/slabs, and had a plano-convex section, a flat abraded working surface and a round base. Figure 1:2 was probably a lower grinding stone.

Rubbing Stones (Fig. 1:3).— This rubbing stone, made of pumice, is a small (5.8 × 5.0 × 4.7 cm) hand-held object of a parallelepiped form with working surfaces on all sides.

Mortars (Fig. 2:1–6).— All the mortars (n = 6, 35%) were found in EB II–III contexts and comprise the largest tool category in the assemblage. They are divided into three sub-categories, based on their size: two large deep bowl mortars made of limestone (diam. >20 cm; Fig. 2:1, 2); two complete mid-sized shallow mortars (diam. >10 cm), one made of basalt (Fig. 2:3) and another made of limestone (Fig. 2:4); and pebble mortars (diam. <10 cm; Fig. 2:5, 6) corresponding to Wright's Type 15 (Wright 1992). The large bowl mortars comprise rim fragments, one of which (Fig. 2:2) exhibits striations on the interior below the rim. One of the pebble mortars has a hemispherical shape and may have been used as a small mortar or a drill socket of a bow drill, as suggested for items of this type by Ilan (2016).

Pounders (Fig. 3:1–3).— These artifacts (n = 3, 18%), retrieved from contexts dating to late EB II–III, comprise two small elongated basalt objects with a pointed tip, one with an oval section (Fig. 3:1) and the other with a triangular section (Fig. 3:2), and one large elongated limestone object with an oval section and a rounded tip bearing pounding scars (Fig. 3:3); this latter object may have been used for heavy duty pounding or crushing. Figure 3:1 has wide smooth surfaces, indicating that it may have been used for rubbing in addition to pounding.

Perforated Stones (Fig. 3:4–6).— The perforated stones (n = 3, 18%), include two that were retrieved from an EB II context: a broken limestone disc (diam. 8 cm, thickness 1.8 cm; Fig. 3:5), and an ovoid-shaped limestone object (7 × 5 cm; Fig. 3:4), with a protrusion on its convex side formed by flaking and grinding, into which a small perforation had been drilled.

