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PRELIMINARY ARCHAEOLOGICAL SURVEY OF THE BARAPAHAD HILL FOOTHILLS AND JHAUN RIVER VALLEY: AN EXPLORATORY STUDY

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Abstract

The current paper is lighted upon the current Prehistoric archaeological investigation on the foothill of Barapahad hill and Jhaun river valley which is an independent branch of river Mahanadi has been emerged from the foothill area of Barapahad hill. The current investigation focuses on a variety of archeological sites in and around of Jhaun river and the Barapahad hill. The cultural material association lights upon the Stone Age culture in varieties of stages involving Hominin occupation of this region and other involved matters. The central intents of the paper to examine the cultural materials from presently got archaeological sites for presenting the Stone Age culture and Prehistoric human residing of this side.

Keywords: Jhaun; Barapahad; foothills; Hand axe; Bargarh; Odisha.

Introduction

There are several different types of archaeological sites in the Bargarh area, dating back to Prehistoric periods (Seth 1995-96, Panda 1996, Mendaly2012, Deep 2014, Behera et al 2015) . For the last 40 years, archaeologists, researchers, and academics have been concentrating their study and exploration in this region. The current archaeological investigations in the Barapahad hills and its Jhaun River have brought light upon the archaeological sites that presented the cultural materials from the Prehistoric times. The physical remnants of the sites were found in locations with rock shelters, along riverbanks, and in the foothills, among other varied geomorphic components.

This archaeological investigation, including the associated materials, presents a new phase of the technological and typological research on stone implements, human habitation, cultural differences in the Prehistory of the region, and a and a network of social behaviour with the development of the above hypothesis.

Area of the present study

The current archaeological investigations give a detailed study of the major and minor branches of the Jhaun River scattering over from the origin up to N H 6, with general relief varying from 150 m to 200 m above mean sea level. The Jhaun played an important role in the reestablishment of Paleolithic culture in the Bargarh upland. It emerges from the Barapahad hills and flows through Junani, Belbahali, Kaantal, Amjhar, Batimunda, and Attabira, crosses N.H. 6, and joins at the life line of the Odisha river Mahanadi (Rana 2018:26). The maximum of Prehistoric sites in the study areas were found on the foothills (Deep and Mendaly 2016:307). Ghanghati and Runipali are located in the Attabira block, Nalichuan located in Bhatli block and Gangei is located in the Ambabhona block of Bargarh district. The Prehistoric Bargarh Upland in general and the Jhaun River in particular provided a constant supply of water for the emergence of human civilization; Prehistoric sites in the Barapahad foothills have been explored.

