Excavation of a new Acheulian occupation site at Hunsgi, peninsular India

by K. Paddayya, Poona

with XIV-XVI

During the last eight years or so the writer has obtained a considerable volume of data concerning the Acheulian culture of the Hunsgi valley in South India. The results of this work have already been published in the form of several interim reports (Paddayya 1975 a and b; 1977 a and b; 1978). In the present paper it is proposed to give a short account of the results of excavation conducted in November-December 1977 at a new occupation locality (Locality VI) at Hunsgi. Before presenting this account it may be useful to provide a brief note about the physical features of the valley and the results of work carried out so far.

The Area and Previous Work

The Hunsgi valley is a somewhat oval-shaped basin and forms the southwestern part of the Shorapur taluk of Gulbarga district, Karnataka state. It measures about 10 km. east-west and 15 km. north-south, thus covering an area of 150 square kilometres. It is enclosed on all sides by plateaux of shale, limestone and the Deccan Trap, which rise to a maximum height of 75 m. from the valley floor. The valley floor itself slopes down gently from west to east. In the west it has an elevation of 490 m. above sea level and drops down to a level of 430 m. at Hunsgi in the east, where the drainage of the entire valley is flushed out by the Hunsgi nullah. Several minor streams (1 to 2 m. deep) rise in the plateaux and traverse the valley in an easterly direction. These unite to form four bigger streams, which in turn join together at or close to the village of Hunsgi to form a single stream called the Hunsgi nullah. The latter joins the river Krishna after an easterly course of about 35 kilometres. A noteworthy aspect of the drainage is that these streams are monsoonal in character and flow for only four months during the year (July to October). But puddles are found at certain points in their beds even during the dry season. Moreover, the stream draining the northern sector of the valley has a few springs in its bed, which feed the Hunsgi nullah with an ankle-deep flow of water throughout the year.

Granite, shale and limestone, and the Deccan Trap are the geological formations of the valley. The former rock formation is confined to a small portion around Hunsgi in the eastern part of the valley. Limestone is by far the most common raw material employed by the Acheulian inhabitants of the valley. The silicified variety occurring in the form of kankar conglomerates on the valley floor as well as slabs procured from the plateaux or their foothill region were utilized for this purpose.

The climate of the valley can be characterized as semi-arid. The average annual rainfall is about 70 centimetres and is received between the months of July and October. Since the valley is under active cultivation, very little of the natural vegetation is preserved. It is of the thorn scrub type. The magnitude of the depletion of the natural vegetation of the valley can be inferred from the fact that in the vegetation map prepared by the Indian Council of Agricultural Research the vegetation of this area has been described as low scattered shrubs, and pseudo-steppe and barren soil, which mark the most degenerate stages of a vegetation series called the *Hardwickia-Anogeissus* series (Gaussen et al 1965; Legris and Meher-Homji, n. d. 118–9).

In the course of the present study efforts have been made by Mr. M. D. Kajale to obtain some more details about the vegetation of the area (Paddayya 1978: 103-4). Basing on the differences in composition and density,

the valley can be divided into three phytogeographic zones, i.e. the stream courses, the valley floor and the plateaux. At some places the stream banks are characterized by thickets or gallery forests comprising species like the *Phoenix sylvestris* ROXB, *Acacia* sps., *Cassia auriculata* LINN, *Vitex negundo* LINN, *Cryptostegia grandiflora* ROXB, *Zizyphus jujuba* LAMK and *Tamarindus indica* LINN. Owing to agricultural activities, the valley floor has almost completely lost its cover of natural vegetation. Typical xerophytic vegetation characteristic of semi-arid climate is found here. It is dominated by weeds, *Acacia catechu* WILLD, *Acacia arabica* WILLD, *Cassia auriculata* LINN, *Capparis aphylla* ROTH and *Balanites roxburghii* PLANCH. The plateaux encircling the valley are covered with a more or less similar vegetation, with the important difference that it is very sparsely distributed. This sparsity is probably due to the bedded nature of limestone and shale formations, which does not afford any favourable conditions for the development of a thick soil mantle. These three zones, more particularly the former two, support several plant species yielding wild food products-fruits, seeds, leafy vegetables, etc.

So far 16 Acheulian occurrences have been discovered in the valley; an intensive survey is likely to reveal some more sites. All the known sites occur on the valley floor. Of these, four are associated with fluviatile gravels and as such belong to the secondary type. Three are workshops located in the foothill area of the plateaux. The remaining nine occurrences, situated 4 to 5 km. away from the plateaux, seem to be primary sites connected with occupation activites. These are found clustered together near the village of Hunsgi. They occur as discontinuous concentrations of artefacts, debitage and blanks of raw material on either bank of the Hunsgi nullah and extend for a distance of about two kilometres.

In order to ascertain the existence of undisturbed or primary horizons, excavations were conducted at one of the localities near Hunsgi (Locality V), lying about half a kilometre northeast of the village. This locality, covering an area of about one hectare, lies on the left bank of the Hunsgi nullah. Excavations conducted here for two seasons (1975–76) exposed an oval-shaped occupation horizon measuring about 65 square metres in extent. It is 20 to 35 cm. in thickness and occurs below 70 cm. thick secondary gravel. It yielded over 800 artefacts of limestone, including a considerable number of waste flakes and chips. Its eastern and western limits were marked by natural accumulations of granite boulders; on the northern side an artificially arranged row of granite blocks was found. In short, it would seem that the Acheulian inhabitants selected an open space formed amidst granite boulders for camping purposes. Such naturally formed open areas must have offered several advantages. First, the rock boulders encircling the spot would serve as a low wall for the camp and facilitate the erection of a superstructure with the help of branches and grasses. Secondly, because these open spaces are already strewn with rock pieces, they must have provided a hard surface for camping purposes. Thirdly, these open spaces are located on local eminences (ridges and knobs) and hence must have offered a good view of the surrounding area.

