

TEL HANAN: A SITE OF THE WADI RABAH CULTURE EAST OF HAIFA

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INTRODUCTION

A number of sites dating to the Late Neolithic period have been discovered in the vicinity of Haifa, some along the Mediterranean coast, west of Mount Carmel, such as Megadim, Qaṣṭra and Kefar Shamir (Raban 1983; Galili and Weinstein-Evron 1985; Galili 2004), others in a survey to the north and east of Haifa (Ronen and Olami 1983). In their survey, Ronen and Olami located two Neolithic sites, one near the Denya neighborhood of Haifa (Site 97), the other in the Nesher Hills (Site 110), some 10 km south of the Wadi Rabah site discussed here, which was revealed in the lower city of Tel Hanan (Fig. 1).

Today, the area of Tel Hanan is almost completely covered by modern construction. The only open area consists of two terraces on the lower western slope of the tell. In November 1998, remains of ancient walls were exposed on the upper terrace during construction work. As a result, several salvage excavations were conducted by the Israel Antiquities Authority,¹ followed by a large excavation on the lower terrace by Haifa University and two additional seasons in 2000 and 2001 on the upper terrace. Extensive architectural remains of the Persian and Hellenistic periods were revealed throughout the excavation areas, overlying massive walls dated to the Iron Age. Within the fills of these upper strata were sporadic sherds of the Pottery Neolithic period (Wadi Rabah culture), suggesting a Pottery Neolithic presence below the historical settlements at the site (Nagorsky 2003).

THE EXCAVATION

A deep sounding in one of the excavation areas in the upper terrace indeed revealed a distinct archaeological horizon containing Neolithic pottery and flint artifacts. Consequently, a small-scale excavation was undertaken in an area of 25 sq m, to a depth of 2 m, below a public structure dated to the late Iron Age–beginning of the Persian period (Fig. 2).²

The excavation was conducted in units of 1 sq m, 5 cm thick, and the archaeological deposits were leveled in accordance with the natural slope. The matrix was a dark brown, clayish soil, containing medium-sized, angular stones. It was thicker in the northern part of the excavation (1.1 m) than in the southern part (0.9 m). All sediments were sieved. Neolithic remains were uncovered throughout the excavation area.

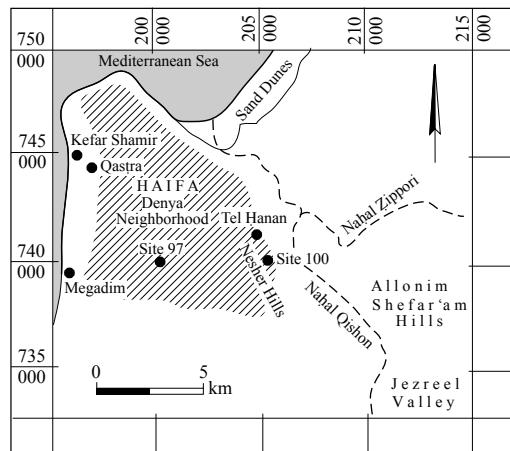


Fig. 1. Location map of Tel Hanan and other Late Neolithic sites in the vicinity.

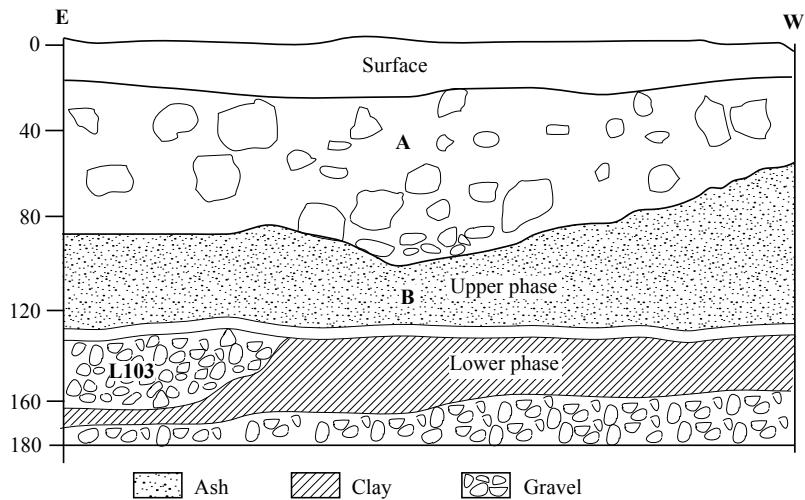


Fig. 1. Main east–west section, showing the general stratigraphy of the site.



Fig. 2. General view of the excavated area, looking north.

In the main east–west section, two archaeological layers were discerned (Plan 1): Layer A, dating to the Iron Age, and Layer B, ascribed to the Late Neolithic period (Wadi Rabah culture). There were two depositional phases within the Neolithic layer: the upper phase (c. 0.6 m thick) comprised mainly loose ash and a few small stones, and the lower phase (c. 0.5 m thick) was of compact gravel overlaid by a dark clay sediment. Both phases were rich in archaeological finds.

Due to the limited excavation area, no architectural remains were identified except an ashy pit (L103) in the southeastern corner,

which was partially excavated. Nevertheless, judging from large stones that were visible at the bottom of the lower phase, it seems that a number of structures had existed in proximity to the excavation area.

THE FINDS

Despite the limited excavation area, the material culture recovered in the Neolithic layer is distinctive and consists of typical Late Neolithic pottery and flint types, a few obsidian artifacts, several bone tools and some beads. In addition, two radiometric datings were obtained, one from charcoal, the other from bone collagen by the accelerator laboratory of the University of Toronto (Table 1). Both dates were calibrated using OxCal 3.10 of Bronk-Ramsey (2001) and converted to dates BCE (Fig. 3). The first sample, TO-11713, produced a date in the range of 7080–6810 BCE (cal.), while the second, TO-11714, gave a date of 5760–5530 BCE (cal.). The earlier date of the first sample could be the result of the ‘old wood phenomenon’, as the second sample fits well the accepted dating of the Wadi Rabah culture within the Late Neolithic period (Banning 2007).

