

## A Report on the Lithic Industries of Keonjhar with Reference to Palasponga Area, Odisha

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**Abstract:** The present survey was undertaken around the Palasponga region of Keonjhar district. The survey has yielded eight sites of every culture (i.e. Palaeolithic, Mesolithic and Neolithic). The area is drained by river Aradei and Jokdara and a numerous number of palaeo channels and rain gully's. The area is dotted with many rocky undulated lands as well as low hills and raised eroded lands. The low hills of the area more or less provided with quartz, quartzite and different types of cherts. These raw materials would have been exploited or rather used by the prehistoric peoples of this region. Significantly it has been marked that the land mass are basically the habitational area of prehistoric population, the cultural remnants in shape of lithic artifacts. Recently conducted short exploration around Palasponga is to impart training in field archaeology for studying the prehistory which was undertaken in the Keonjhar district. The survey was conducted during April 2022. The prime aim was to locate new and uncharted prehistoric sites and the stratigraphic profiles of this area which lies to the north of district headquarter Keonjhar and to the eastern extent of Chhotnagpur plateau in the northern part of the state.

**Keywords:** Keonjhar, Survey, Aradei, Chert, Lithic, Stratigraphic.

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### Introduction

Geo-morphologically the study area of Palasponga lies between 21°47'55" Northern latitude and 85°34'15" Eastern longitude which is located on the valley of the river Aradei a tributary of the river Baitarani. It is 20 km away from district headquarter Keonjhar and about 260 km from state

capital Bhubaneswar. The Orissa Sponge Iron and Steel Limited also comes under the study area as a landmark. This area is drained by the rivers like Ardei, Jokdara and Baitarani. The study area is very important in the study of prehistoric remains and antiquities of the region. This region was not studied earlier so the main aim was to locate some new uncharted sites by knowing the topography of the area and to prepare a map of the region through the study.

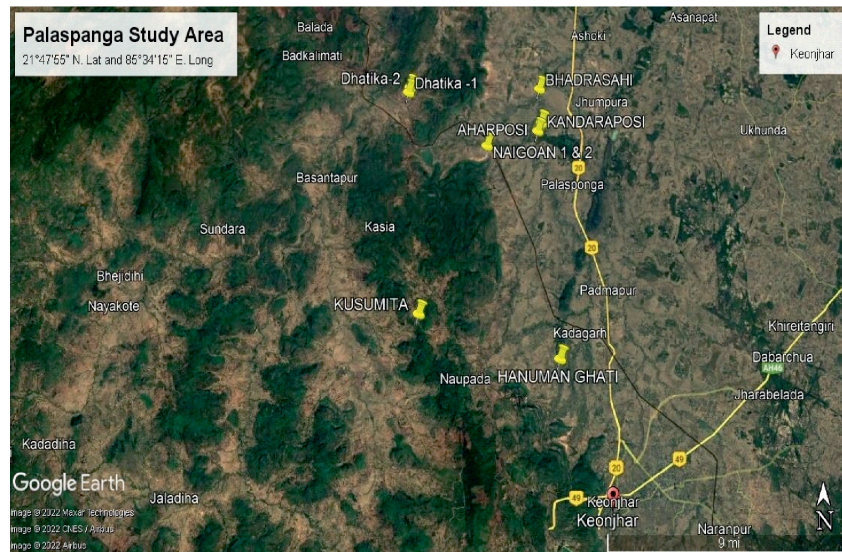


Fig. 1: Satellite Image of the Study area

### Location of Sites and recovery of Artifacts

1. **Kusumita (KMT)**- It lies about 6 km west from Raisuan chaka. The site is a foothill site which is located on the south western part of Kusumita hill range and a part of Nayagarh reserve forest. It lies on the left of the tri junction of Kusumita in north, Uppar Kampidihi in west and 6 km to Raisuan towards east. The area is covered with some indigenous plants like Kendu, Sal, Palash and Ramasikula grass etc. The site has yielded some artefacts of Palaeolithic, Mesolithic and Neolithic. The lithic artifacts were found from the conglomerate bed or surface. The **Middle Palaeolithic** implements recovered includes: side scraper-1, convex scraper-1. **Upper Palaeolithic** : side scraper-3, end scraper-2, end flake-1, utilized flake-2. **Mesolithic**: core-5, fluted core-1, end flake-2, side scraper-5, round scraper-2, end scraper-2, side-cum-end scrape-1, blade-8, point-1, borer-1. **Neolithic**: nodule-2, end flake-3, side flake-4, side scraper-2.



Fig. 2: View of the site Kusumita which is going to be destroyed as construction of water tank is in progress.

2. **Aharposi (ARP)** - It lies about 3 km from Palasponga towards west. The site is on the left side of the road which leads from Palasponga to Kalimati. The area is covered with some plants like kendu, sal, palash etc. The surface of the site is eroded and deposited with light brown soil mixed with fine to coarse grained quartz, quartzite pellets and lateritic granules. The surface of the site is also covered with outcrop of loose laterite and calcrete deposit in some places. The lithic artifacts recovered from the surface survey includes; **Lower Palaeolithic**: core-1, hammer stone-2, handaxe-1, chopper-1, round scraper-1, utilized flake-3. **Middle Palaeolithic**: end flake-9. **Upper Palaeolithic**: core-1, side scraper-3, end scraper-1, side flake-3, blade core-1, blade-3, point-2, borer-1, burin-1, knife-1, nodule-1. **Mesolithic**: core-1, fluted core-1, micro blade-2, blade-106, side scraper-5, end scraper-2, end flake-1, point-6, burin-1, borer-2, pen-knife blade-1, chips-14 and many spalls. A single piece of **Neolithic** flake was also found during the survey.