Locality VI

Initial Explorations

When the above-mentioned excavation work was going on, intensive explorations were undertaken in the surrounding area for ascertaining the existence of more Acheulian sites. In February 1976 several fresh limestone artefacts were found in the cultivated field lying immediately to the northeast of the above-mentioned locality. Further explorations and trial excavations carried out here during the months of December 1976 and January 1977 led to the identification of one more Acheulian locality.

This locality is separated from Locality V by a small feeder stream of the Hunsgi nullah (Fig. 1; Pl. XIV, 1). It lies over 70 m. away from the left bank of the Hunsgi nullah and 5 to 6 m. above its bed (or 432 to 433 m. above sea level). It measures 150 m. north-south and 120 m. east-west; the whole area is under regular cultivation (see Fig. 2). The surface slopes down gently from north to south, and is covered with greyish black soil. Mediaeval pottery (16th to 17th centuries A.D.), animal bones and Mesolithic artefacts of whitish chert were found strewn all over the locality, but no structural remains have been noticed so far.

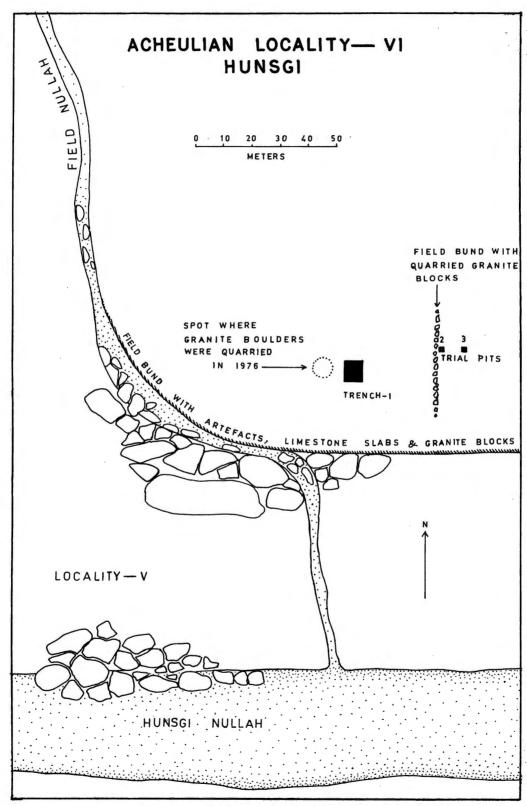


Fig. 1. Map of the Acheulian locality VI at Hunsgi.

So far as the Acheulian artefacts are concerned, these were found concentrated in the southern part covering an area of about 3 000 square metres (Pl. XIV, 2). This part of the locality has undergone extensive disturbance due to ploughing and also digging operations in connection with the preparation of protective bunds around the field. In fact, several artefacts together with limestone slabs and granite blocks were found in the earth making up these bunds. More important, several granite boulders (1 to 2 m. across) were observed on surface in the southeastern part of the locality. Indeed, it appears most probable that this part of the site was originally a low ridge or eminence of granite over which the Acheulian people settled. It is most unfortunate that this original configuration of the site is now completely altered, because the granite blocks have been blasted away in March 1976 and removed to the eastern edge of the field in the course of levelling work.

The concentration of artefacts and the presence of granite boulders suggested that undisturbed horizons may be expected below surface. With a view to ascertaining the existence of such levels four 1×1 m. test pits were dug at different points in the southeastern part of the locality (Paddayya 1977 c). In all these pits Mediaeval pottery, animal bones, and a few limestone chips were found in greyish black soil up to a depth of 30 cm. below surface. Furthermore, in one of the pits (Pit 1) a compact gruss horizon (25 to 30 cm. thick) was encountered at a depth of 60 cm. below surface. It yielded a total of 42 Acheulian artefacts including waste products. The fresh physical condition of these artefacts, the occurrence of limestone slabs, granite pieces and nodules of dolerite and quartz, and the hard and compact nautre of the matrix material were strongly suggestive of the primary context of the horizon.

Excavation

With the clues so obtained a regular excavation has been conducted at the site during November-December 1977. A trench (Trench 1) measuring 8 m. north-south and 6 m. east-west has been laid (around the trial pit referred to above) in the southeastern part of the locality. It lies about 95 m. from the nullah bank and 5 m. above its bed. At the time of excavation the locality was covered with standing jowar or great millet (Sorghum vulgare) crop, so an area of 70 square metres had to be obtained for excavation on payment of a suitable monetary compensation. The stratigraphy exposed in the trench is as follows (Fig. 2):

TRANSVERSE SECTION ACROSS THE ACHEULIAN LOCALITY-VI, HUNSGI

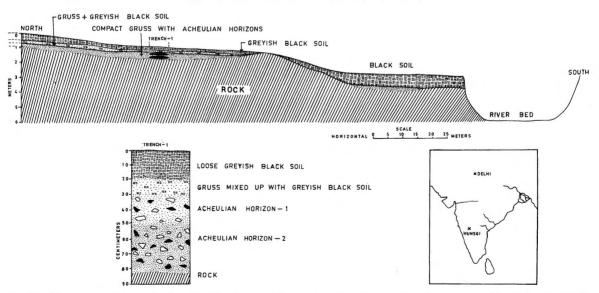


Fig. 2. Transverse section at the Acheulian locality VI at Hunsgi, showing the stratigraphical position of the Acheulian levels in relation to other deposits and the Hunsgi nullah.