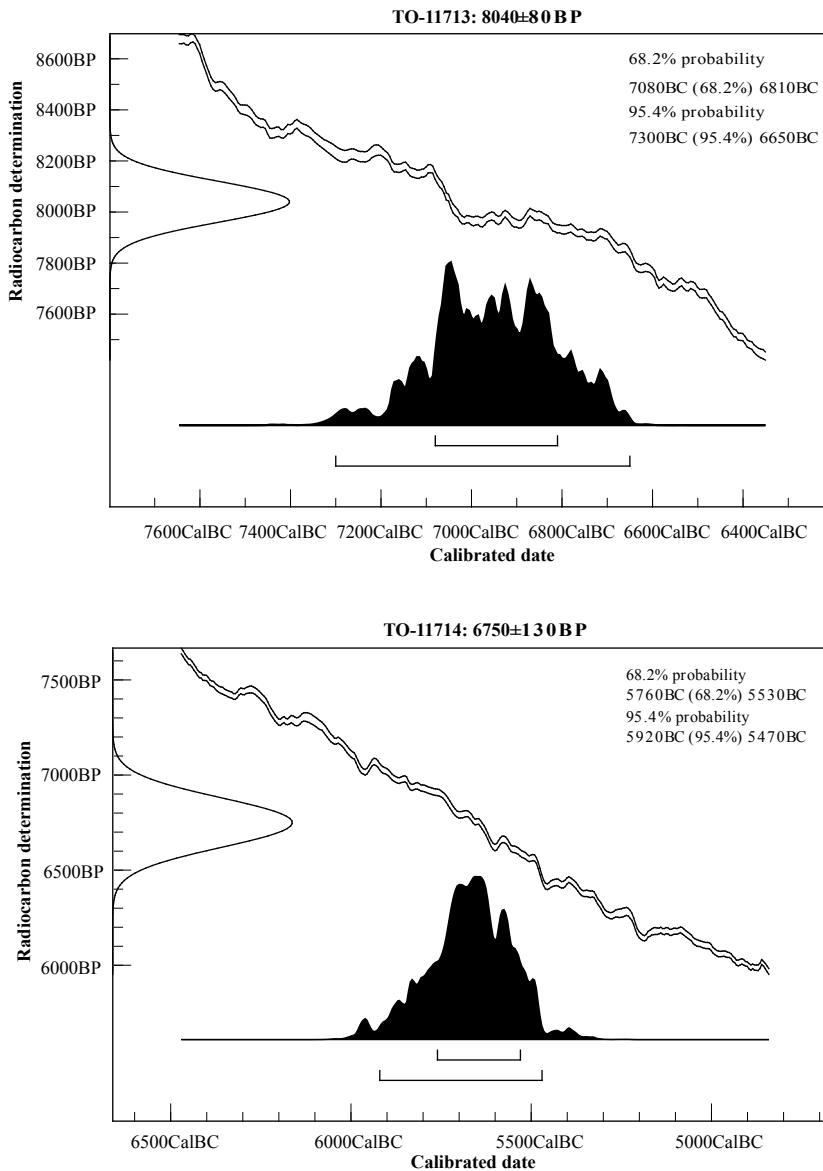


Fig. 3. Calibration of the two dates from Tel Hanan.

Table 1. 14C Dates from Tel Hanan

Lab No.	Material	Date (Years BP)	Cal. Date (Years BCE)
TO-11713	Charcoal (132 mg)	8040 ± 80	7300–6650
TO-11714	Bone (ash)	6750 ± 130	5920–5470

THE FLINT ASSEMBLAGE

A relatively large number of flint artifacts was collected in the excavation ($N = 1450$). As all sediments were sieved and all flint items collected, the large percentage of debitage and debris is not surprising (88.9% of the assemblage). The flint

Table 2. Flint Frequencies according to Loci

Type Loci	Debitage					Debris		Cores	Tools	Total
	PE	Flakes	Blades/ Bladelets	CTEs	Spalls	Chips	Chunks			
101	4	21	11	1	1	12	7	4	6	67
102	14	59	26	-	1	102	14	12	16	244
103	26	69	19	8	2	133	23	14	18	312
104	16	47	12	1	1	52	9	7	16	161
105	21	105	27	2	4	185	21	13	33	411
106	16	43	15	1	1	60	7	7	16	166
<i>Total</i>	97	344	110	13	10	634	81	57	104	1450
%	6.7	23.7	7.6	0.9	0.7	43.7	5.6	3.9	7.2	100.0

PE = Primary Element; CTE = Core Trimming Element

industry appears to have been produced on site from locally procured raw materials. The small size and exhausted appearance of the cores reflect a high degree of exploitation. The tools comprise 7.2% of the assemblage, and include most tool types in various percentages; among them, the sickle blades predominate.

Although the cores bear mostly negatives of flake removals in their final stages of exploitation, and flakes dominate thedebitage (c. 69%), blades were chosen as the preferred blanks for the production of sickle blades. This choice is reflected in the relatively small number of discarded blade blanks compared with flakes and primary elements (PE; Table 2).

Raw Material

Several types of raw material were identified among the tools and waste products. Most common is a gray to dark gray flint used for the production of more than two-thirds of the ad-hoc tools. This raw material is of Eocene origin and presents in the vicinity of the site. The second most common material is a fine-grained, dark brown flint that comprises about 10% of the assemblage. Both types were processed on site, as evidenced by cores and waste products of these raw materials. In addition, a light brown flint and another type of gray flint were used sporadically for the production of several tool classes, mainly sickle blades and borers.

Apparently, the quality of these raw materials and their abundance in close proximity to the site, resulted in their extensive use.

Only one tabular scraper was apparently not knapped on site, and may reflect some small-scale exchange network involving flint tools.

Cores

Cores of all types and stages of exploitation are present in this assemblage, further evidence of on-site knapping activities. The knappers made use of a wide variety of pebbles and cobbles available in the vicinity of the site. The majority of the cores were exhausted and discarded in amorphous shape, although many of the one-striking-platform cores show only a few flake removals. Few cores had been rejuvenated, as reflected by the low number of core-trimming elements (CTE; Table 2). An early stage of the reduction process consisted of the removal of primary elements, probably to prepare the core for knapping determined blanks. An average of four removals of primary elements from each core was sufficient for cleaning its surface from cortex and preparation for exploitation. This small number of PE removals may also be related to the small original size of the pebbles that were collected.

Of the 57 cores, amorphous cores predominate ($N = 38$; 66.7%) and are exhausted due to intensive flaking (Fig. 4:1), while 16 (28.1%)