Fig. 3: General view of the site Aharposi

3. **Kandraposi (KDP)**-It is about 3 km north-west from Palasponga .The site is located inside the Tangarani Reserve Forest. The state highway is about 200m to the south of this site which leads from Palasponga to Kalimati. The surface of the site is covered with outcrop of loose laterite with calcrete. The lithic remains found from this site includes; Lower Palaeolithic: core-2, side scraper-1. Upper Palaeolithic: core-2, nodule-1, end flake-2, round scraper-1. There is no evidence of Mesolithic were found, but some Neolithic tools were found.
4. **Naigaon- (NIG)**- It is about 10 km far from Palasponga in the north-western direction and 1.2 km west from the village Naigaon. The site is located on the left side of the railway track which is runs to Barbil from Keonjhar. The site lies on the foothill of Nayagarh Reserve Forest. The surface of the site is eroded and deposited with light brown soil mixed with fine to coarse grained quartz, lateritic granules. Deep cut rain gullies can be seen in this particular site which formed due to water action either because of rain or due to water flowing from the hill. The lithic assemblage found from this area includes; **Lower Palaeolithic**: end flake-3. **Middle Palaeolithic**: core-1, end flake-3, side flake-1. **Upper Palaeolithic**: core-4, side scraper-8, end scraper-2, round scraper-1,



**Fig. 4: General view of the site Kandraposi**

side flake-5, end flake-7, blade-15. **Mesolithic:** core-2, side scraper-12, end scraper-1, end flake-6, fluted core-1, blade-39, burin-4, point-11 with many spals. The site has also yielded few evidence of some Neolithic tools.



**Fig. 5: General view of the site Naigaon**

5. **Dhatika-1 (DTK-1)**- It is about 12 km far from Palasponga in the western direction. It lies on the left side of the state highway which leads to Palasponga from Kalimati. The site is about

1 km south-west from the village Dhatika. The area is covered with some indigenous plants like Kendu, Sal, Palash and Ramasikula grass etc. Here the site seems have bad land formation mix with loose laterite and calcrete along with rain gullies. There is numerous eroded deep cut rain gullies formed in different part of the site which run to the Kashi Nala. The beds and slopes of the deep cut rain gullies are thoroughly studied for recovery of prehistoric lithic artifacts. The present surface of the site is eroded and is deposited with light brown soil mixed with fine to coarse grained quartz, quartzite pellets and lateritic granules sand and silts. The site yielded large number of Palaeolithic remains which includes; **Lower Palaeolithic**: core-8, hammer stone-1, chopper-2, handaxe-8, cleaver-2, incomplete handaxe-2, triangular handaxe-1, nodule-1, side scraper-1, round scraper-1, end flake-7, side flake-3, orange slice flake-1. **Middle Palaeolithic**: core-3, handaxe-1, side scraper-2, end scraper-1, round scraper-1, borer-cum-scaper-3, spheroid-1, end flake-10, utilize flake-1, blade like flake-1. In addition to these the site yielded two **Neolithic** fragment of ringstone from the surface soil which is found in insitu position.



Fig. 6: General view of the site Dhatika-1

- Dhatika-2 (DTK-2)**- It is about 12 km far from the Palasponga in north-western direction and 1 km south-west from the village Dhatika. It lies on the right side of the state highway which leads to Palasponga from Kalimati. It lies on the opposite side of Dhatika-1 site. The place is a quartzite outcrop site. This area is covered with some indigenous plants like Kendu, Sal, Palash and Ramasikula grass etc. From the surface exploration we found only one tool i.e, point which belongs to upper Palaeolithic period. A very good numbers of large boulders of quartzite were found embedded in the soil in the site. In some of the boulders removal of flakes were marked during the survey. There is no evidence of Mesolithic and Neolithic tools.



Fig. 7: General view of the site Dhatika-2

7. **Hanumanghati (HMT)**-It is about 9 km west from Raisuan which is 2.5 km south from Palasponga area. The site lies in 1.5 km west from Tikarpada village. It is located on the foothill of Kodagarh paharh or hill, hence this belongs to a foothill site with full of big rock boulders. So this site is also called as rocky boulder site. This site yielded only Palaeolithic artifacts, neither Mesolithic nor Neolithic tools were found from this site. The lithic remains includes; Lower Palaeolithic: chopper-1 and prepared flake-1. Middle Palaeolithic: end flake-1.



Fig 8: General view of the site Hanumanghati

8. **Bhadrasahi (BDS)**- It is about 15 km far from Vishnupur chhack of Palasponga in the north-western direction. The site is a river bank site. At this site the river Ardei flows from south towards

north direction. From the surface survey of this site we found Palaeolithic and Mesolithic artifacts where as Neolithic were not found from this site. Due to the river bed site some tools were found which does not come under at this site raw material. The principal raw material of this site is quartzite but maximum numbers of tools were found which comes under the raw material of jasper. The site yielded mainly Palaeolithic and Mesolithic remains. These include; Lower Palaeolithic: core-1, side scraper-3. Middle Palaeolithic: core-2, side scaper-8, side-cum end scraper-1, point-2, concave scraper-1. Upper Palaeolithic: side flake-1, blade-3, burin-2, point-1. Mesolithic: blade-1.



