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The Chipped-Stone Collection from the Chalcolithic Cemetery at Palmaḥim (North)

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Introduction

The flint collection from Palmaḥim is extremely meager, consisting of only 157 items. A few flint artifacts were recovered inside the tombs (e.g., L211), although most of them were retrieved from the lower layers of the surrounding aeolian sand fills and on the upper surface of the red paleosol (*ḥamra*; see Gorzalczany, this volume). Aside from two Chalcolithic sickle blades, all of the flint items are intrusive.

In most of the excavation area, the sediments were fully sieved through a 5 mm mesh, and as a result, chips, small flakes (30–40 mm) and small blade/bladelet cores are well-represented in the collection. Consequently, it is clear that the lack of flint artifacts is not due to recovery techniques, but rather reflects the nature of the human activities and the post-depositional processes that occurred at the site. Preliminary observation indicates that the flint collection is not homogeneous, and can be attributed to at least four different periods: Middle Paleolithic, Epipaleolithic (Kebaran), Pottery Neolithic and Chalcolithic. Considering the small size and heterogeneity of this collection, it will be described together without any attempt to differentiate the material stratigraphically. Special attention, however, will be paid to the diagnostic tools that have chronological significance.

The Lithic Assemblage

Waste Materials (Tables 1, 2)

Most of the flint artifacts were produced from small wadi pebbles (< 60 mm) of fine-grained,

Table 1. The Chipped-Stone Collection

Type	N	%
Debitage		
Primary elements	13	16.5
Flakes	40	50.6
Blade/bladelets	16	20.3
Levallois flake	1	1.3
Levallois point	1	1.3
CTEs	8	10.0
Total Debitage	*79*	*100.0*
Debris		
Chunks	3	5.9
Chips	48	94.1
Total Debris	*51*	*100.0*
General		
Debitage	79	50.3
Debris	51	32.5
Cores	15	9.6
Tools	12	7.6
Total	*157*	*100.0*

Table 2. Core Frequencies

Type	N	%
Single-platform cores—blade/ bladelets	9	60.0
Amorphous cores—flakes	2	13.3
Single-platform core—flakes	1	6.7
Core on flake—blade/bladelets	1	6.7
Core fragment	1	6.7
Levallois core—flakes	1	6.7
Total	*15*	*100.1*

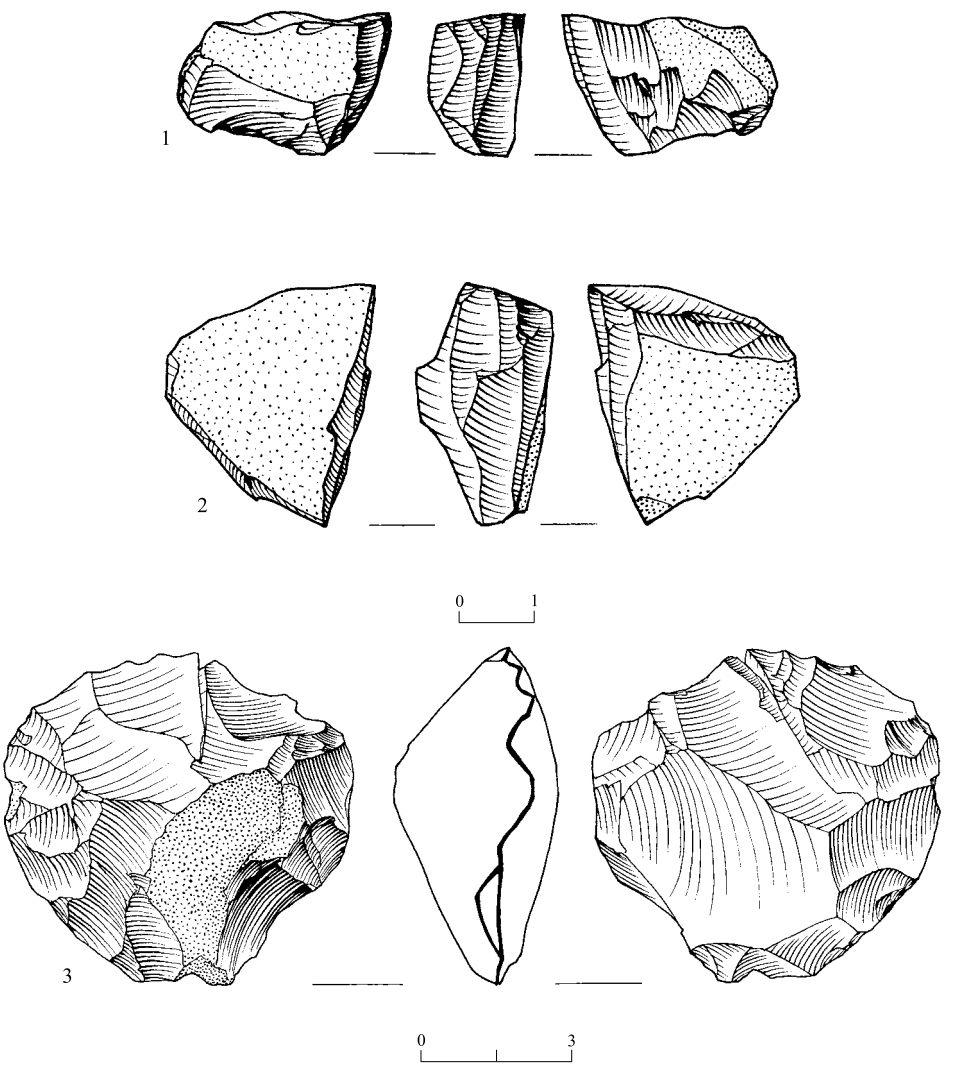

Fig. 1. Cores.

