5

Preliminary Report on Excavations at the Late Palaeolithic Occupation Site at Baghor I Locality

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INTRODUCTION

The site of Baghor I (24°35′2″N ; 82°18′ 54″E) is located almost at the base of the Kaimur escarpment some 4km north-east of Maraoli village, Sidhi District (Pl. I). The site is isolated on three sides by erosional gullies leading to the Kundheri river, which in turn flows into the Son some 8-10km to the south. The site was discovered by a survey team from the University of Allahabad, Department of Ancient History, Culture and Archaeology in an area where a gray-black clay was being exposed by erosion at the edge of a cultivated area. Here, scattered over the surface of the eroded slope and in the furrows of the field were numerous chert artifacts and some sandstone artifacts. The chert artifacts were primarily debitage, prismatic blade cores, blades, flakes, and some fragments of backed blades and triangles, while the sandstone artifacts included grindstone fragments, hammerstones and broken ring-stones. The high percentage of blades and blade cores suggested that the site might be of Late Upper Palaeolithic origin and it was evident that the artifacts were eroding from a primary context site. Since no sites of this type have been excavated before in this region it was chosen for extensive horizontal excavation.

The excavation was begun by a combined team from the University of Allahabad and the University of California-Berkeley and lasted for three weeks, beginning on February 21, 1980. The excavation was supervised by D. Mandal, J. N. Pal and J. M. Kenoyer under the direction of Professor G. R. Sharma and Professor J. D. Clark. As more areas of the site were opened up for excavation we were joined by V. D. Misra, P. Sinha and R. Dreiman.

TOPOGRAPHY AND STRATIGRAPHY

The exposure of the site is a result of the erosion of the alluvial-colluvial deposits which make up the fine Upper Member of the Bag-

hor Formation (see Chapter 1). The site has been eroded only on the western side and the remaining area covers approximately half a hectare (or one acre). The primary reasons for this heavy erosion are the deforestation of the local teak forests and the decimation of the ground cover by overgrazing.

In order to get a better understanding of the stratigraphy at the site itself we excavated a test trench three meters to the east of our main excavation (Fig. 1, Squares 05,P5). We were able to correlate the levels found in this trench with levels which had been reported from nearby gully sections by the geologists, M. A. J. Williams and K. Royce (see the Geological Report, this volume).

The uppermost level at the site is a yellow sandy loam about 30cm thick and this has been divided into levels 1 and 1A (Fig. 2). Level 1 consists of the first 5 to 10cm which have been badly disturbed by ploughing and root activity, and Level 1A is the remainder of the same level which has not been disturbed by ploughing, although there are some rodent burrows and occasional deep roots. These two levels are equivalent to the lower part of the Khetaunhi Formation (Chapter 1), or possibly the uppermost part of the fine Upper Member of the Baghor Formation. Beneath this level we see a much darker gray coloured clay which has very fine calcium carbonate concretions (kankar) and also some iron/manganese nodules. This layer appears to be deposited on top of or within the larger body of the fine Upper Member of the Baghor Formation. In the region surrounding the site there are many such isolated layers of gray to gray-black clay which are being exposed by erosion. These strata may be indicative of former marshy areas caused by ox-bow lakes or the ponding of surface water. This layer ranges from 20 to 50cm in thickness in different areas, and at our site it is 50cm thick.

The artifacts at our site are eroding out of the upper part of this gray-black clay level at a depth of approximately 20cm. The gray-black clay above the artifact level has been designated as level 2, the artifact level as level 3 and the remainder of the clay level which is underneath the artifacts is called level 4 (Fig. 2). From an examination of the soil in levels 2 and 4 it appears that level 4 has a slightly higher concentration of calcium carbonate and iron/manganese nodules than level 2, otherwise they have basically the same composition. At our site we have treated these two levels as distinct depositional units since they are separated by a very well defined artifact level which is *in situ* and quite undisturbed. However, the evidence from the gully sections near the site suggests that this gray-black clay layer can also be seen as a single larger geological unit. The lower part of level 4 becomes more yellow mottled in colour and this is attributed to the increased concentration of iron/manganese in the soil.

Level 5 is a layer of lag gravel which is a common feature in the fine Upper Member of the Baghor Formation. The source of these gravels is somewhat uncertain and requires further study, but it appears that they could be coming from two very different areas; either the Kaimur Escarpment or the coarse Lower Member of the Baghor Formation. Another complicating feature is that Middle Palaeolithic tools have been found in association with some of these lag gravels. Many of these tools appear almost fresh while others are more heavily abraded, again suggesting that they originate from two different types of source areas.

Below level 5 we have the main level of yellow mottled silts and clays which character-

ize the fine Upper Member of the Baghor Formation. In the well sections and gullies to the east of the site this level has a reddish colour. In this level 6 we found heavy concentrations of calcium carbonate as well as isolated pebbles and a small sandstone cobble (Fig. 2). Due to the limitations of time, we were not able to excavate the test trench down to the level of the coarse Lower Member of the Baghor Formation, but we were able to identify this level in the sections of wells and gullies near the site.

THE EXCAVATION

The main area of excavation consisted of a 10×10 meter grid which was laid out over an area where the greatest concentrations of surface artifacts were found. This area was sloping down hill towards a low bund (or earthen embankment) and a small erosional gully which bordered the edge of the ploughed area (Figs. 3 and 4; Pl. II). The ploughing had evidently cut into the artifact level near to the area at the edge of the slope where it was being eroded, and because of this ploughing many artifacts were dragged upslope to be redeposited in level 1. In order to determine where the artifact level was being eroded and where it was still *in situ,* we chose to excavate the entire ploughed area which lay on the slope by carefully clearing away the loose surface soil. In this manner we were able to determine the exact pattern and depth of the ploughing, and determine which areas of level 3 were still undisturbed. (Figs. 1 and 4).

In order to get an idea of the full range of debitage and shaped tools which had already been dragged out of context we chose four squares (D5, D6, E5, & E6) as a test area, and we collected all debitage by using a wet sieve of 1×1mm mesh. During this operation we found the edge of the *in situ* level 3 extended into the south-eastern half of square E6. In the other three and a half squares we could see where the plough had cut through level 3 and down into level 4. In Figure 1 we have indicated the squares in which level 3 has been disturbed by ploughing and erosion.

As was mentioned earlier, we excavated a small test trench of 2×1 meters at the highest part of the slope in order to provide us with a complete section of the levels at the site. In addition to the test trench we made a small 5 square meter extension to the south-west of the main grid to determine the extent of artifact concentrations in this direction.

The total area of horizontal exposure was 117 square meters but only in 45 square meters were we able to completely expose *in situ* level 3. In 18 of the grid squares we had just reached the top of level 3 but were unable fully to expose this level because of the conclusion of our excavation season (Fig. 1). The areas of level 3 which we were able to excavate fully have provided us with some interesting new data concerning the possible functions of the site and these areas will be discussed in detail before going on to a discussion of the lithic assemblage itself.

Artifact Concentrations (Features) in Level 3

In order to reach the *in situ* artifact level we had to excavate one or two layers of basically sterile soil. On the surface we encountered the disturbed ploughed level in which there were occasional artifacts which had been dragged upslope by ploughing, but beneath this in level 1A we found no artifacts at all. Level 2 is the beginning of the gray-black clay level and again there was no artifact in this layer until we reached the top of level

3. Level 2 was laid down on top of the artifacts level without any intervening deposition to differentiate these two levels, therefore, we may assume that the few artifacts which were found at the lowest levels of level 2 are perhaps artifacts which have been upthrust from level 3. Immediately below such isolated artifacts we invariably found heavy concentrations of artifacts in level 3 (Figs. 5 and 6; Pl. III). These figures are the plots of the topmost artifacts of the *in situ* level 3. While removing the artifacts for study and during the screening of the soil some additional specimens were discovered (see Fig. 8 for full counts of artifacts from each square).

In the areas at the north-west corner of the main grid (squares H, I, J, & K-1 to 3) we found a light concentration of flakes, blades and other debitage lying among many sandstone fragments. In grid squares H1, H2, & I2 there was a concentration of angular sandstone fragments some of which appear to have been fire cracked. Unfortunately no ash or charcoal was found in association with these sandstone fragments, but their distribution indicates that this was some sort of activity area, possibly even a hearth (Pl. IV). In the same general area, grid squares I3 and J3 we found fragments of flat lower grindstones and what may be the fragment of an upper grindstone or rubber. All of these artifacts are *in situ* but there is no indication of a floor or any other intentionally prepared occupation surface.

In the south-western part of the main grid we were able to expose fully a large area of level 3 and the distribution of artifacts here is very intriguing (Grid squares B, C8-10; D7-10; E, F6-10). The heaviest concentrations are found in grid squares F7-10 and E6-10. Grid square B10 also has a very high concentration of artifacts but the rest of the squares have only small numbers of debitage and very few shaped tools (Fig. 8). Most of the shaped tools in this area were broken and it appears that many of them may have been broken after being discarded or in process of manufacture as we were able to join many of the fragments together. The shaped tools are made up primarily of backed blades and scalene triangles but in square B-10 we found two large concave scrapers (Fig. 15: 13, 14); in F-6 we found a double denticulated blade (Fig. 1: 37); and in several other grid squares we found a unique type of blade which is half-denticulated and half-backed along one edge (Fig. 1: 35, 36).

One of us (DM), who supervised much of the excavation of this area, uncovered a widespread area of ashy soil which first began appearing just at the top of level 3 and partly mixed in to the bottom of level 2 (Fig. 7D). The ashy soil was concentrated in level 3 in association with a heavy concentration of debitage and heat spalled fragments, in squares E and F-7 to 10. Several soil samples were taken from this area in the hope that the ash could be sorted out and used for Carbon 14 dating. The abundance of heat spalled fragments suggests that this area may have been a dump or possibly even the working area for the heat treatment of chert nodules prior to flaking. The scatter of the artifacts throughout the rest of the surrounding squares suggests a manufacturing area or dump where debitage accumulated during the manufacture of specific tools.

The thickness of the deposit in this area is difficult to determine because the surface of level 3 here, is undulating (Figs. 9 and 7B). This whole area may have been slightly disturbed in antiquity before being sealed by level 2 and this could explain how fragments of the same artifact were scattered over several

meters. Looking carefully at Figure 6 we see that the ashy area in squares F-9 and 10 is isolated by a band of sterile soil. This soil is not the same as level 2 or 3 and by studying the section south of the ashy concentration (Fig. 7B) we can see that this is a small erosional gully which has been filled in with yellow sandy loam. The remainder of the section shows that the rest of level 3 which we exposed is completely sealed beneath level 2 and has not been eroded.

To the south-west of the main grid we made a small extension to see if the artifact concentration in grid square B-10 continued on in this direction. In the five squares which we excavated we found that level 3 consisted of many angular sandstone fragments and relatively few chert artifacts. There were no tools in this area and the sandstone fragments do not show any evidence of being heated or fire cracked. Further excavations in this area will hopefully show how this area relates to the artifact concentrations in the main grid.

On the eastern side of the north-south baulk and south of the east-west baulk we found a further extention of level 3. The whole area of 24 square meters (excavated by two of us JNP and JMK) was slowly removed until we exposed the topmost artifacts on level 3. In squares K-5 and 6 we found scatterings of chert manufacturing debris and a sandstone ring-stone fragment which had been broken in the process of drilling the center hole (Fig. 17 : 4). This *in situ* discovery of a ring-stone in association with a backed-blade industry is very significant for our understanding of the lithic technologies of Baghor I. On the surface we had found other similar ring-stone fragments but we were not sure if they were actually associated with the chert blade industry.

Due to the short excavation season, we were not able to expose fully all of the grid squares so we decided to concentrate on squares H-5 to 10 in order to better understand the artifact concentrations on the other side of the baulk in the F line. In H-9 and 10 we discovered that the ashy area continued this far east and that there were many heat spalled chunks and even cores associated with the ash. We also began finding increased numbers of shaped tools in all of the squares in the H line. The ashy area did not extend north into grid square H-7, but the percentage of shaped tools in squares H-7, H-6, and H-5 increased markedly. The heaviest concentration occurred in squares H-6 and H7 (Figs. 5 and 8). Here we found a very thick layer of manufacturing debris, and associated with this was an assortment of scalene triangles, isoceles triangles, convex and straight-backed blades, partly-backed blades and half-denticulated/half-backed blades. Many of these tools were complete and by careful sieving we were able to find joining pieces for quite a few of the broken ones. It is interesting to note that half of one convex-backed blade was found in square H-6 and the other half was found two meters away in square H-8. All of this area was completely sealed by level 2 so that any disturbance of the artifact distribuiton must have occurred in antiquity before the level was sealed by level 2. This concentration of tools is very intriguing because they show very little indication of edge damage or use (Using 300-X Stereoscopic Microscope). The area is undoubtedly a working area where these tools were being manufactured and where unfinished, broken or flawed tools were discarded without ever having been used.

In the test trench, squares O-5, P-5, we did not find any heavy concentrations of artifacts in level 3. There were mainly sandstone fragments and river cobbles with only a few

flakes and nodules of chert and chalcedony. The cobbles show no evidence of having been used, but some of the sandstone fragments are spalled as if from over heating.

Before making any interpretations of the features in level 3 we must point out that only a relatively small area (45 sq.m) of the *in situ* material has been exposed and that the artifact analysis for each feature is in the preliminary stage. Taking an overall look at the excavated area we see that the artifact level 3 is somewhat lower in the centre of the main square (Fig. 9) but that the general contour is of a slightly undulating surface. The heavy concentration of artifacts in the southern half of the main excavation area can be seen as one general activity area related primarily to tool manufacture (squares B10, C8 and 9, D7-9. E6-8, F6-10 and H5-10). Within this area the concentration of ashy soil, heat spalled fragments and manufacturing debris might indicate activities relating to heat treatment of chert nodules. The surrounding concentrations of manufacturing debris without ashy soil on the other hand suggest that the making of tools and the dumping of the resulting debris took place in this area.

The artifact distribution in the north-eastern corner of the main excavation has no shaped tools and very little manufacturing debris. However, the angular, fire-cracked sandstone fragments—possibly a hearth—and the fragments of lower and upper grindstones suggest that this feature is not directly related to tool manufacture. The surface of level 3 is somewhat flatter here and further excavations in the adjacent squares may help to determine if this area was related to habitation or to some other sort of activity. In the south-western extension also we see the absence of shaped tools and very little manufacturing debris but, since we have no modified or fire-cracked pieces among the heavy concentration of sandstone fragments, it is difficult to interpret the significance of this feature.

The thickness of the deposit througout the site averages some 5cm indicating that we are not dealing with an area which was used for any considerable length of time. The nature of the gray-black clay suggests that the site was a seasonal camp at the edge of a marshy area and the amount of manufacturing debris indicates that a large amount of chert was being processed and made into blades and blade tools. In the next section we have presented a preliminary analysis of the lithic assemblage.