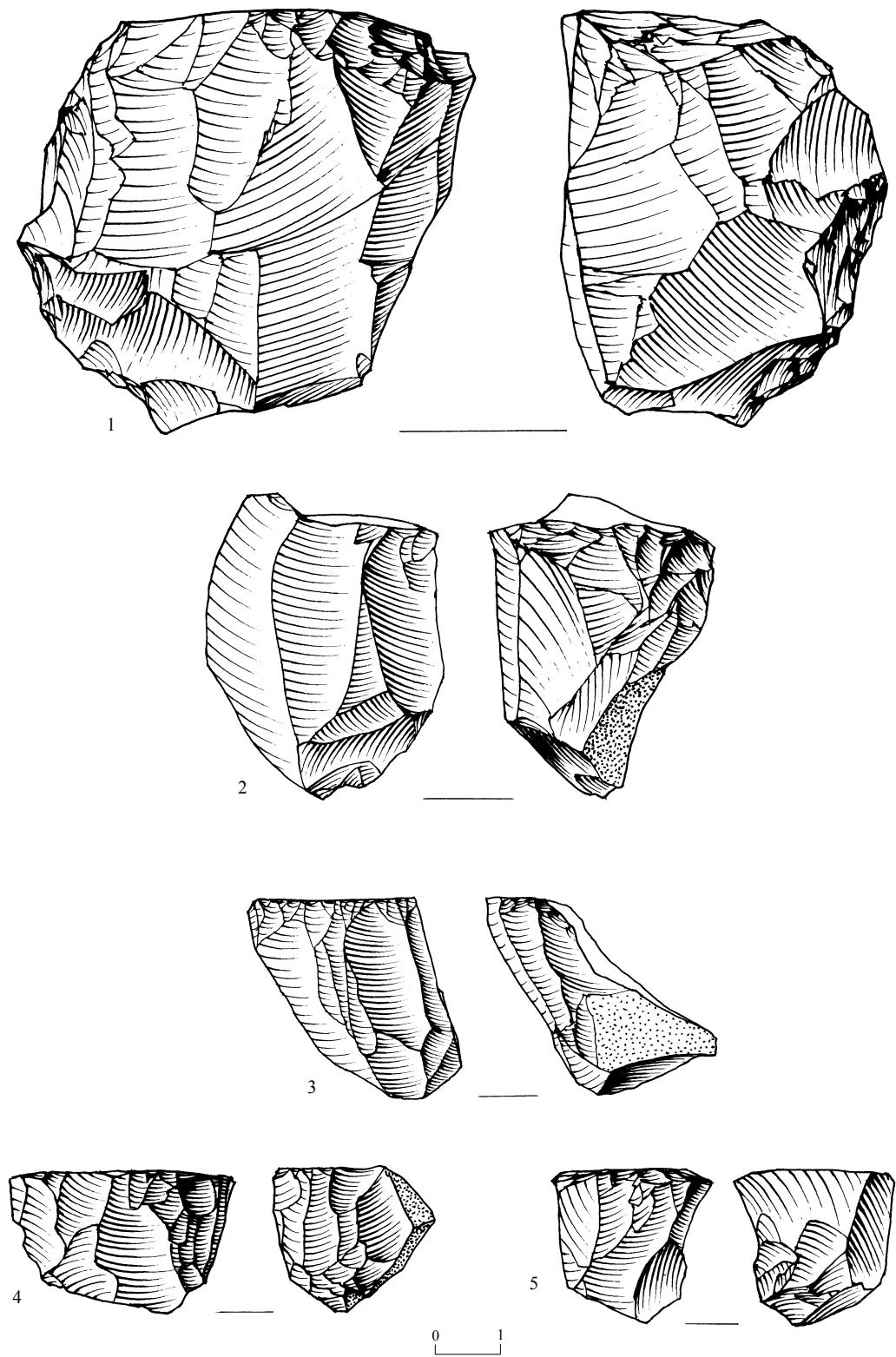


Fig. 4. Cores: (1) amorphous core; (2–5) single-platform cores.

are single-platform cores (Fig. 4:2–5) ranging in size from 2 to 12 cm. Cortex covers less than 25% of the total surface. Cores of two or more platforms comprise only 5.2%.

Tools

The tool assemblage ($N = 104$) comprises 7.2% of the total flint assemblage. Table 3 presents the tool frequencies in the assemblage. An attempt was made to divide the tools into two categories, formal and expedient (ad-hoc) tools. Sickle blades (24%) and perforators (13.5%) dominate the formal tools. Notable is the relatively small amount of ad-hoc tools, such as retouched flakes, truncations and notches/denticulates. All the tools were locally produced, except for one tabular scraper made on high-quality, dark brown flint that is not available in the vicinity of the site. The preferred blank was the blade, used for the production of almost half of the tools.

Formal Tools

Arrowheads.— Two transverse arrowheads manufactured on blade segments were recovered. Their edges display semi-abrupt

retouch, their tangs are pointed and their active edges are flat and wide (Fig. 5:1). Transverse arrowheads began to appear during the Late Pottery Neolithic period (Gopher 1994; Khalaily 1999), and the type with a pointed tang has been found at Pottery Neolithic sites, such as Lod (Khalaily and Gopher 1999), Horbat Usha (Khalaily 2006) and Nahal Yarmut (Khalaily 2011).

Sickle Blades.— Sickle blades are the dominant tool class, representing 24% of the tools. Two types can be distinguished. The first type is a short, rectangular sickle blade with abrupt or semi-abrupt retouch on the back and truncations on one or both ends. The working edge is shaped by deep, regular denticulation (Fig. 5:2–4). The second type is similar to the first in form and shaping technique, with backing and truncations toward the dorsal and ventral sides. However, the working edges of this type display either fine denticulation (Fig. 5:5–7) or are plain (Fig. 5:8).

Most of the sickle blades in this assemblage were prepared on short blanks, and only four on long blanks. This preference for short blanks can be observed in many Late Neolithic

Table 3. Flint Tool Breakdown

Type \ Locus	101	102	103	104	105	106	Total	%
Arrowheads		1		1			2	1.9
Sickle blades	1	8	2	4	8	2	25	24.0
Backed blades	1		1		4	1	7	6.7
Bifacial tools	1		2			2	5	4.8
Perforators	1	1	1	1	8	2	14	13.5
Scrapers			1	1		1	3	2.9
Tabular scraper					1		1	1.0
Burins		2	2	1	4	2	11	10.6
Truncations			2			1	3	2.9
Notches and denticulates	1		3	4	2		10	9.6
Retouched blades		3		2	2	3	10	9.6
Retouched flakes	1	1	3	1	5	2	13	12.5
<i>Total</i>	5	15	15	15	28	14	104	100.0

