

The Lithic Assemblages of Levels E and D of Buran-Kaya III

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This chapter describes the lithic assemblages from the two lowermost cultural layers in the Buran-Kaya III sequence, Level E and Level D. Both of these are small assemblages, and their analysis is further hampered by a fairly significant degree of break-

age. While the assemblages from Levels E and D are both culturally unattributed, they are technologically and typologically distinct from one another, as well as from the other assemblages present in the site of Buran-Kaya III.

The Level E Lithic Assemblage

The Level E lithic assemblage consists of 1,558 items, most often made on black, speckled black, dark grey, and greyish-brown colored flint. Artifacts in this cultural layer were most heavily concentrated in the southeastern section of the intact deposits of the site (Monigal, Chapter 1). There was some minor edge damage and movement of artifacts, although this was slight overall; a few post-depositionally broken pieces were conjoinable.

The Level E assemblage has been subdivided into eight categories: chips (less than 30 mm in maximum dimension), flakes, blades (length = 2 × width), primary elements (having greater than 50% cortical coverage on the dorsal surface), core trimming elements (CTE), chunks (thick, fragmentary unidentifiable debitage), cores, and tools (any piece carrying purposeful retouch, including fragments). The bulk of the Level E assemblage is pieces less than 30 mm in maximum dimension (Table 4-1), comprising 91.5% of the total number of artifacts, so the non-debris (exclusive of chips and chunks) portion of the assemblage consists of only 129 items. There is, in addition, a fair

amount of breakage in the assemblage—67% of all artifacts, or 34% of the non-debris assemblage (Figure 4-1).

The two cores in the assemblage, one of which was on a plaquette, are between 25 and 35 mm in maximum dimension. Although they are unbroken, they are too small and exhausted to classify properly. On

TABLE 4-1
Artifact totals for Level E of Buran-Kaya III

	<i>N</i>	%	%
Chips (< 3cm)	1426	91.5	
Flakes	38	2.4	29.5
Blades	32	2.1	24.8
Primary elements	7	0.4	5.4
Core trimming elements	13	0.8	10.1
Chunks	3	0.2	
Cores	2	0.1	1.6
Tools	37	2.4	28.7
Total	1558	100.0	100.0

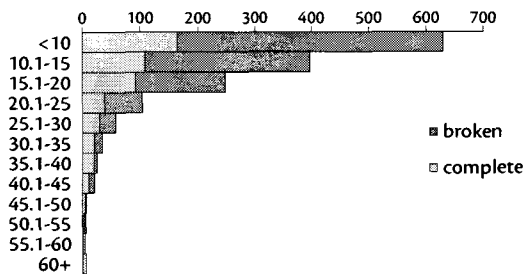


Figure 4-1—Histogram of the maximum dimensions (in mm) of broken and complete pieces from Level E.

the other hand, it can be noted that their last removals were flake-dimensional, they were non-volumetric, and there was some preparation of multiple platforms. Based on the deep bulbar concavities on the core facets, it appears that a hard hammer technique was used for their reduction.

Core trimming elements, which make up 10% of the non-chip assemblage, include massive flakes that removed the top of the core's reduction surface and removals from the core edge where the platform and reduction surfaces intersect. These latter are often blade dimensional, and resemble poorly-executed *lames à crête* (Figure 4-2: 1). Overall, the CTE confirm the characteristics noted for the cores—hard hammer, multiple prepared platforms, and flake-oriented debitage. They also suggest that the cores were rotated as one surface became too flat or had too many hinged removals, and an adjoining surface of the core use for reduction. The cores were not, however, volumetric—they were single surface in conception throughout the reduction sequence. The CTE further indicate that

there was probably more multi-platform use, and therefore multi-directional reduction, than that suggested by the scar patterns on the debitage. There are no core tablets or other debris typically associated with prismatic blade core reduction.

Primary elements account for 5% of the non-chip assemblage and average 35 mm in greatest dimension, with a single piece that is 55 mm. A fair number of the pieces smaller than 30 mm are covered by more than 50% cortex on their dorsal surfaces, and debitage and tools frequently have small areas of cortex. These traits suggest that nodules did not undergo a separate step of decortication beyond setting up a striking platform before reduction began.

