

THE FLINT ASSEMBLAGE FROM SOUTH HORBAT TITTORA

VLADIMIR ZBENOVICH

The flint assemblage consists of 311 items collected in the course of salvage excavations near Horbat Tittora (Modi'in 1) in 1994 (see Kogan-Zehavi, this volume). All the finds originated on the surface or within fills of features and installations dated to different periods; for example, 25 items, including 2 bi-facial tools, were recovered from an Iron Age rock-cut burial cave (Burial Cave 1, Room C).

THE FLINT ASSEMBLAGE

Raw Material

Most of the specimens are made of gray, non-translucent Senonian flint (of the Mishash Formation), while c. 15% of the assemblage comprises chert with crystalline inclusions. Sources for these raw materials are located in the vicinity of Modi'in. A single tool, probably imported, is made of high-quality, homogeneous Eocene flint.

Waste Material

Flakes (N = 101).— Most of the flakes, which constitute about one-third of the entire assemblage (Table 1), vary in length from 4 to 6 cm.

Blades (N = 11).— All of the items are broken and irregular blades, varying in width from 1.2 to 2.0 cm.

Core Trimming Elements (N = 3).— Two of the CTEs comprise the upper ends of cores bearing the remains of the striking platform and

negatives of three to four flakes or blades. The third CTE is a ridge-blade, probably reused as a borer.

Cores (N = 4)

Three of these are single-platform cores for flake removal (Fig. 1:1); the fourth specimen is a blade core.

Tools (N = 61)

The unusually high percentage of tools within the flint assemblage (19.6%; see Table 1) is probably a result of the collection method. The majority of the tools (80%) were manufactured

Table 1. Flint Assemblage

Type	N	%
Primary Elements	2	1.6
Flakes	101	83.5
Blades	11	9.1
CTEs	3	2.5
Bifacial Spalls	4	3.3
<i>Total Debitage</i>	<i>121</i>	<i>100.0</i>
Chunks	115	92.0
Chips	10	8.0
<i>Total Debris</i>	<i>125</i>	<i>100.0</i>
Debitage	121	39.0
Debris	125	40.2
Cores	4	1.2
Tools	61	19.6
<i>Total</i>	<i>311</i>	<i>100.0</i>