PRELIMINARY LITHIC ANALYSIS

Since Baghor I is the first site of its type to be excavated in this region, it is important to make a detailed morphological study of the entire lithic assemblage in order to avoid classifying artifacts into categories which do not exist for this assemblage. The morphological features and measurements of each artifact were recorded in a coding system which was designed for easy entry into a computer so that we could carry out quantitative and statistical studies of the artifacts. Unfortunately, due to limitations of time we were able to record only a small number of artifacts using this coding system (74) and we were able to sort and tabulate the full samples from only 26 of the excavated grid squares. The remainder of the recording will be done during the 1981 season, but this preliminary analysis has been very valuable in that we can now direct our future work more efficiently and with specific goals in mind.

The 26 squares which were fully tabulated were selected because of their important

concentrations of shaped tools and debitage, and therefore, they are not necessarily representative of the assemblage as a whole. The few artifacts which were measured and recorded using the coding system were also a selected sample of artifacts, and although they represent the entire range of variation in each artifact type, the mean measurements obtained from this sample do not necessarily reflect the mean measurements of all of the artifacts of each type in the assemblage itself. Keeping these qualifications in mind we can look at the results of the preliminary analysis in detail.[1]

Raw materials

From the tabulation of all artifacts from the 26 grid squares (Fig. 1) we have found that five basic types of raw materials were used or processed at the site (Fig. 13). The most common raw material was chert, comprising 92.8% of the assemblage. These cherts occur in the form of cobbles in the local stream beds, which we assume to have eroded from limestone formations which occur near the site, however, we have not yet discovered any large source of good quality chert. The inhabitants of Baghor I evidently knew of such a source and utilized it fully. Most of the cherts are mottled or banded and range in colour from white to gray and black, from red to various shades of orange and brown, and even green. Most of the artifacts have a waxy sheen on the surface which again suggests that the nodules were heated to facilitate the removal of thin blades. In addition to the finer quality of chert we have 3% poor quality chert and chert/limestone. Flakes and chunks of this material were not used for making tools and are probably the result of the removal of limestone and weathered chert which was adhering to the finer quality chert.

We have grouped several different types of rocks under the classification of chalcedony, and these include those semi-transparent or translucent crypto-crystalline silicates such as carnelian, bloodstone, jasper, chalcedony and various types of agates. We also have a few flakes of quartz and rock crystal (8) and these have also been included under chalcedony. This group of raw materials is also available locally in stream beds where it has been washed down from the more distant Deccan Traps, however, the nodules which we examined in these stream deposits were of very poor quality and it is probable that the inhabitants of Baghor I brought their raw materials from some other undiscovered source. Chalcedony only makes up 1.5% of the assemblage and it is obviously not a primary raw material during this period.

1. We have been able to complete the tabulation of the excavated materials for 21 additional squares not included in the preliminary analysis. This finishes the study of all excavated squares with *in situ* materials and also includes some squares containing disturbed materials. We found 81 additional shaped tools making the total 310 tools and, adding the Edge Damaged|Utilised and Unmodified Waste categories, the total of artifacts studied so far is 25,836. Among the 81 new tools are only two types different from those recorded from the 26 squares discussed in this preliminary analysis. In the new squares we found several blades with straight, oblique and irregular truncations while only one had been recorded from the preliminary analysis (Fig. 14:2). We also found two very interesting choppers or core-scrapers made of poor quality chert|limestone. Many of the flakes and chunks of poor quality chert|limestone (Fig. 13—3%) must have come from the manufacture of these tools. The working edge of both examples is worn and shows marginal step flaking|edge damage on the ventral face. Overall, the percentages of tools to waste and of the types of raw materials after adding the data from the new squares remain the same. In the final report we will discuss fully these new tools and give the revised histograms.

The low percentage of sandstone, 2.68% is somewhat deceiving because we have based the histogram on the total number of artifacts and not on the total volume or weight. When we have weighed all of the artifacts we will be able to give a comparative histogram with weights, but for the present it will suffice to state that sandstone was quite common at the site in the form of broken river cobbles and angular chunks. Sandstone is available in all of the stream beds and in areas where alluvial/colluvial gravel deposits are being exposed by erosion.

Very little pigment was found at the site (.02%) and this consists of small nodules of hematite and ochre. It is possible that these small nodules are naturally found in the soil at the site and that they were not being used at the site. However, the presence of many rock shelters with rock paintings in the nearby Kaimur Escarpment suggests that pigment was used by the inhabitants of this region during this period or slightly later.

Artifact Classification and Description

In classifying the lithic assemblage at Baghor I we have tried to use classificatory terms which are well defined and in common use in the description of Late Stone Age and Upper Palaeolithic assemblages in India, Africa, and Europe. However, because of the unique nature of Baghor I it has been necessary to define some of these terms more carefully so that our colleagues will be absolutely clear as to what is meant when we describe our assemblage.

We have divided our assemblage into three main categories; Unmodified Waste, Edge Damaged or Utilized/Modified Artifacts, and Shaped Tools. A preliminary tabulation of the 26 grid squares shows 98.3% Unmodified Waste, .5% Edge Damaged or Utilized and 1.2% Shaped Tools (Table I and Fig. 10).

Unmodified Waste (Number=19576; 98.3% of total assemblage)

The high percentage of unmodified waste at the site indicates that we are dealing with a manufacturing site or an area where manufacturing debris was dumped. All of the chert waste materials are a result of cobble reduction and various blade manufacturing processes. We have separated these materials into various groups based on specific morphological features in order to better understand the amounts of waste resulting from different stages of blade manufacture.

Flakes and Flake Fragments (N=13608; 69.5% of Unmodified Waste)

Flakes are the most common debitage found at the site and they also have the greatest range in size and shape. Some of the flakes are very large pieces with cortex on the entire dorsal face and are the result of primary cobble reduction or platform preparation, where a large flake is struck off from a cobble to provide a striking platform for further flake or blade removal. Most of the flakes are small and of irregular shape while the bulk of the flake debitage consists of broken fragments and tiny chips.

Blades and Blade Fragments (N=1224; 6.3%; Fig. 15 : 1–10)

This category is made up of flakes with basically parallel sides and whose length is twice the width of the flake. Blade fragments are identified on the basis of parallel sides and dorsal scars which run parallel to the sides on the fragment. Most of the complete blades

have cortex on part of the dorsal face or else they are thick and large, making them unsuitable for manufacturing the thin type of backed tools found at the site. Very few of the small thin blades were found unbroken, suggesting that most of the blades which were suitable for tool manufacture were processed or taken from the site. The majority of the blade fragments are small blades which have been broken in manufacture or have flaws.

Core and Platform Rejuvenation (N=327; 1.7%)

Core rejuvenation flakes and blades (Fig. 16: 5, 6) are produced when blade removal has been obstructed by step flaking on the core surface. A plunging flake or blade is then struck from the core, extending from the platform to the bottom of the core, resulting in a new platform edge and a new face from which to remove blades. These are often grouped together under core trimming flakes and blades (see Chapter 9).

Platform rejuvenation flakes and blades (Fig. 16: 1, 2) are removed to repair the platform edge and are struck from the side of the core. Depending on the angle of the blow, a blade or flake will be removed creating a new platform edge. The resulting flake/blade will have part of the old platform surface on one half of its dorsal face and blade negative scars from the old platform edge on the rest of the dorsal face. Platform rejuvenation blades can be confused with core trimming blades or "Crested Blades" and in some cases they are indistinguishable.

Core Trimming Blades (N=57; .3%; Fig. 16: 3, 4)

This group includes those blades which are removed in the preparation of the core for blade removal. They are either partially crested on the dorsal face by single directional flaking or are fully crested and have bi-directional flaking (Evett, 1967: 263).

Chunks (N=2495; 12.7%)

This general category is for fragments which have no definable ventral face and are basically angular and amorphous. Chunks are the result of irregular fracture and fragmentation of flakes or blades.

Heat Spalled Fragments (N=721; 3.7%)

Most of the heat spalled fragments are chunks or flake fragments and these pieces are defined as having irregular fracture and a pitted surface apparently caused by dehydration from heat.

Cores (N=36; .18%; Fig. 16: 7, 8; Fig. 17: 1–3)

Almost all of the cores found at the site are prismatic or semi-prismatic blade cores. About half of these are single platform cores (n=18) and the rest are double platform or bi-polar cores (n=16). We found one unfinished core which was in the process of being trimmed of the exterior irregularities in order to remove long blades, and we found one example of a multi-platform core.

Sandstone Fragments (N=512; 2.6%) and *Pigment* (N=4; .02%)

These are included under Unmodified Waste based on the assumption that their association with the chert debris and their distribution at the site might have been a result of human activity.

Edge Damaged and Utilized/Modified Artifacts (N=89; .5% of total assemblage; Fig. 11)

In this category we group those artifacts

which show some type of secondary modification of their original edges or surfaces, but we cannot determine the actual cause of this modification. This alteration can be the result of natural taphonomic processes such as trampling by animals or from soil pressures, while on the other hand it may be the result of utilization or even intentional retouch by man. In many cases these various processes are very difficult if not impossible to distinguish from one another.

We see a fairly even distribution between flakes (N=25 ; 28.1%) and blades (N=28 ; 31.5%), and together with flake and blade fragments (N=21 ; 26.6%) these are the only chert artifacts in this category. Most of these artifacts are undoubtedly edge damaged from natural taphonomic processes and also from the inevitable damage which occurs in the process of transporting bags of artifacts from the field to the laboratory. Most of the pieces which showed definite modern edge damage could be identified and properly classified as Unmodified Waste, but there were many artifacts which were questionable and these were grouped with the Edge Damaged category (Fig. 15 : 2, 4, 7, 10).

Sandstone fragments which show evidence of grinding or rubbing are also grouped in this category (N=15 ; 16.8%), but grindstones which have been shaped by pecking to produce a defined grinding surface would be grouped with shaped tools. Most of the sandstone fragments which have been grouped in this category appear to have been used for grinding, and their association with chert debitage and blade cores suggests that they may have been used for the grinding of platforms or were used in some other stage of the manufacturing of blade tools. We have one example of a cylindrical piece of rolled sandstone which appears to have been used as a hammerstone since it has heavy battering on both ends (not illustrated).

Shaped Tools (N=229 ; 1.2% of total assemblage)

In defining our shaped tools we must emphasize that this is only a preliminary grouping, and that these categories may be divided into smaller groups or combined into larger groups as we find out more about the assemblage. For example, we have divided Backed Blades into two groups, "Straight-Backed" and "Convex-Backed". This division may in fact be meaningless if we find that backed blades have a morphological range from straight to convex backing without any break between the two extremes. Our final objective in the lithic analysis is to isolate attributes of the artifacts which will provide us with information concerning functional and stylistic features of each artifact group or type. This will help us in making reliable interpretations of function and for comparisons with assemblages from other sites. With these goals in mind, we have tried to define our shaped tools on the basis of measurable morphological features and not on general appearances (Table 2 and Fig. 12).

Backed Blades (N=31 ; 13.5%)

straight-backed blades : (n=6 ; Fig. 14 : 3, 4, 10, 11)

These are blades with a relatively straight line of steep retouch or backing along one edge and an oblique or an approximate right-angle truncation at one or both ends of the blade. Backed blades with oblique truncations have been round at the Rampur site (see Chapter 6) and it

may be necessary to divide straight backed blades into two categories based on the angle of truncation.

convex-backed blade: (n=25; Fig. 14: 5-9, 12)

This is a blade which has a slightly convex line of backing which forms a continuous curve from one end of the blade to the other. If the curve is broken by a poorly defined wide obtuse angle then it was also grouped with convex-backed blades (Fig. 14: 12).

Triangles (N=25: 11%)

scalene triangle: (n=22; Fig. 14: 17-25)

This is a blade or flake which has backing along one edge which forms a sharp obtuse angle and the resulting form of the artifact is roughly a scalene triangle. In addition to the triangular shape, most of the scalenes at the site also have a tiny bit of retouch on the edge opposite the backing, at the narrow end of the triangle. This retouch is not steep and is only one directional, but it serves to form a very sharp point at the narrow end of the triangle. Scalenes range in length from 20mm to 42mm (Table 2) and it is possible that when we have studied the entire assemblage we may find that there are short and long scalenes with a definite break between the two groups. This would indicate a stylistic or functional difference between the two groups.

isoceles triangles: (n=3; Fig. 14: 14-16)

These triangles are backed on one edge to form a sharp obtuse angle which falls approximately in the middle of the triangle, forming roughly an isoceles triangle. The three examples which we measured have the same type of retouch at one end as is found on many of the scalenes. It is possible that these "isoceles" triangles are extreme variations of the scalene triangle and do not in fact represent a separate tool "type".

Half-Denticulated/Half-Backed Blade (N=7; 3.1%; Fig. 14: 35, 36)

This is a unique type of artifact which has straight backing on half of one edge and denticulated retouch and backing on the remainder of the same edge. It is possible that some of these blades actually represent one stage in the manufacture of backed blades or triangles (Fig. 14: 35) but there is one example (Fig. 14: 36) with continuous retouch along the right edge which is undoubtedly a finished tool.

Partly-Backed Blade (N=14; 6.1%; Fig. 14: 30-34)

Many of the blades we found seemed unfinished and had backing only on half of one edge. These blades may represent a stage in the manufacture of backed blades or triangles and are probably not a finished tool type.

Denticulated Blade (N=5; 2.2%)

Blades with denticulated retouch along one edge are grouped in this category. The examples which were examined in the field appear to be unfinished artifacts and are also probably just another stage in the manufacture of backed tools.

Double Denticulated Blade (N=2; .9%; Fig. 14: 37)

This is a blade which has steep retouch or backing on both edges, forming deep, alternating denticulations on each side. The resulting form is of a wavy or undulating blade. The example illustrated has light edge damage on the edges of the denticulations and a slight polish at the tips of the denticulations along one side. It was found broken in three pieces in grid square F-6.

All fragments of backed artifacts which could not be positively identified, were grouped under a general category of *Miscellaneous Backed Fragments* (N=101; 44.1%; Fig. 14: 1), the remainder of the shaped tools found at the site do not need to be defined here since our examples do not differ significantly from those found in other Late Upper Palaeolithic sites in India. We have only one example of a trapeze (Fig. 14: 13) and one example of a perçoir/awl (Fig. 14: 26) so that it is difficult to discuss the importance of these two types of artifacts until we know more about the assemblage.

We found only six "scrapers" in this first season (2.6%); five of these were concave scrapers and there was one end scraper (Fig. 14: 2). The two concave scrapers illustrated here (Fig. 15: 13, 14) were found in grid square B-10 and shoe steep retouch and step flaking on the concave edge. It is questionable if these artifacts were actually used as scrapers, because there is no indication of wear or edge damage along the retouched edge (examined under 300-X Stereoscopic Microscope).

