

A BURIN SITE IN THE UMM UTHEINA DISTRICT, JABAL AMMAN

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Introduction

Recent surveys in the eastern deserts of Jordan (Betts n.d.; Garrard and Price 1977) and in Saudi Arabia (Adams et al. 1977; Parr et al. 1978) have suggested a particular phenomenon of cultural exploitation of this now very arid area in the form of flint sites heavily dominated by one tool type: the burin, most often struck from a concave truncation. Concurrent and later investigations in the eastern Jordan deserts revealed that these sites are found both in the basalt areas (Rollefson and Frohlich 1982) and in the "ard es-suwwan" (flint desert) (Muhaisen n.d.). Although this poorly understood cultural manifestation is a common feature of the deserts east of the Jordan Valley, one survey recently located a cluster of "burin sites" (Betts n.d.) on a small plateau in the western highlands of Jordan south of the Wadi Hasa northeast of Tafila (MacDonald et al. 1982). Since none of the burin sites now known have produced conclusively diagnostic artifacts, they are currently assigned to the Pre-Pottery Neolithic B tradition based on similarities of burin configurations with sites in the Wadi Dhobai in the eastern Jordanian desert (Waechter and Seton-Williams 1938; Garrard and Price 1977).

The recent focus on economic development in the Umm Utheina district of western Jabal Amman has brought to light another burin site which, with the Wadi el-Hasa cluster, adds some new dimensions to what appeared, at first, to be a PPNB desert cultural adaptation. Construction of the San Rock Hotel destroyed the location of several periods of prehistoric and historic occupation, but enough evidence remains to indicate that the uniquely focused activity sites which are so numerous in today's deserts also exist in

areas of very different ecological associations.

Site Location and Setting

The economic expansion near Amman has heavily affected the hills west of the city center, and Jabal Amman has witnessed some of the most intensive development of the urban area. In addition to the construction of new new housing, streets, and support systems, two major hotels have been established just north of the Wadi Seer Road near the Sixth Circle.

The San Rock Hotel now occupies the northwest brow of Jabal Amman, and it has a splendid view of the large Wadi Umm ad-Diba, approximately one kilometer to the west, and a smaller unnamed wadi directly to the north which feeds into the Wadi Umm ad-Diba. The construction of the hotel delved deeply into limestone bedrock, obliterating Roman, Iron Age, and Neolithic occupations.

At an elevation of ca. 980 m, the Umm Utheina burin site is located in a situation that starkly contrasts with the eastern desert sites which, for the most part, lie 250 meters or more lower in elevation. Amman currently receives 400-500 mm precipitation annually, with monthly temperatures ranging between averages of 12-33° C. throughout the year. The bioclimate is classified as the warm variety of semi-Mediterranean in a Red Mediterranean soil zone which supports a Mediterranean plant community. By contrast, the eastern desert sites receive between 50-100 mm rain each year, with monthly temperature averages ranging from 18-39° C. Bioclimates in the desert are all cool Mediterranean-Sahara with Gray Desert