- Layer 1 20 cm. in thickness; loose, greyish black soil very much disturbed due to ploughing and yielding Mediaeval pottery, animal bones, Mesolithic artefacts of whitish chert, and waste flakes and chips of limestone.
- Layer 2 10 cm. in thickness; gruss mixed up with greyish black soil; cultural material same as that of layer 1, but pottery, animal bones and Mesolithic artefacts in smaller quantities.
- Layer 3 20 cm. in thickness; compact, brownish/whitish gruss yielding Acheulian tools and debitage of limestone (Acheulian horizon 1); pottery and Mesolithic artefacts rare.
- Layer 4 25 to 30 cm. in thickness; hard, whitish/brownish gruss with Acheulian artefacts (Acheulian horizon 2); pottery and Mesolithic artefacts absent.
- Layer 5 Sterile gruss mixed up with granite blocks.

Since no structural remains have been found at the locality so far, it is difficult to know the exact context of the Mediaeval pottery and animal bones. However, it has been reported by the owner of the field that in 1976 some urn-burials have been encountered in the field in the course of ploughing operations. In fact, one such burial, albeit imcomplete, has been found in the present excavation. So it is possible that the locality served as a burial ground during the Mediaeval period. As to the Mesolithic artefacts, these are not confined to one particular level but found on surface and sometimes occur up to a depth of 30 cm., with some pieces even reaching the upper Acheulian horizon. Several Mesolithic sites occur around Hunsgi, so it is not at all surprising that the present locality was also utilized by the Mesolithic folk.

Coming to the Acheulian levels, the occurrence, albeit as rare pieces, of potsherds and Mesolithic artefacts suggests that the upper horizon has suffered some disturbance due to ploughing and other agricultural activities. These objects had obviously got infiltrated from the overlying levels. As against this, the lower Acheulian level is free of these objects. Secondly, this horizon is more compact in nature and shows no signs of disturbance. That the site witnessed two or even more cycles of occupation is proved in another way also. The surfaces in the case of some of the artefacts, particularly of the lower level, bear a distinct (about 2 millimetres in thickness) layer of carbonate encrustation which, with careful efforts, can be separated from the artefact like an eggshell. The other artefacts are totally devoid of such thick encrustation, thereby suggesting a time gap between the two series of artefacts.

Acheulian occupation levels (Pl. XV, 1-3)

As in the case of the occupation level exposed at Locality V, the matrix of these horizons consists of light brown/whitish gruss mixed up with secondary carbonate deposited by surface runoff. Both the levels, more particularly the lower one, are hard and compact, and consist of clods and nodules of various sizes. As at Locality V, numerous granite pieces of various sizes have been found in a disaggregated state. This is particularly true of the northeastern part of the trench where the lower occupation level almost entirely consists of such disaggregated blocks ranging between 15 and 50 cm. in size. Sometimes the sandy matter from the disaggregated blocks has been recemented to form 15 to 20 cm. thick slab-like pieces. These features clearly suggest that the matrix material of the horizons resulted essentially from the in situ weathering of granite. In other words, it would seem that a hard, boulder-strewn surface was chosen by the Acheulian man for occupation.

An interesting feature of the lower occupation level concerns the position of eight large granite boulders. These are between 40 cm. and 2 m. in size and run across the trench in northwest-southeast direction. Although still held together, these blocks are now split into smaller pieces. They extend below the 75-80 cm. level and as such clearly form part of the bedrock. They continue into the overlying horizons, with some even reaching up to the surface level. In this connection it is necessary to take into consideration the position of surface granite blocks blasted away in 1976. They were found as a cluster 5 to 6 m. due west of the excavated trench. Viewing their position in relation to those found in excavation, we may infer that, as at Locality V, the Acheulian inhabitants selected for their camp site an open area enclosed by natural accumulations of granite blocks.

With regard to the lithological composition of the floors, only provisional observations can be given here because a detailed size- and rock-wise analysis has not been made as yet. Limestone rubble is the single largest component of the levels. Over 1,200 pieces have been found in the lower level. Although the majority of them are below 5 cm., there are a number of pieces measuring above 8 cm. The largest slab measures 29 × 16 × 9 cm. In the upper horizon one dozen slabs measuring above 10 cm. have been found, with the largest slab measuring 24 × 14 × 6 cm. These blocks were definitely introduced to the spot by man for use as raw material. Next in order comes the shale rubble, but these pieces measure by and large below 5 cm. Limestone gravel and chert nodules are the other major components of the levels. In these categories also there are a number of pieces measuring between 5 and 10 cm., which also were probably brought by man to the site. Considering the alluvial setting of the site, the smaller rock pieces (particularly those below 4-5 cm.) may be fluviatile in origin and probably form part of a gravel spread laid down over the locality and surrounding area prior to the Acheulian occupation. Likewise, the limestone and shale rubble below 4-5 cm. may have been derived by surface runoff from the foothill zone of the plateaux.