Fig. 9: Researcher and his students at the site of Bhadrasahi

### Concluding Remarks

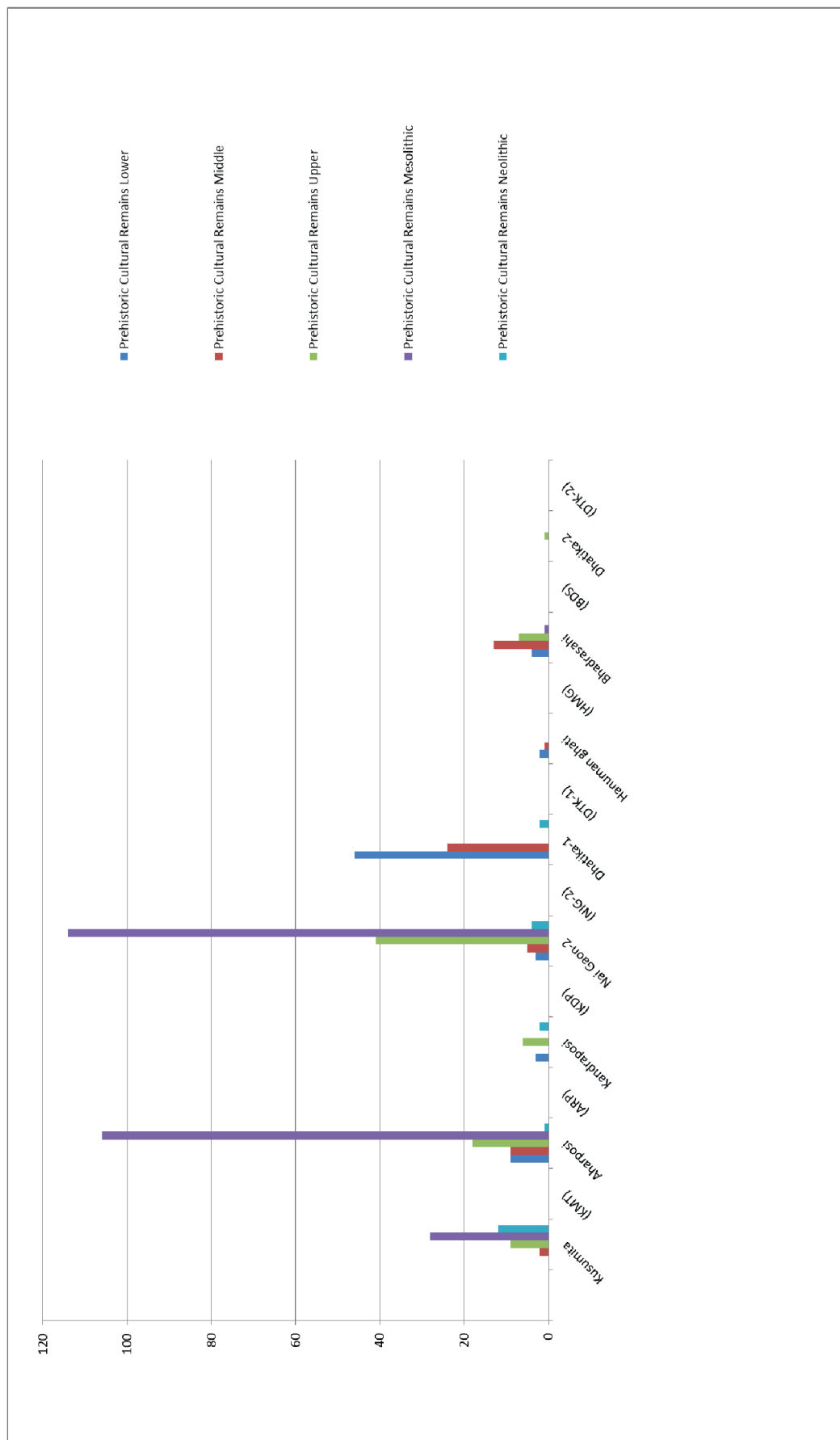
The present survey primarily reports the nature of Palaeolithic, Mesolithic and Neolithic sites discovered around the study area of Palasponga, Keonjhar District of Odisha, over the course of study period. The survey has yielded 473 numbers of lithic assemblages from different stone age cultures and has not only resulted in establishing link between northern and other parts of Odisha but also resulted in discovery of Prehistoric sites related to various lithic cultures. The concentration of Mesolithic artifact is more in comparison to artifacts of other lithic cultures. It was seen that the Mesolithic artifacts found around the survey area dominates the other lithic cultures. The microliths were made of various types of raw material such as grey chert, black chert, quartz, milky quartz, yellow chert, crystal materials. The Paleolithic's were made mostly on quartzite, quartz, jasper, chert, etc. A few Neolithic tools found were made up of diorite, dolerite, basalt and sandstone. Thus it can be concluded that the material culture evidence is limited to stone artefacts in this area. Pottery and such other items of the cultural relics are not known nor is there any trace of organic materials like bone of other animal or of the man who were living in the area. The recovery suggest that the Palasponga area was occupied by the