No.	Locus	Basket	Description
1	Surface	–	Blade/bladelet core
2	276	2148	Blade/bladelet core
3	Surface	–	Levallois core

medium- to high-quality, multi-colored (buff, gray, brown) flint. Occasionally, larger nodules were used for the preparation of Levallois flakes. At least one-third of the debitage items are covered with a whitish to light gray patina. Flakes dominate the collection, although blade/bladelets and primary elements are also common (Table 1). The high frequency of primary elements within the collection indicates that most knapping activities took place on-site. The two Chalcolithic sickle blades, however, were probably manufactured off-site.

All the cores except the one Levallois core are small (average length 26.2 ± 5.6

s.d; average width 18.9 ± 5.5 s.d.; average thickness 16.8 ± 6.7 s.d.). Most of the cores (60%; Table 2) are single platform and narrow fronted (Marder 2003), which were intended mainly for bladelet production (Fig. 1:1, 2). They vary in shape from semipyramidal to globular and rectangular. All except three of the blade/bladelet cores are covered with cortex on their back and/or lateral edges (40–60%). Typologically, these narrow-fronted cores are typical of Epipaleolithic (Kebaran) industries (see Shimelmitz 2002).

Other core types include amorphous, a single-platform core for the production of flakes, a core on a flake and a core fragment (Table 2). The single Levallois core with minimal cortex on its back (c. 20% of the body), intended for flake production by recurrent Levallois technique, deserves special note (Fig. 1:3). This type of core should be attributed to Middle Paleolithic industries.

Tools (Table 3)

A small number of flint tools were retrieved (n = 12; Fig. 2:1–5), most of them ad hoc, such as denticulates, endscrapers and retouched blades (Fig. 2:4, 5). Only four diagnostic tools were identified. The earliest is a denticulate flake produced by Levallois technique and assigned to the Middle Paleolithic period; another is a burnt fragment of a Haparsa point that was originally used as a sickle blade (Fig. 2:1). Two typical Chalcolithic sickle blades (e.g., Gilead, Hershman and Marder 1995: Figs. 5.17, 5.18) are backed and rectangular in shape, one triangular and one trapezoidal in section. Both sickle blades are covered with a whitish patina and are broken on their proximal end. They bear gloss on one edge only. One item, with fine denticulation on the ventral side, has gloss on both the dorsal and ventral surfaces (Fig. 2:2); the other item, with a plain working edge, has gloss only on the dorsal side (Fig. 2:3).

One broken handstone made of dense, fine-grained, metamorphic stone was retrieved from Structure 206 (Fig. 2:6).

Table 3. Tool Frequencies

Type	N	%
Denticulate	1	8.3
Endscrapers on flakes	2	16.7
Endscrapers on blades	2	16.7
Retouched blades	2	16.7
Denticulate on Levallois flake	1	8.3
Arrowhead on sickle blade	1	8.3
Chalcolithic sickle blades	2	16.7
Varia	1	8.3
Total	*12*	*100.0*

DISCUSSION

The majority of the artifacts in the small and heterogeneous Palmaḥim lithic collection originate in secondary depositions, therefore minimal data was obtained from the study of the collection. It may be conjectured that the site was temporarily occupied during four different periods: the Middle Paleolithic, Epipaleolithic, Pottery Neolithic and Chalcolithic.

Most of the artifacts retrieved from the site are flakes, blade/bladelets and blade/bladelet cores, the latter two probably attributable to the Epipaleolithic (Kebaran) period. A Levallois core and flakes dating to the Middle Paleolithic period were also recovered. The nearest Kebaran site is the 'Grass Hill' located 500 m to the west (see Gorzalczany, this volume: Fig. 1; Gophna 1974:46; Braun et al. 2001:63–65).

An isolated find of a Haparsa point reflects a possible visit during the Pottery Neolithic period. Pottery Neolithic remains were identified 6 km to the southwest at the Palmaḥim sites (Gopher, Friedman and Burian 2005).