Most of the retouched blades and flakes have normal retouch and only three examples have inverse retouch (see Table 1) (Fig. 14: 28, 29). Most of the retouched blades (N=19; 8.3%) have discontinuous retouch along one or more edges and it is probable that these were rejects in the tool making process. However, one blade (Fig. 14: 27) shows continuous retouch along one edge, but this example has no traces of wear or edge damage. The retouched flakes (N=16; 7.%) are also characterized by discontinuous retouch and some have small notches (Fig. 15: 11, 12) but we will have to do more microscopic studies of these artifacts before we can discuss their functional significance to the assemblage.

One of the very interesting features of the assemblage is the presence of a partially bored ring-stone in association with the blade industry (Fig. 17: 4). There have been other reports of ring-stones in association with Late Upper Palaeolithic industries in India and Africa (Jacobsen, 1979: 479; Cooke, 1963 and Miller, 1969) and here we have another indisputable association of the two types of lithic industries. Future research in this region will help us to understand the implications of this feature in terms of prehistoric adaptations in the Son River valley. It should be noted however, that we did not find any burins or evidence for a burin technology in this assemblage.

Blade Technology

The blade industry at the site appears to be quite well developed in terms of the technology of blade production. The chert nodules were evidently being heat treated and we can see from looking at the core and platform rejuvenation flakes that the people making the cores and blades had developed a highly specialized technique. By a careful

study of the manufacturing debris we intend to reconstruct the various stages of manufacture which were used in the preparation of the cores, the removal of blades and the final production of shaped tools. Blades appear to have been struck from semi-prismatic or prismatic cores by direct percussion and also indirect percussion. On many of the cores and blades there is evidence to suggest the use of an anvil, against which the core was rested to facilitate blade removal. The blades range in size from large thick ones, to extremely delicate micro-blades and it is obvious that different techniques were used to remove these different types of blades.

As has been stated above, we were only able to record the detailed measurements and morphological features for a selected sample of artifacts, and most of these are shaped tools (Table 2, total 74 artifacts). By studying these few artifacts we have been able to determine where we need to concentrate our next season's analysis in order to most efficiently record specific attributes and variations in the rest of the assemblage. The backed blades for example, have a wide range in lengths but they are all of approximately the same thickness and this applies for the triangles as well. We will try to determine if the variation in length is a significant feature or if it is merely a function of the decreasing length of blades as the cores become smaller. The presence of retouch on the edge opposite the backing on the triangles needs to be studied in greater detail in order to determine its morphological significance and if possible its functional significance.

CONCLUSION

During the 1981 season we plan to complete the recording of all of the excavated artifacts before continuing the excavations. When we have fully recorded all of this data we will do a detailed qualitative and quantitative study of the assemblage and try to understand where this industry fits in to the prehistory of the region and of the sub-continent in general. If we can get some reliable dates from our ash samples it will provide for the dating of many other sites in the region. We also hope to get some environmental data from the study of pollens from our soil samples.

The lithic assemblage from Baghor I is unique in that it is the first large collection of manufacturing debris and finished tools which has been found in a primary context in this region. There are also no close parallels with this site from the surrounding regions and there are only two other major sites in India to which it can even be compared. These sites, Bijapur in Karnataka South India and Patne in Maharashtra, have been called Late Upper Palaeolithic or Epi Palaeolithic and have been dated to between 20,000 B.P. and 10,000 B.P. on the basis of their placement between the Middle Palaeolithic and the Mesolithic (Jacobsen, 1979). We have tentatively placed Baghor I in this same period in order to have a general point of reference, but it is quite obvious that this is only a relative placement and should not be considered as a final classification of the Baghor I industry. It is only through continued excavation and systematic research and analysis that we will be able to sort out the complex regional sequences in the Son River valley. Hopefully, the data and information presented in this report and the forthcoming reports will provide other scholars with valuable information from which to make comparative studies with other regions in the sub-continent and in this way we can begin answering some of the many questions which confront the student of prehistory in South Asia.

DESCRIPTION OF ARTIFACTS ILLUSTRATED

Fig. 14.

Blade tools ; Baghor I, Level 3

1. Backed blade fragment, possibly a scalene triangle ; chert, fresh, normal backing, snapped at both ends, edge damaged in excavations ; Square E8, 14×8×2mm.

2. Truncated blade or "end scraper" ; chert, fresh, plain platform, normal marginal retouch ; H8, 25×9×4mm.

3. Straight backed blade ; chert, fresh, possibly heat treated, snapped at distal end, plain platform, normal backing, slightly concave at proximal end, continuous edge damage on right edge ; D5, level 3 (surface) ; 51×13×3mm.

4. Straight backed blade ; chert, fresh, broken, heat spalled, normal backing, edge damage on left edge ; F7, 31×7×2mm.

5. Convex backed blade ; chert, fresh, normal backing, inverse retouch forming a notch, light edge damage ; D6, 59×8×3mm.

6. Convex backed blade ; chert, fresh, plain platform, normal backing, inverse retouch and light edge damage on right edge ; H7, 42×7×3mm.

7. Convex backed blade ; chert, fresh, normal backing, edge damage on right edge ; F7, 50×10×5mm.

8. Convex backed blade ; chert, fresh, normal backing, light edge damage ; H8, 47×9×4mm.

9. Convex backed blade ; chert, fresh, snapped at both ends, normal backing, light edge damage ; E9, 33×5×2mm.

10. Straight backed blade with oblique truncation ; chert, fresh, plain platform, possibly heat treated, normal marginal retouch on right side at proximal end ; H7, 46×8×2mm.

11. Straight backed blade with oblique truncation ; chert, fresh, possibly heat treated, snapped at proximal end, normal backing, both on right edge ; F7, 44×8×3mm.

12. Convex backed blade ; chalcedony, fresh, normal backing, discontinuous edge damage on right edge ; H7, 31×6×2mm.

13. Trapeze ; chert, fresh, oblique truncations, normal retouch, light edge damage on left edge ; F8, 19×8×2mm.

14. Isoceles triangle ; chert, fresh, broken, normal backing, normal marginal retouch on right edge at proximal end, edge damage on right edge ; H6, 25×8×2mm.

15. Isoceles triangle ; chert, fresh, possibly heat treated, normal backing, normal marginal retouch on right edge at proximal end, edge damage on right edge ; H6, 38×10×2mm.

16. Isoceles triangle ; chert, fresh, possibly heat treated, normal backing, marginal retouch on right edge at proximal end,

edge damage on right edge ; H7, 33×8×3mm.

17. Scalene triangle ; chert, fresh, normal backing, normal marginal retouch on right edge at proximal end ; D8, 24×5×2mm.

18. Scalene triangle ; chert, fresh, proximal end snapped, normal backing, light edge damage ; H7, 30×9×2mm.

19. Scalene triangle ; chert, fresh, normal backing, inverse marginal retouch on right edge at proximal end, light edge damage ; H7, 33×6×2mm.

20. Scalene triangle ; chalcedony, fresh, normal backing ; H7, 38×6×2mm.

21. Scalene triangle ; chert, fresh, normal backing, normal marginal retouch on *left* edge at proximal end, light edge damage ; E8, 37×5×2mm.

22. Scalene triangle (ventral view) ; chalcedony (carnelian), fresh, normal backing, normal marginal retouch on proximal end, light edge damage ; D5, 31×5×2mm.

23. Scalene triangle ; chert, fresh, normal backing, normal marginal retouch at distal *and* proximal ends, discontinuous edge damage ; H7, 24×7×3mm.

24. Scalene triangle ; chalcedony, fresh, normal backing, normal marginal retouch on right side at proximal end, light edge damage on right edge ; H7, 23×5×2mm.

25. Scalene triangle ; chert, fresh, normal backing, normal marginal retouch on right edge at proximal end, light edge damage ; H8, 16×4×1mm.

26. Percoir or Awl ; chert, fresh, heat spalled, multifacetted platform, convergent steep normal retouch on distal end, slight polish on both edges ; E5, level 3 (surface), 26×6×2mm.

27. Retouched blade ; chert, fresh, broken at both ends, continuous normal retouch on right edge ; H8, 43×7×3mm.

28. Retouched blade, (ventral view) ; chert, fresh, point platform, convergent inverse retouch at distal end ; E8, 35×13×3mm.

29. Retouched blade, (ventral view) ; chert, fresh, distal end snapped, irregular retouch or edge damage along left edge ; B10, 44×9×4mm.

30. Partly backed blade ; chert, fresh, snapped at proximal end, broken at distal end, normal, slightly concave backing on left edge, normal retouch on right edge at proximal end ; H7, 42×13×2mm.

31. Partly backed blade ; chert, fresh, multifacetted platform, normal backing on left edge, truncated at distal end ; H8, 41×12×4mm.

32. Partly backed blade ; chert, fresh, snapped at both ends, normal backing on left edge ; H6, 35×10×3mm.

33. Partly backed blade ; green chert (bloodstone), fresh, multifacetted platform, normal backing on right edge, marginal normal retouch on left edge at proximal end, large fractures at distal end ; H6, 30×8×2mm.

34. Partly backed blade fragment; chert, fresh, plain platform, normal backing forming a concave edge at proximal end; E8, 20×8×2mm.

35. Half-denticulated-half-backed blade; chert, fresh, snapped at proximal end; normal backing on right edge, proximal half; normal retouch to form notches/denticulations on right edge, distal half; marginal inverse retouch on left edge at extreme distal end; E10, 47×9×2mm.

36. Half-denticulated-half-backed blade; chert (black), fresh, snapped at proximal end, bipolar backing on left edge of proximal end, steep retouch forming notches/denticulations on left edge on distal half; continuous fine marginal normal retouch (Ouchtata type) on right edge, light edge damage; F10, 45×9×3mm.

37. Double denticulated blade; chert, fresh, broken into three pieces, snapped at both ends, steep retouch forming deep alternating notches/denticulations on both edges, light edge damage in the notches and slight polish on the tips of the denticulations on the right edge, F6, level 3 (surface), 47×10×2mm.

Fig. 15.

Scrapers, modified blades and flakes: *Baghor I, Level 3*

1. Modified blade; chert, fresh, cortex remaining, plain platform, normal and inverse marginal edge damage; F6, 62×33×9mm.

2. Blade; chert, fresh, cortex remaining, light edge damage on right edge of distal end, notches on right edge on ventral face; F6, 70×20×7mm.

3. Blade; chert, fresh, plain platform; F6, 70×32×9mm.

4. Blade; chert, fresh, point platform, light edge damage on left edge; F7, 65×26×5mm.

5. Blade; chert, fresh, point platform, discontinuous edge damage along both edges of distal end.

6. Blade; chert, fresh, cortex remaining at distal end; F6, 67×15×7mm.

7. Blade; chert, fresh, dihedral platform, discontinuous edge damage along left edge; F7, 54×13×3mm.

8. Blade; chert, fresh, point platform; F6, 42×7×2mm.

9. Blade; chert, fresh, point platform; F6, 30×7×2mm.

10. Blade; chert, fresh, point platform, notch on left side; F6, 40×8×3mm.

11. Modified flake; chert, fresh, point platform, side flake, distal end broken, steep normal retouch on left edge at distal end, steep normal retouch forming shallow notch on right edge; H6, 37×25×4mm.

12. Modified flake; chert, fresh, plain platform, normal retouch on left distal edge, concave, edge damage on right edge; E5, 35×51×15mm.

13. Concave scraper on a flake; chert, fresh,

cortex remaining, step flaking forming a concave edge ; B10, 41×44×9mm.

14. Concave scraper on a chunk ; chert, fresh, cortex remaining, steep scalariform and step flaking forming a concave edge ; B10, 65×57×19mm.

Fig. 16.

Unmodified waste and cores : Baghor I, Level 3

1. Platform rejuvenation flake ; side struck, removing the edge of the platform and face of the blade core, chert, fresh, point platform ; F6, 61×39×15mm.

2. Platform rejuvenation flake ; side struck, removing most of the striking platform and the platform edge with blade negative scars ; H8, 37×23×9mm.

3. Core trimming flake, longitudinal ; chert, fresh, cortex remaining, point platform, partly crested ridge created by uni-directional step flaking ; H8, 66×25×11mm.

4. Core trimming blade ; chert, fresh, point platform, partly crested ridge created by unidirectional step flaking ; F6, 66×20×7mm.

5. Core trimming blade (rejuvenation) ; chert, fresh, heat spalled, point platform, deep step fractures on dorsal face ; F7, 54×13×4mm.

6. Core trimming blade (rejuvenation) ; plunging blade from polyhedral blade core, chert, fresh, heat spalled, point platform ; H8, 38×16×10mm.

7. Semi-polyhedral blade core ; opposed platform, chert, fresh, cortex remaining, possibly heat treated ; H5, 72×30×29mm.

8. Semi-polyhedral blade core ; opposed platform, chert, fresh, possibly heat treated, note the uni-directional step flaking on the left margin in preparation for the removal of a partly crested ridge flake ; H6, 51×36×37mm.

Fig. 17.

Blade cores and ring-stone : Baghor I, Level 3

1. Semi-polyhedral blade core ; opposed platform, chert, fresh, cortex remaining, possibly heat treated ; H5, 49×35×32mm.

2. Polyhedral blade core ; single platform, chert, fresh, possibly heat treated ; E8, 42×22×20mm.

3. Semi-polyhedral (or prismatic) core ; single platform, split obliquely across short axis to remove distal half of core, chert, fresh, cortex remaining, possibly heat treated ; F8, 55×55×46mm.

4. Partly perforated ring-stone ; sandstone, broken during perforation ; K6, 87×59×49mm.

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LIST OF TABLES, FIGURES AND PLATES

Tables

1. Artifact types and groupings (from the 26 fully counted one meter squares).

2. Artifact measurements (total 74 artifacts).

Figures

1. General plan of excavations.

2. Section of Test Trench, squares O5 and P5.

3. Contour map of surface area prior to excavation.

4. Map of excavations showing the ploughed area and other surface features.

5. Distribution map of shaped tools and modified artifacts in the *in situ* areas of Level 3.

6. Distribution map of unmodified waste and edge damaged artifacts.

7. Sections, A. North-South on the K Line
   B. East-West on the 11 Line
   C. Section Facing South of the East-West Baulk
   D. North-South Section of the Ashy Area in the F Line.

8. Distribution of artifacts in the 26 Squares which were fully counted.

9. Contour map of the *in situ* Level 3.

10. Histogram of tools to waste.

11. Histogram of modified and edge damaged artifacts.

12. Histogram of major classes of shaped tools.

13. Histogram of raw materials.

14. Blade tools, Level 3.

15. Scrapers and modified blades and flakes, Level 3.

16. Unmodified waste and cores, Level 3.

17. Blade cores and ring-stone, Level 3.

Plates

I. General view showing the setting of the site with the Kaimur in the background.

II. General view of the excavations with the ploughed area in the main grid.

III. General view of the excavation in the H line of the grid showing a heavy concentration of artifacts.

IV. Close up of a hearth with concentration of fire cracked angular sandstone fragments.

TABLE 1

Artifact Types and Groupings

(From 26 fully counted one meter squares)

Artifacts	Chert	Chalcedony	Sandstone	Total	%
Shaped Tools					
Straight-backed blades	4	2		6	13.5
Convex-backed blades	22	3		25	
Isoceles triangles	3			3	11
Scalene triangles	18	4		22	
Trapeze	1			1	.4
Percoir/Awl	1			1	.4
Half-denticulated/Half-backed	6	1		7	3.1
Denticulated blade	5			5	2.2
Double denticulated blade	2			2	.9
Partly backd blade	13	1		14	6.1
Miscellaneous backed fragments	87	14		101	44.1
End scrapers	1			1	2.6
Concave scrapers	5			5	
Blades with single truncation	1			1	8.3
normal retouch	16			16	
inverse retouch	2			2	
Flakes with normal retouch	13	1		14	7
inverse retouch	1			1	
other retouch	1			1	
Bored ring-stone			1	1	.4
Total	202	26	1	229	(100) (1.2% of Total)
Edge Damaged or Utilized/Modified Artifacts					
Blades	27	1		28	31.5
Flakes	24	1		25	28.1
Blade and flake fragments	21			21	23.6

TABLL 1 (Contd.)