Table 1: Table showing distribution of site wise lithic remains around Palasponga

SL. NO	Name of the site (Abbreviation)	Global Position		Prehistoric Cultural Remains					Total	
		Eastern Longitude	Northern Latitude	Lower Palaeolithic	Middle Palaeolithic	Upper Palaeolithic	Mesolithic	Neolithic	Number	%
1	Kusumita (KMT)	85°29'15"	21°42'22"	---	02	09	28	12	51	10.78
2	Aharposi (ARP)	85°32'33"	21°48'24"	09	09	18	106	01	143	30.23
3	Kandraposi (KDP)	85°32'41"	21°48'40"	03	---	06	---	02	11	2.32
4	Nai gaon- (NIG)	85°30'41"	21°47'59"	03	05	41	114	04	167	35.30
5	Dhatika-1 (DTK-1)	85°27'39"	21°49'40"	46	24	---	---	02	72	15.22
6	Hanuman ghati (HMG)	85°33'08"	21°41'26"	02	01	---	---	---	03	0.63
7	Bhadrasahi (BDS)	85°32'40"	21°49'48"	04	13	07	01	---	25	5.28
8	Dhatika-2 (DTK-2)	85°27'42"	21°49'44"	---	---	01	---	---	01	0.21
	Total			67	54	82	249	21	473	99.97



Table 2: Graphical table showing the distribution of site wise lithic remains around Palasponga



**Table 3: Site wise Material recovered from the study area of Palasponga**

Serial No.	Typology	SITES								Total	%
		KMT	ARP	KDP	NIG	DTK-1	HMT	BDS	DTK-2		
1.	Core	05	05	04	06	15	----	03	----	38	8.03
2.	Fluted core	01	01	----	----	----	----	----	----	02	0.42
3.	Blade core	----	01	----	----	----	----	----	----	01	0.21
4.	Nodule	02	01	01	01	01	----	----	----	06	1.26
5.	Hammer Stone	----	02	----	----	01	----	----	----	03	0.63
6.	Unifacial/ Bifacial Chopper	----	01	----	----	02	01	----	----	04	0.84
7.	Handaxe	----	01	----	----	08	----	----	----	09	1.90
8.	Cleaver	----	----	----	----	02	----	----	----	02	0.42
9.	Prepared Flake	----	----	----	----	----	01	----	----	01	0.21
10.	End Flake	04	09	01	13	04	----	----	----	31	6.55
11.	Side Flake	----	01	01	03	----	----	02	----	07	1.47
12.	Utilized Flake	02	02	----	01	01	01	----	----	07	1.47
13.	Indeterminate Flake	06	02	02	12	03	01	----	----	26	5.49
14.	Concave scraper	----	----	----	----	----	01	----	----	01	0.21
15.	End Scraper	03	01	----	02	01	----	----	----	07	1.47
16.	Side Scraper	14	05	01	20	11	----	11	----	62	13.10
17.	Round Scraper	01	01	01	01	03	----	----	----	07	1.47
18.	Borer-cum- scraper	----	----	---	----	03	----	----	----	03	0.63
19.	Blade	18	73	----	81	01	----	06	----	179	37.84
20.	Penknife blade	----	01	----	----	----	----	----	----	01	0.21
21.	Ringstone	----	----	----	----	02	----	----	----	02	0.42
22.	Burin	----	02	----	04	----	----	02	----	08	1.69
23.	Borer	01	03	----	----	----	----	----	----	04	0.84
24.	Micro-blade	----	02	----	----	----	----	----	----	02	0.42
25.	Point	02	10	----	11	----	----	04	01	28	5.91
26.	Spheroid	----	----	----	----	01	----	----	----	01	0.21
27.	Spal	----	04	----	13	----	----	----	----	17	3.59
28.	Chips	----	14	----	----	----	----	----	----	14	2.95
29.	TOTAL									473	99.88

prehistoric man since Lower Palaeolithic period through Middle Palaeolithic and Upper Palaeolithic periods during Pleistocene epoch and up to the Mesolithic and Neolithic periods in the Holocene epoch.