Flakes (Figure 4-3: 1, 2) are small in the Level E assemblage: under 50 mm in maximum dimension, with an average of 35 mm. They are often as broad as they are wide, with blunt or plunging distal terminations, but rarely feathering terminations. Twisted ventral profiles dominate (48.3%), followed by flat (27.6%), incurvate (13.8%), and convex (10.3%).

Dorsal scar patterns on the flakes show an equal amount of unidirectional parallel and crossed/three-directions (43.3% each), with occasional bidirectional (10%) or irregular (3.3%) patterns; no unidirectional convergent dorsal scar patterns were noted on the flakes. The flakes have large bulbs of percussion, without lipping, *écaillage* scars, noticeable hackles, and indicate hard hammer percussion in all cases. Multiple faceted platforms are most common (57.1%), followed by unafaceted (28.6%), and dihedral (14.3%); no cortical platforms were noted on the flakes.

Blades—pieces the length of which is equal to or exceeds twice the breadth—are almost as common (25%) as flakes in the Level E assemblage (Table

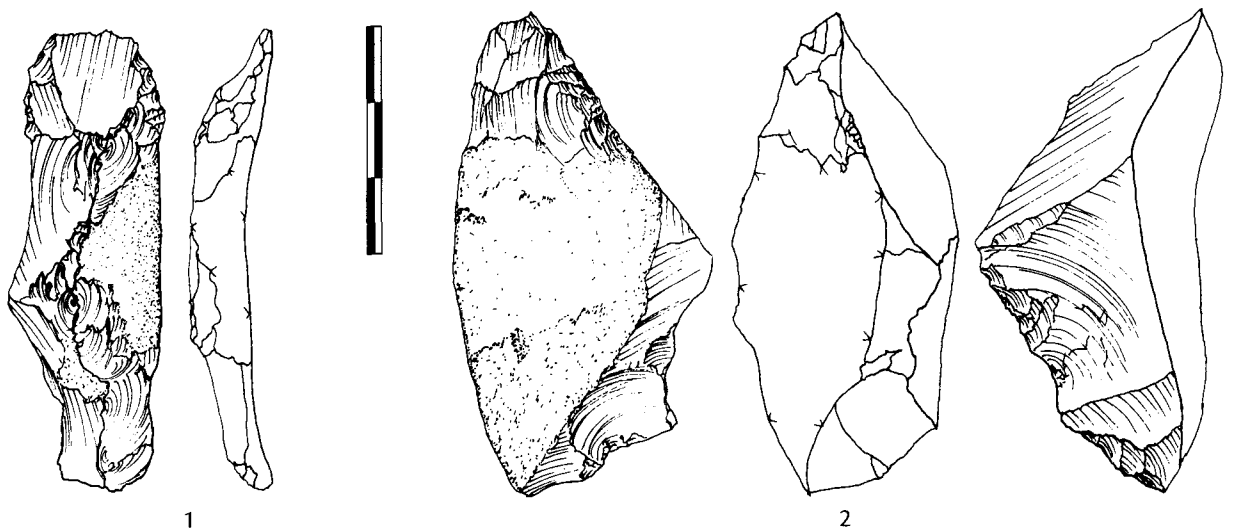


Figure 4-2—Core trimming elements from Buran-Kaya III Level E: 1—pseudo-*lame à crête*/core edge element; 2—core fragment.