Artifacts	Chert	Chalcedony	Sandstone	Total	%
Lower grindstone fragments			4	4	
Miscellaneous groundstone fragments			10	10	16.8
Hammerstone			1	1	
Total	72	2	15	89	(100%) (5% of Total)
Unmodified Waste					
Blades	332	1		333	6.3
Blade fragments	874	17		891	
Flakes	1047	12		1059	59.5
Flake fragments	12323	226		12549	
Core & platform rejuvenation	324	3		327	1.7
Core trimming	57			57	.3
Chunks	2476	19		2495	12.7
Cores—unfinished	1			1	
single platform-prismatic	17	1		18	.18
opposed platform-prismatic	16			16	
multiple platform	1			1	
Poor quality chert/limestone (592)				592	3
Heat spalled fragments	721			721	3.7
Sandstone fragments			512	512	2.6
Pigment (4)				4	.02
Total (596)	18189	279	512	19576	(100%) (98.3% of Total)
Grand Total				19894	

TABLE 2

Artifact Measurements (Total 74 artifacts)

Artifact Type	No.	Measurements in mm.			
Shaped Tools		Mean	S. D.	Minimum	Maximum
Convex backed blades	7	L = 46.2	8.61	33	59
		B = 7.8	1.72	5	10
		T = 3.4	1	2	5
		B/L = .16	.02	.13	.20
		T/B = .42	.04	.37	.50
Straight backed blades	2	L = 43	7.38	31	51
		B = 9	2.34	7	13
		T = 2.5	.5	2	3
		B/L = .25	.03	.17	.25
		T/B = .28	.05	.23	.37
Half-denticulated/Half-backed blades	2	L = 46		45	47
		B = 9		9	9
		T = 2.5		2	3
		B/L = .2	.01	.19	.2
		T/B = .28	.08	.22	.33
Partly backed blades	6	L = 33.8	8.13	20	42
		B = 9.5	2.6	6	13
		T = 2.5	.8	2	4
		B/L = .28	.07	.19	.31
		T/B = .27	.07	.15	.33
Scalene triangles	9	L = 28.4	7.2	16	38
		B = 5.7	1.4	4	9
		T = 2.	.5	1	3
		B/L = .21	.05	.14	.3
		T/B = .35	.07	.22	.43

TABLE 2 (Contd.)

Artifact Type	No.	Measurements in mm.			
Shaped Tools		Mean	S. D.	Minimum	Maximum
Isoceles triangles	3	L = 32.	6.5	25	38
		B = 6.3	4.7	8	10
		T = 2.3	.5	2	3
		B/L = .28	.03	.24	.32
		T/B = .28	.09	.2	.38
Trapeze	1	L = 19			
		B = 8			
		T = 2			
		B/L = .42			
		T/B = .25			
Backed blade fragments	4	L = 21.7	6.8	14	30
		B = 7	.8	6	8
		T = 2	.8	1	3
		B/L = .35	.15	.23	.57
		T/B = .28	.1	.17	.43
Double denticulated fragment	1	L = 47			
		B = 10			
		T = 2			
		B/L = .21			
		T/B = .20			
Oblique truncated blade	1	L = 25			
		B = 9			
		T = 4			
		B/L = .36			
		T/B = .44			

TABLE 2 (Contd.)

Artifacts Type	No.	Measurements in mm.			
Shaped Tools		Mean	S. d.	Minimum	Maximum
Percoir/Awl	1	L = 26			
		B = 6			
		T = 2			
		B/L = .23			
		T/B = .33			
Concave scrapers	2	L = 53		41	65
		B = 50.5		44	57
		T = 14		9	19
		B/L = .98	.13	.88	1
		T/B = .27	.09	.2	.33
Modified blades	3	L = 50.3	13.8	35	62
		B = 19.6	11.55	13	33
		T = 5	3.5	3	9
		B/L = .38	.15	.24	.51
		T/B = .29	.02	.21	.27
Modified flakes	2	L = 34		33	35
		B = 44		37	51
		T = 12		9	15
		B/L = 1.3	.24	1.1	1.4
		T/B = .27	.04	.24	.29
Modified blade fragments	4	L = 43	18.3	20	65
		B = 11.2	8.6	5	24
		T = 4.3	2.6	2	8
		B/L = .27	.1	.17	.46
		T/B = .35	.12	.19	.56

TABLE 2 (Contd.)

Artifact Type	No.	Measurements in mm.			
Shaped Tools		Mean	S. D.	Minimum	Maximum
Modified flake fragments	1	L = 37			
		B = 25			
		T = 4			
		B/L = .68			
		T/B = .16			
Unmodified Waste					
Blades	8	L = 57.2	17	30	74
		B = 16.3	9.2	7	32
		T = 5.3	2.6	2	9
		B/L = .27	.1	.17	.46
		T/B = .35	.12	.19	.56
Flake fragments	1	L = 44			
		B = 23			
		T = 11			
		B/L = .52			
		T/B = .48			
Core Rejuvenation flakes	3	L = 55.3	18	38	74
		B = 15.3	2	13	17
		T = 7	3	4	10
		B/L = .3	.1	.23	.42
		T/B = .45	.16	.31	.63
Platform rejuvenation flakes	3	L = 44	7.9	34	61
		B = 27.3	10.2	20	39
		T = 10.3	4.2	7	15
		B/L = .62	.03	.59	.64
		T/B = .37	.02	.35	.39

TABLE 2 (Contd.)

Artifact Type	No.	Measurements in mm.			
Unmodified Waste		Mean	S. D.	Minimum	Maximum
Core preparation blades	5	L = 54.6	14.9	31	66
		B = 17.6	6.8	9	25
		T = 7.8	1.7	7	11
		B/L = .32	.05	.24	.38
		T/B = .35	.19	.32	.78
Core-single platform	2	L = 48.5		42	55
		B = 38.5		22	55
		T = 33		20	46
		B/L = .76	.34	.52	1
		T/B = .87	.05	.84	.91
double platform opposed	3	L = 57.3	12.7	49	72
		B = 33.6	3.2	30	36
		T = 32.6	4	29	37
		B/L = .61	.17	.42	.71
		T/B = .97	.06	.91	1

BAGHOR I: General Plan of Excavations

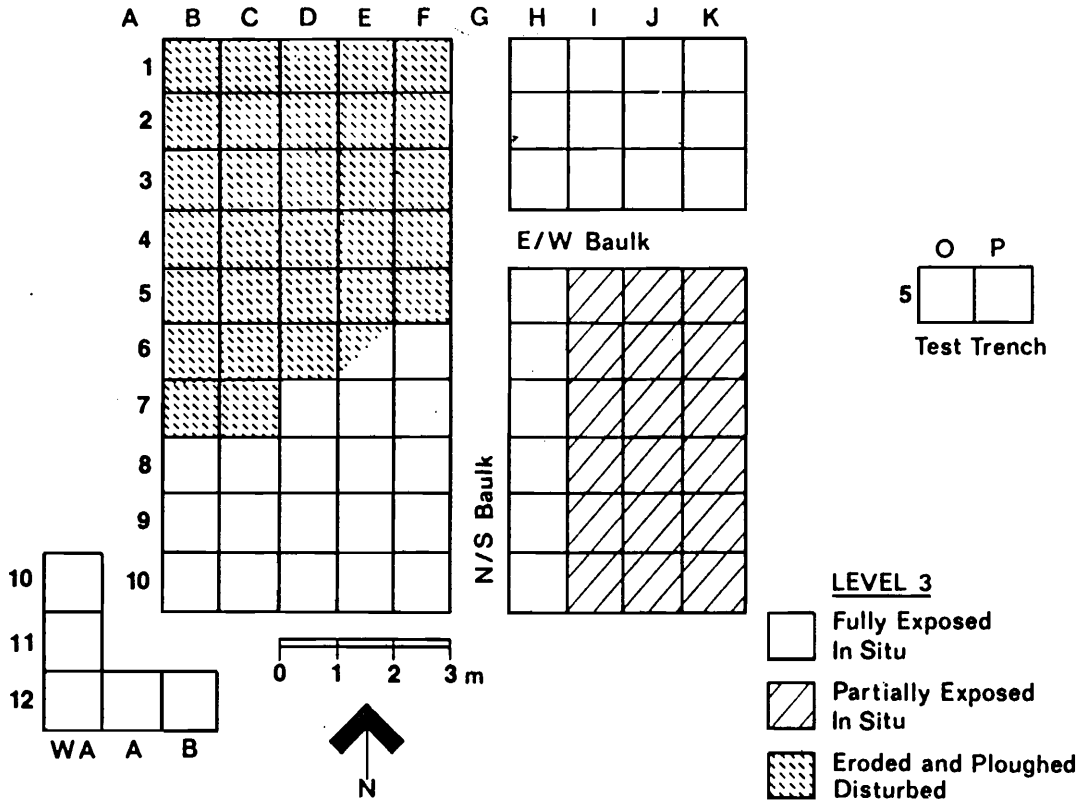


Fig. I

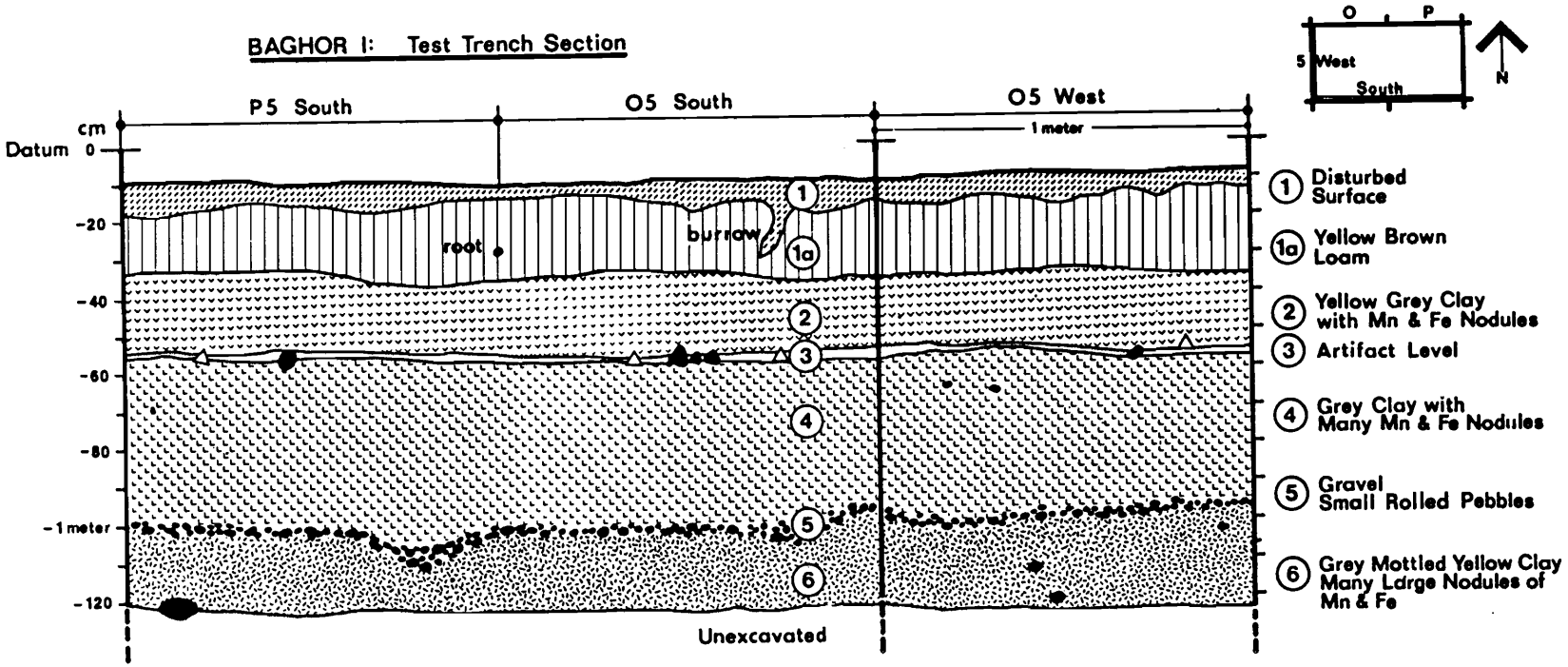

BAGHOR I: Test Trench Section
P5 South
O5 South
O5 West
1 meter
cm
Datum 0
-20
-40
-60
-80
-1 meter
-120
root
burrow
1
1a
2
3
4
5
6
Unexcavated
O
P
5 West
South
N
1 Disturbed Surface
1a Yellow Brown Loam
2 Yellow Grey Clay with Mn & Fe Nodules
3 Artifact Level
4 Grey Clay with Many Mn & Fe Nodules
5 Gravel Small Rolled Pebbles
6 Grey Mottled Yellow Clay Many Large Nodules of Mn & Fe