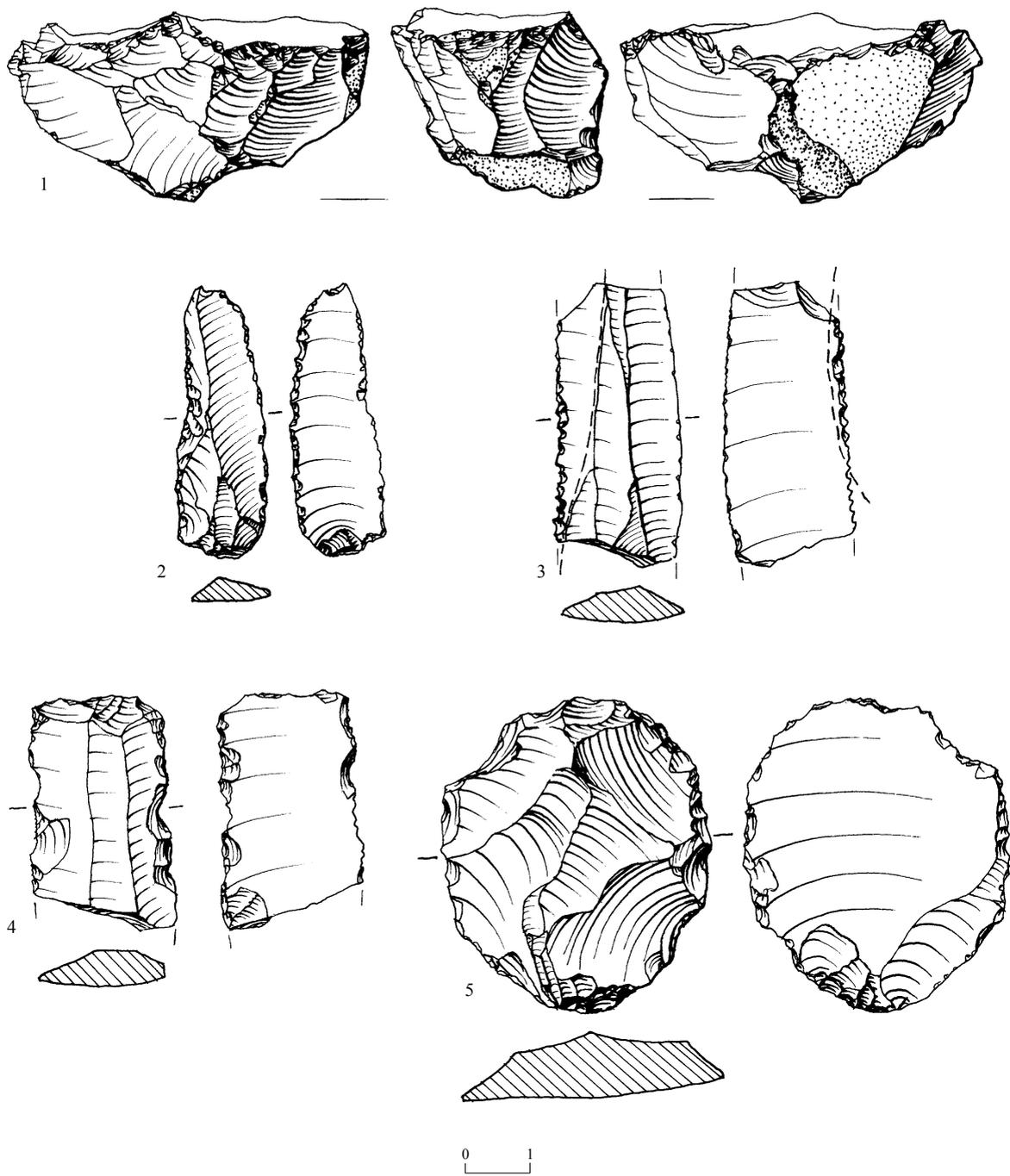


Fig. 1. Flint tools: (1) core; (2) retouched flake; (3) sickle blade; (4) truncated blade; (5) scraper.

Table 2. Tool Frequencies

Type	N	%
Retouched Blades	6	9.9
Sickle Blades	2	3.3
Truncated Blade	1	1.6
Scrapers	5	8.2
Notches	10	16.4
Retouched Flakes	12	19.7
Borers	2	3.3
Spearhead	1	1.6
Knife	1	1.6
Bifacials	21	34.4
<i>Total</i>	<i>61</i>	<i>100.0</i>

on flakes; the remainder are blade tools (Table 2).

Retouched Blades (N = 6).— All these tools are complete blades, most with a triangular cross-section, varying from 3.0 to 6.5 cm in length and 1.3 to 1.9 cm in width. Four tools show semi-abrupt retouch on one or both lateral edges (Fig. 1:2), while two blades were fashioned by simple retouch on one edge.

Sickle Blades (N = 2).— Both sickle blades are medially broken. One example (Fig. 1:3), 1.8 cm wide, presents fine denticulation and a strip of gloss on the lateral edge. The second blade, 1.3 cm wide, is backed on one edge, with shallow, semi-abrupt retouch on the opposite edge, which also bears a narrow strip of gloss on both dorsal and ventral surfaces.

Truncated Blade (N = 1).— This regular, broken blade, 2 cm wide (Fig. 1:4), was fashioned of homogeneous Eocene flint and coarsely truncated on the distal end. The tool was reutilized as a notched implement.

Scrapers (N = 5).— Four endscrapers were made on oval or round, medium-sized flakes and one sidescraper, on a large flake (Fig. 1:5).

Notches (N = 10).— A single tool bearing two alternate notches (Fig. 2:1) was fashioned on a broken blade. The other notched implements were made on flakes of various sizes (Fig. 2:2).

Retouched Flakes (N = 12).— These are large to medium-sized tools, usually with coarse, semi-abrupt retouch on a small section of the perimeter.

Borers (N = 2).— One of these tools is a blunt perforator made on a massive triangular flake (Fig. 2:3). The other, with a short point flanked by a notch, was fashioned on a small flake.

Spearhead (N = 1).— A single projectile (Fig. 2:4) was coarsely fashioned on a blade 2.5 cm wide. The tool is broken; part of the tang is preserved, while its point is missing. The spearhead was created by pressure retouch and flat retouch on its ventral surface.