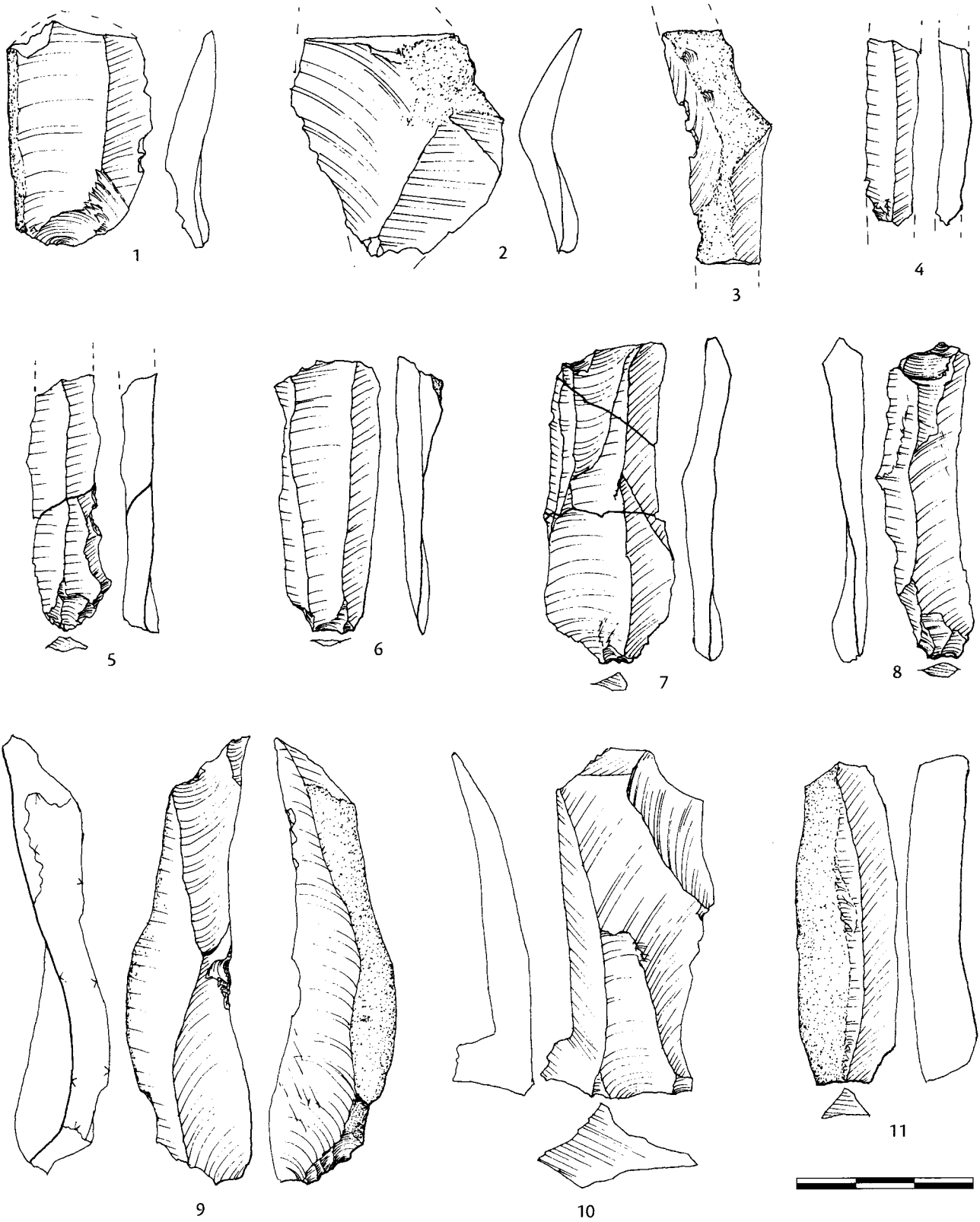


Figure 4-3—Flake and blade debitage from Buran-Kaya III Level E.

TABLE 4-2
Dimensional data for blades (including tools) from Level E

	Mean	s.d.	N
Length	47.68	14.21	33
Width	20.87	7.22	36
Elongation index (L/W)	2.49	0.55	32
Thickness	7.73	5.61	37
Platform width	12.66	5.95	17
Platform height	6.37	3.16	17
Platform flattening (w/h)	2.18	1.04	17
Relative plat. size (w/plat w)	1.95	0.06	17