Fig. 2

BAGHOR I: Contour Map Prior to Excavation

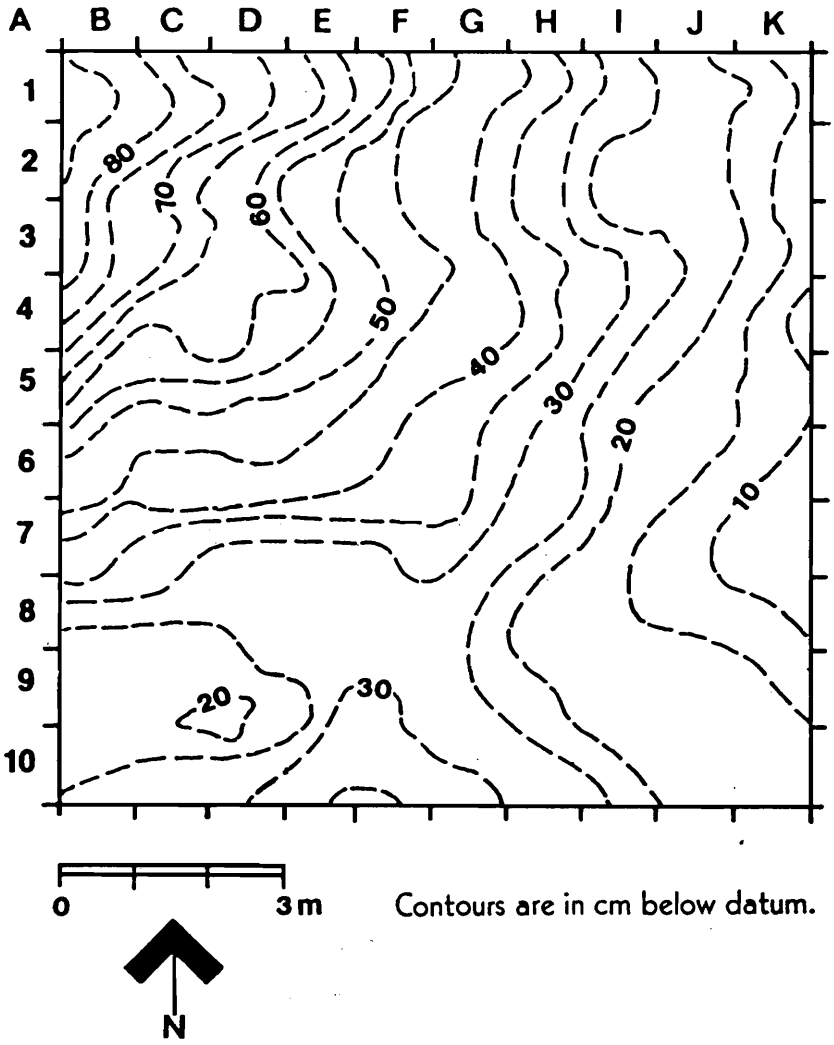


Fig. 3

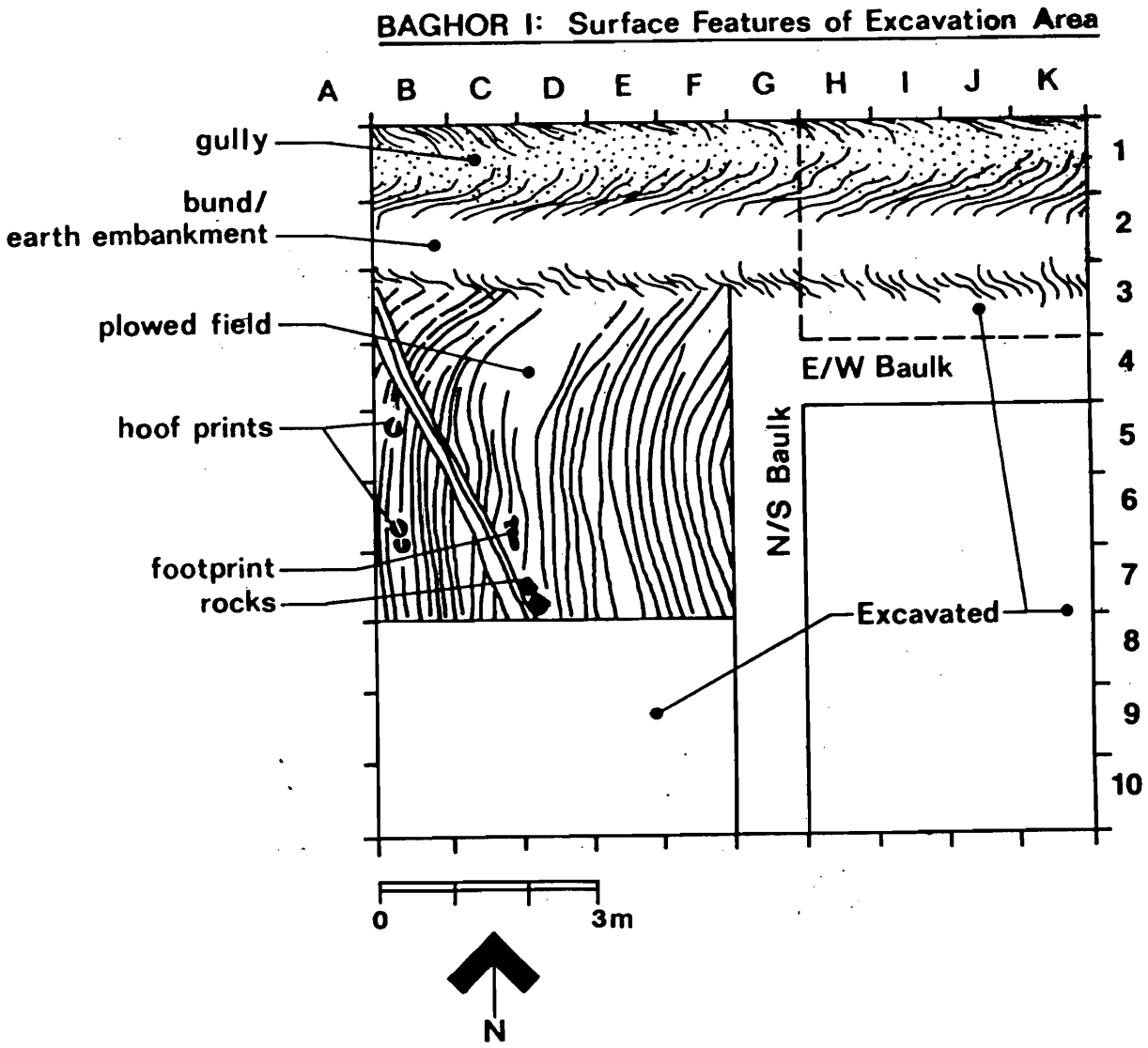

BAGHOR I: Surface Features of Excavation Area
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
gully
bund/
earth embankment
plowed field
hoof prints
footprint
rocks
E/W Baulk
N/S Baulk
Excavated
0
3m
N

Fig. 4

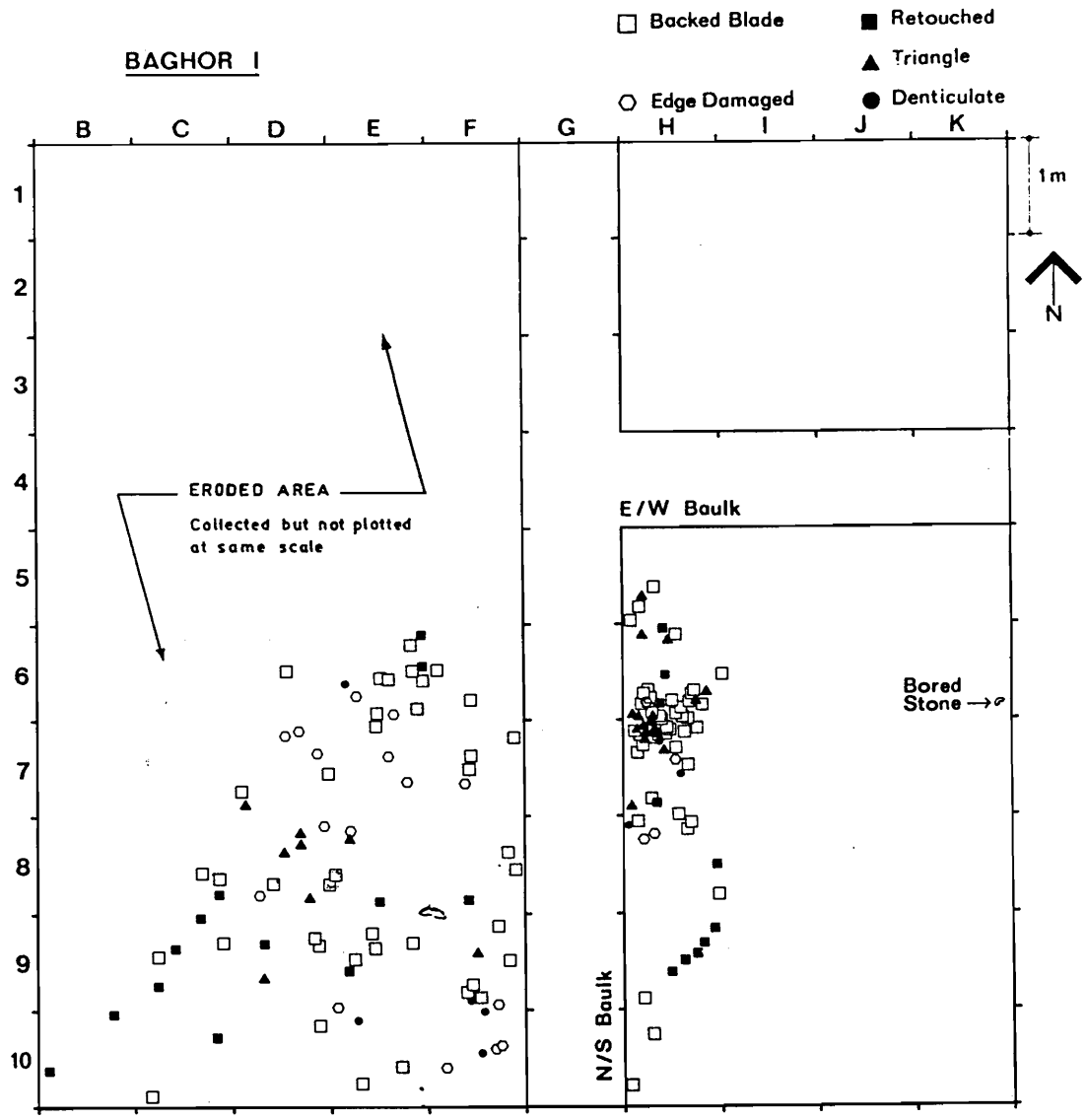


Fig. 5 Baghor I : Distribution map of shaped tools and modified artifacts in the in situ areas of Level 3.

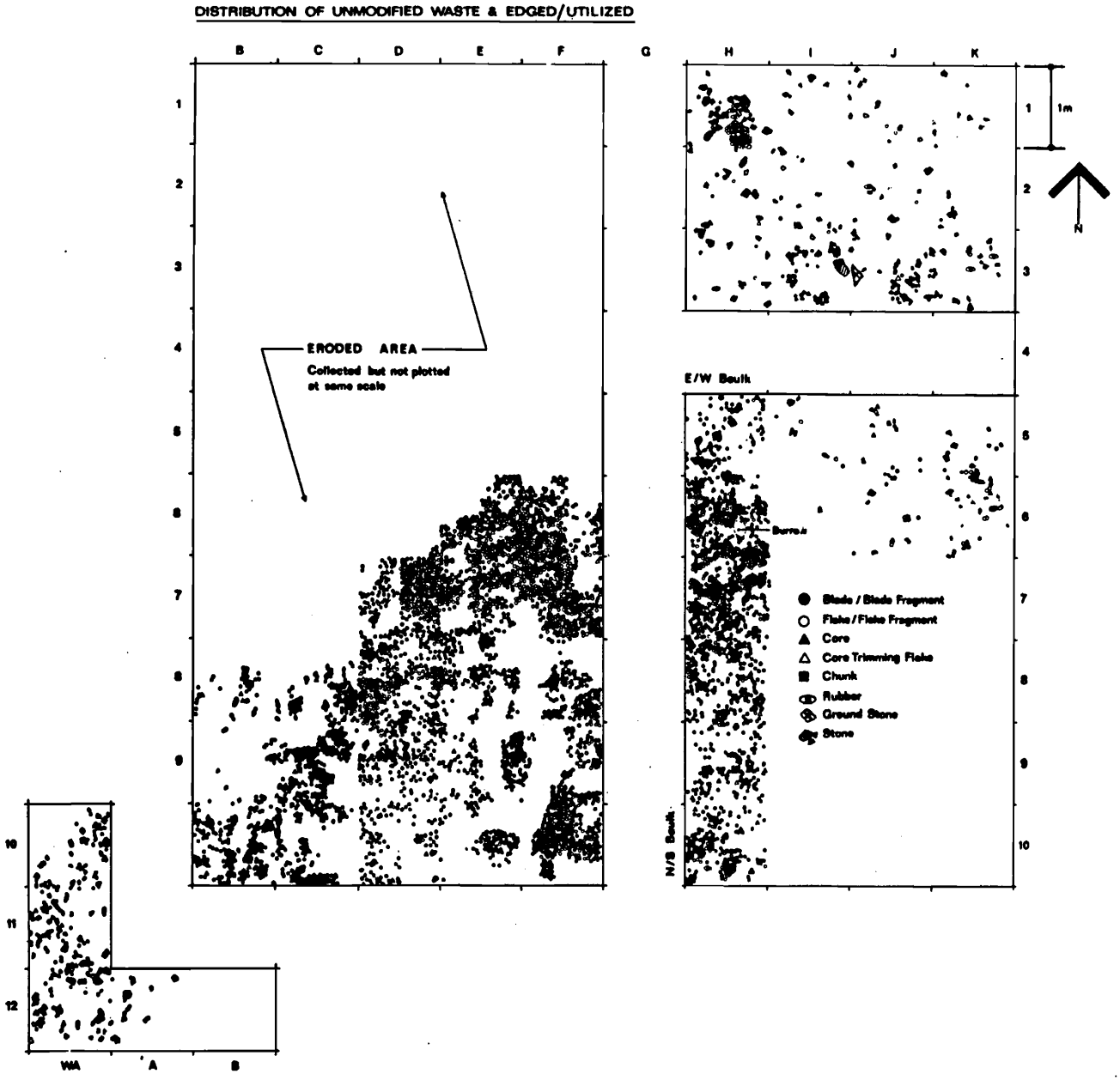

DISTRIBUTION OF UNMODIFIED WASTE & EDGED/UTILIZED
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
1m
N
ERODED AREA
Collected but not plotted at same scale
E/W Baulk
N/S Baulk
Burnt
Blade / Blade Fragment
Flake / Flake Fragment
Core
Core Trimming Flake
Chunk
Rubber
Ground Stone
Stone
WA
A
B