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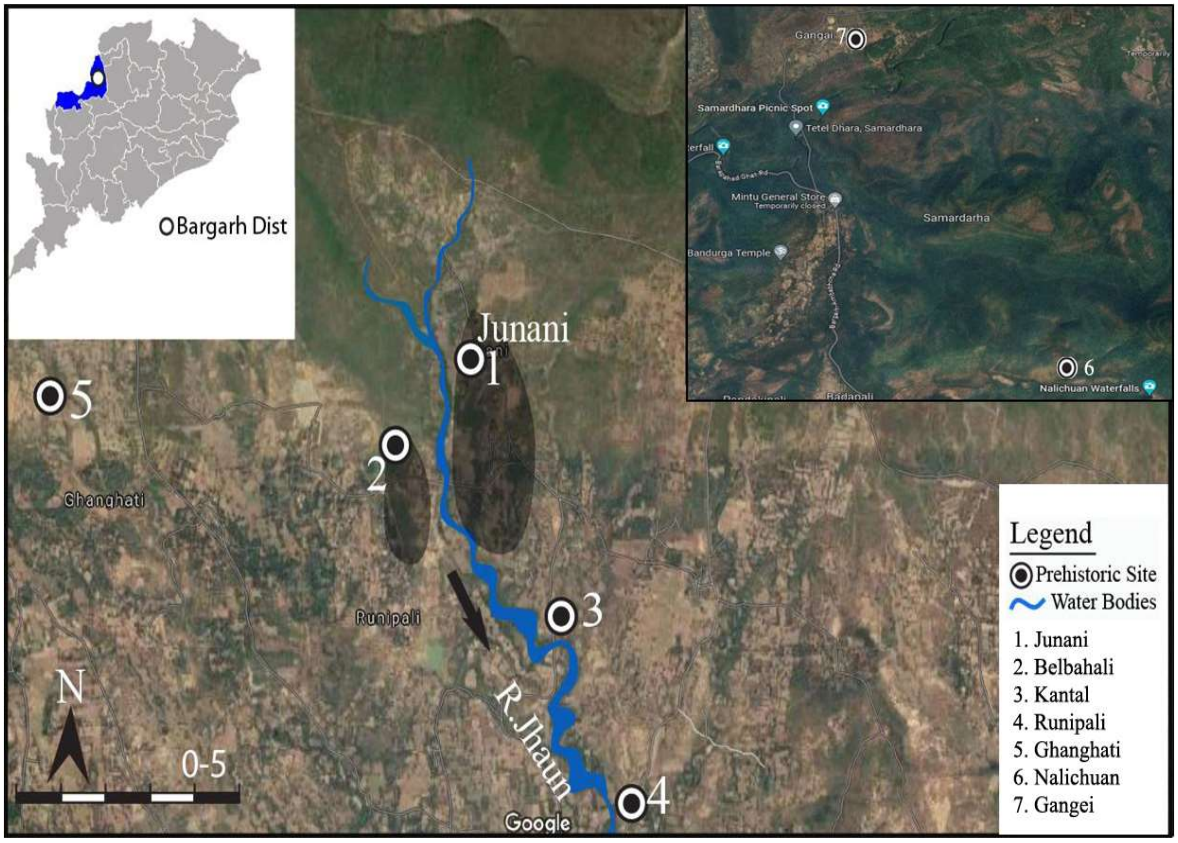

Environmental setting

Understanding the solar system, the home planet, and its geophysical and biological processes is essential for the examination of human ancientness (Dincauze 2000). Known as the "rice bowl of Odisha," Bargarh was located in the western part of the state. The district has 5837 square kilometres in total size. The district has been split into two categories: flood lowlands and hill tracts. The food plain is derived from the fertile alluvial plains, while the steep slopes preserve a variety of rocks and minerals. There are east-west slants in this area. 2019–13; Rana and Acharya.It has been bounded on the west and the north west by hill ranges from eastern Sarangarh and Mahasamund district of Chhatishgarh while on the North, East, South East and South by the Barapahad hill ranges of Bargarh district and uplands of Sambalpur, Subarnapur and Balangir district of Odisha (Behera, Sinha, Thakur2015). The district has a lot of undulating hills with hillocks and small hill ranges. The central hill ranges and the hill are the Gandhamardhan hill ranges, the Barapahad hill ranges and the Jhanjpahad with this Papanga and Bindhyabasini and non hilly forests could be found there. The peak physiographic areas and the main hill ranges in the district is Barapahad hill ranges covering the area of over 777 sq km has been situated on the South West of the district.

Previous works on Bargarh upland

The Prehistoric lithic collections in Jira valley werereported by Mishra. He found a small number of microlithic sites in lower Jira valley near Bargarh district. After, Seth accomplished research in the lower Jira valley and marked microlithic sites affluent in collections related with geometric microlithic instruments. Mishra began exploration in upper course of Jira valley in 1997-98. He found Acheulian site in Barapahad village during the period. After P.K Behera and Neena Thakur explored the district in 2011-15. As the consequences, they found various kinds of archaeological sites (Thakur, 2015) such

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as Torajunga, Gopalpur, Samardarha, Ainalapali, Katapali, Kamgaon. Various scholars worked on Prehistoric exploration on Bargarh Upland after 1980s, Girsul Valley by S. Mendaly, Jira valley by S Mishra, Ong and Sukel river by S Gadtia and Danta river valley by S. Deep to get the archaeological prospective of Bargarh district(Deep ,2020).