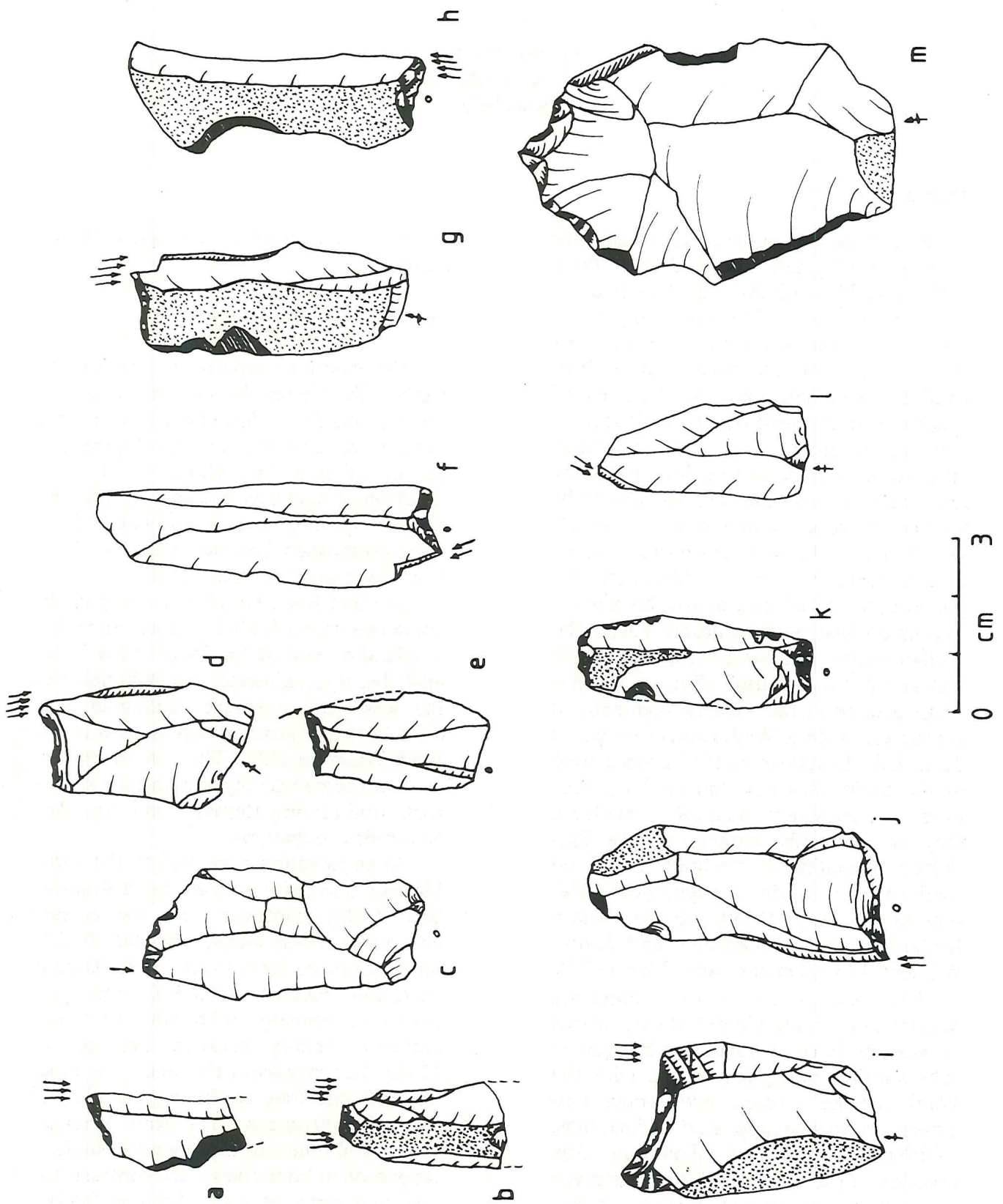


Figure 1. Tools from the Umm Uttheina site. a-j, 1) burins; k) double truncation on a blade; m) borer.

or Basalt soils that support Irano-Touranian plant communities (Madany 1978; Anonymous 1971).

The destruction of the Umm Utheina burin site has left very little of the original occupation, but enough material could be collected to provide a sufficient sample of artifacts to make substantive analyses and conclusions.

Typology

The collection efforts produced 127 artifacts. Of this total one piece is a distal segment of a Levallois point and derives either from the Late Acheulian or the Middle Paleolithic; based on similarities of patina and abrasion with the Levallois point, two blade segments also appear to date from Middle or Upper Paleolithic times. The remaining 124 artifacts all appear to belong to the same general period of cultural occupation on the bases of technological similarities and the lack of substantial patina development.

Table 1 presents the inventory of major artifact classes in the collection. The relatively small amount of debris and the lone bidirectional blade core are probably reflective of the severe disturbance of the site, and the relative frequencies of flakes and blades are probably suspect. The comparison of the nearly 20% tool proportion (excluding debris) with other sites is similarly inappropriate.

Among the tool types in the collection (Table 2), nearly half of them are of dubious origin, and this uncertainty is once again due to the disturbance caused by the hotel construction. Both the use of heavy earth-moving equipment and the exposure of the artifacts to repeated vehicular traffic have contributed greatly to the damage of artifact edges. Since only 16% of the flakes and blades ($n = 19$) have light patina development, it is very difficult to determine whether the "retouch" on 11 of the specimens is recent or ancient. These suspicious "implements" include all of the notches, denticulates, battered pieces, the scraper, and the borers. Only the burins and the truncated blade can be confidently assumed to have been fashioned during the site's occupation.