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### Illustration

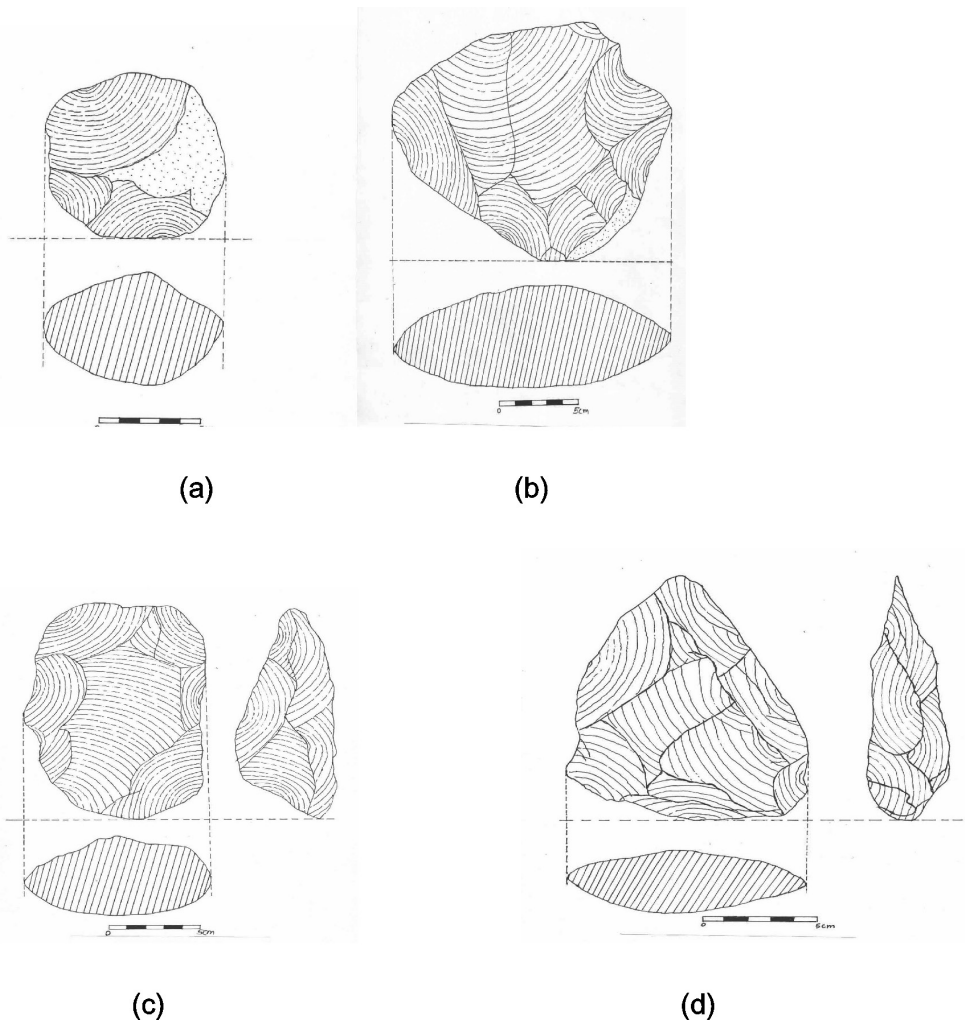
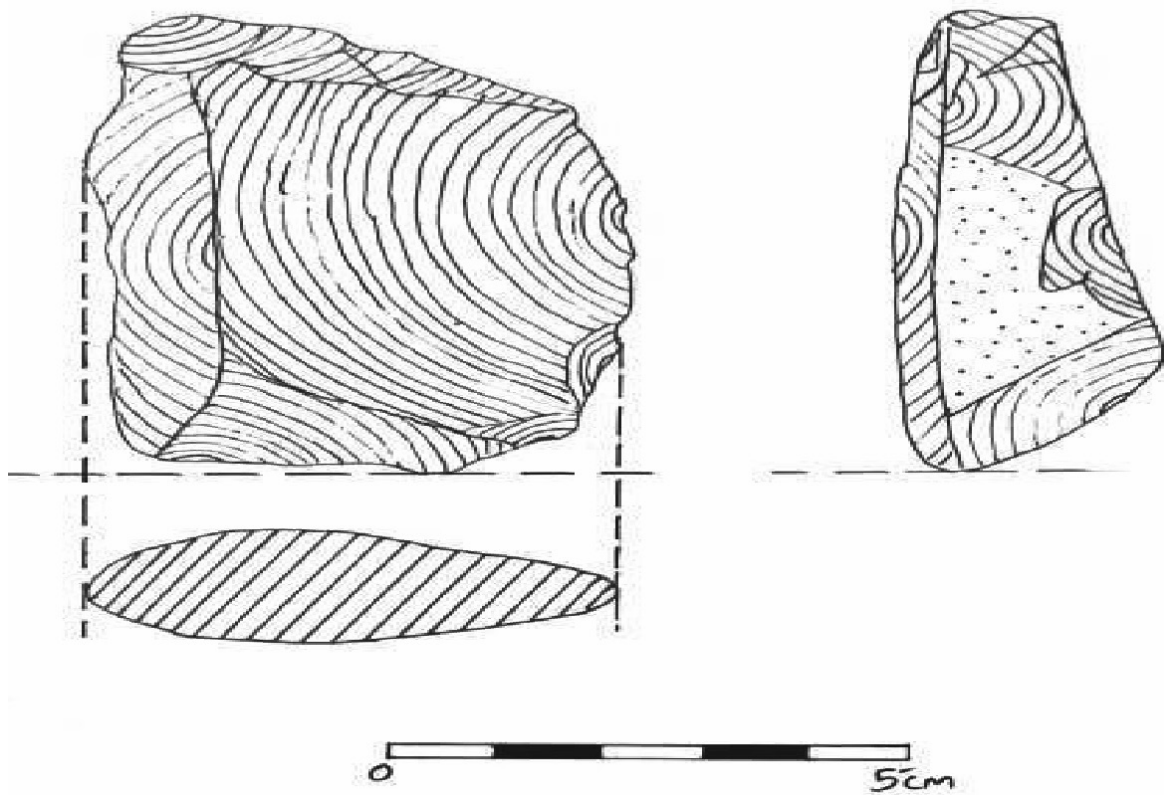
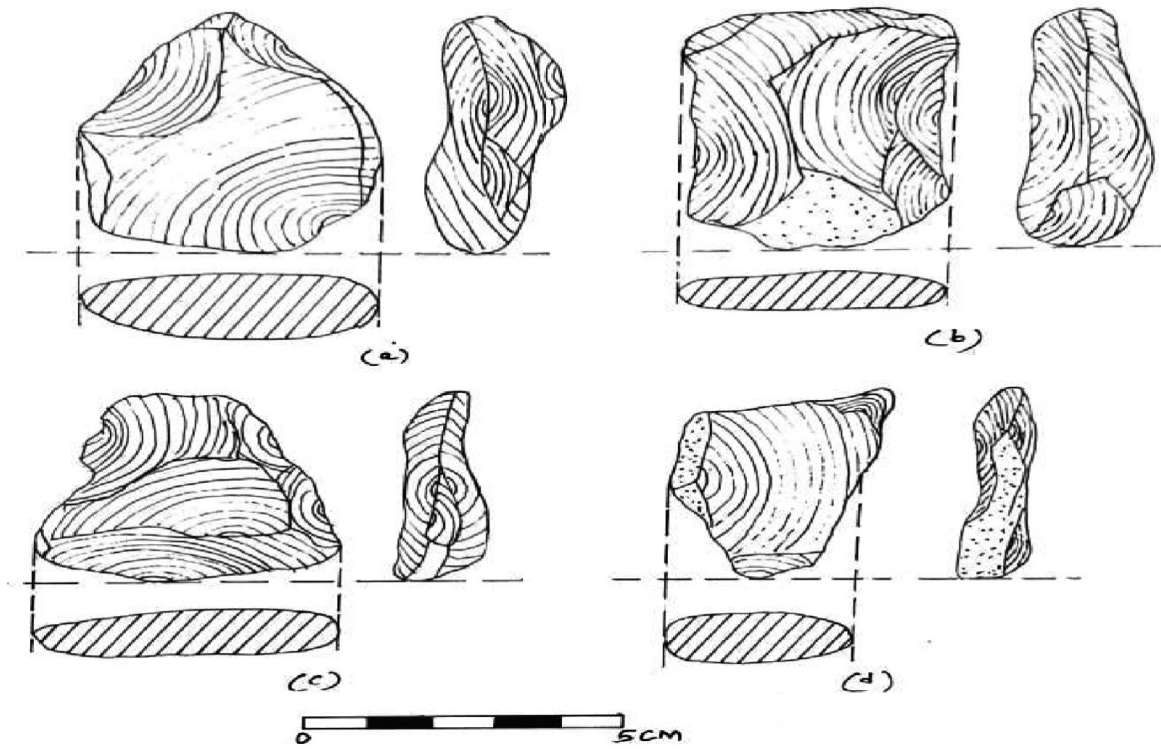