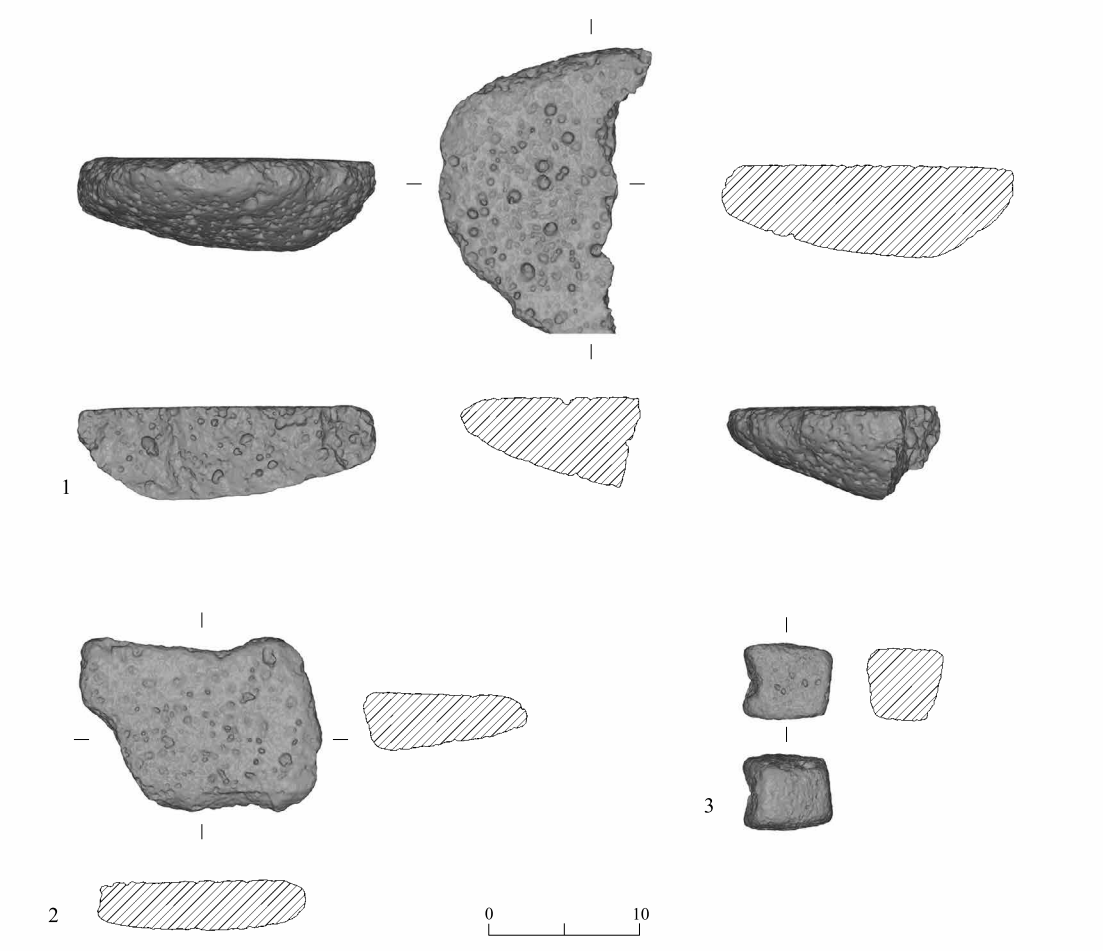

Fig. 1. Lower grinding stones and a rubbing stone.

No.	Vessel	Locus	Basket	Material
1	Lower grinding stone	131	1084	Basalt
2	Lower grinding stone	141	1130	Basalt
3	Rubbing stone	141	1130	Pumice

Figure 3:6, retrieved from a context dated to late EB II–III, is a symmetrical round basalt object. Battering marks along the narrow peripheral edge indicate that this item may have been used as a pounder; however, two shallow depressions at the center of the object on both sides indicate that it could have been used for the drilling of small objects (e.g., beads), or that it was meant to be perforated and used as a weight, similar to an item from Tel Bet Yeraḥ classified by Rosenberg and Greenberg (2014:201) as Type D2.

Multiple-Use Stone Tool (Fig. 3:7).— One object found in an EB II context is a basalt spheroid item with two flattened faces, which indicate a rubbing function. The presence of pounding marks indicates that this object was also used as a hammerstone, and the presence