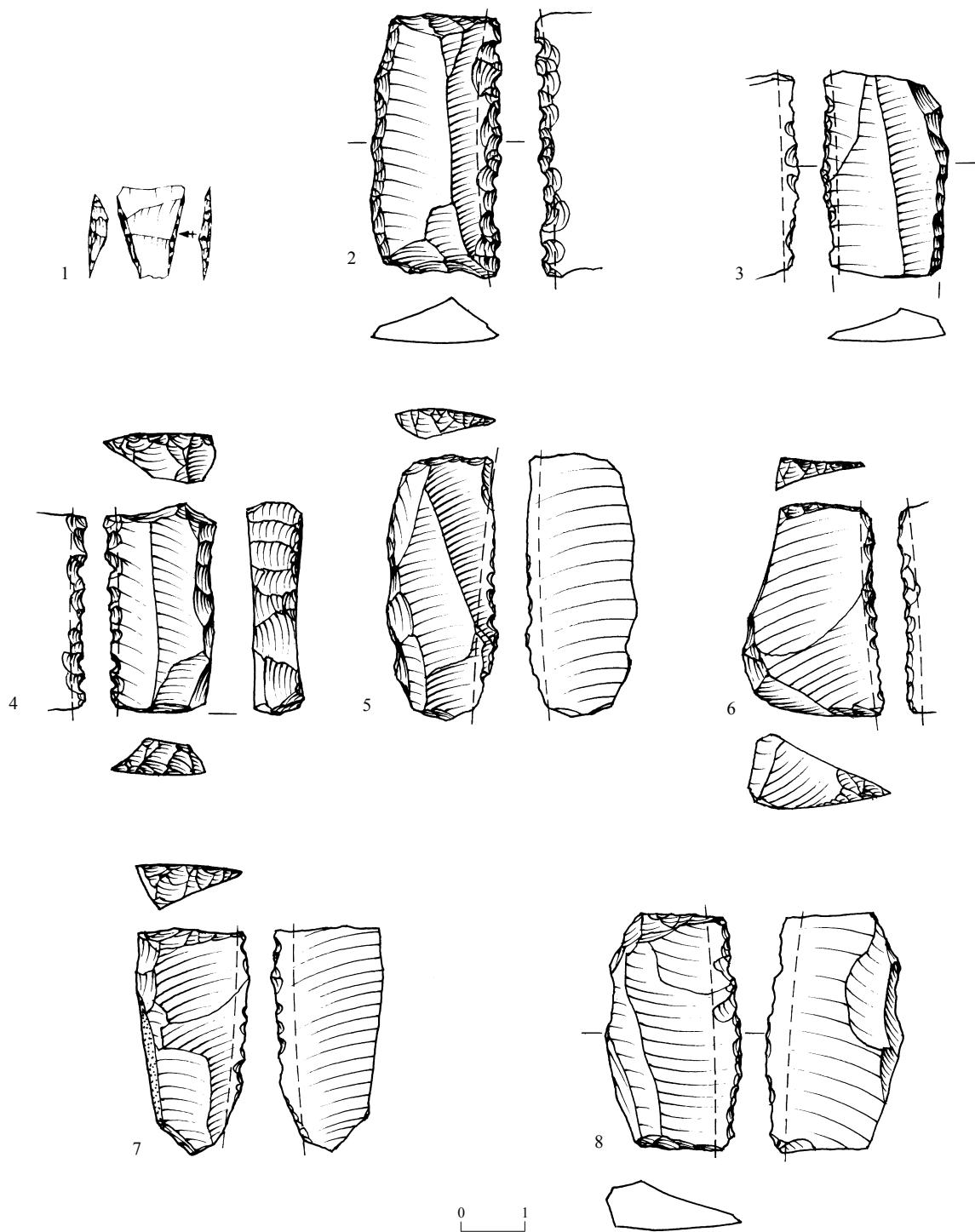


Fig. 5. Formal tools: (1) transverse arrowhead; (2–8) sickle blades.

assemblages and may be the result of either the quality of the raw material or a knapping tradition. In any case, production of sickle blades in this period was highly standardized, as suggested by several observations: all items are backed; truncation and denticulation are consistent; and the measurements demonstrate a low standard deviation. Within the sickle-blade assemblage at this site, seven items display similar attributes, but have no gloss on their working edges. Nevertheless, these were classed as sickle blades rather than backed blades due to the morphological resemblance. The seven items classified as backed blades display semi-abrupt retouch on the back with no truncations.

Bifacials.— Bifacials are all core tools that were shaped by bifacial flaking (Barkai 2005:10), and include axes, adzes and chisels. The main difference between these three types

is their shape and the form of the cross section. Axes have an elongated body, a bi-convex cross section and a rounded working edge; adzes have a trapezoidal body, a plano-convex cross section and a wide working edge; chisels have an elongated, narrow, rectangular body and a narrow working edge. These differences may represent different functions and hafting methods, although both are unknown. Of the five bifacials encountered in this assemblage, three items are axes (Fig. 6), one is a broken adze (Fig. 7:1), and one is a fragment of a chisel (Fig. 7:2).

Perforators.— In this assemblage, perforators are classified under the formal tool category, as they are much more standardized than the expedient tools. They were manufactured on a wide variety of raw materials and elements, such as flakes, blades, chunks and even core fragments. All display points that vary in

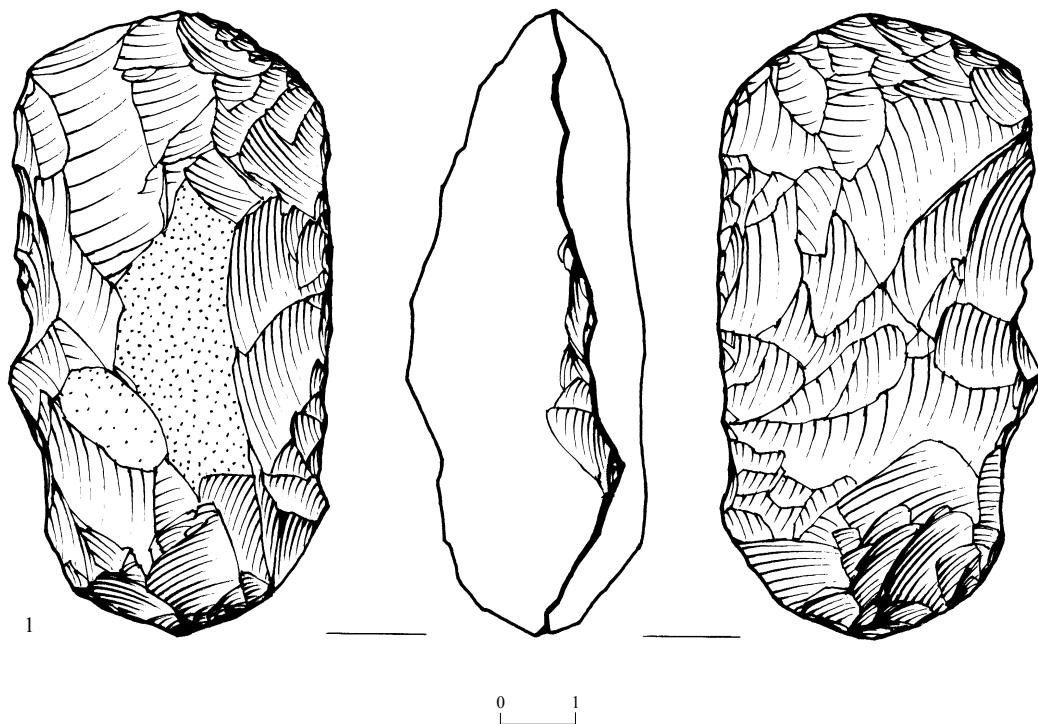


Fig. 6. Bifacial tools: axe.