Knife (N = 1).— This tool, made on a complete blade of semi-translucent, gray-brown flint, 9.4 cm long and 1.7 cm wide (Fig. 3:1), is classified as a knife. It bears two opposing retouched notches near the proximal end and the point was fashioned by regular, semi-abrupt retouch on the ventral surface. A small spot of gloss is discernable on the right upper edge of the tool, on the ventral surface.

Bifacials (N = 21; Figs. 3:2, 3; 4; 5).— Bifacials constitute one third of the tool kit, including 11 complete tools; most of the remainder are distally broken. The majority of the complete bifacials measure 6–10 cm in length and 2.3–4.0 cm in width, while the largest tool (Fig. 5:1) is 14 × 5 cm. The working end is usually convex or straight, fashioned by one to three transversal blows (Figs. 3:3; 4). Typologically, the bifacial tools are divided into two types: (1) axes (N = 9), characterized by a symmetrical longitudinal cross-section and a lens-shaped or rhomboidal transversal cross-section; (2) adzes (N = 6), with an asymmetrical longitudinal

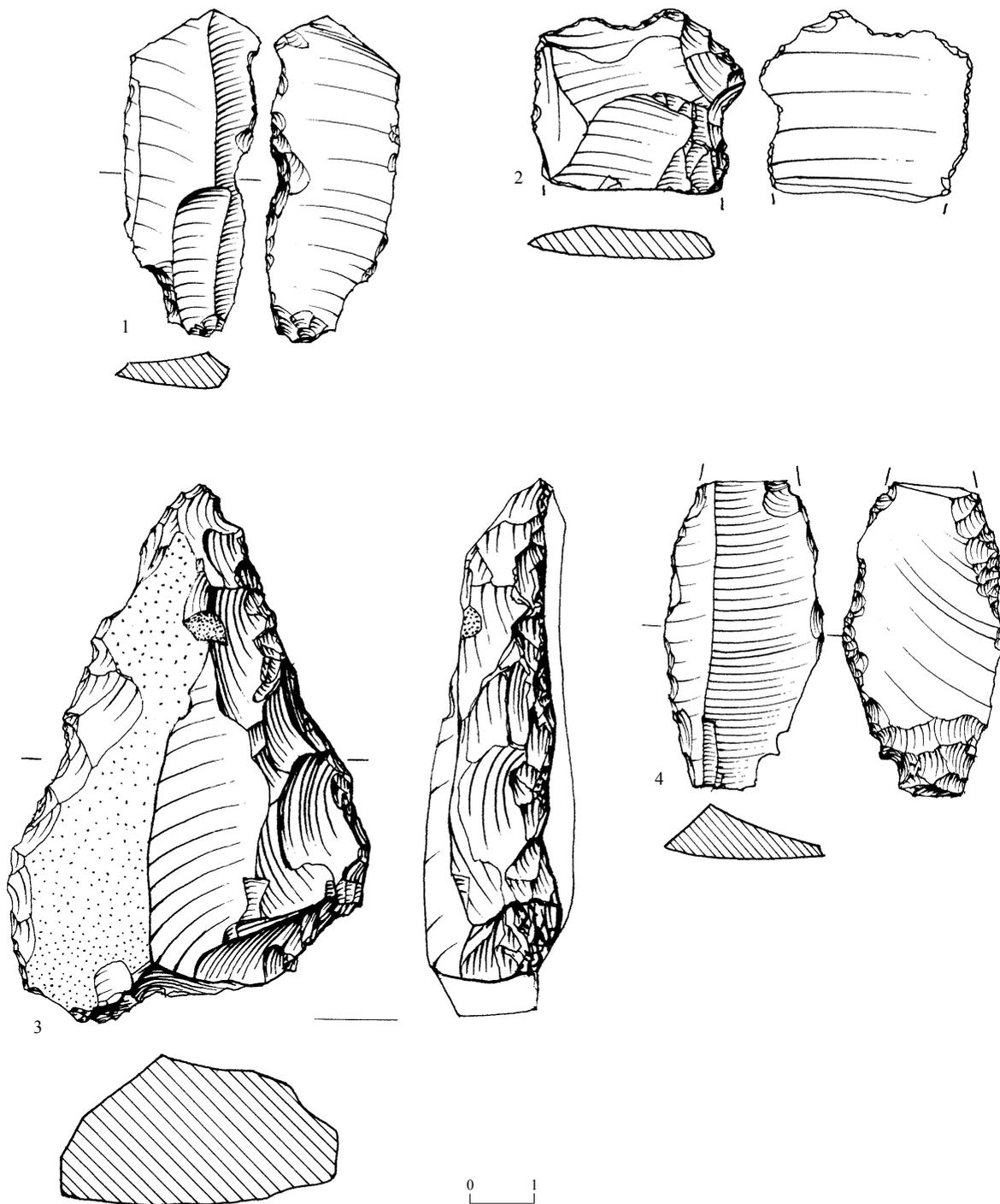


Fig. 2. Flint tools: (1, 2) notches; (3) borer; (4) spearhead.

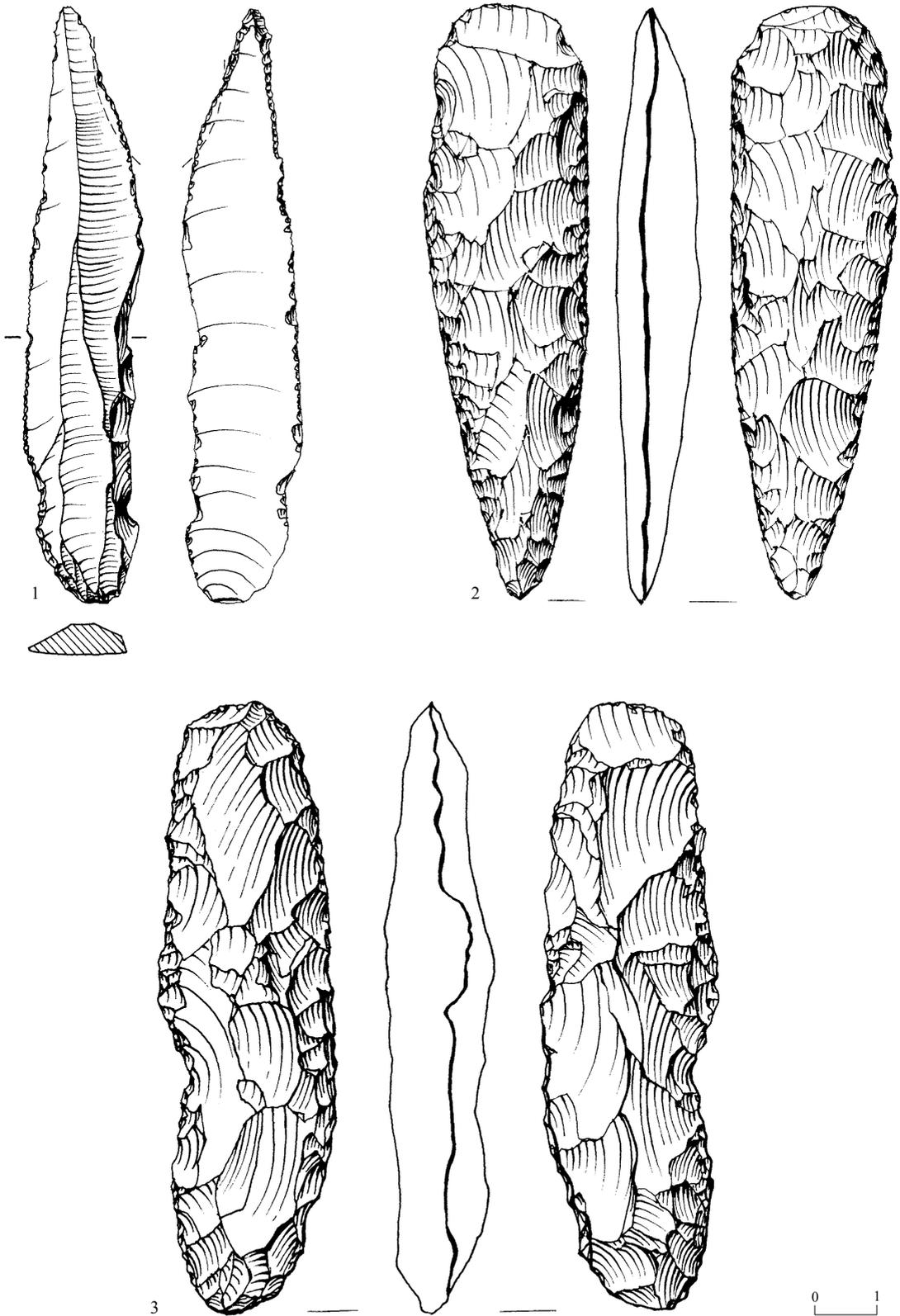


Fig. 3. Flint tools: (1) knife; (2, 3) bifacials.