Fig. 6

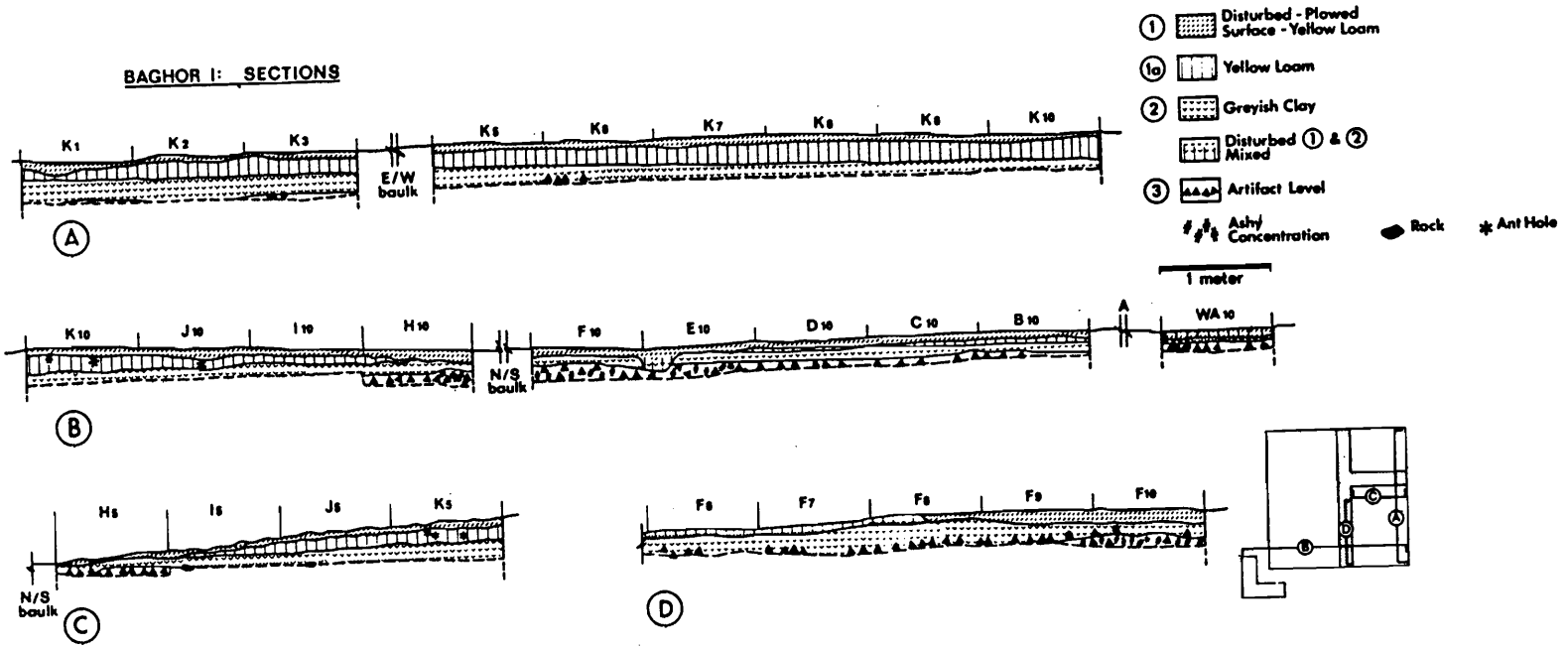

BAGHOR I: SECTIONS
K1
K2
K3
E/W baulk
K5
K6
K7
K8
K9
K10
A
K10
J10
I10
H10
N/S baulk
F10
E10
D10
C10
B10
A
WA10
B
H5
I5
J5
K5
N/S baulk
C
F6
F7
F8
F9
F10
D
1 Disturbed - Plowed Surface - Yellow Loam
1a Yellow Loam
2 Greyish Clay
Disturbed 1 & 2 Mixed
3 Artifact Level
Ashy Concentration
Rock
Ant Hole
1 meter

Fig. 7

BAGHOR I: Distribution of Artifacts in 26 Fully Counted Squares

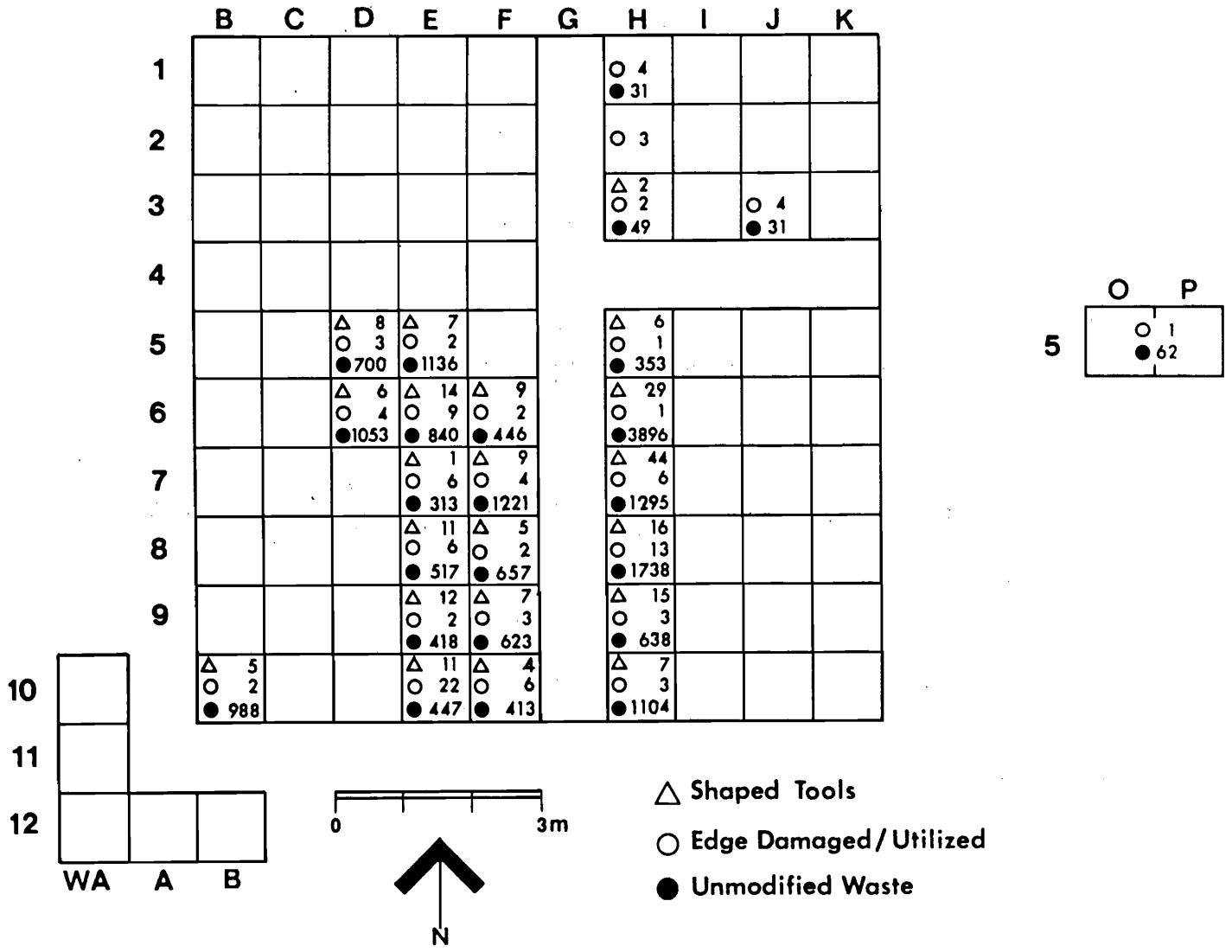


Fig. 8

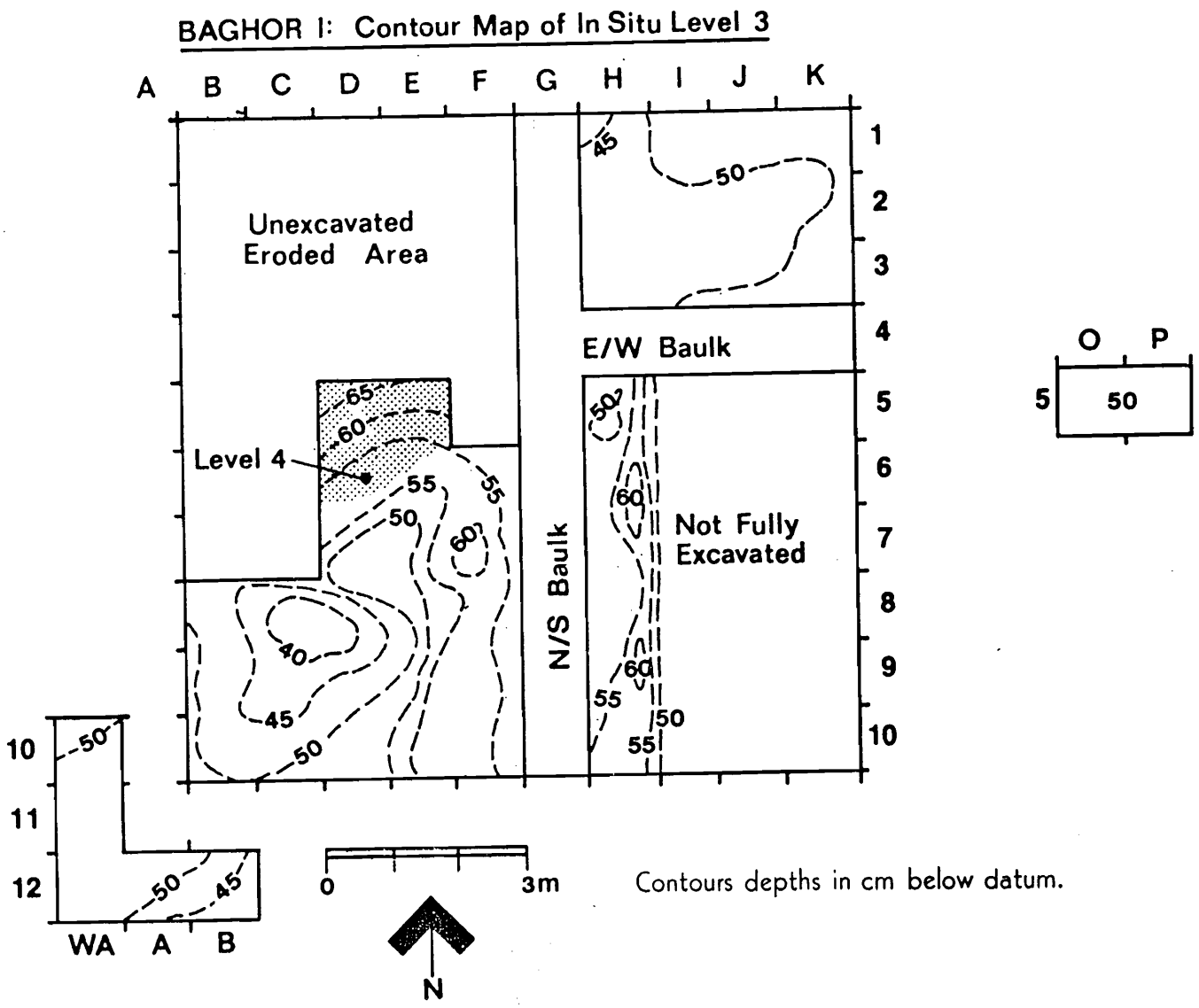

BAGHOR I: Contour Map of In Situ Level 3
A B C D E F G H I J K
1 2 3 4 5 6 7 8 9 10 11 12
Unexcavated
Eroded Area
E/W Baulk
N/S Baulk
Not Fully
Excavated
Level 4
65
60
55
50
45
40
WA A B
0 3m
N
O P
5 50
Contours depths in cm below datum.

Fig. 9

Fig. 10 Histogram of Tools to Waste

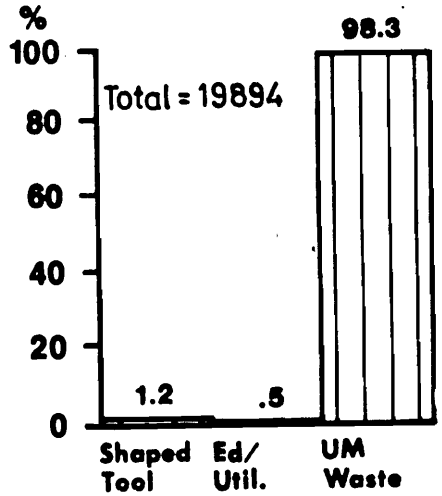
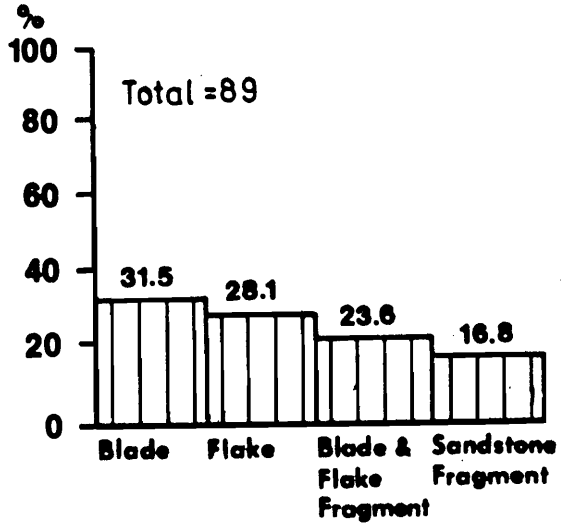