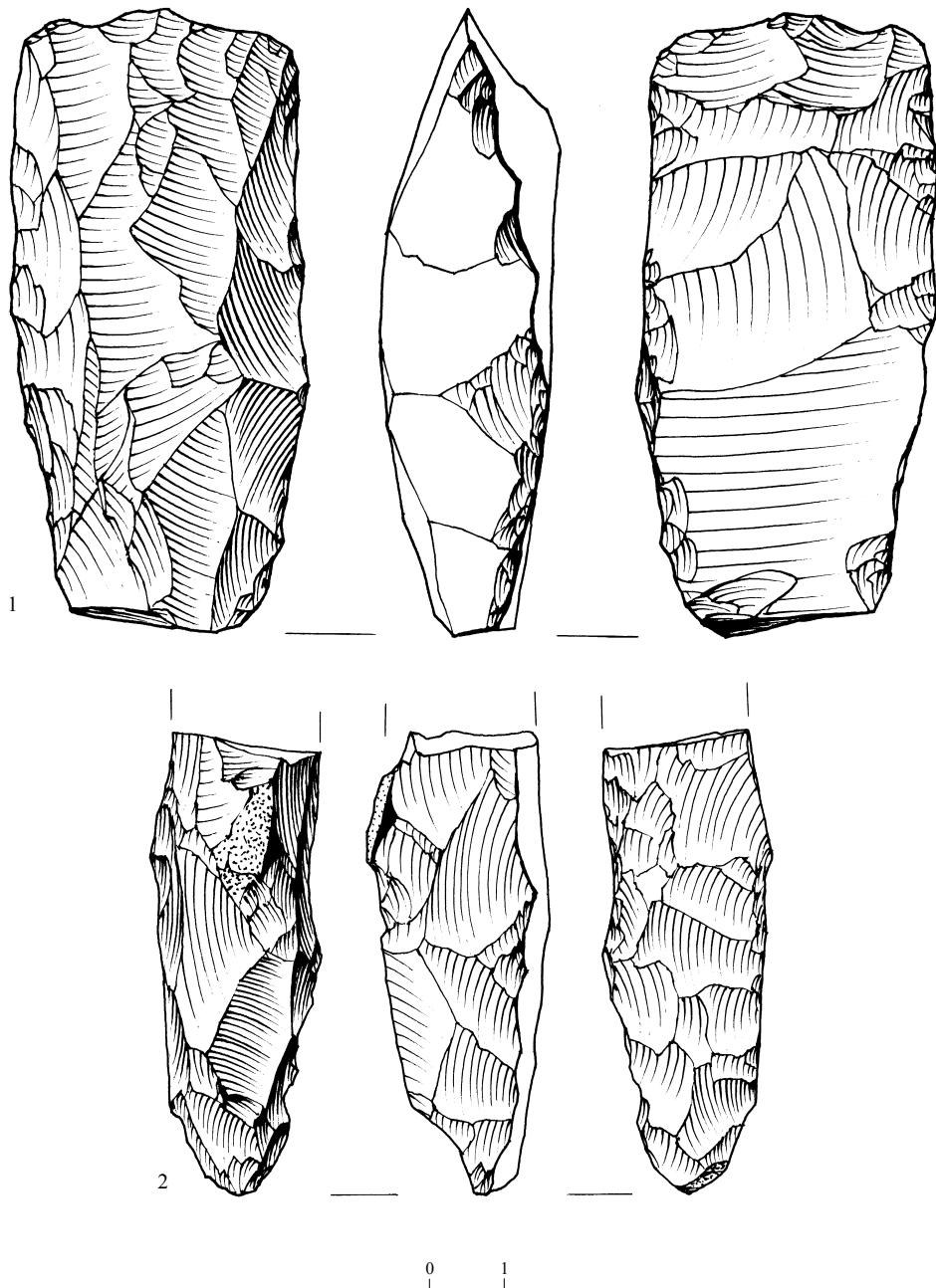


Fig. 7. Bifacial tools: (1) adze; (2) chisel.

shape from short and slightly modified to long and steeply retouched along the lateral sides of the point. The fourteen perforators in this assemblage are subdivided into eight awls (Fig. 8:1, 4), five borers (Fig. 8:2, 3) and one

massive drill made on a thick, elongated blank that was shaped by small bifacial flaking over the dorsal face and the sides. Both edges bear abrupt sharpening that continues to cover the pointed end.