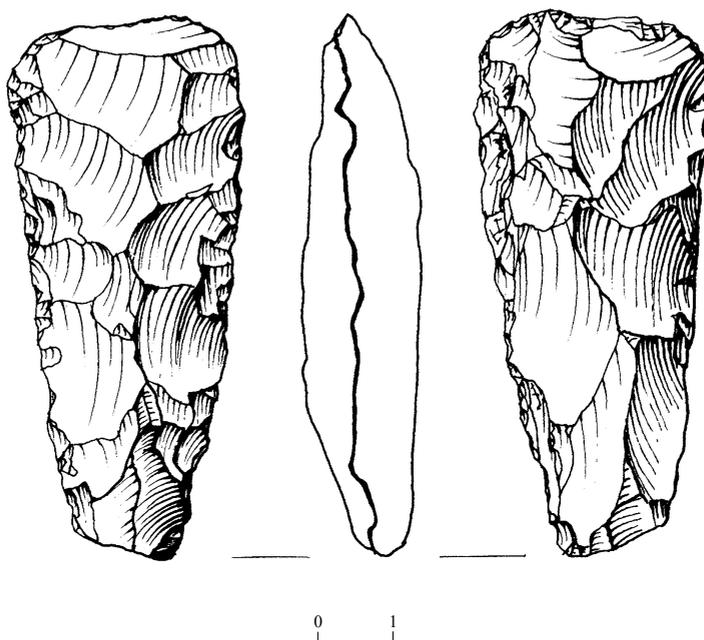


Fig. 4. Flint tools: bifacials.

cross-section and a plano-convex transversal cross-section. The remaining six tools are small, unidentified pieces.

Four bifacial spalls, one of which was used as a notched tool (Fig. 5:2), are worth mentioning.

DISCUSSION AND CONCLUSIONS

In spite of the ad hoc nature of most of the tools described here, certain diagnostic implements enable us to position this flint assemblage within a chronological framework.

Most of the complete bifacials belong to the so-called tranchet axes fashioned by transversal blows, which are characteristic of early Pre-Pottery Neolithic A (PPNA) flint assemblages (e.g., Nadel 1997). Several tools have close parallels in assemblages of the later PPNB horizon, such as the knife (Fig.

3:1), which resembles knives from the Naħal Hemar Cave (Bar-Yosef and Alon 1988). The finely worked, pointed bifacial tool (Fig. 3:2) may be compared with one from the Kefar Ha-Ĥoresh flint assemblage (Goring-Morris et al. 1995: Fig. 12:4). The spearhead (Fig. 2:4) and denticulated sickle blade (Fig. 1:3) may possibly be attributed to the PPNB as well.

Two flint items can be dated to subsequent periods: the backed sickle blade is typical of the Chalcolithic period, while the truncated blade (Fig. 1:4) has numerous parallels in EB I–II flint assemblages.

In conclusion, on the basis of the flint assemblage, it is suggested that the site of South Ĥorbat Tittora was inhabited during the PPNA and PPNB, although given the sparse archaeological data, this remains in the realm of speculation.