The present work is proposed to carry out intensive archaeological exploration in the river valley of the Jhaun within the Bargarh district of Odisha. The present study areas reveal a good number of archaeological sites that represent many cultural periods, starting from the Middle Paleolithic to the Neolithic period, which have been found on the bank of the river Jhaun. The region seems to have enormous promise for learning about Pleistocene human adoption.

Assemblage composition

SL NO	NAME OF THE SITE	CORE	FLAKE	BLADE	BLADELET	HANDAXE	CLEAVER	PICK	RING STONE	HAMMER STONE	CHIP / CHUNK	TOTAL
1	JUNANI – 1	38	140	26	26	4	2	2	1	-	31	270
2	JUNANI – 2	36	120	21	24	6	2	-	-	-	24	233
3	JUNANI – 3	32	111	24	21	6	-	-	-	-	21	215
4	JUNANI – 4	30	104	22	14	8	4	1	-	2	23	208
5	GHANGHATI	38	119	22	21	-	-	-	-	-	26	226
6	KAANTAL	33	96	26	20	-	-	-	-	-	29	204
7	BELBAHALI	26	72	22	17	-	-	-	-	-	26	163
8	RUNIPALI	23	86	27	19	-	-	-	-	-	27	182
9	NALICHUAN	29	76	21	26	-	-	-	-	-	24	176
10	GANGEI	24	84	29	28	-	-	-	-	-	29	194
TOTAL	10 SITES	309	1008	240	216	24	8	3	1	2	260	2071

Table – 1 Assemblage composition

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Lithic assemblages

Ten archaeological sites have been found in the sides which are as many as Junani - 1, Junani -2 , Junani-3 , Junani -4 , Ghanghati, Runipali, Belbahali, Kaantal, Nalichuan, and Gangei during the period of archaeological investigations in the major and minor branches of Jhaun river and the hill of Barapahad. 2071 antiquities were found from ten sites. The lithic collection of current research consist of the core no- 309(14.92%), flake is n- 1008(48.67%), Blade n-240(11.58%), Bladelet n-216(10.42%), Hand axe n- 24(1.15%), cleaver n- 8(0.38%), pick n- 3(0.14%), Hammer stone n- 2(0.09%), chip/chunk n-260(12.55%). This lithic collections shows an significant role to the toppest number of dominant instruments in the research.