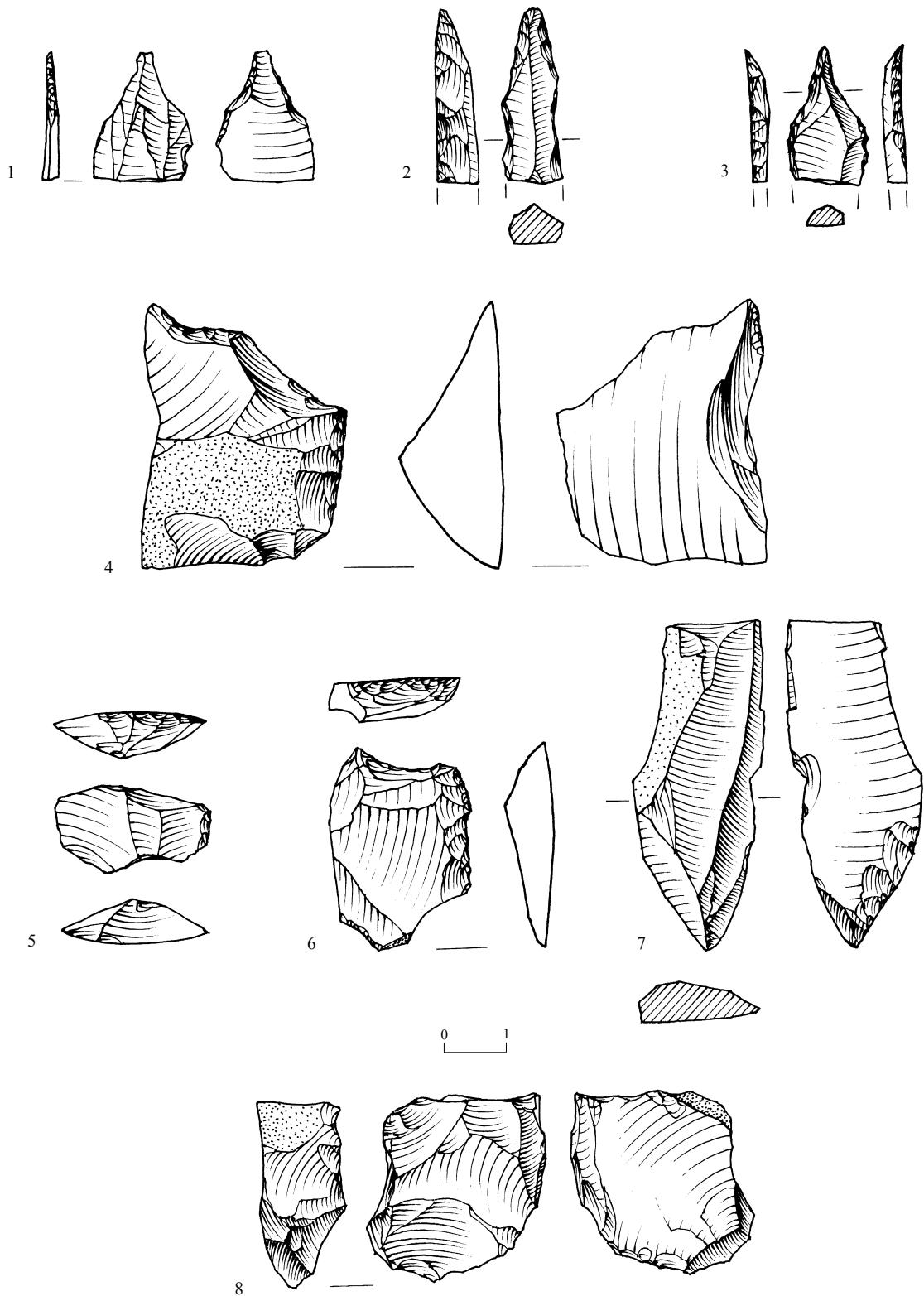


Fig. 8. Ad-hoc tools: (1–4) perforators; (5, 6) scrapers; (7, 8) burins.

Ad-Hoc Tools

Scrapers.— This class of tools is present in a low frequency (2.9%), consisting of two endscrapers and one sidescraper. The endscrapers were shaped on broken flakes with the working edge located at the distal end (Fig. 8:5). The sidescraper (Fig. 8:6), on the other hand, has retouch along a lateral side. It was fashioned on a relatively large flake that was also truncated.

A single fragment of a tabular scraper on thin tabular flint displays semi-abrupt retouch on its working edge.

Burins.— Burins are usually present in high numbers in Late Pottery Neolithic tool assemblages (Barkai 1996:36; Barkai and Gopher 1999), and such is the case in this assemblage, where burins comprise 10.6% of the tools (Fig. 8:7, 8). Nine burins were shaped on flakes or retouched flakes, the remaining two on blades. Most burins were made on a break ($N = 7$), although other types appear as well. Two items are classified as double burins, which have one on a break while the other is transverse on the distal side; the remaining two are dihedral burins. The number and variation of the burins suggest that their production is best described as ad hoc.

Truncations.— Only three truncated items were recovered. All of them are straight, two on blades and one on a flake.

Notches and Denticulates.— Notches and denticulates are common tools in most Neolithic assemblages, making use of waste materials, such as flakes, chunks and core fragments. In this assemblage, there are five notches and five denticulates, all of them small and shallow (less than 1.1 cm) and restricted to a limited area of the blank.

Retouched Blades.— This tool class is not common in the assemblage of Tel Hanan, consisting of 10 retouched blades representing 9.6% of the total tools. Retouched blades were

partially or fully retouched, mostly with fine retouch along one of the lateral sides.

Retouched Flakes.— The 13 retouched flakes in this assemblage exhibit limited, irregular retouch on part of the circumference.

THE POTTERY ASSEMBLAGE

The pottery from both Neolithic phases is discussed as a single assemblage, as no significant differences were discerned between the upper and lower Neolithic levels at the site. Although the density of sherds in the upper phase is greater and there is more variability, the main pottery types and their frequencies are identical in both phases, representing most of the types in the Wadi Rabah assemblage of the southern Levant. No complete vessels were recovered, nor could any be restored, and the typological selection presented here is derived from rims and large parts of vessels.

The Neolithic pottery assemblage from Tel Hanan is rich in relation to the size of the excavation, and contains all the basic types and decorative motifs known from the Wadi Rabah repertoire (Sadeh 1994). Most of the pottery is handmade, although there is evidence of the use of a slow wheel during the manufacturing process on certain parts of the vessels, such as jar necks and some bowl types. The vast majority of the vessels were manufactured of light brown clay tempered with small, dark gray chalky grits, and the surfaces were treated prior to firing. Dark-Face Burnished Ware vessels were well levigated—the inclusions barely distinguishable; the vessels were then slipped in black, burnished and fired.

The vessels were classified into two main groups: open vessels, which include bowls and basins, and closed vessels, grouping all the types of jars.

Bowls

Bowls dominate the open vessels (c. 82%) and appear in a variety of shapes and sizes, with different types of decorations. Three

types of bowls are discerned based on shape: hemispherical, V-shaped and carinated. Hemispherical and V-shaped bowls are present in equal numbers. The hemispherical bowls have rounded walls with inverted, simple pointed or slightly rounded rims (Fig. 9:1, 2), and are usually shallow, with a diameter larger than the depth. Others are deeper (Fig. 9:5). Their bases are simple and flat. Many of the hemispherical bowls are decorated with red slip and heavily burnished.

Most of the V-shaped bowls are small in size; a few are larger. V-shaped bowls generally have flat bases, straight walls and simple, pointed rims (Fig. 9:3). The majority display red or black slip, or a combination of both, usually on the outer surface. A red-painted band often decorates the inner rim.

The few distinctive carinated bowls of the Dark-Face Burnished Ware family (Braidwood and Braidwood 1960; Anati et al. 1973) are generally small and shallow (Fig. 9:4). The

relatively thin walls have a sharp carination, and the rims are usually pointed and slightly flaring. The bases are rounded with a concavity at the juncture with the body.

Basins

Only three rims were classified as basins. These vessels are large, open and handmade, with thick walls and pronounced rims that are thicker than the walls. All three vessels are relatively wide with diameters between 19 and 26 cm (Fig. 9:6).

Jars

Closed vessels, mainly jars, comprise 40% of the vessels from Tel Ḥanan. The vast majority of them are handmade of light brown clay with a brown core and small to medium-sized, dark inclusions; only 1% did not show any inclusions. It appears that many of the jars were either treated with a wash, or the surfaces were simply smoothed. Only a few display red slip.

