A Study of Findings of Prehistoric Remains from Dighi Area of Dumka in Jharkhand

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Abstract

Though several archaeological explorations had been carried out in the district of Dumka in the area of Jharkhand under the division of Santhal Parganas, the area around the town of Dumka remained unexplored. During a recent exploration, some remains of prehistoric culture are found from the campus area of Sido Kanho Murmu University in the vicinity of Dumka town. The focus of the present paper is to analyse these findings with reference to stratigraphy, the geological depositions as well as geomorphological features of the area, vegetation and soil types.

Keywords: Prehistory, Dumka, artefacts, palaeoenvironment

INTRODUCTION

There were a number of studies and researches on prehistoric cultures of Santhal Parganas division since the reporting of Neolithic celts in 1901 by Rev. P.O. Bodding in the Journal of the Asiatic Society. Notable works in the area have been done by scholars from K. P. Jayaswal Research institute, Patna (1961, 1967), Pratap (1988), Chakrabarti (1981 to 1987), Kumar (2006), Tyagi and Mandal (2008). Despite so many researches in Santhal Parganas, there are very few archaeological finds reported in and around the Dumka town. The study is on the archaeological findings from a site in Dighi area of Dumka in Jharkhand. The site is about 6kms away from Dumka town. The finds are very few in number. Both finished and unfinished tools are found from the top of a hillock and also from a dry runnel. The tools are surface finds and are mainly blades and bladelets.

The objective of the present study is to study the prehistoric cultural remains in the background of topographical settings, drainage pattern, resources, flora and fauna. The present study may be helpful to understand the tool typology and technology of Post-Pleistocene period as well as past human behaviour. Cultural remains in in situ position is helpful for understanding proper chronological situation of the culture. For ethical purpose, tools were not collected rather studied on the site.

Site Dighi

The site is located in the campus area of Sido Kanho Murmu University in Dumka

district of Jharkhand. The co-ordinates of the site are 24° 16/ 25//N latitude and 87° 17/ 05//E longitude. The name of site is recorded in toposheet no 73P/7. The nearest road to the site is Dumka-Pakur road and the nearest railway station is Dumka railway station which is 4 kms away. The site lies on an altitude of 750m at the foothills of a hill named Dighi Pahar. The land is undulating and rolling in nature. A number of hillocks cover the area. The hillocks are mainly made up of quartz and quartzite rocks. The soil is lateritic and reddish to yellowish in colour mixed up with grits. Pieces of quartz, quartzite, chert are distributed throughout the site. Gravels are scattered throughout the site which are dislocated from their original matrix that belongs to the Pleistocene deposition. Tools are concentrated along the runnels and at the exposed sections formed due to natural erosion.

The area is very close to a protected forest just below the Dighi pahar (hill). The forest of the area is Tropical Dry Deciduous type. The vegetation of this area includes Sal (Shorea robusta), Kendu (Diospyros melanoxylon), Kusum (Schleichera sylvestris), Tentuli (Tamarindus indica), and Mango (Mangifera indica), Palash (Butea monosperma), and Date palm (Phoenix dactylifera). Besides these plants, various flowering trees and tall grasses are seen in this region. The fauna of the area includes Indian Flying Fox Bat (Pteropus giganteus), Indian Wild Boar (Sus scrofa), Jungle Cat (Felis chaus), Common Palm Civet (Paradoxurus hermaphroditus), Spotted Deer (Axis axis), Indian Wild Dog (Cuon alpinus), Rhesus Macaque (Macaca mulatta), Indian Field Mouse (Mus booduga), Three-striped Palm Squirrel (Funambulus palmarum), Rat Snake (Ptyas mucosus), and Rock Lizard (Agama buberculatus). Besides, there are different species of insects found in the area (The Director, ZSI, 2004). Both tribal and non-tribal people are inhabiting in this area.