Table 1. Absolute and relative frequencies of major artifact classes in the Umm Utheina artifact sample.

<i>Class</i>	<i>n</i>	<i>%</i>	<i>%'</i>
Cores	1	0.8	0.8
Flakes	66	53.2	55.5
Blades	52	41.9	43.7
(Tools)	(23)	(18.5)	(19.3)
Debris	5	4.0	
Total	124	99.9	100.0

Table 2. Absolute and relative frequencies of tool types in the Umm Utheina artifact sample.

<i>Type</i>	<i>n</i>	<i>%</i>
Borer	1	4.3
Atypical borer	2	8.7
Burins:	(11)	(47.8)
On a straight truncation	1	4.3
On an oblique truncation	2	8.7
On a concave truncation	7	30.4
On a convex truncation	1	4.3
Double truncation on a blade	1	4.3
Notch	3	13.0
Denticulate	2	8.7
Battered piece	2	8.7
Scraper	1	4.3
Total	23	99.7

Nearly two-thirds of the burins (7 of 11, 63.4%) are on concave truncations, and although the sample is small, this is similar to the Wadi Dhobai figures. It is interesting to note that nine of the 11 burins (81.8%) bear two or more burin facets that emanate from the same platform. Of the 113 burins from Jabal Uweinid Site A (Rollefson and Frohlich 1982), for example, multiple burin facets from the same platform are found on only 13 specimens (11.5%).

Technological Features

The techniques used to produce the flakes and blades in the sample are presented in Table 3. Specific technique could not be determined for 34 of the pieces. For

those blades for which the technique could be discerned, half had platform angles greater than 110° (relative to the interior surface of the blade), 35% had platform angles of less than 110°, and 15% were punch blades. None of these relative frequencies are significantly different from the values calculated for Jabal Uweinid Site A. The predominance of high platform angles is a technological feature that characterizes the PPNB period (Mortensen 1970: 20).

Table 3 also provides information concerning the relative amounts of cortex on the flakes and blades. In terms of the amount of cortex on the striking platforms, the percentages are not very different from Jabal Uweinid Site A. However, for the categories of remaining cortex on the exterior surfaces of flakes and blades, the two collections are significantly different in all except the completely cortical category; furthermore, only ten of the artifacts in the Umm Utheina sample bear natural backing, which is quite the reverse of the case for the Jabal Uweinid PPNB cluster. These stark differences in cortex are probably related to the raw material resources in the immediate vicinity of each site: the tabular outcrops of flint so characteristic at Jabal Uweinid do not occur at Umm Utheina.

Table 3. Aspects relating to the production of flakes and blades in the Umm Utheina artifact sample.

TECHNIQUE OF PRODUCTION

Technique	n	%	%'
High angle blade	20	16.9	23.8
Low angle blade	14	11.9	16.7
High angle flake	26	22.0	31.0
Low angle flake	14	11.9	16.7
Punch blade	6	5.1	7.1
Punch flake	4	3.4	4.8
Interminate blade	24	20.3	
Interminate flake	10	8.5	
Total	118	100.0	100.1

PLATFORM CORTEX

Amount	n	%
No cortex	54	71.0
Partially cortical	2	2.6
Completely cortical	20	26.3
Total	76	99.9

EXTERIOR CORTEX

Amount	n	%
None	50	42.4
1-10%	21	17.8
10-50%	30	25.4
50-90%	10	8.5
90-100%	7	5.9
Total	118	100.0

Concluding Remarks

Although the collection from Umm Utheina is small and from a very disturbed site, it appears to represent a highly specialized occupation which until now seemed to be uniquely associated with present desert environments in eastern Jordan and Saudi Arabia. This implication is important to our understanding of the economies pursued by Early Neolithic societies, but this small sample requires much more corroborating evidence from elsewhere in the western highlands before any firm conclusions can be made.

Accumulating such evidence, if it exists, will not be an easy task, since in contrast to the denuded and deflated nature of most of the desert environs, the Irbid-Madaba district has witnessed net accumulation of sediments that conceal very ancient sites. Beyond this, the rapid economic expansion of the urban centers of the western region in quickly encroaching upon and destroying archaeological sites from all periods of cultural development. Despite the problems involved, and because of the urgency of archaeological salvage in some sectors, concerted efforts should be made to explore more fully the prehistory of the western highlands.

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