Plate 1: Lower Palaeolithic ; a-Core, b-Chopper, c-Cleaver , d-Handaxe



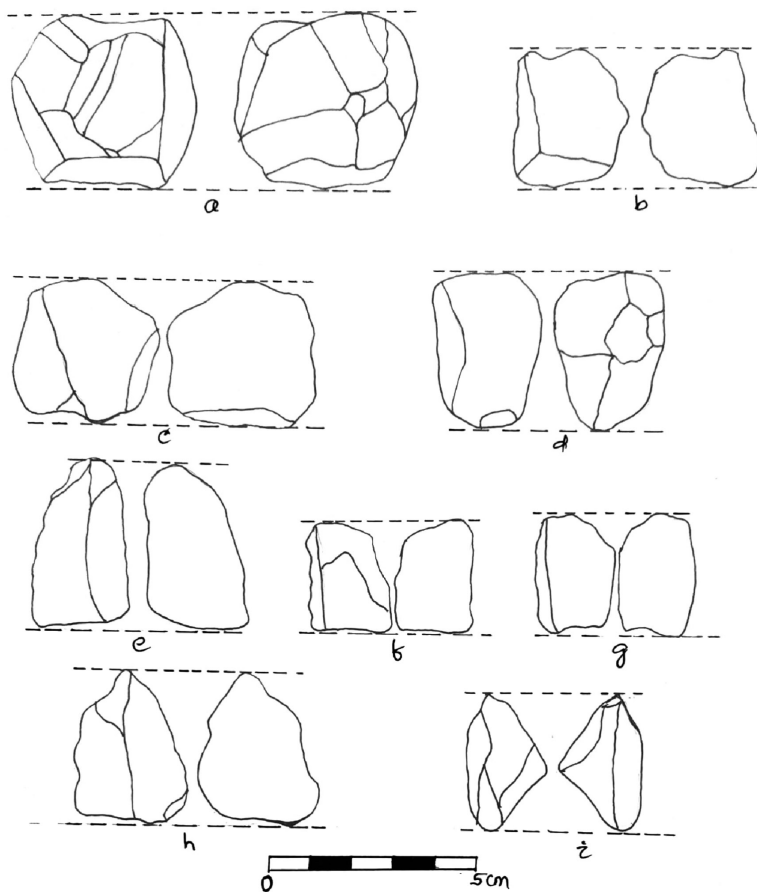


Plate 4: Upper Palaeolithic: a,b and c-Side Scraper, d-End Scraper, e,f and g-Blade,h, i-Point