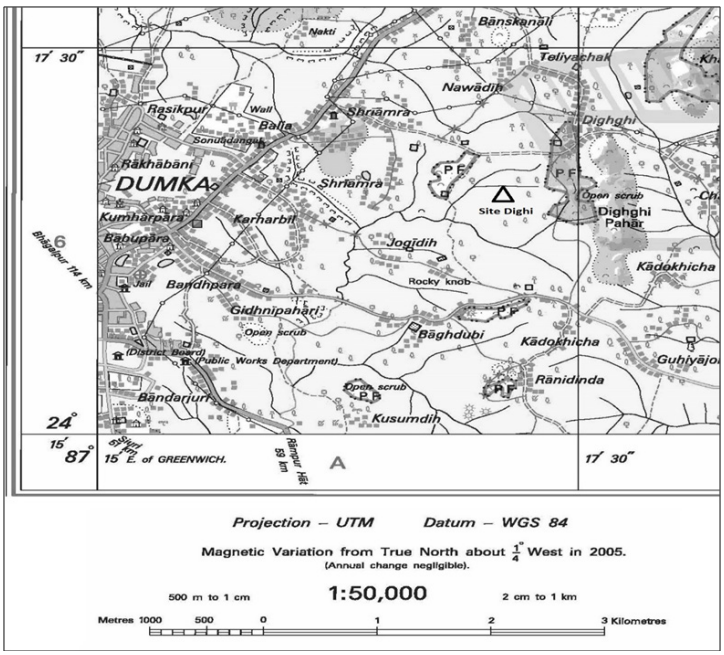


Plate I : Topographic map (73P/7) locating the site Dighi

The soil types and vegetation indicate that dry climate prevails in the area, interspersed with wet seasons. The area is dissected by a number of tributaries like Pusharo of the River Mayurakshi on the west and the River Brahmani and its tributaries on the east. A number of dried up paleo-channels are found throughout the area. The rich forest resources and raw materials available for making necessary items of daily life and presence of water sources closeby attracted people to inhabit at the place since prehistoric times. No major minerals are found in Dumka district. The minor minerals found in the district are feldspar, stone, quartz, granite and sand (MSME, GoI, 2016-17).

Methodology

Primary data are collected from the field and secondary data available from earlier reports and finds are also analysed for this paper. Maps and topographic sheets of the area are studied. A thorough site survey was undertaken. It included (a) exploration on foot over the whole area, (b) study of surface features including observation of soil and rock compositions, river and road sections, and (c) study of surface finds. The site was explored through fieldwalking Three geological methods, namely stratigraphy, surface geology and geomorphology were taken into consideration. Correlation between stratigraphy and allied geomorphology was done. Photographs were taken of the tools in situ, of the strata, and of the area. The physiography of the area with all its aspects like river system, flora, fauna, rainfall, temperature, humidity etc. was worked out. Photography was used for recording of sites.

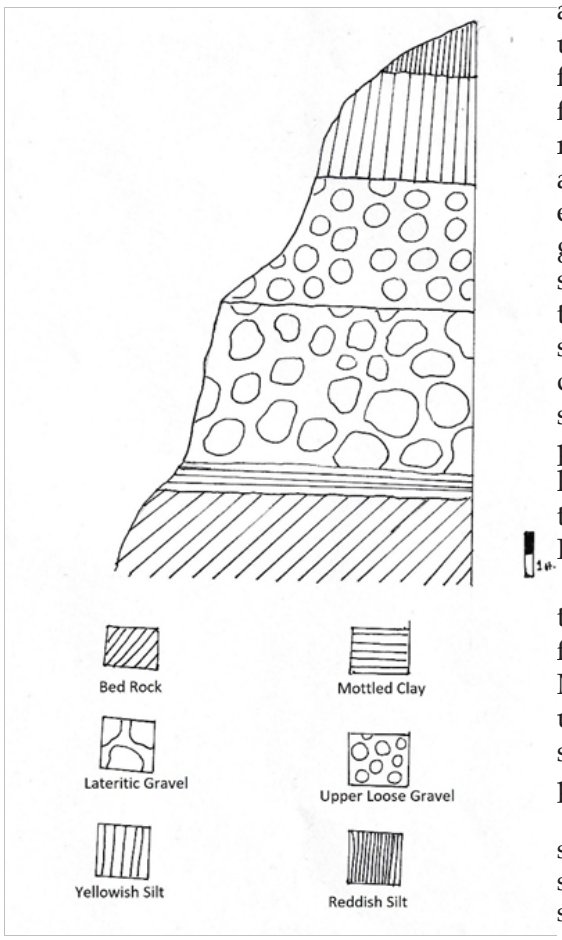


Figure 1 : Stratigraphy

The tools were analysed in terms of technology, typology, metric values, function, frequency, sequence, and culture. Morphometric analyses of the tools were undertaken. Attributes, namely, shape, size, colour, weight, cutting edge, bulb of percussion etc. were noted.