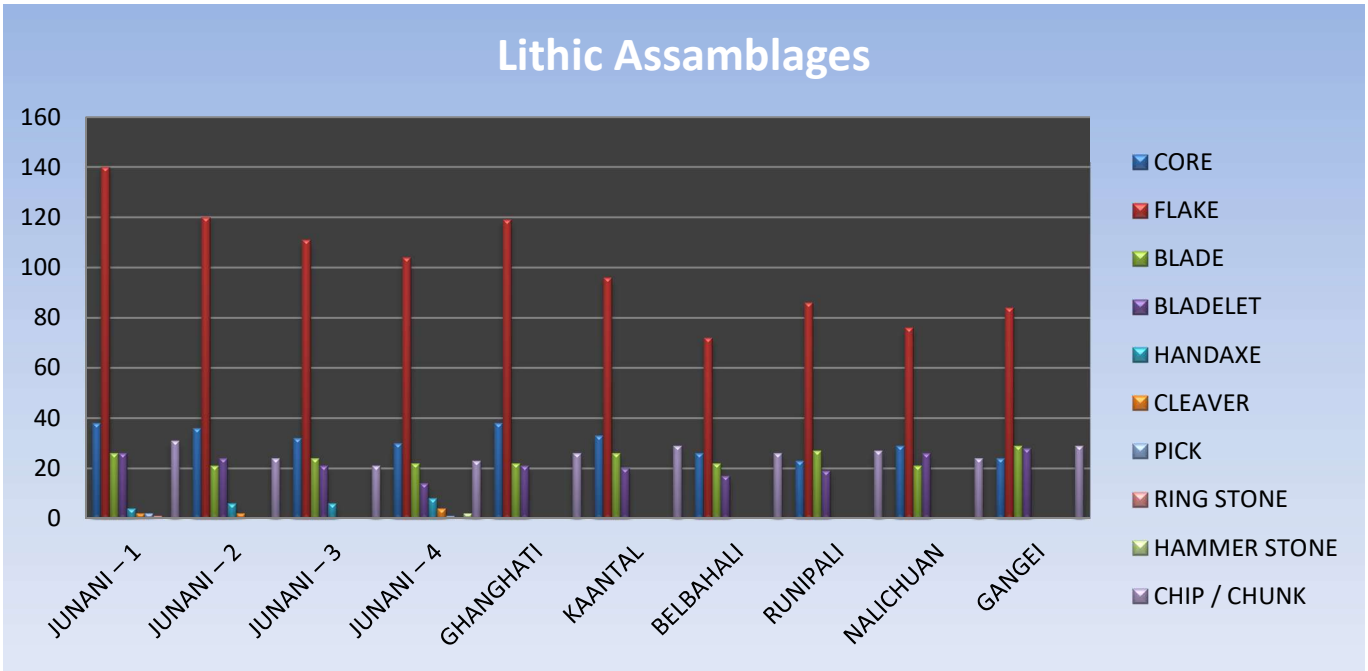

Figure 2 – Bar graph of tools in percentage.

The tool types

The assemblage structures of the research area have been concluding a number of tools made of flake, blade and Bladelets. The flake tools consist of various kinds of scraper, notch tools, burins, denticulate , triangle , trapeze and other instruments that have been during the period of finding are Handaxe, cleaver , pick , Ring stone (fig 4,5,6). The instruments are made of raw materials. Archaeological materials are either organic or inorganic origin in nature it occurs naturally and are used in the form which they are found (Herz and Garrison, 1998). The Barapahad itself is the source center for the raw materials used in the sites. Perhaps the human being exploited the raw materials which was from the rock itself and exemplified the advancement of their ideas (Rana 2018:47). The lithic instruments like scrapers, burin, triangle and trapeze were made of chert, quartz, chalcedony and agate. The cumbersome instruments like handaxe, pick, cleaver made of quartzite. The Barapahad hills are an attractive place for the Prehistoric men for residing in the foothill areas and a good source of quartzite and many more rivers have been emerged from this hilly side. N 333 chip /chunk or waste products has been classified during classification that shows the chip /chunk that have been produced during the time of tool production.

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SL NO	NAME OF THE SITE	QUARTZITE	CHERT	QUARTZ/CRYSTAL	AGATE	CHALCEDONY	TOTAL
1	JUNANI – 1	156	114	-	-	-	270
2	JUNANI – 2	120	113	-	-	-	233
3	JUNANI – 3	117	98	-	-	-	215
4	JUNANI – 4	115	93	-	-	-	208
5	GHANGHATI	44	132	31	14	5	226
6	KAANTAL	31	122	25	18	8	204
7	BELBAHALI	36	96	16	8	7	163
8	RUNIPALI	55	88	24	15	-	182
9	NALICHUAN	80	71	19	6	-	176
10	GANGEI	41	96	17	19	21	194
TOTAL	10 SITES	795	1023	132	80	41	2071

Table – 2 raw materials

Raw materials

The instruments of current archaeological investigations on the Jhaun river and the foot hill of Barapahad and related substances categorized into five classes which are much accessible. The significant raw substances of this area is chert which presents n -1023(49%), quartzite n-795(39%), chalcedony n -41 (2%), quartz/crystal n- 132(6%), and agate n-80(4%). The histogram marks the kind of the raw substances used by the Prehistoric people of that area.