Fig. 11 Histogram of Modified/Utilized and Edge Damaged Artifacts



Figs. 10 & 11

Histogram of Major Classes of Shaped Tools

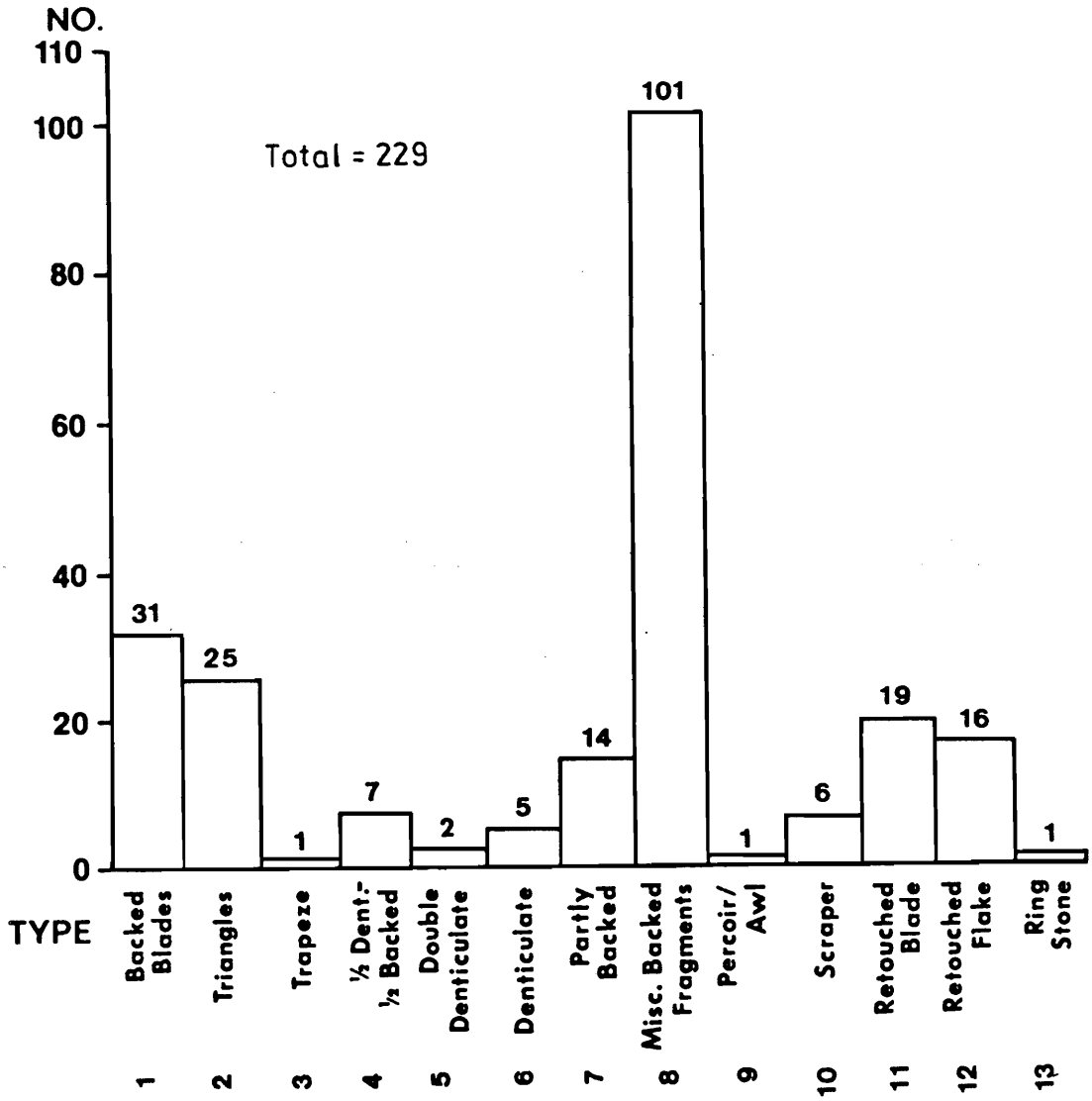


Fig. 12

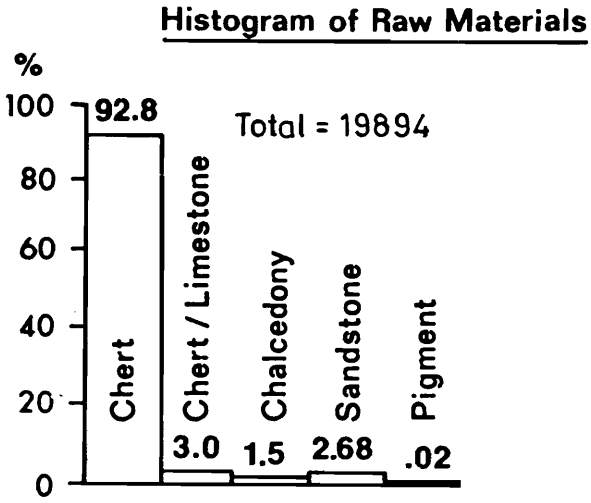

Histogram of Raw Materials
%
100
80
60
40
20
0
92.8
Total = 19894
Chert
Chert / Limestone
Chalcedony
Sandstone
Pigment
3.0
1.5
2.68
.02

Fig. 13

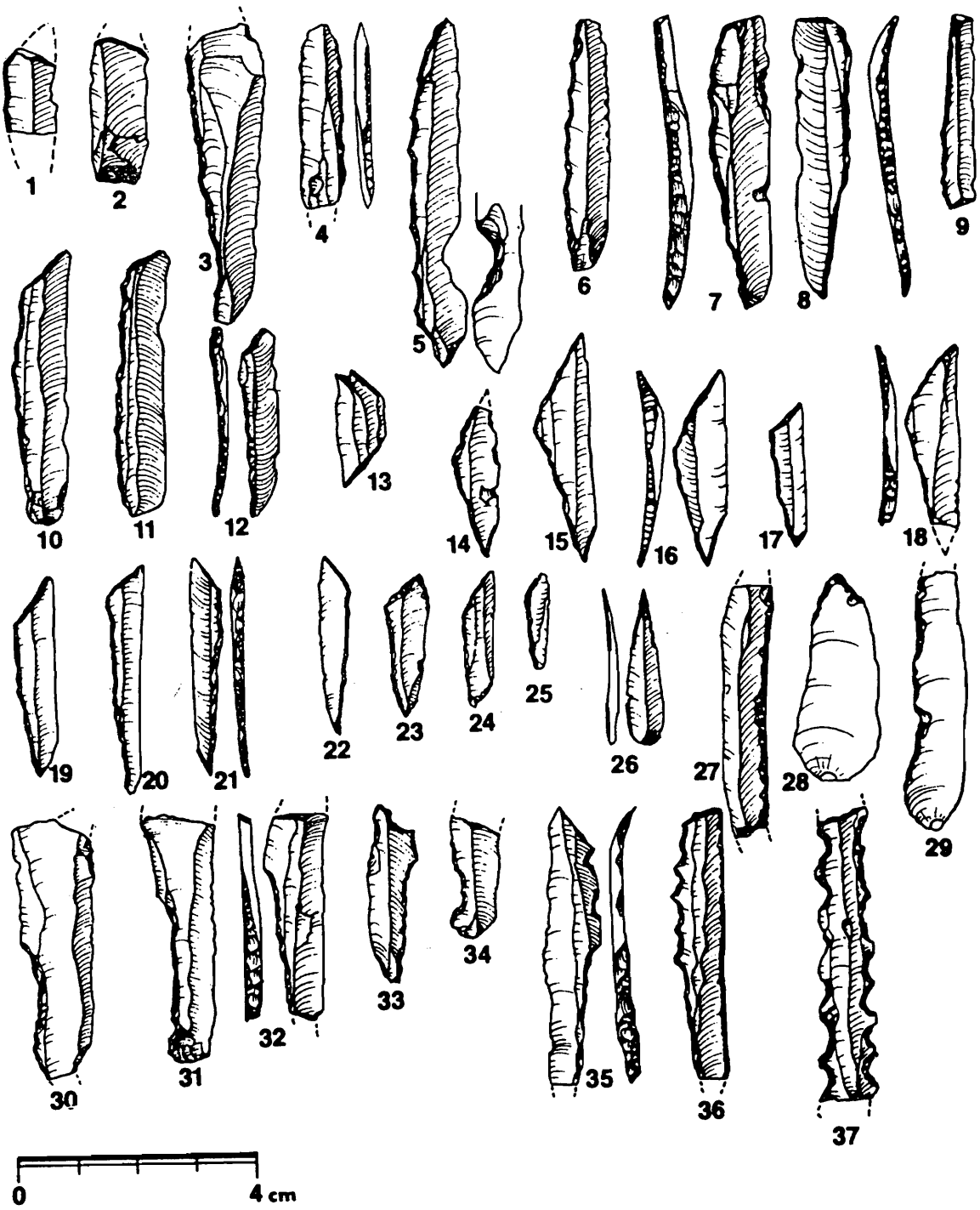


Fig. 14 Baghor I : Blade tools, Level 3.

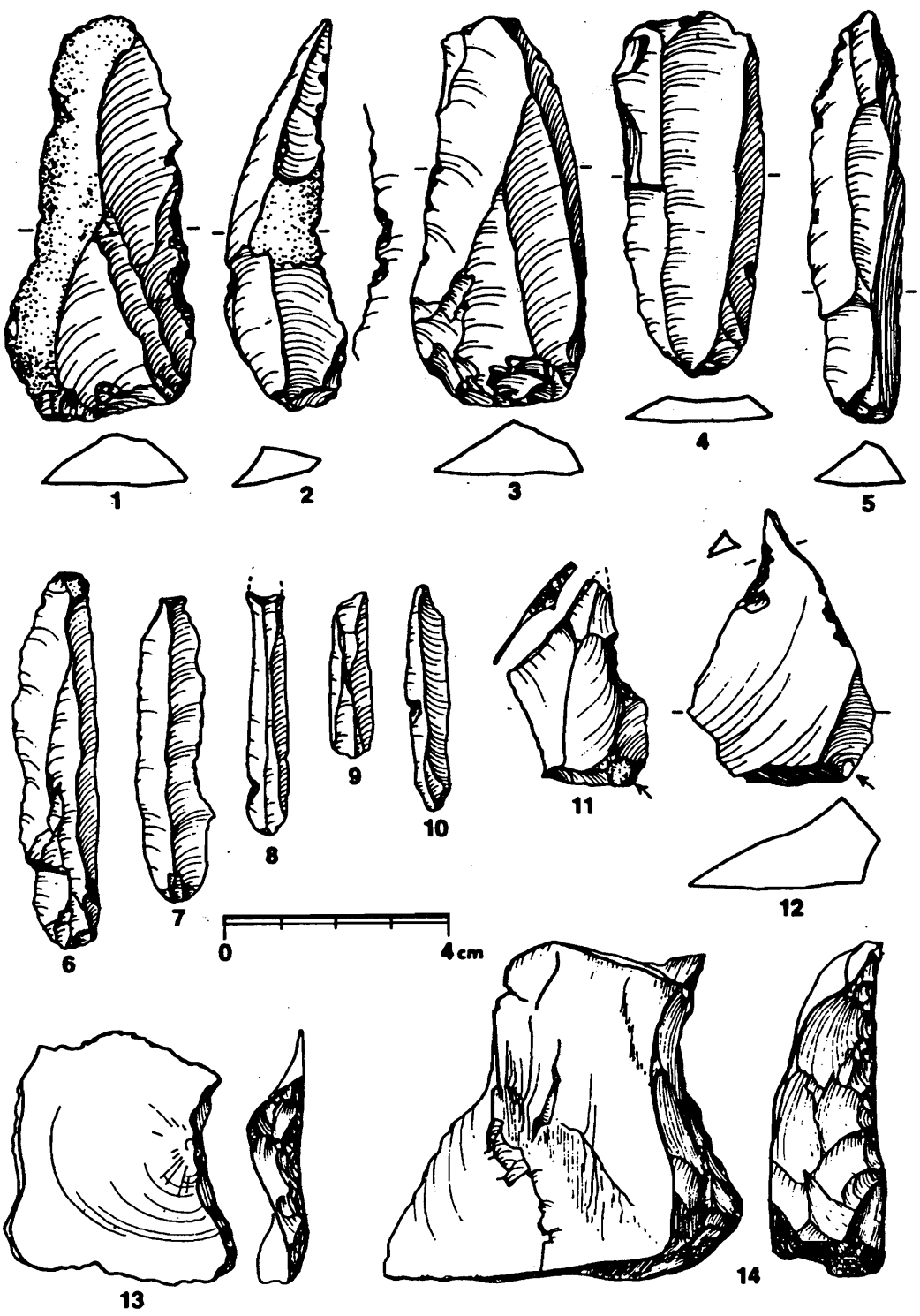


Fig. 15 Baghor I : Scrapers and modified blades and flakes, Level 3.

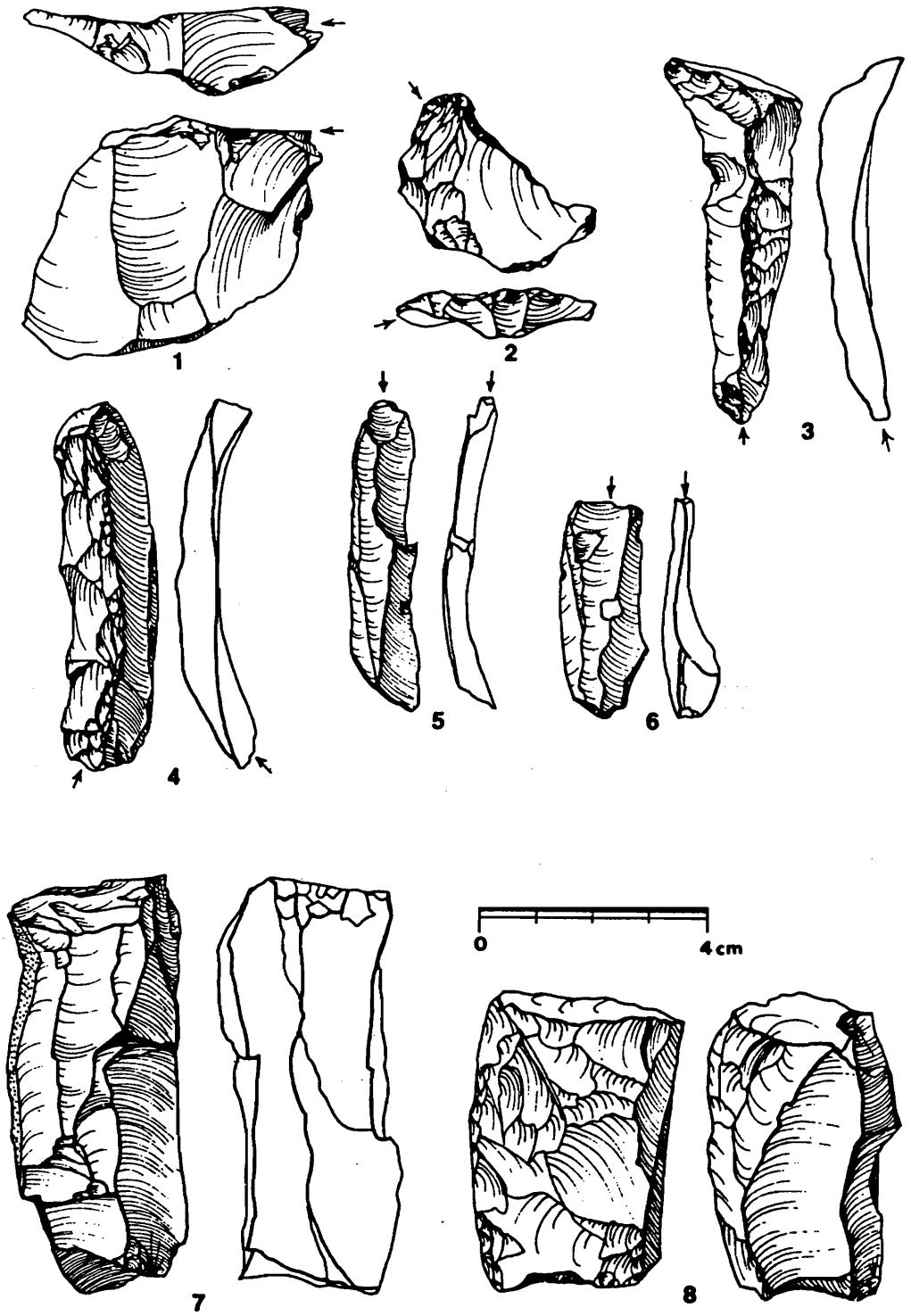


Fig. 16 Baghor I : Unmodified waste and cores, Level 3.