Sections exposed at various places were studied for reconstruction of the chronological sequence of prehistoric environment. These sections are correlated with the observation made earlier by Ghosh (1966) in eastern India.

Following is stratigraphic sequence at the site Dighi. Four major beds are identified at the site. The lower most is the bed rock, made Archean schist. Upper part of the bed is decomposed into mottled clay. Overlying the bed rock is a bed of gravel lying loose in lateritic matrix.

It is about 8 ft in thickness. There is an unconformity above this bed. The gravels are unsorted and varied in size from large to small. Above the unconformity is another bed of gravels. The gravels of this bed are not as thick as the lower gravel bed and gravels are smaller in size. On top of the smaller gravel lies a silt bed yellowish in colour. The yellowish silt bed is underlain by a bed of darkish red silt bed. Following is a brief account of the stratigraphy noted at the site Dighi.

Lateritic Gravel

This is the earliest deposition found over the bed rock. It is about 9ft thick. This layer consists of unsorted gravels of varied sizes, from very small to big. This phenomenon suggests the differential fluvial activity and a wet climate prevailed during the time of the deposition of this layer. No archaeological evidences were found from this stratum.

Upper Loose Gravel – This deposition is lying on top of the above-mentioned gravel bed. An unconformity is marked between the two. This stratum consists of sorted gravels, which are smaller in size. The gravel size in the deposition suggests that the climate during this period was wet. Ghosh (1966) dated this deposition to Upper Pleistocene.

Yellow Silt – This bed lies above Upper Loose Gravel. This stratum marks the end of Pleistocene and start of Holocene. The silt is coarse in texture and is mixed with pebbles and grits. Small stone fragments were also found. This stratum suggests a dry climate during its deposition. It is approximately 4ft. in thickness. The artefacts of the present collection were found from this layer. This layer yielded the artefacts belonging to Flake-Blade industry.

Reddish silt – This stratum overlies the yellowish silt. This Holocene deposition is about 3ft. in thickness. The climate was relatively wetter during this deposition.

Top soil – Reddish silt is topped by humus and is overgrown with grasses and bushes.

Ghosh (1970) had done intensive work in the district of Singhbhum in the state of Jharkhand. Singhbhum is adjoining to Santal Parganas and is located on the Chhotanagpur plateau. So far no such work is done in Dumka area on Pleistocene stratigraphy. Because of geographical location the stratigraphy of the present site may be compared to the one established by Ghosh (1970). The Pleistocene sequence consists of deposits in the following order from bottom upwards (Ghosh 1966:154):

5. Upper clay
4.Upper loose gravel

3. Lower silty clay
2. Lower gravel conglomerate

1. Mottled clay

All the above-mentioned beds were lying on the bedrock. It appears that the lower clay deposit at this site had washed away leaving an unconformity between the two gravel beds. Upper clay bed and recent deposits are more intact at the site. The tools collected from the runnels and surface, wherever the upper silt bed of Ghosh (1966), marked as yellow silt bed in this paper, is eroded the tools are exposed. From the field based observation and with a comparison to Ghosh (1970) finds the assumption is made that the collection belongs to the end of Pleistocene.

Cultural Assemblage (fig.2)

The typology of the tools resembles the flake blade industry of Upper Paleolithic period in eastern India. Tools are made either on flake or on blade. It shows that the culture belonged to the tradition of fluting and punching technology. There is a huge deposition of raw materials nearby. For making stone tools prehistoric people preferred to use sizable stones detached from the rocks and river pebbles and gravels.

(i) Specimen No. 1: End Scraper

Size – 5cm. x 4.2cm. x 2.2cm.

This is a stone scraper made on Levalloisian flake. The ventral surface of the tool has faceted striking platform and positive bulb of percussion. No flake scar is found on the ventral surface. Dorsal surface has both primary and secondary flake scars and few retouches at the proximal end of the tool. There is a small notch at the right lateral margin of the tool. The raw material of the tool is quartzite.

(ii) Specimen No. 2: Side Scraper

Size – 3.5cm. x 3cm. x 0.5cm.

This is a side scraper made on Levalloisian flake. The scraping edges are found at both the lateral margins of the tool. Retouches are found at the lateral margins of the tool to make the edges sharp. Ventral surface has faceted striking platform and positive bulb of percussion. The raw material of the tool is porcelainite.