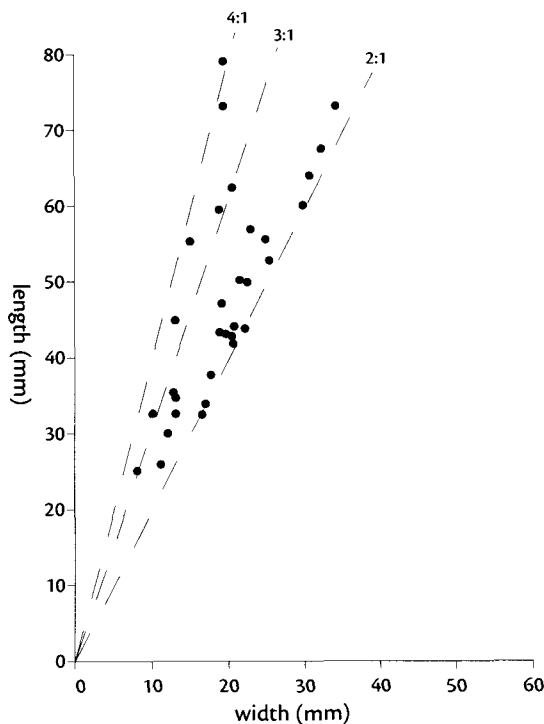


Figure 4-4—Length/width scatterplot of blades (including tools) from Buran-Kaya III Level E.

4-1). These are generally rectangular in shape, but irregularly so—they are often skewed in one direction and/or have wavy lateral edges (Figure 4-3). They are considerably larger than flakes, with a mean length of 48 mm (Table 4-2). The blades have a significant elongation index (that is, they tend to be long and narrow) with a mean of 2.5 and maximum of 4.1 (Figure 4-4). They are fairly thick (7.7 mm) and triangular to trapezoidal in cross-section. The relative platform widths (blank width divided by platform width) have high values (mean = 1.95 mm): platforms of blades are quite narrow; indeed, the blades often taper towards the proximal ends.

Ventral profiles of blades show the same proportional patterning as do the flakes, with a slightly

higher incidence of twisted profiles: twisted (55.6%), flat (25.0%), incurvate (13.9%), and convex (10.8%). Most were struck off-axis. Dorsal scar patterns on blades are predominantly unidirectional parallel (54.5%), followed by the considerably rarer bidirectional (21.2%), irregular (15.2%), crossed (6.1%), and converging (3.0%) patterns.

Blade striking platforms are similar to the flakes, with salient bulbs and obvious hard hammer percussion. In contrast to the pattern seen on the flake platforms, the blades of Level E dominate in cortical platforms (45.2%). This is followed by multiple faceted platforms (32.3%), unafaceted (12.9%), and dihedral (9.7%). With a mean of 2.2, the index of platform flattening (the quotient of the platform width and platform height) indicates that platforms are rectangular in shape; about twice as wide as they are thick. There does not appear to be a significant relationship between the size of the blade or its platform and the degree of platform preparation.

Of the thirty-seven tools in the Level E assemblage, all are unifacial (Table 4-3). Denticulates make up a significant number of the tools (38%) (Figure 4-5). It should be noted that due to the presence of some edge damage (probably by trampling) in the assemblage, simple notched (Clactonian-like) items were excluded from the tool assemblage. Two-thirds of the denticulates are on elongated blanks, and denticulation is frequently bilateral. Retouched items make up the second most prevalent tool group (32.4%). One-third of these have marginal but continuous retouch, and one is inverse. Nearly one-half of the retouched items were made on blade blanks. There are five (13.5%) sidescrapers in the assemblage: three simple scrapers, whose classification is provisional since all are broken, a convex oblique sidescraper (Figure 4-5: 1) and a convergent sidescraper (Figure 4-5: 6). Sidescraper retouch is flat, semi-parallel, and well-executed, and is thereby contrasted with the retouched pieces with retouch

TABLE 4-3
Typology of Buran-Kaya III Level E

	N	%
Point	1	2.7%
Retouched point	2	5.4%
Simple sidescraper	3	8.1%
Convergent sidescraper	1	2.7%
Convex oblique sidescraper	1	2.7%
Endscraper	1	2.7%
Burin	1	2.7%
Atypical backed knife	1	2.7%
Denticulate	14	37.8%
Inverse retouch	1	2.7%
Retouched piece	11	29.7%
Total	37	100.0%