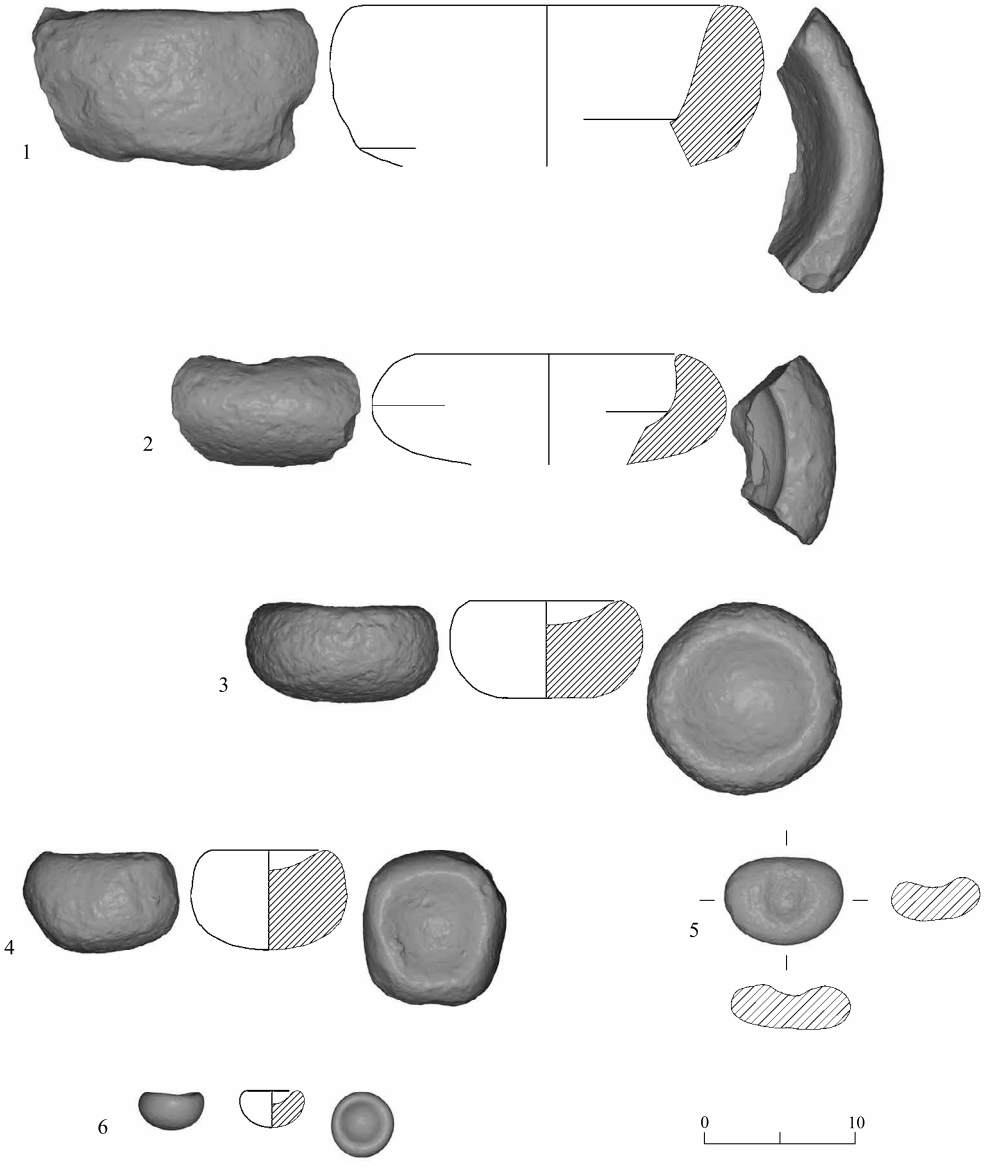

Fig. 2. Mortars.

No.	Vessel	Locus	Basket	Material
1	Large mortar	118	1065	Limestone
2	Large mortar	132	1131	Limestone
3	Mid-sized mortar	126	1086	Basalt
4	Mid-sized mortar	124	1112	Limestone
5	Pebble mortar	104	1013	Limestone
6	Pebble mortar	145	1121	Limestone