So far as the distribution of artefacts is concerned, the debitage, mostly represented by flakes and chips, is found all over the excavated area. Almost all the large artefacts, on the other hand, are found to the west of the diagonal alignment of granite blocks. This is true of the artefacts occurring in both the Acheulian horizons (Pl. XV, 1 and 3). This feature, considered together with the presence on surface till recently of several granite boulders 5 to 6 m. to the west of the trench (see Fig. 1), suggests that the excavated diagonal row of blocks marks the eastern limit of the occupation floor and that the site probably extends further west of the excavated area. This factor should be taken into account while planning any future excavation at the site. Further, that some more occupation areas occur at this locality is revealed by the occurrence of artefacts in trial pits (Pits 2 and 3) dug 25 to 30 m. to the east of Trench 1 (see Fig. 1). In these pits 25 to 30 cm. thick and compact gruss horizon, yielding finished tools and debitage along with limestone slabs and other rock pieces, has been encountered below sterile layers of black soil (50 cm. thick) and soft gruss (25 cm. thick).

An equally interesting aspect of the floors concerns the occurence of large artefacts in definite clusters. In the upper Acheulian level eight artefacts have been found together in grid squares C-6 and D-6/7 (Pl. XVI, 1). These include three cleavers (Fig. 3, No. 2), one handaxe, two polyhedrons, one utilized flake and one indeterminately worked limestone nodule. Twelve limestone slabs, measuring between 8 and 24 cm. in length, have been found associated with these artefacts.

In the lower Acheulian level two major clusters of artefacts can be recognized. The first one occupies B-3/4 and C-3/4 grid squares (Pl. XVI, 2) and is made up of 15 artefacts. These belong to the following types:

Cleavers	2 (Fig. 4)
Chopping tools	2
Polyhedron	1
Perforator	1
Prepared core	1 (Fig. 10, No. 2)
Utilized flake	1 (Fig. 10, No. 4)
Unused flake	1
Anvil stone	1
Indeterminately worked nuclei	5
Total	15

Over one dozen limestone slabs (above 6 cm. in size) have been found along with these artefacts. The largest of these measures $29 \times 16 \times 9$ cm.

The second cluster of this level encompasses grid squares B-7/8 and C-7/8 and consists of 13 artefacts as follows (Pl. XVI, 3):

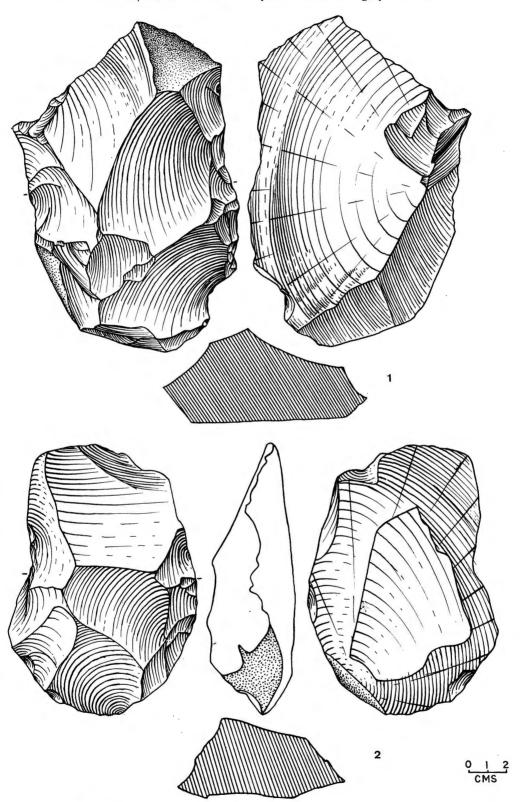


Fig. 3. 1. Cleaver from surface. -2. Cleaver from the upper Acheulian level.

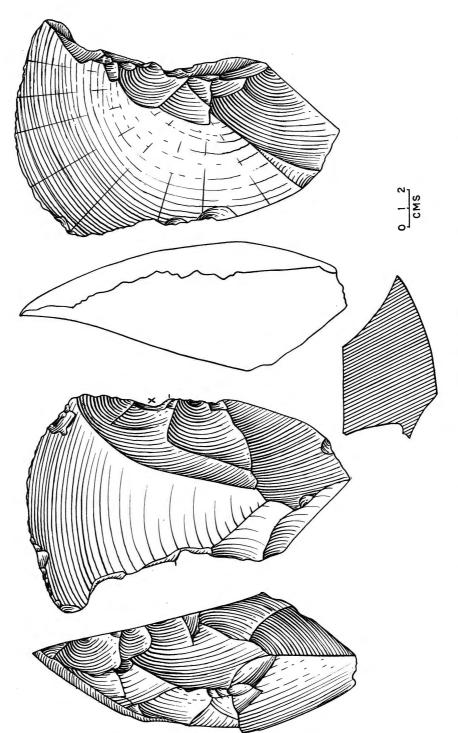
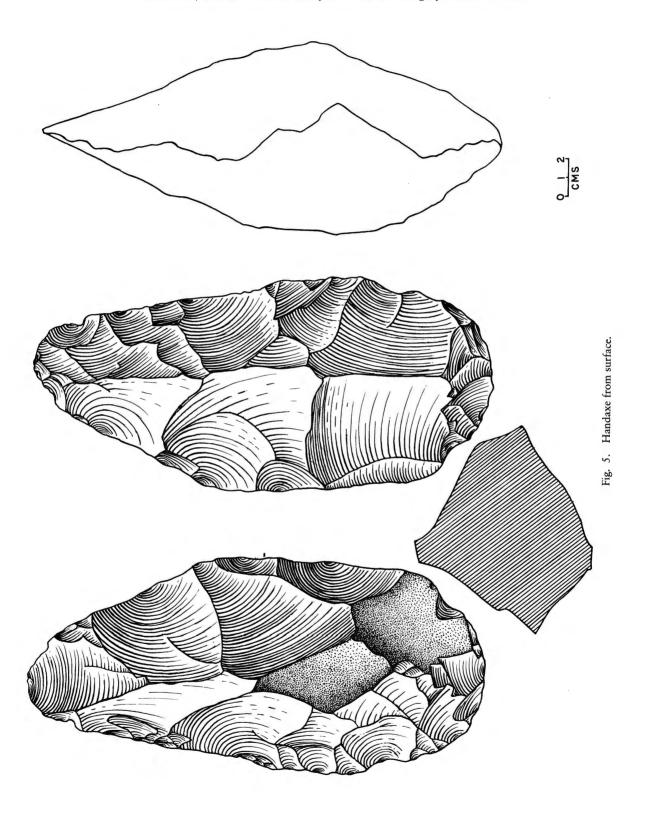