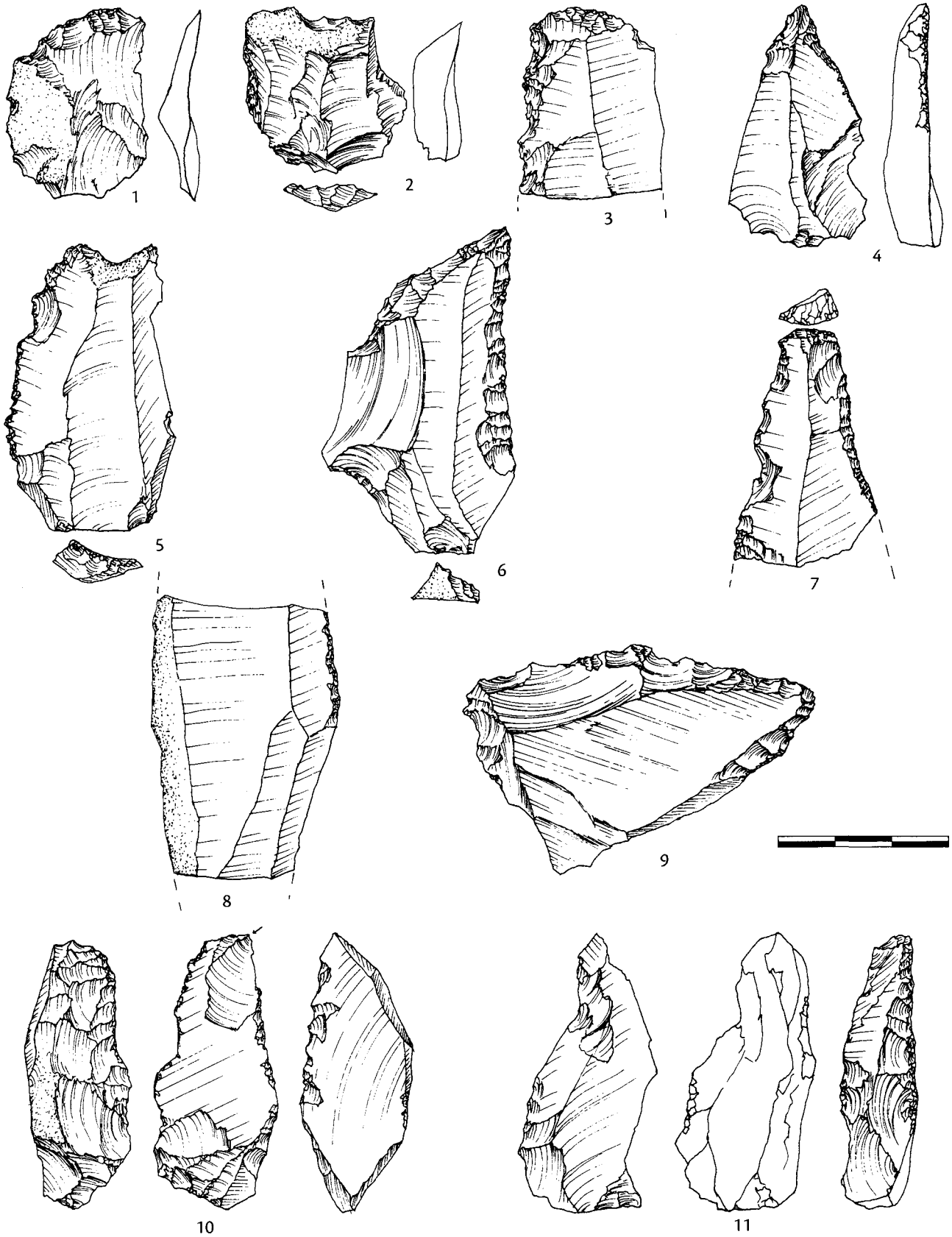


Figure 4-5—Tools from Buran-Kaya III Level E: 1—convex oblique sidescraper; 2—retouched flake; 3, 5, 9—denticulates; 4—retouched point; 6—convexo-concave convergent sidescraper; 7—endscraper on retouched and notched blade; 8—marginally retouched blade; 10—burin plan on heavily retouched piece; 11—backed piece.

varying from marginal to invasive, flat to steep, and which may be irregularly executed on the same piece.