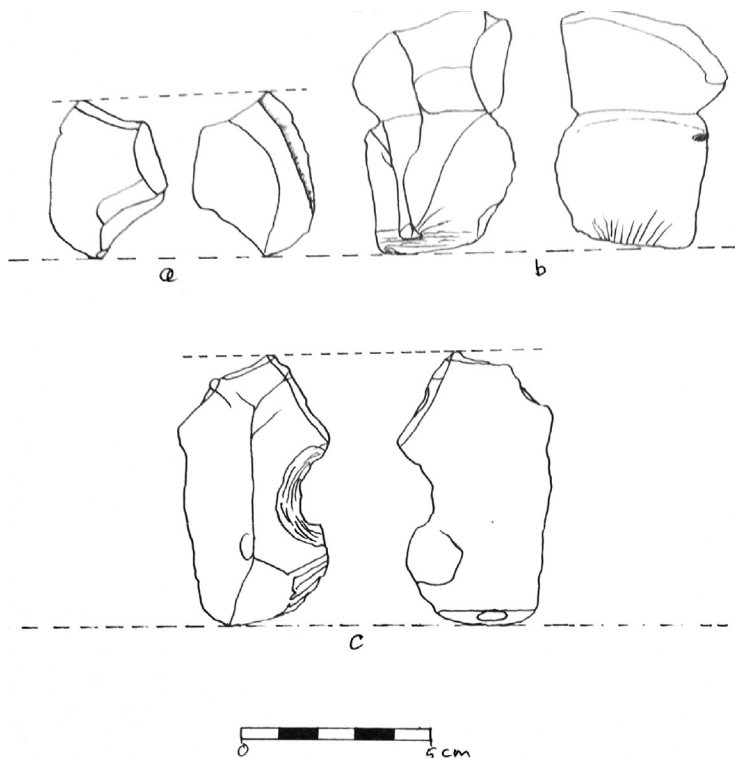


Plate 5: Upper Palaeolithic: a-End Flake, b and c-Utilized Flake

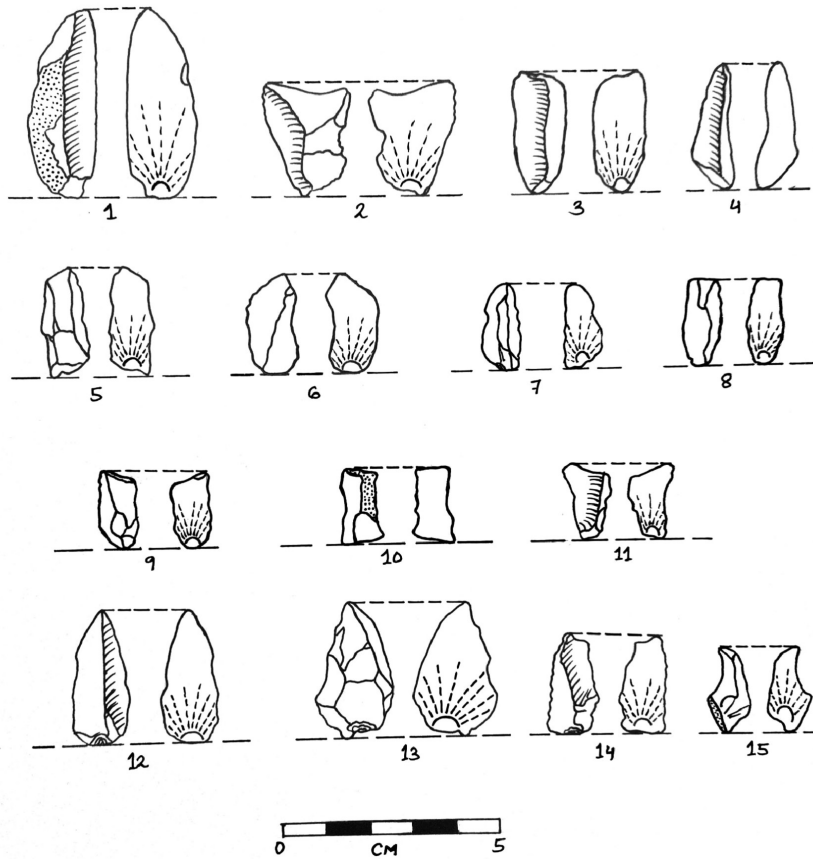


Plate 6: Mesolithic (1-11)-Blade, 12 and 13-Point, 14-Blade, 15-Pen- knife Blade

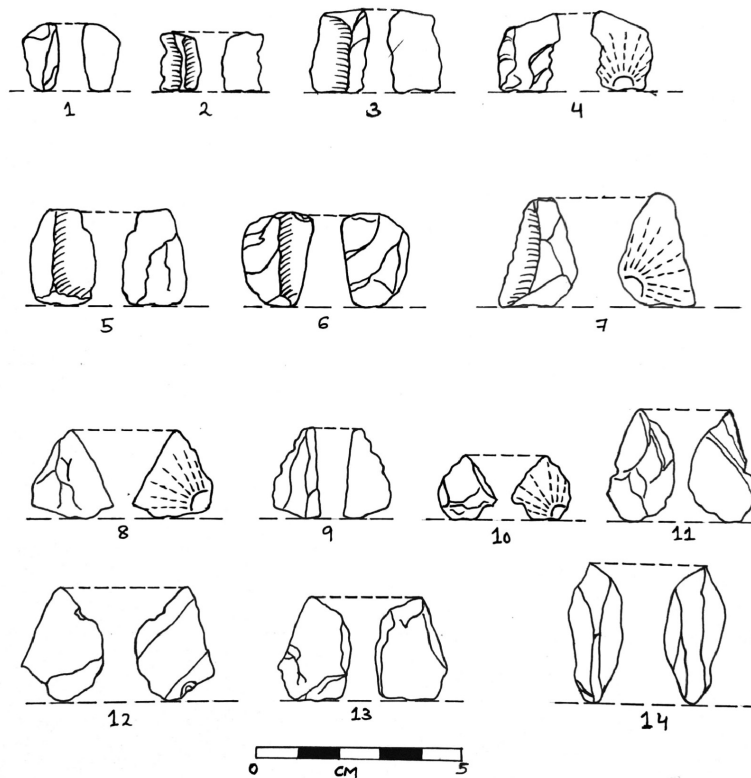