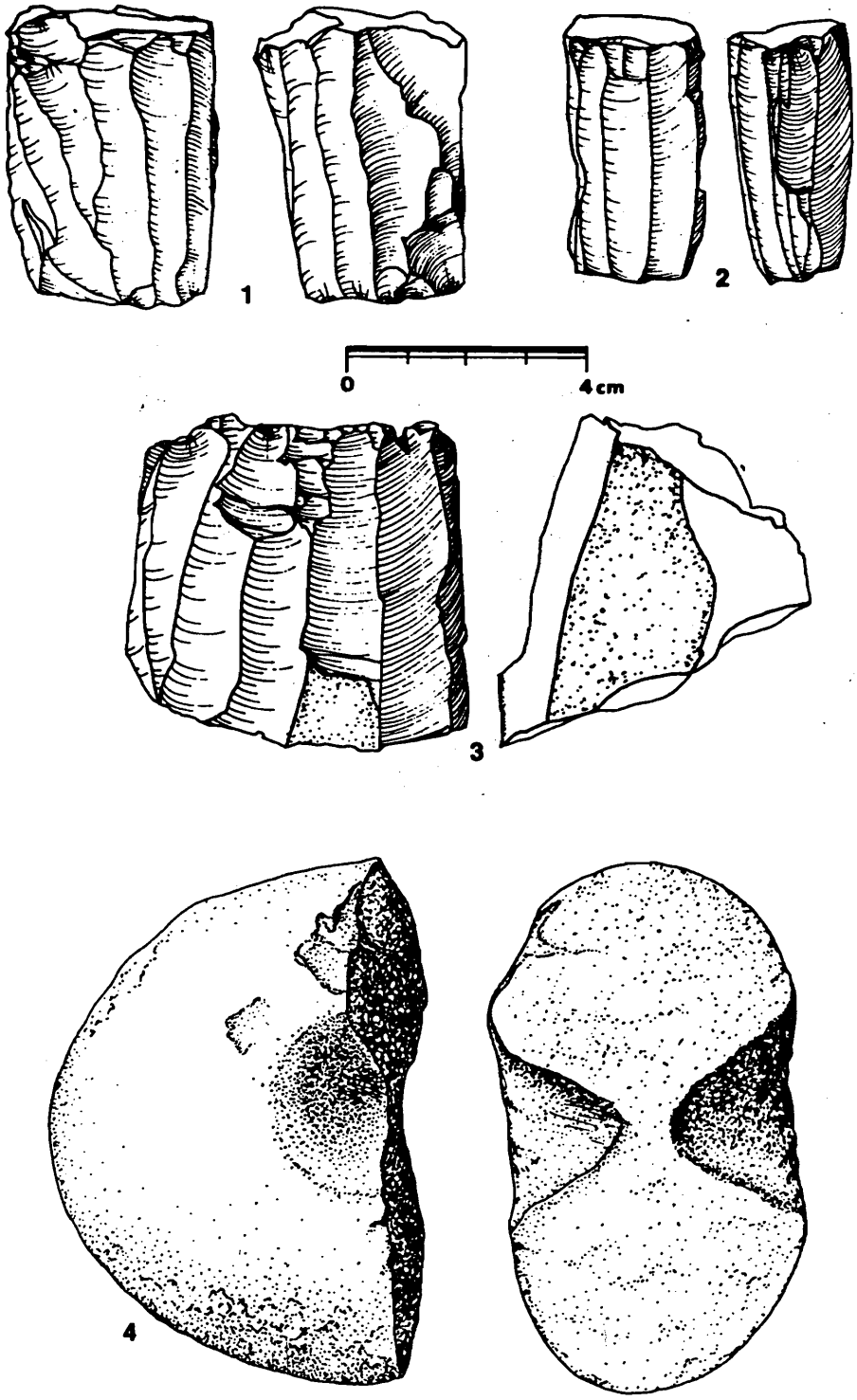
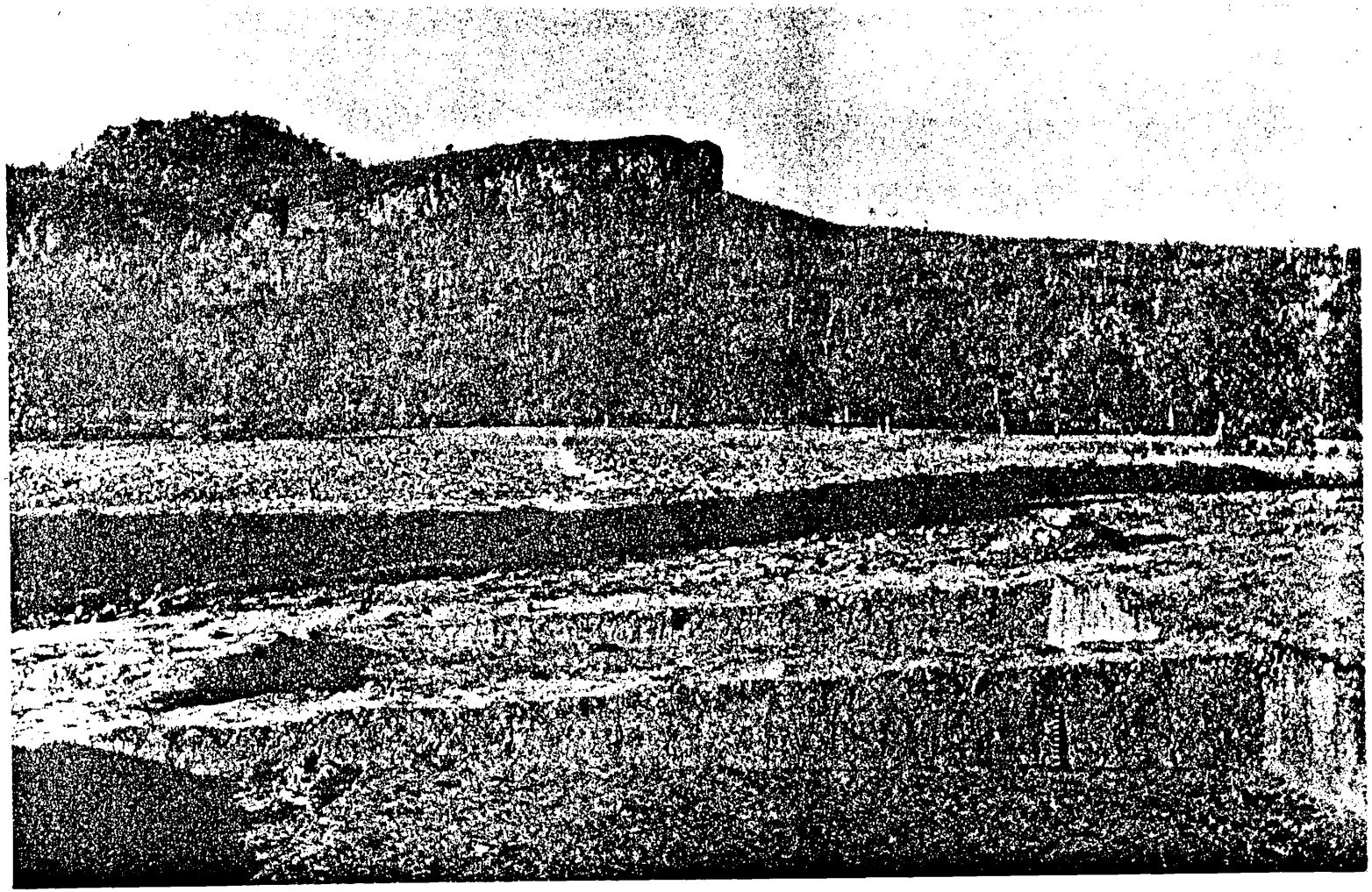
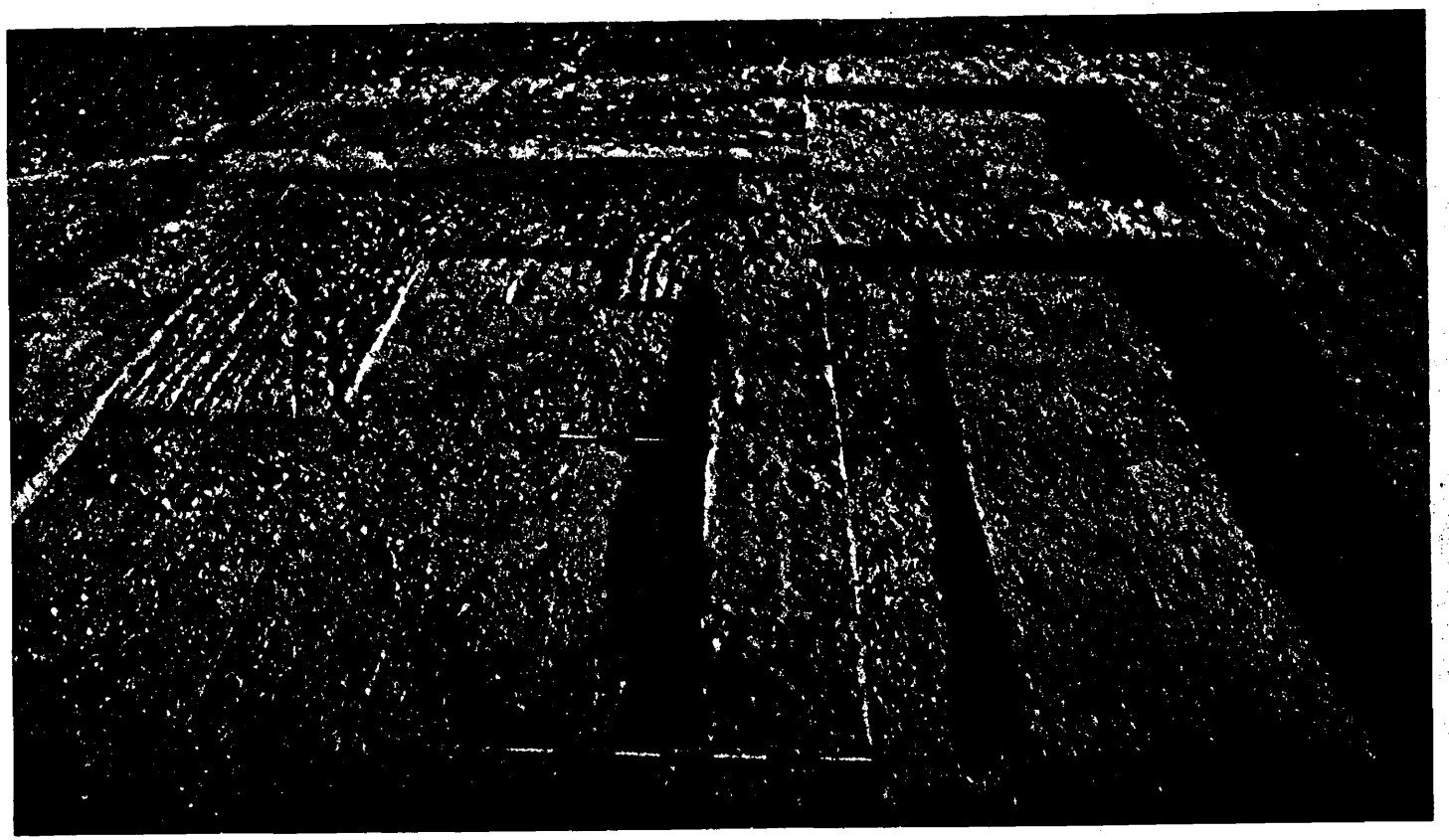


Fig. 17 Baghor I : Blade cores and ringstone, Level 3.

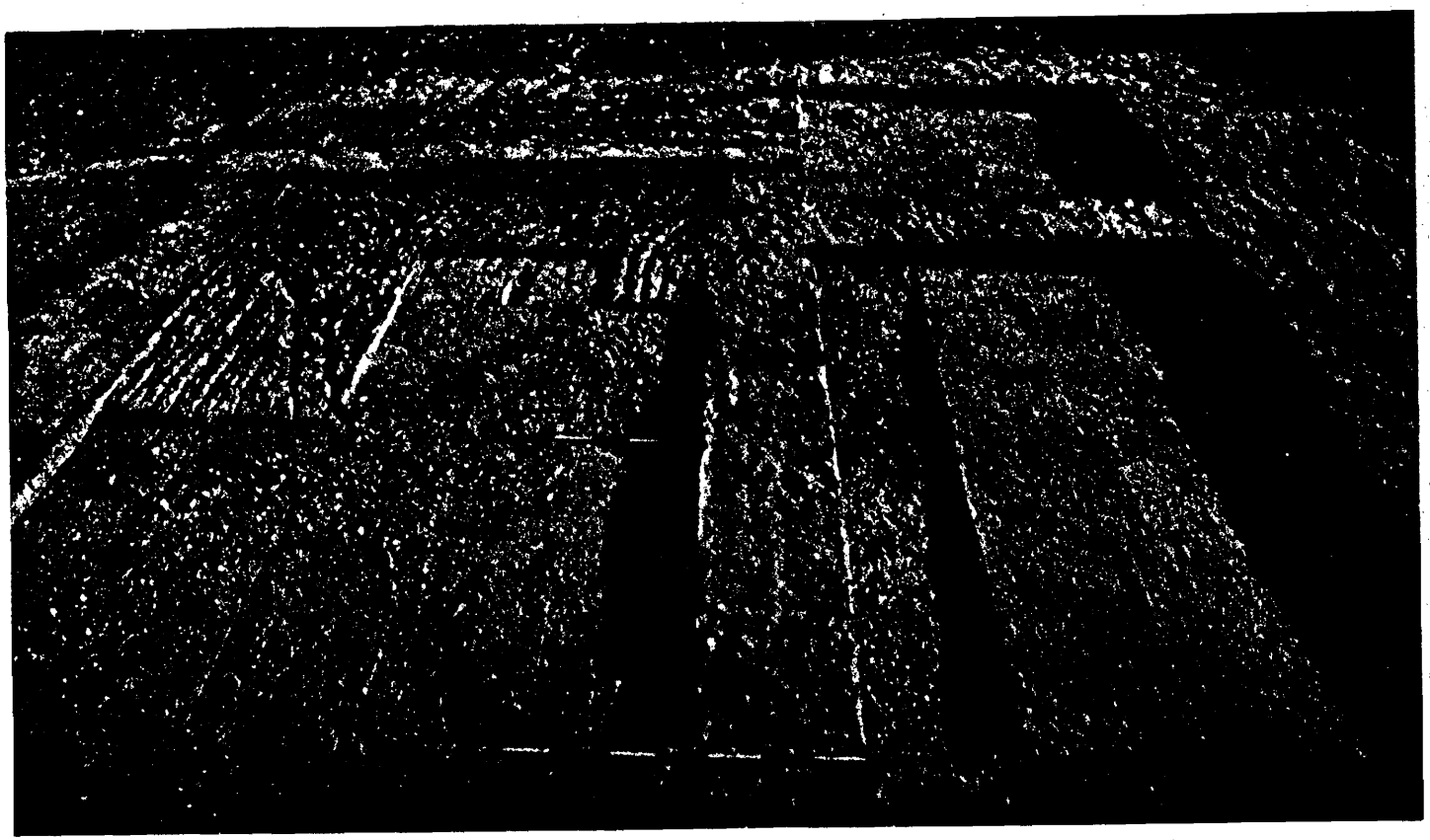


Pl. I Baghor I : General view showing the setting of the site with the Kaimur in the background.



Pl. II Baghor I : General view of the excavations with the ploughed area in the main grid.

Pl. III Baghor I : General view of the excavation in the H' line of the grid showing a heavy concentration of artifacts.



Pl. II Baghor I : General view of the excavations with the ploughed area in the main grid.