The single endscraper in the assemblage is on an elongated piece with even, short retouch on one lateral edge, and denticulation on the other; the endscraper portion of the tool is steep and fairly well made (Figure 4-5: 7). There are three points in the assemblage; these are flake-proportioned, slightly asymmetric, and probably do not derive from a Levallois reduction strategy given the characteristics of the rest of the assemblage. Two of these are retouched (Figure 4-5: 4). There is one atypical backed knife (Figure 4-5: 11) and a burin plan on a heavily retouched piece (Figure 4-5: 10).

In sum, there is little in the Level E tool assemblage that is exceptional, or which could securely attribute it to a known Crimean industry. The reduction strategy, hard hammer percussion, typology, and overall morphological characteristics suggest that it is Middle Paleolithic in nature. On the other hand, the lack of any bifacial reduction or tool production means that it is not part of the Crimean Micoquian. While the Western Crimean Mousterian is also a unifacial industry with blade production, it is technologically and typologically dissimilar to the Level E material. For example, the blade production in the early stage of the Western Crimean Mousterian (wcm) is Levallois in nature, while in the late stage it is derived from bidirectional parallel cores. Blades in the wcm are rectangular to convergent—and regular—in shape, on-axis, broader and thinner than the Level E blades, and have large, wide, usually well faceted, semi-lipped platforms (Chabai 1998c). Retouch in the wcm is often scalar and semi-steep and extends the length of the tool edge, and the predominant tool types are simple and convergent sidescrapers (Chabai 1998c).

This assemblage from Buran-Kaya III Level E has been referred to as a “blade industry” in preliminary publications (e.g., Marks 1998; Marks and Monigal 2000) and, perhaps on this basis, has recently been ascribed to the Upper Paleolithic (Chabai et al. 2000). While the elongated pieces are certainly a noticeable component, their lack of morphological and technological standardization, along with the absence of other corroborating evidence for true blade core reduction, suggests that these elongated pieces most frequently served as core cleaning elements and by-products of a reduction strategy that was mainly geared to flake production.

The mere presence of blades does not automatically confer Upper Paleolithic status to an assemblage. Blade production in pre-Upper Paleolithic contexts has been noted repeatedly throughout Europe, Asia, and Africa (e.g., Cook 1986; Boëda 1988; Conard 1990; Otte et al. 1990; Schäfer and Ranov 1998; Bar-Yosef and Kuhn 1999; Delagnes 2000; Meignen 2000; Révillion 1994; Révillion and Tuffreau 1994; Monigal 2002), and, of course, there are myriad cases of Upper Paleolithic assemblages without any blade production whatsoever (Bar-Yosef and Kuhn 1999; Marks 2003). The single examples of an endscraper and a burin are hardly unusual in a Middle Paleolithic assemblage; after all, both are on the Bordian Middle Paleolithic type list (Bordes 1961) and even when present in significant numbers do not necessarily denote modern Upper Paleolithic behavior (e.g., Marks et al. 2001). The remainder of the tool assemblage is fully Middle Paleolithic in character and the cultural level lacks components of the typical behaviorally modern package such as art, ornaments, bone working, burial, or structures.

The Level D Lithic Assemblage

Level D, which was only present as a thin scatter in a small area of the rockshelter (Monigal, Chapter 1) contained a very small lithic assemblage: 394 pieces,

of which only 31 were larger than 30 mm (Figure 4-6). The lithic assemblage was undoubtedly washed; there is light patination and edge damage on a substantial

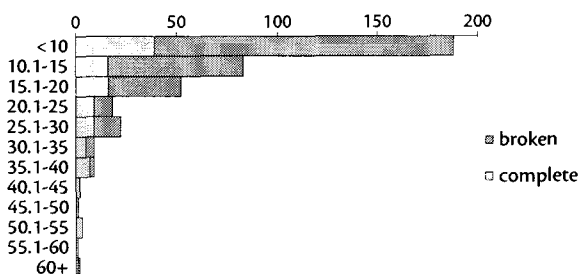


Figure 4-6—Histogram of the maximum dimensions (in mm) of broken and complete pieces from Level D.