(iii) Specimen No. 3: Side-cum-end Scraper

Size – 2.7cm. x 2cm. x 0.5cm.

This is a stone scraper made on Levalloisian flake. Scraping margins are found at the end as well as at one lateral margin of the tool. Both primary and secondary flake scars are found at both the dorsal and ventral surfaces. Retouches are found at the scraping margins for making the edges sharp and effective. The raw material of the tool is porcelainite.

(vi) Specimen No. 6: Thumbnail Scraper

Size – 2.1cm. x 2.7cm. x 0.5cm.

This is a thumbnail scraper made on Clactonian flake. Shallow flake scars were removed from the dorsal surface. Ventral surface is unworked. Serrations are found at the working edge of the tool.

(vii) Specimen No. 7: Borer

Size – 4.7cm. x 2.1cm. x 2.4cm.

It has four longitudinal sides which meet at the proximal end to make a projected end.

(viii) Specimen No. 8: End Scraper

Size – 4.6cm. x 3.9cm. x 1.5cm.

It is an end scraper made on Levalloisian flake. The ventral surface of the tool has faceted striking platform and positive bulb of percussion. Flake scars are found at both the dorsal and ventral surfaces of the tool. Dorsal surface has secondary flake scars and few retouches at the proximal end of the tool. The raw material of the tool is quartz.

(ix) Specimen No. 9: Bladelet

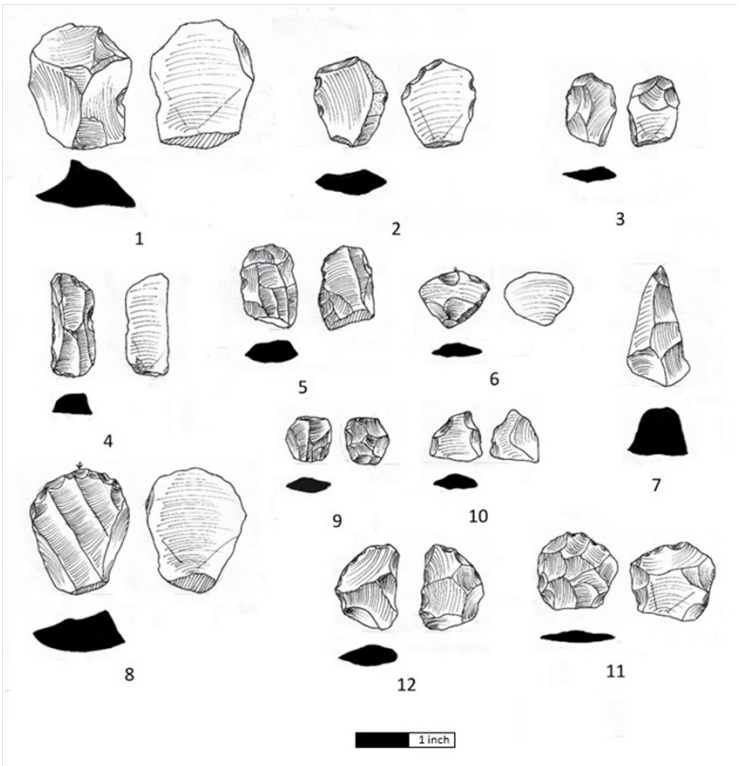


Figure 2: Schematic Diagram of stone tools found from the site (Specimens 1 to 12)

Size – 1.8cm. x 1.7cm. x 0.6cm.

It is a square-shaped bladelet with two sharp parallel edges. Flake scars are found on both the dorsal and ventral surfaces of the tool. The raw material is glassy quartz.

(x) Specimen No 10: Triangle

Size – 1.8cm. x 2.3cm. x 0.5cm.

It is a triangle shaped microlith made on milky quartz. It has two blunt sides and one sharp edge.

(xi) Specimen No 11: Side-cum-End Scraper

Size – 3cm. x 3.1cm. x 1.1cm.

This is an end-cum-scraper made on Levalloisian flake. Scraping edges are found at the proximal end as well as at two lateral margins of the tool. Primary and flake scars are found at both the dorsal and ventral surfaces. Retouches are found at the scraping margins for making the edges sharp and effective. The raw material of the tool is quartz.

(xii) Specimen No. 12: Side Scraper

Size – 3.3cm. x 2.6cm. x 0.9cm.