It is not surprising that only two diagnostic Chalcolithic tools (sickle blades) were found at the site, as flint artifacts are often recorded in extremely low frequencies at Chalcolithic burial sites, occasionally even completely absent (Marder 2002:42). In most cases, flint implements retrieved from Chalcolithic burial sites are either intrusive,

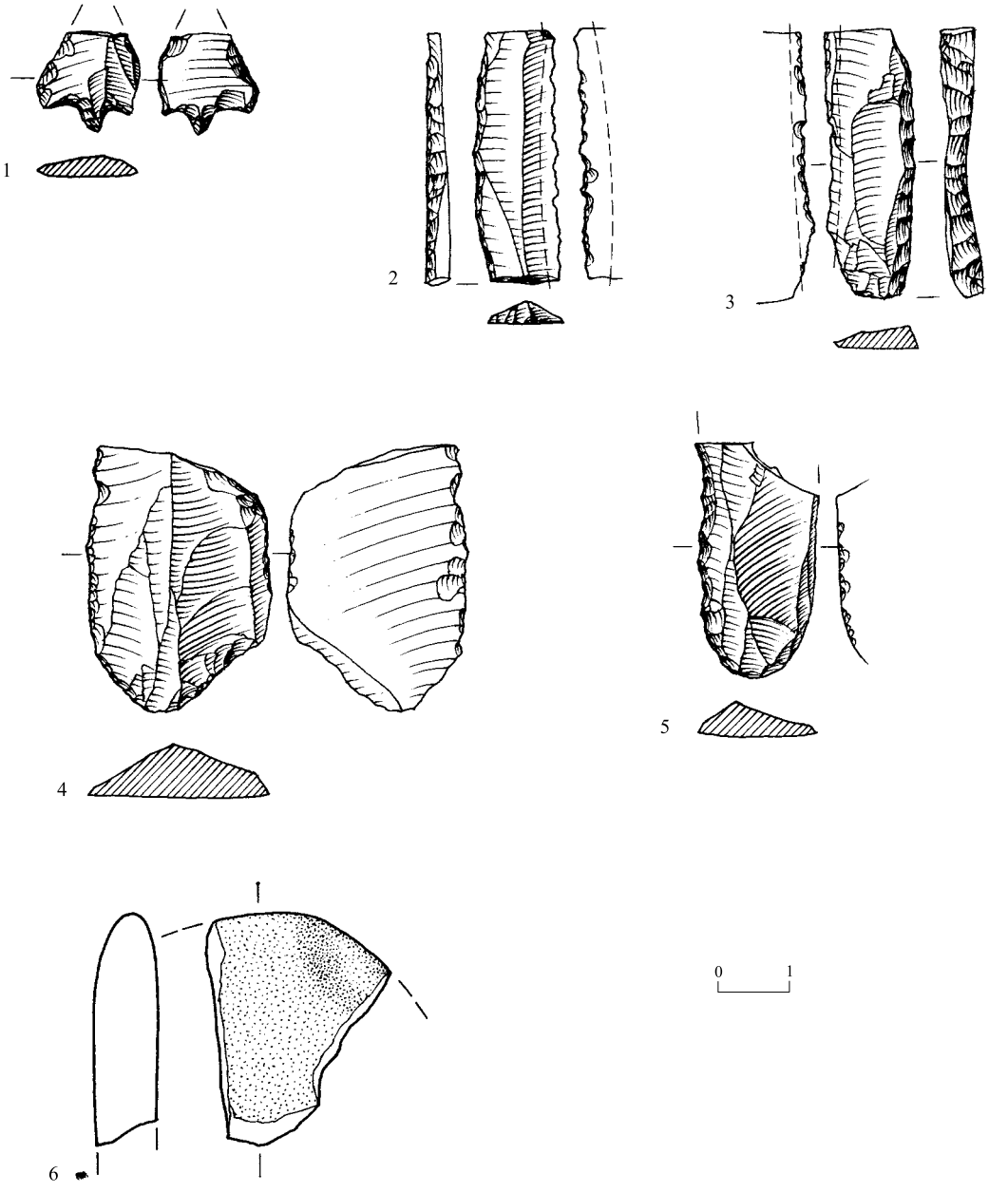

Fig. 2. Tools.

No.	Locus	Basket	Description
1	227	2095	Haparsa point
2	Surface	1028	Sickle blade
3	211	2048	Sickle blade
4	204	2003	Retouched blade
5	228	2002	Retouched blade
6	206	2004	Handstone

originating from earlier prehistoric periods, or they are related to Chalcolithic domestic activities. Only in rare instances were flint tools deposited as grave offerings during the Chalcolithic period, such as the perforated flint discs and adzes in the Peqi'in burial cave (Gal, Smithline and Shalem 1997:151), most of them of high-quality, fine-grained flint, untarnished and carefully polished. Still, Barkai (2005:271–272) has suggested that the flint objects in the Peqi'in Cave were probably hoarded within the burial complex and not deposited as offerings. Another example of a flint burial offering is a Fayum arrowhead found on the floor of a Chalcolithic burial cave at Ḥorbat Qarqar (Fabian, Scheftelowitz and Gilead 2015). In the Palmaḥim cemetery, however, the evidence is inconclusive, as the sickle blades originate in disturbed loci and cannot be unconditionally attributed to the burials. They may have been left behind or intentionally discarded after they were worn down by cutting grass or applying plaster to the walls or floors of burial structures.

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