TABLE 4-4
Artifact totals for Level D of Buran-Kaya III

	N	%	%
Chips (<3cm)	363	92.1	
Flakes	7	1.8	26.9
Blades	2	0.5	7.7
Primary elements	4	1.0	15.4
Core trimming elements	3	0.8	11.5
Chunks	5	1.3	
Cores	0	0.0	0.0
Tools	10	2.5	38.5
Total	394	100.0	100.0

number of pieces. There is, in addition, a high percentage of breakage: 72% of all pieces or 44% of pieces larger than 30 mm (Figure 4-6).

Table 4-4 presents the lithic artifact counts in Level D. No cores were found during excavation, but there were three core trimming elements (CTE): one core top and two core edges. Primary flakes (having more

than 50% cortical coverage) are relatively frequent at 20% (including tools made on cortical flakes) of the non-chip assemblage.

Flakes in Level D are broad—nearly as wide as they are long—and fairly thick, with flat (41.7%) and twisted (37.5%) ventral profiles, or more rarely, incurvate (20.8%).

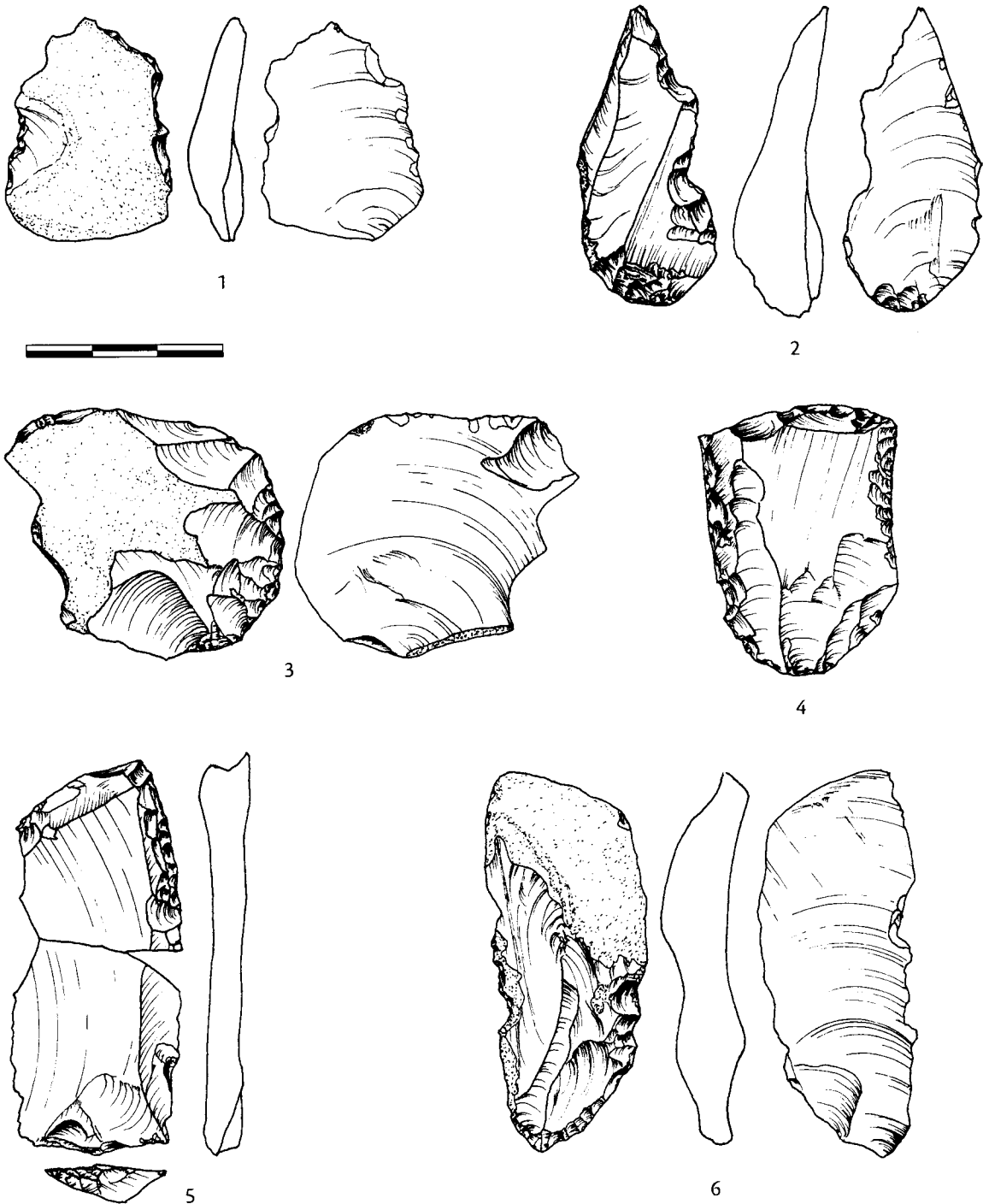


Figure 4-7—Tools from Buran-Kaya III Level D: 1, 2, 6—denticulates; 3, 4—sidescrapers; 5—discontinuously retouched elongated flake.

Dorsal scar patterns on the debitage predominate in unidirectional (41.2%), followed by multidirectional (29.4%), irregular (17.6%), and bidirectional (11.8%). Of the recognizable, intact platforms, they vary in preparation: cortical = 30%, unafaceted = 25%, dihedral = 20%, and multiple faceted = 25%. They are usually fairly broad and thick, and obviously derived from a hard-hammer technique.

There are two blade-dimensioned pieces in the assemblage, but, like the tools on elongated flakes in Figure 4-7, they are wide and off-axis, and not derived from a blade core reduction technology. While there are some pieces in the assemblage that may be interpreted as bifacial thinning flakes, they are smaller than 30 mm in maximum dimension, and often broken. Based on the debitage characteristics, and the core trimming elements, the assemblage was probably completely derived from a true flake core technique; most likely a discoidal one given the scar patterns and frequent square to trapezoidal shapes.