Plate 7: Mesolithic: 1 and 2-Micro-Blade, (3-7)-Blade, 8-Point, 9-Blade, (10-12)-Point, 13-Burin, 14-Borer

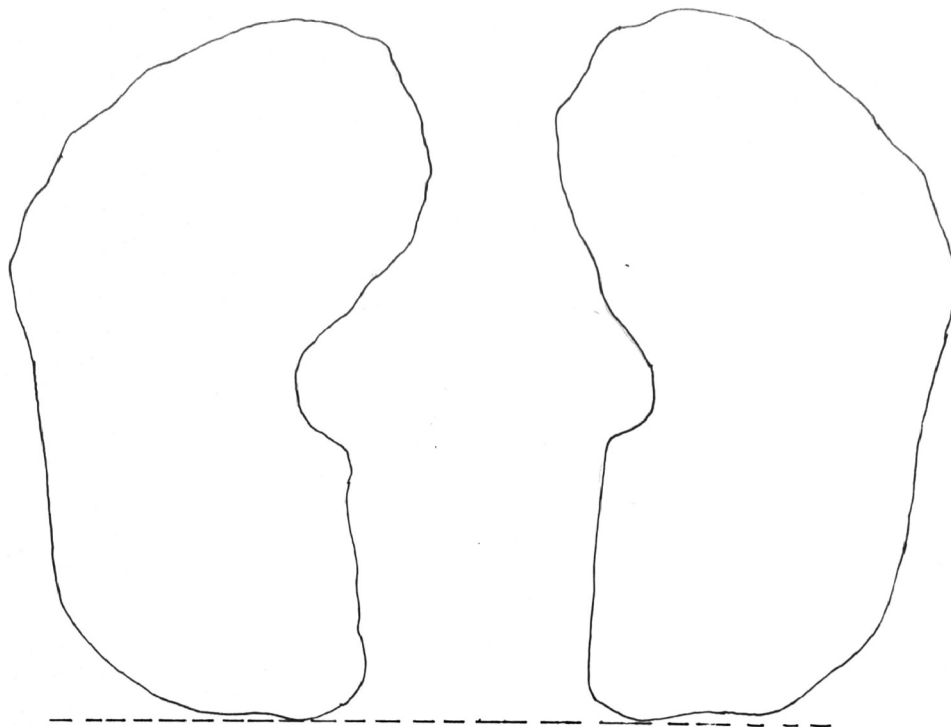


Plate 8: Neolithic: Fragment of Ringstone

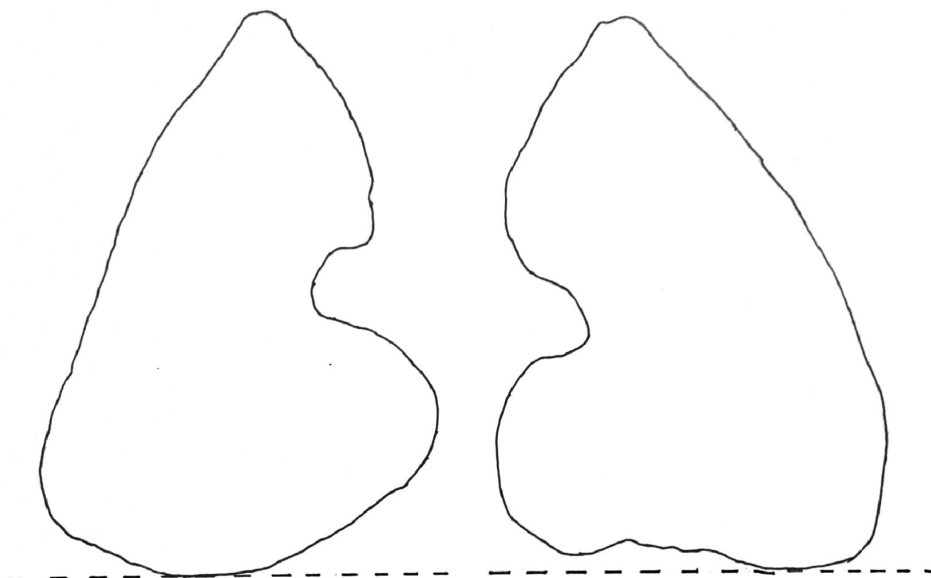


Plate 9: Neolithic: Fragment of Ring stone