Fig. 4. Cleaver from the lower Acheulian level found in semi-vertical attitude (the edge exposed to surface marked X).



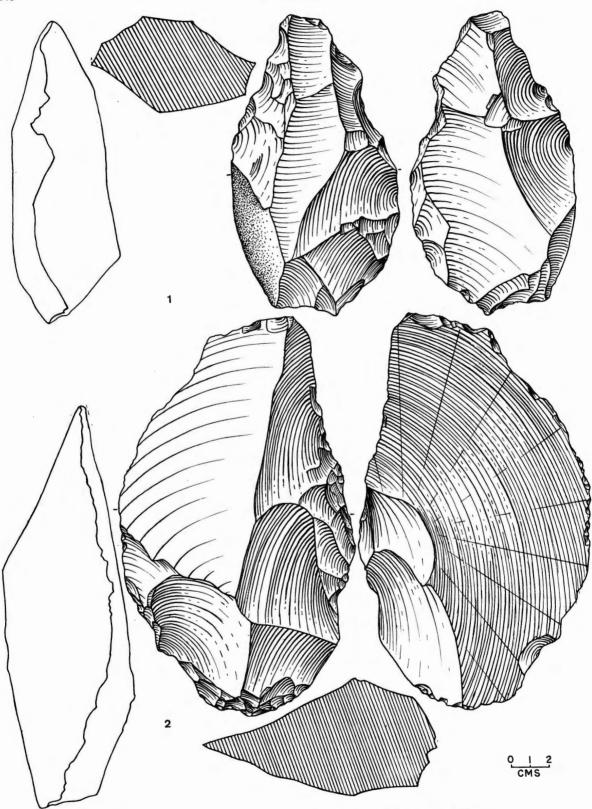


Fig. 6. 1. Handaxe from the upper Acheulian level. -2. Knife from surface.

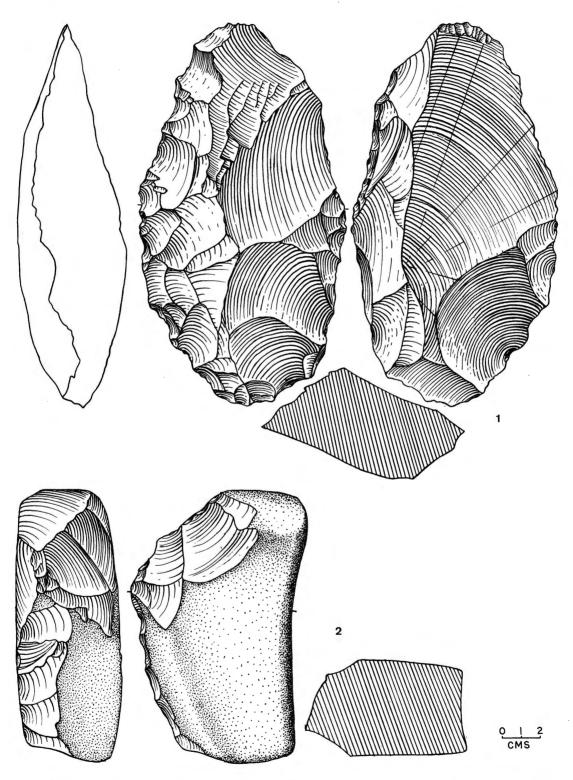


Fig. 7. 1. Knife from the lower Acheulian level. -2. Chopping tool from the lower Acheulian level.

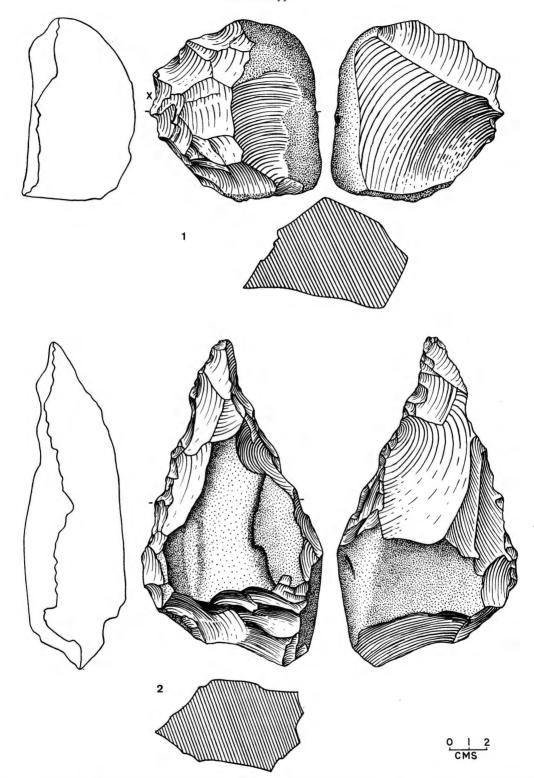


Fig. 8. 1. Chopping tool from the lower Acheulian level found in vertical attitude (the edge exposed to surface marked X). -2. Pick from surface.