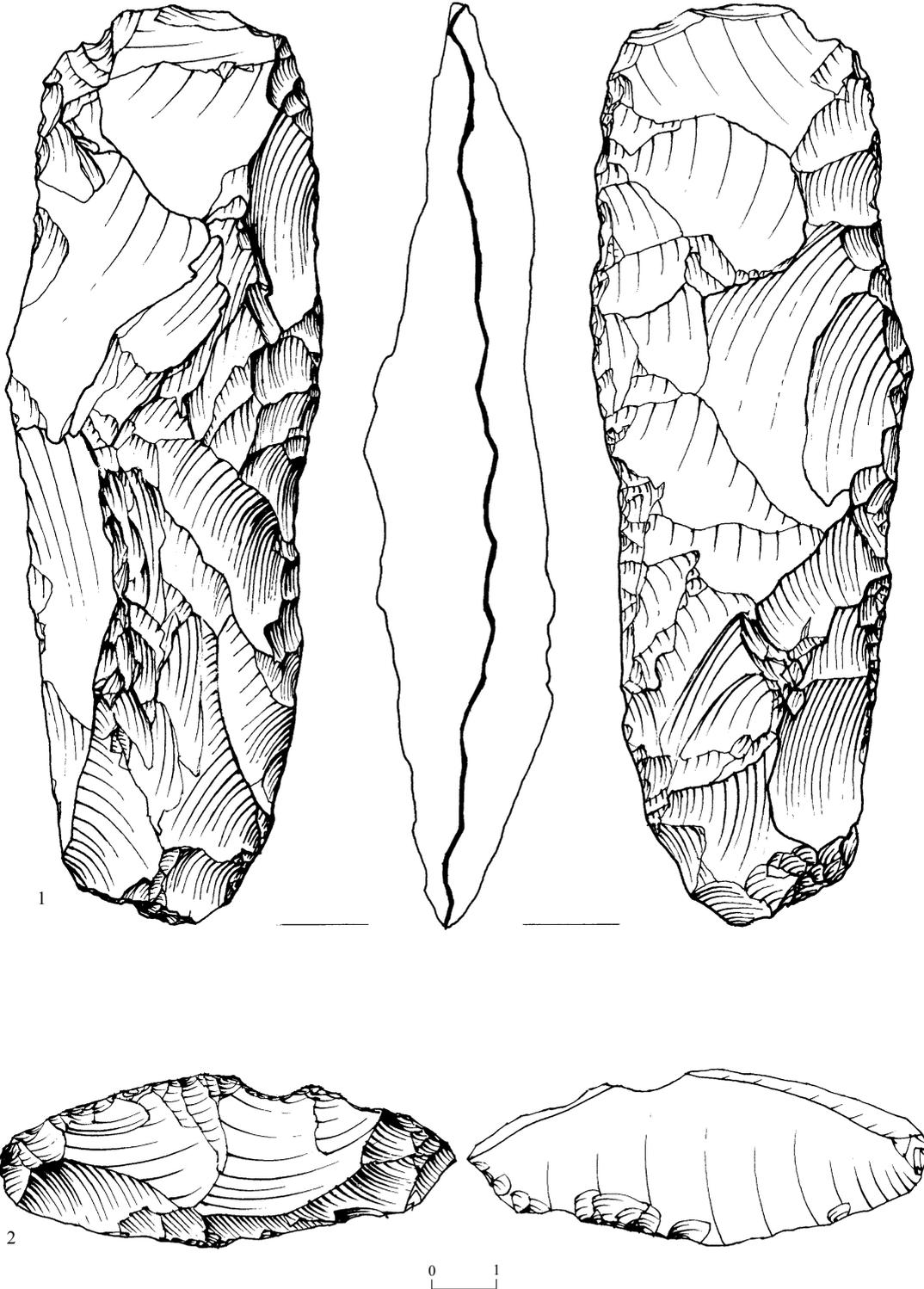


Fig. 5. Flint tools: (1) bifacial; (2) bifacial spall.

REFERENCES

- Bar-Yosef O. and Alon D. 1988. Naḥal Hemar Cave. *'Atiqot (ES)* 18:1–30.
- Goring-Morris N., Goren Y., Kolska Horwitz L., Bar-Yosef D. and Hershkovitz I. 1995. Investigations at an Early Neolithic Settlement in the Lower Galilee: Results of the 1991 Season at Kefar Ha-Horesh. *'Atiqot* 27:37–62.
- Kogan-Zehavi E. This volume. Tombs and Installations of the Iron Age II–Byzantine Period from South Ḥorbat Tittora.
- Nadel D. 1997. The Chipped Stone Industry of Netiv Hagdud. In O. Bar-Yosef and A. Gofer eds. *An Early Neolithic Village in the Jordan Valley I: The Archaeology of Netiv Hagdud* (American School of Prehistoric Research Bulletin 43). Cambridge. Pp. 71–150.