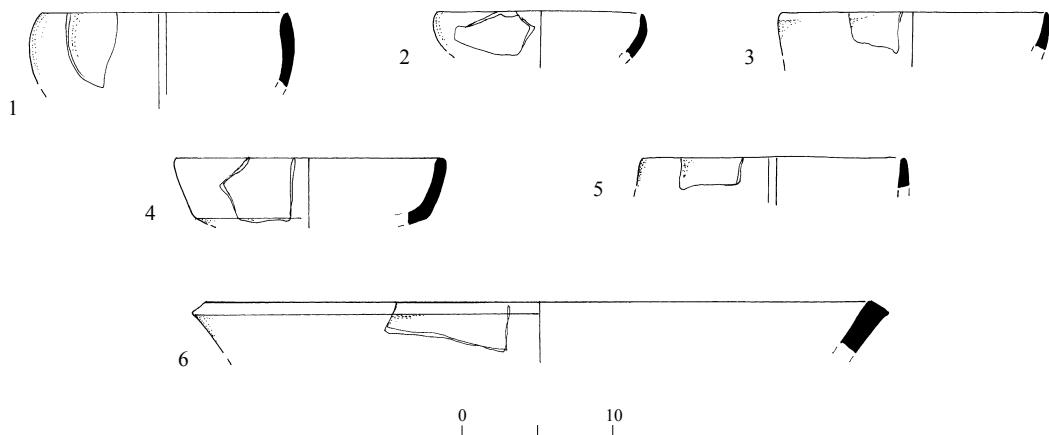


Fig. 9. Pottery vessels: bowls and basin.

No.	Basket	Type	Description
1	102.1	Hemispherical bowl	Light brown clay, small dark grits, red slip
2	103.1	Hemispherical bowl	Brown clay, small dark grits, red slip
3	102.3	V-shaped bowl	Fine gray clay, Dark-Face Burnished Ware, black slip
4	105.2	Carinated bowl	Fine gray clay, black slip
5	106.2	Hemispherical bowl	Fine gray clay, black slip
6	105.1	Basin	Fine buff clay, small dark grits

Three types of jars are discerned: bow-rim jars, necked jars and holemouth jars.

Bow-rim jars, one of the hallmarks of the Wadi Rabah assemblage (Gopher and Gophna

1993), are present at Tel Hanan in small quantities. Judging from the rim diameters, it seems that these were small and medium-sized jars (Fig. 10:1–3). Some were treated with either

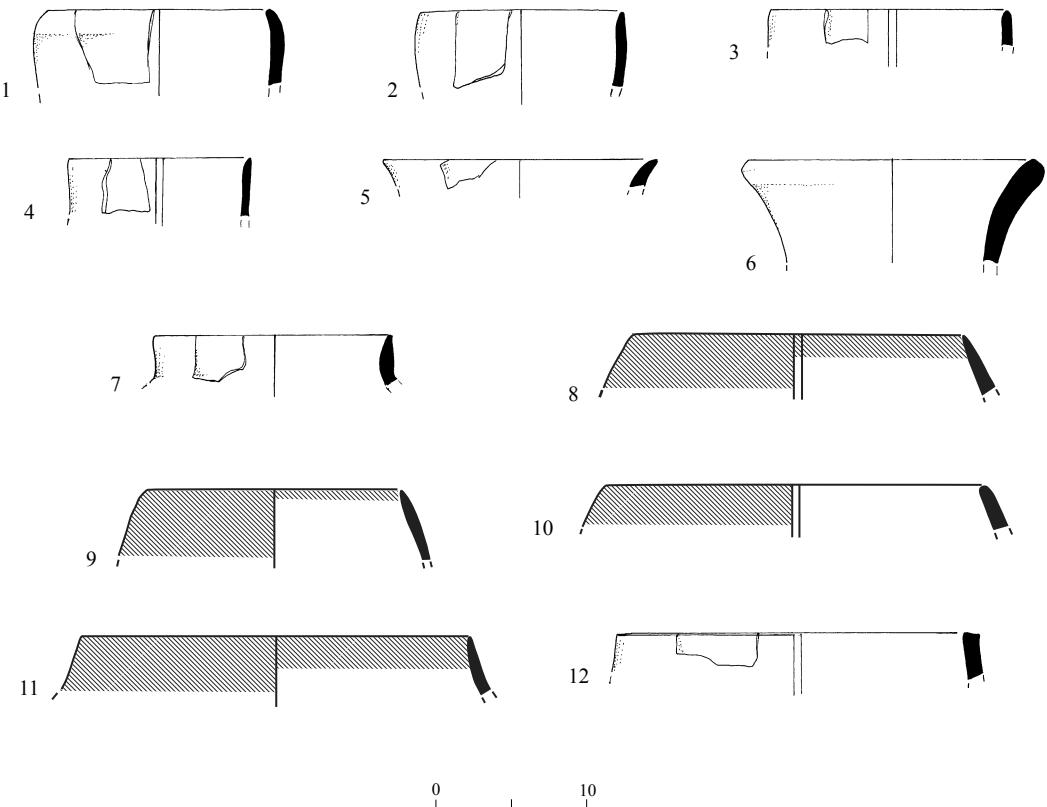


Fig. 10. Pottery vessels: jars.

No.	Basket	Type	Description
1	106.1	Bow-rim jar	Light gray clay, dark core, red slip
2	106	Bow-rim jar	Light brown clay, dark core, washed surface
3	106.2	Bow-rim jar	Light brown clay, brown core, small dark grits
4	102.5	High, straight-rim jar	Brown clay, small and medium dark grits
5	102.4	Everted-rim jar	Brown clay, brown core, red wash
6	102	Everted-rim jar	Brown clay, brown core, red wash
7	105.3	Everted rim jar	Light brown clay, dark core, red wash
8	101	Holemouth jar	Light brown clay, small gray grits, red slip
9	104.1	Holemouth jar	Light gray clay, small gray grits, red slip
10	102.2	Holemouth jar	Light brown clay, small dark grits
11	105	Holemouth jar	Light brown clay, fine gray grits
12	104	Holemouth jar	Brown clay, dark core, red slip

slip or incised decoration. The identified sherds are neck fragments and many of them also bear red slip and burnish that cover the inner neck. Incisions generally appear at the junction of the body and neck. It should be noted that two of the bow rims are of Dark-Face Burnished Ware (Fig. 10:3).

Jars with high, straight (Fig. 10:4) or everted (Fig. 10:5–7) necks, the two main variants of necked jars, are medium- to large-sized vessels with globular bodies and flat or concave bases. The outer surfaces were treated with red wash, a treatment that occurs on most Wadi Rabah jars, which was applied before firing (Goren 1991:53–54). Generally, these vessels have two loop handles with splayed attachments (Gopher and Gophna 1993; Gopher 1995).

Holemouth jars are the most common jar type (c. 54% of the closed vessels) and are present in two variants. Small holemouth jars with a rim diameter of less than 15 cm, simple pointed rims and flat bases (Fig. 10:8, 9) are sometimes decorated with red bands around the rims. Larger vessels with a wider opening often

have a cut rim and a flat base (Fig. 10:10–12), and the body was treated with wash.