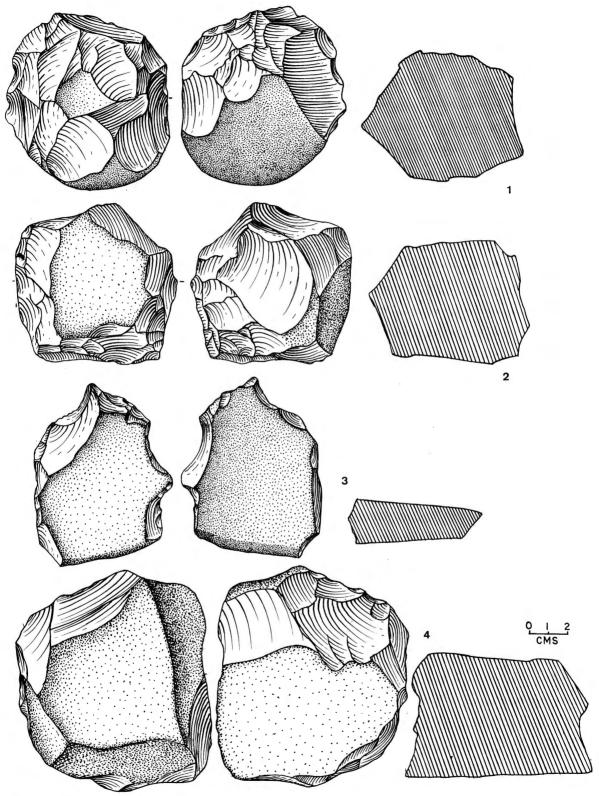


Fig. 9. 1. Polyhedron from surface. – 2. Polyhedron from the upper Acheulian level. – 3. Perforator from the lower Acheulian level. – 4. Anvil stone from surface.

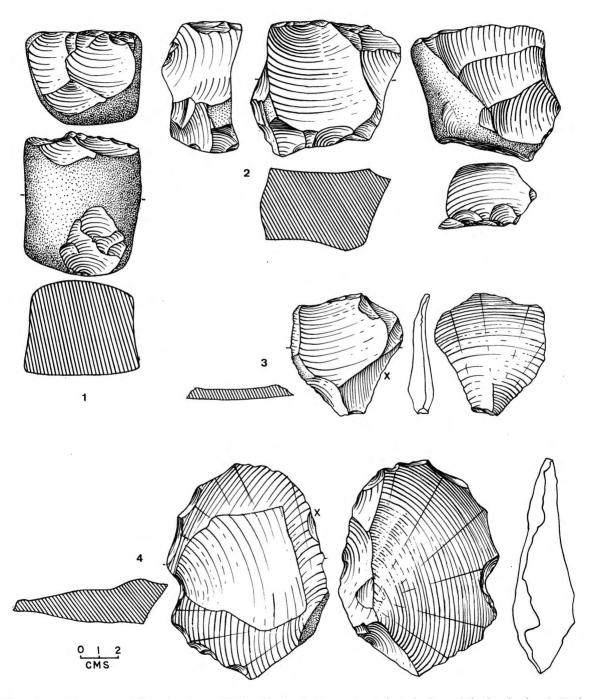


Fig. 10. 1. Hammerstone from the upper Acheulian level. -2. Prepared core from the lower Acheulian level. -3. Fresh flake from the lower Acheulian level found in vertical attitude (the edge exposed to surface marked X). -4. Used flake from the lower Acheulian level found in vertical attitude (the edge exposed to surface marked X).

Chopping tools	3 (Fig 8, No. 1)
Polyhedron	1
Perforator	1 (Fig. 9, No. 3)
Utilized tabular piece	1
Flakes	3 (Fig. 10, No. 3)
Indeterminately worked nuclei	4
Total	13

This cluster is associated with about one dozen limestone slabs and nodules of other rocks like chert, all measuring between 6 and 9 cm. in size.

What is the raison d'être of these artefact concentrations? At the moment it is difficult to give a final answer. One possible interpretation is that they mark the spots of tool-manufacture. Another explanation (which sounds more probable) is that they represent activity areas where animal and vegetable foods were processed. In this connection it is important to note that, in the lower Acheulian horizon, four artefacts have been found lying in vertical positions (two each in clusters 1 and 2). In grid square B-4 a cleaver has been found with one of the lateral edges (the opposite one being blunt) lying at an angle of 60 ° (Pl. XVI, 4; Fig. 4). In grid C-4 a large, cleaver-like flake has been found with one of the lateral edges placed in fully vertical position (Fig. 10, No. 4). In grid square B-7 another flake (Fig. 10, No. 3) and a chopping tool (or prepared core?) have been found in a similar attitude (Pl. XVI, 3); the butt-end of the latter artefact is unworked and lies embedded in the soil (Fig. 8, No. 1). In East Africa such peculiar attitudes have been taken to suggest that the artefacts were utilized as fixed tools in the ground and that the material to be worked or treated (meat, fruits, vegetables, etc.) was manipulated against the projecting edge of the artefact (Kleindienst and Keller 1976). But the difficulty in unreservedly accepting such an interpretation in the case of our site is that there are no faunal or botanical remains which could serve as a corroborative evidence 1. Secondly, in some cases such attitudes could be merely fortuitous, considering the open-air character of the sites and the in situ weathering of granite resulting in the formation of gruss. However, these peculiar attitudes of tools are an aspect which cannot be dismissed as of no importance in the Stone Age studies but should be understood in the light of data from future excavations.