This is a side scraper made on Levalloisian flake. The scraping edges are found at both the lateral margins of the tool. One lateral margin of the tool is convex. Retouches have been found at the lateral margins of the tool to make the edges sharp. Ventral surface has faceted striking platform and positive bulb of percussion. The raw material of the tool is quartz.

Raw Materials

The primary raw materials used for making stone tools were quartz and chert. These materials were suitable for making flake tools and blade tools. Chert became popular with the introduction of fluting technology. Porcelainite is a rare silicate material used by Upper Paleolithic men for making smaller tools. Future exploration is needed to find the sources of this Porcelainite material.

Observation and Conclusion

Stone tools are the direct evidence of past human activity as well as their behaviour. The cultural assemblages found from the site Dighi resembles to the Flake-blade industry as proposed by Ghosh (1967). Upper Palaeolithic people learned the technology of removing blades by fluting technology. Blade tool technology was highly flourished in the area with formation of microliths. Microliths appeared with the flake blade cultures. The subsistence pattern appears to have been hunting gathering throughout the lithic period of Pleistocene. Though no direct evidence of fishing has been found but fishing perhaps was practised as there were number of tributaries and sub-tributaries distributed throughout the area.

The site Dighi is inside the campus of Sido Kanhu Murmu University. Geomorphological features of the village consist of Archean bed rocks decomposed at places into gneiss. The Dighi protected Forest is a mixed jungle with conifers, bamboo, shrubs. Some boulders which are partially rolled are found surrounding the region. The communities who live in and around the region practice agriculture. Their main cultivated crop is paddy. The geo-

physical settings of the area suggest that prehistoric men chose the place for their habitation for utilization of surrounding resources distributed in and adjacent areas under study.

The site itself preserves the rich cultural heritage of our prehistoric past. The in-depth study is recommended to study different aspects of prehistoric culture, which continued in the area. Prehistoric culture of the region may reveal interesting concepts regarding the bio-cultural evolution of man as well as population migration during the prehistoric period. The little findings made so far suggests that there is chance of getting rich prehistoric cultural remains from the area. Much of the site has been destroyed due to the construction of the campus of Sido Kanho Murmu University. Urgent in-depth study is needed for study of the chrono-cultural sequence of the prehistoric culture of the area and to preserve the rich archaeological heritage of the area on the age-old Chotanagpur plateau in eastern part of India before the evidences are completely destroyed.

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Photographs:



Plate II: Bed Rock



Plate III: Lateritic Gravel



Plate IV: Silt

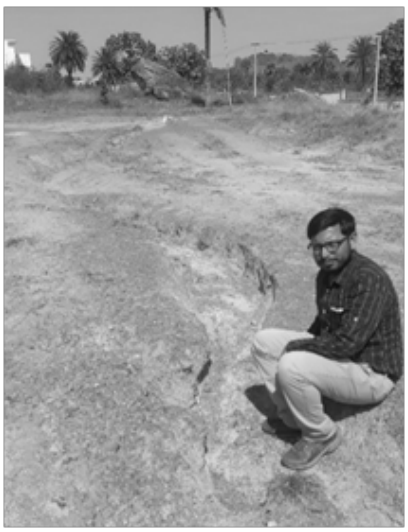


Plate V: Tools being exposed around this Runnel



Plate VI : In *situ* tools

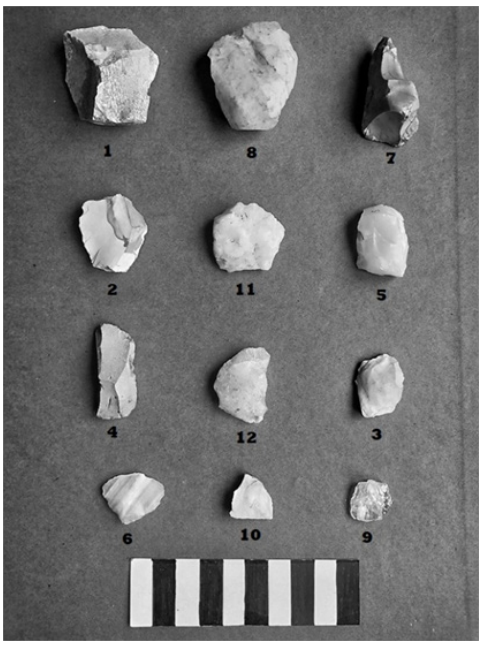


Plate VII : Tools found from the site