Handles and Decoration

A few handles were retrieved, most of them loop handles. Lug handles are rare, perhaps a result of the small-scale excavation rather than ceramic tradition. Knob handles are also rare, represented by a single rounded example.

The Wadi Rabah ceramic assemblage in general is rich in decorative motifs, which have been discussed in detail elsewhere (e.g., Garfinkel 1999:142–146). These diverse motifs are extremely important for the attribution of assemblages within the Late Pottery Neolithic horizon (Gopher and Gophna 1993; Khalaily and Kamaisky 2002). The main patterns in the Tel Ḥanan assemblage are incised and finger impressed (Fig. 11:1–3), with other designs represented by single fragments.

In addition, fragments of two perforated clay discs (spindle whorls; Orrelle 1993) were recovered (e.g., Fig. 11:4).

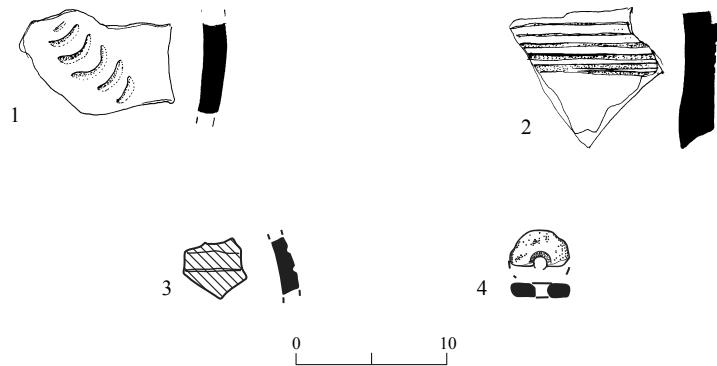


Fig. 11. Pottery vessels: decorated sherds and a spindle whorl.

No.	Basket	Type	Description
1	106	Thumb-impressed decoration	Light brown clay, small grits
2	102.6	Incised decoration	Light brown clay, no grits, red slip
3	103	Incised decoration	Light brown clay, no grits, red slip
4	101	Spindle whorl	Light gray clay, red slip, incised decoration

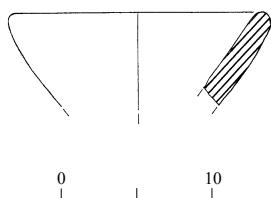


Fig. 12. Basalt bowl.

BASALT BOWLS

Four rims of basalt bowls appear to belong to V-shaped bowls with straight walls and flat bases (Fig. 12). The rims are simple and display no signs of decoration. Basalt bowls with straight walls and simple rims are common in Late Neolithic sites, and such bowls have been reported from sites such as ‘Ein el-Jarba (Kaplan 1969), Munhata (Gopher and Orrelle 1995), Tel Dover (Milevski et al., in prep.) and Nahal Yarmut (Khalaily 2011).

DISCUSSION

The small-scale excavation conducted at the site did not enable any conclusions as to the size of the site or its economic subsistence strategies. However, the discovery of a thick occupation layer dating to the Late Pottery Neolithic period at Tel Hanan increases the number of sites of this period in the vicinity of Haifa and contributes to our knowledge of the distribution of the Late Pottery Neolithic sites in this region, most of which are known only from findspots located during the survey of the East Haifa map (Ronen and Olami 1983). The discovery of this settlement, together with the other localities, demonstrates that this region was densely populated during the Late Neolithic period.

Analysis of the flint assemblage contributes much to our understanding of the nature of the Late Pottery Neolithic flint industry. The

abundance of cores representing various knapping stages, as well as the high frequencies of waste material, indicate that flint knapping took place on site using local raw material. Typologically, sickle blades dominate the tool assemblage (c. 24%) and can be classified into two types, those with deeply denticulated working edges and others showing fine denticulation. These two types are characteristic of the Wadi Rabah assemblages, termed Types C and D respectively (Gopher 1989a:95), and appear in different frequencies at diverse sites (Gopher 1989a; Marder, Braun and Milevski 1995; Barkai 1996; Gophna and Shlomi 1997). They are distinguished by the fact that they were fashioned on short blanks, a preference that somehow relates to the flexible knapping methods employed during the Late Neolithic period, which relied on local raw material of medium quality.

The pottery assemblage from the Late Neolithic occupation at Tel Hanan is domestic and consists of types known from this period, notably a number of forms that are among the hallmarks of the Wadi Rabah culture. Diagnostic types include jars with bow rims, Dark-Face Burnished Ware vessels, and the wide variety of decorative motifs, such as thumb impressions and incisions, that are found on most of the pottery forms. The large selection of ceramics from this limited excavated area is evidence that the site was occupied for a long period of time during the Late Pottery Neolithic, and the diverse cultural material and varied type frequencies are indicative of the daily activities that took place at the site.

The homogenous flint and ceramic assemblages, as well as the radiocarbon dating, demonstrate that the Neolithic occupation at Tel Hanan falls within the normative Wadi Rabah culture (Gopher and Gophna 1993). Characteristic assemblages of this culture are known from many sites distributed throughout the country.³

NOTES

¹ In December 1998, six squares were excavated on the upper terrace. In March–April 1999, eight test trenches were excavated on the lower terrace and eight squares, adjacent to these trenches.

² The excavation (Permit No. A-3665) was conducted by the authors on behalf of the IAA in March 2002, assisted by Shlomo Ya‘aqov-Jam (administration), Avraham Hajian (drafting), Leonid Zeiger and Michael Smilansky (flint drawing) and Alina Pikovsky (pottery drawing). The authors would like to thank Ianir Milevski, Eli Yannai and Yossi Garfinkel for their valuable comments, as well as Zach Horovich (Haifa district), who assisted us.

³ Nahal Be’er I (Gopher 1989b), Horbat ‘Uza Strata 18 and 17 (Getzov et al. 2009:5), Ha-Gosherim Stratum IV (Getzov 1999; 2008), Ha-Zore‘a (Anati et al. 1973), ‘Ein el-Jarba (Kaplan 1969), Nahal Zehora I and II (Gopher and Orrelle 1989; 1991; Gopher et al. 1996; Barkai 1996), Munhata (Perrot 1972; Garfinkel 1992), Tabaqat al-Buma in Wadi Zaqlab (Banning 1998), Tel Dover (Wolff 1998:764–765; Milevski et al., in prep.), the Wadi Rabah Site (Kaplan 1958), Lod (Kaplan 1977:58–60), and the site of Nahal Yarmut (Khalailey 2011), which is the southernmost site to date that can be attributed to the normative Wadi Rabah culture.

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