The Lithic Industry

The top two layers of the trench (1 to 20 cm. and 21 to 30 cm. levels) have yielded Mediaeval pottery and Mesolithic artefacts together with a small number of limestone chips and flakes. But these collections are not included in the present study. The upper and lower Acheulian levels proper have yielded 243 and 930 specimens, respectively. Since some of the specimens bear thick carbonate encrustation, it is possible that a few examples may have to be discarded or typologically rearranged after final cleaning. In the present study only artefacts measuring above 5 cm. are taken into consideration. In order to obtain a better picture of the industry, the specimens collected on surface from the locality over a period of two years are also included here.

As in the case of assemblages from other Acheulian sites in the valley, limestone is the principal raw material of the collections from this locality. Both slabs and rounded pieces were employed as blanks. The use of other rocks like chert and quartzite is but a minor feature. Although some of the specimens bear thick carbonate encrustation, the artefacts are in fresh condition. This feature, as supported by the occurence of a large quantity of waste products and blanks of raw material, proves that the manufacture of tools took place locally. The following artefact types are represented in the assemblage:

¹ Soil samples from the present excavation have been submitted to Dr. Vishnu-Mittre of the Birbal Sahni Institute of Palaeo-botany, Lucknow, for palynological studies. In a personal communication Dr. Vishnu-Mittre confirms the presence of polen grains in some of the samples. The final report on his study is awaited.

		Surface	Acheulian horizon 1	Acheulian horizon 2	Total
			(30–50 cm.)	(50–80 cm.)	
I. Shaped Tools					
1. Cleavers		9	3	2	14
2. Handaxes		10	2	4	12
3. Knives		4	1	1	6
4. Chopping tools		2	_	8	10
5. Picks		2	_	1	3
6. Polyhedrons		3	3	2	8
7. Scrapers		_	_	2	2
8. Perforators		_	-	2	2
9. Backed tool		-	. 1	-	1
II. Utilized Pieces					
1. Anvil stones		2	_	1	3
2. Hammerstones		3	1	1	5
3. Utilized flakes		_	2	9	11
4. Utilized tabular piece		_	-	1	1
III. Débitage					
1. Cores		1 .	3	6	10
2. Indeterminately worked nuclei		3	2	25	30
3. Flakes		2	-	12	14
4. Waste pieces		_	4	17	21
	Total	41	22	90	153

Cleavers are made on both slabs and flakes (Figs. 3–4). The shapes represented are parallel-sided, convergent and divergent. The cross-sections are invariably thick. One specimen has a guillotine-type edge; in three cases the edge belongs to the ultra-convergent type. Almost all the handaxes are made on whole blanks (slabs and rounded nuclei) and belong to the pointed group (Fig. 5; Fig. 6, No. 1). As in the case of cleavers, the cross-sections are thick and irregular. The flake-scars are large and deep, thereby implying the employment of stone hammer technique. Knives are made on thick flakes and constitute the most characteristic artefact type of the industry (Fig. 6, No. 2 and Fig. 7, No. 1). One of the lateral margins of the flake is steeply worked from ventral surface. The working edge, located on the opposite margin, is sharp and arc-shaped. Chopping tools are made on slabs and rounded nuclei; the working edge is bifacially treated in most of the specimens (Fig. 7, No. 2 and Fig. 8, No. 1). Picks are made on elongate slabs by chipping the lateral margins bifacially (Fig. 8, No. 2). The butt-end is untrimmed; the cross-section is triangular or trapezoidal. Polyhedrons show shallow flaking all over the body; several sharp ridges are formed at the intersection of these flake-scars (Fig. 9, Nos. 1 and 2). Perforators are made on thick blanks; the margins are worked and converge to form a borer-like working end (Fig. 9, No. 3).

All the three anvil stones are of limestone (Fig. 9, No. 4). These are circular in outline and show batter-marks around the periphery. One of the specimens found on surface is short cylindrical in shape, measuring 20 cm. in height and 15 cm. in diameter. The three hammerstones found on surface (two of dolerite and one of quartzite) are spherical in shape and show pecking marks over the body. It is quite probable that they belong to a later

cultural phase. The specimen from the upper Acheulian level (Fig. 10, No. 1) is a flat-bodied limestone nodule; its ends show batter-marks. Of the six cores found in the lower Acheulian level, one is a prepared core with the flake already struck off (Fig. 10, No. 2).

In terms of raw material as well as typological and technological considerations, the assemblage compares well with the one excavated from Locality V and also those from other sites in the valley. The employment of stone hammer tehnique, the pointed forms of handaxes, and the occurrence of artefact types like polyhedrons, picks, chopping tools and knives ascribe an Early Acheulian character to the collections.