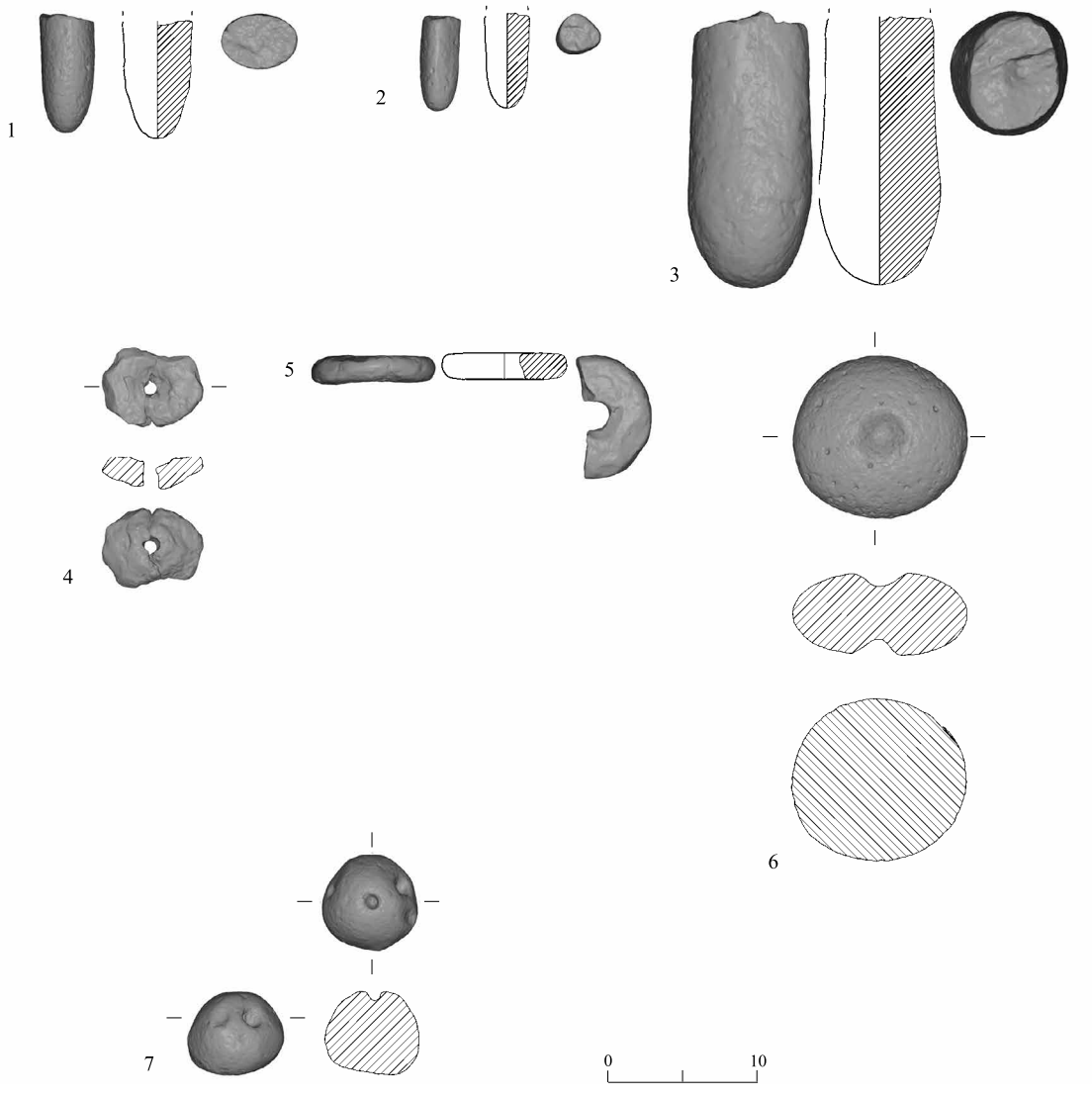

Fig. 3. Pounders, perforated stones and a multiple-use stone tool.

No.	Vessel	Locus	Basket	Material
1	Pounder	118	1065	Basalt
2	Pounder	104	1031	Basalt
3	Pounder	139	1135	Limestone
4	Perforated stone	134	1081	Limestone
5	Perforated stone	134	1093	Limestone
6	Perforated stone	131	1084	Basalt
7	Multiple-use stone tool	138	1118	Basalt

of four shallow worked depressions indicates that it may also have been used for other purposes.

Spatial Distribution

The small size of the excavation area and the partial preservation of the architectural remains prevented to some extent the identification of different kinds of indoor and outdoor spaces, especially where the earlier remains of EB IB and II are concerned. A clearer layout could be reconstructed for the EB III remains (Strata II–I) that comprised a narrow north–south alleyway, dividing the excavation area into eastern and western parts. Ground stone artifacts were present in loci on both sides of the alleyway, each yielding seven such items, but were absent on the surface of the alleyway and in the accumulation above it. It could also be shown that while the area east of the alleyway yielded a variety of ground stone artifacts, comprising items from all tool categories, the area west of it yielded a lesser variety of types, including mainly mortars and pounders.

CONCLUSIONS

Although the ground stone tool assemblage from Tel Bet Yeraḥ is small, it conforms with observations regarding this category of tools from earlier excavations at the site (Rosenberg and Greenberg 2014:206–208). The finds exhibit an exclusive use of basalt for fashioning grinding implements and a preferred use of limestone for producing mortars during EB II and III.

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