Items classified as tools account for a high proportion (39%) of the lithic assemblage (Table 4-5), but many of these should be viewed cautiously. As noted above, there was frequent damage to the edges of the lithics, and even the unquestionable, purposeful retouch is often irregular or discontinuous. Denticulates account for 30% of the tools; two of these are made on primary blanks (Figure 4-7: 1, 2, 6). There is one notch made on a broad, thick flake. The two sidescrapers are fairly well made in comparison to the other tools. One of these is convex, on a primary

TABLE 4-5
Typology of Buran-Kaya III Level D

	N	%
Convex sidescraper	1	10.0%
Concave sidescraper	1	10.0%
Notch	1	10.0%
Denticulate	3	30.0%
Retouched	1	10.0%
Bifacially retouched	1	10.0%
Fragment	2	20.0%
Total	10	100

flake, and has damage to the distal ventral edge (Figure 4-7: 3). The other is concave, with what is probably trampling damage to its left and distal edges (Figure 4-7: 4). There are two retouched pieces, one is bifacially retouched, the other is discontinuously retouched on an elongated blank (Figure 4-7: 1). Finally, there are two unidentifiable tool fragments.

The lithic assemblage from Level D is not only too small to securely classify, but has few distinct characteristics to be able to compare it to other Crimean assemblages. Based on the apparent discoidal, hard hammer technology, the sidescrapers, and to a lesser extent, the notches and denticulates, along with its stratigraphic position beneath the Micoquian assemblage of Layer B, it is probably Middle Paleolithic, but no further attribution is possible.

Conclusion

The lithic assemblages found in Levels E and D of Buran-Kaya III are both core-based, non-bifacial reduction/tool production strategies. In this, they stand in stark contrast to those lithic assemblages immediately overlying them in Levels C and B, both derived from a *façonnage*-type reduction. The assemblages of E and D are dissimilar from each other as well, notably in the presence of blades in Level E and their lack in Level D, but also in the morphological

characteristics of the debitage and in the typological structures of the two assemblages. Given the small size of both assemblages, the absence of distinguishing tool types or reduction features, along with the absence of any paleoenvironmental data for these occupations (Chapter 1), it is virtually impossible to put these two assemblages into their broader Crimean context. It can, however, be stated that they are most likely Middle Paleolithic, but not Crimean Micoquian.