To sum up the study, the present excavation goes to confirm the evidence obtained at Locality V as to the preference shown by the Acheulian inhabitants of the valley in the selection for camping purposes of naturally formed open grounds on local eminences or ridges of rock overlooking the streams. This feature has also been observed at several surface sites of the Acheulian and Mesolithic cultures. So it would seem that the use of such naturally formed open areas surrounded by boulders of rock as home bases was an established tradition with the Stone Age settlers of the valley. Secondly, the artefactual assemblage from the present excavation confirms the Early Acheulian character of the industry.

References

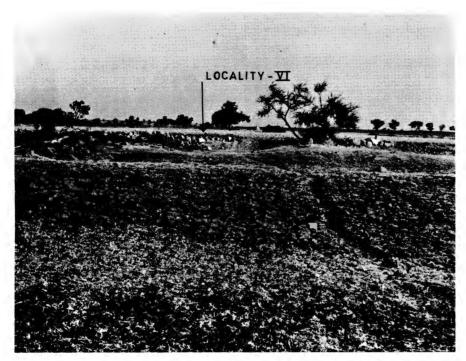
GAUSSEN, H., LEGRIS, P., VIART, M., MEHER-HOMJI, V.M. and LABROUE, L. 1965. International map of the vegetation and of environmental conditions. Sheet Bombay with notice. Indian Council of Agricultural Research, New Delhi.

KLEINDIENST, M.R. and KELLER, C.M. 1976. Towards a functional analysis of handaxes and cleavers: the evidence from eastern Africa. Man, vol. 11, 176–87.

LEGRIS, P. and MEHER-HOMJI, V.M. (Not dated). The Deccan trap country and its vegetation patterns. Symposium on "Deccan Trap Country" (Bulletin No. 45 of the Indian National Science Academy), 108–126.

PADDAYYA, K. 1975a. An Acheulian occupation site at Hunsgi, Gulbarga district, Karnataka – a preliminary report. Bulletin of the Deccan College Research Institute, vol. 35, 87–93.

- --1975b. Investigations into the Acheulian phase in the Shorapur Doab, Peninsular India a preliminary report. Quartär, vol. 26, 5–11.
- --1977a. An Acheulian occupation site at Hunsgi, Peninsular India: a summary of the results of two seasons of excavation (1975–6). World Archaeology, vol. 8, 344–55.
- --1977b. The Acheulian culture of the Hunsgi valley (Shorapur Doab), Peninsular India. Proceedings of the American Philosophical Society, vol. 121, 383-406.
- ---1977c. A new Acheulian occupation locality at Hunsgi, Gulbarga district, Karnataka. Journal of Archaeological Studies, vol. 2, 9–12.
- ---1978. New research designs and field techniques in the Palaeolithic archaeology of India. World Archaeology, vol. 10, 94-110.



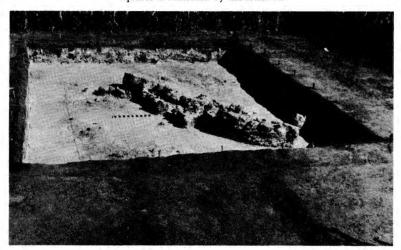
1. View from south of the Acheulian locality VI at Hunsgi. The stone blocks (granite boulders and limestone slabs) in the foreground form part of the field bund marking the southern limit of the locality.



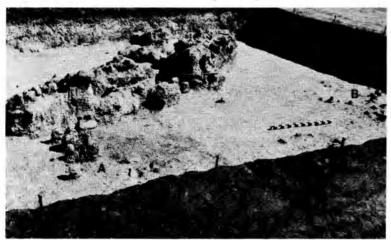
2. Close-up from east of the southern part of the Acheulian locality VI at Hunsgi. The granite blocks in the foreground were quarried from an area slightly away from the spot (Trial Pit No. 1 dug in 1977) where the two persons are sitting and placed in their present positions in March 1976.



 View from south of the upper Acheulian horizon (30–50 cm. level) exposed in Trench 1, Locality VI at Hunsgi. The cluster of large artefacts in C–6 and D–6/7 grid squares is indicated by the letter X.



2. View from south of the lower Acheulian horizon (50–80 cm. level) exposed in Trench 1, Locality VI at Hunsgi. Note the occurrence of large artefacts to the west of the nortwest-southeast running line of granite blocks.



3. View from west of the northwest-southeast running row of granite blocks exposed in the lower Acheulian occupation horizon of trench 1, Locality VI at Hunsgi. Note the clusters of large artefacts exposed in B-3/4—C-3/4 and B-7/8—C-7/8 grid squares which are respectively indicated by the letters A and B.



 Close-up of the cluster of large artefacts in grid squares C-6 and D-6/7 of the upper Acheulian horizon of Trench 1 at Locality VI, Hunger



3. Close-up of the cluster of large artefacts in B-7/8 and C-7/8 grid squares of the lower Acheulian horizon exposed in Trench 1, Locality VI at Hunsgi. Artefacts marked by the letters A (see Fig. 10, No. 3) and B (see Fig. 8, No. 1) have been found in vertical attitudes.



Close-up of the cluster of large artefacts and limestone slabs exposed in B-4 and C-4 grid squares of the lower Acheulian horizon of Trench 1 at Locality VI, Hunsgi.



4. Close-up of the artefacts and limestone slabs found in grid square B-4 of the lower Acheulian horizon exposed in Trench 1, Locality VI at Hunsgi. The artefact marked by the letter A is a cleaver (Fig. 4) with one of the lateral margins found lying at an angle of 60°.