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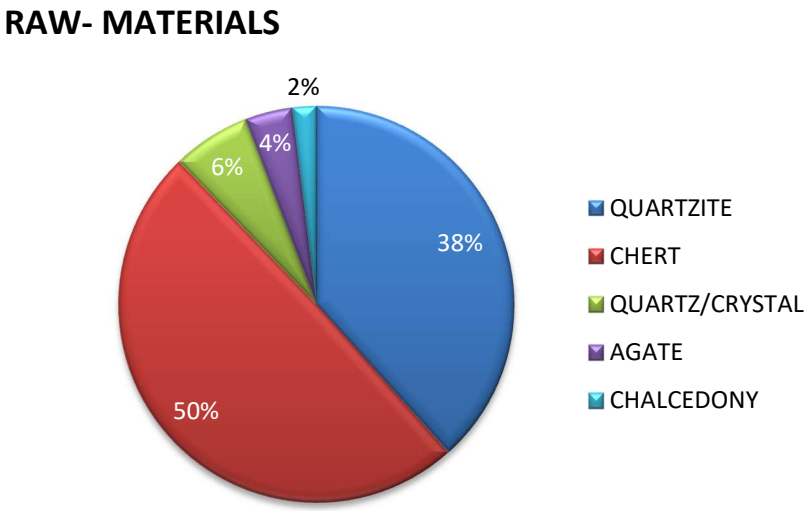

Figure 3 - Pie charts of the percentage of the raw materials

Stone tool of the study area

There is the future of a core biface/ chopper chopping instruments transformation to a flake based innovation using the Levallois technique in the subcontinent (Possehl 2007). When we discuss about the stool instruments innovation we get chopper, chopping, side scrapper etc.

Core

Core which is regarded as the primary piece that is used as a source of raw substances, it comes in a variation of forms and sizes. It presents the end product of a series of main piece composition, depletion of separated pieces and resumed composition and depletion (Mendaly 2019:432).

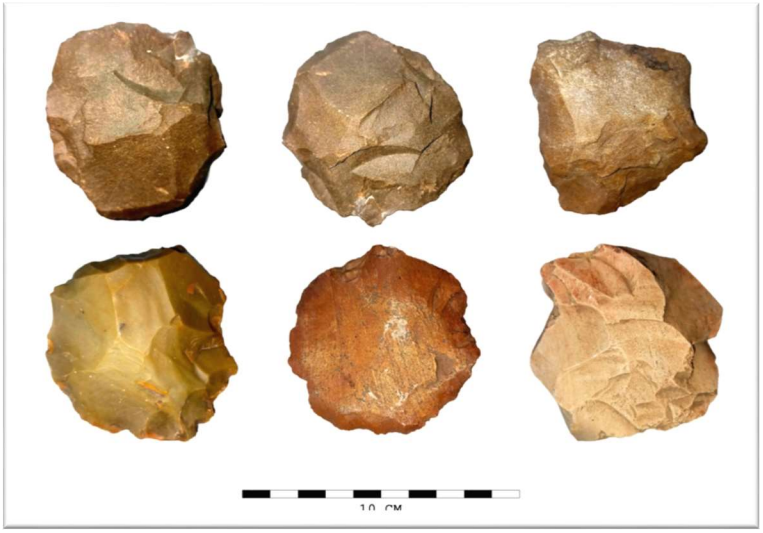

Figure- 4 core of Junani

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The lithic collections of the investigations side core instruments which can be shown n -408(29.20%) of that area. Various kind of core could be got during the surveys of stone instruments. There are a variety of flake core, blade core, and blade - Bladelet core, and flake - blade cores chronologically. An abundant kinds of raw substances are used for core like quartzite, quartz, chert, and chalcedony..

Flake

It is a salient element of middle Paleolithic culture and played a significant role in the transformation procedure that is distinguished by a noteworthy solidity in instruments types. It has been believed that this culture stayed as remarkable uniform in both geographically and chronologically. It has varied nature of tool production where flake instruments played a desegregated part.

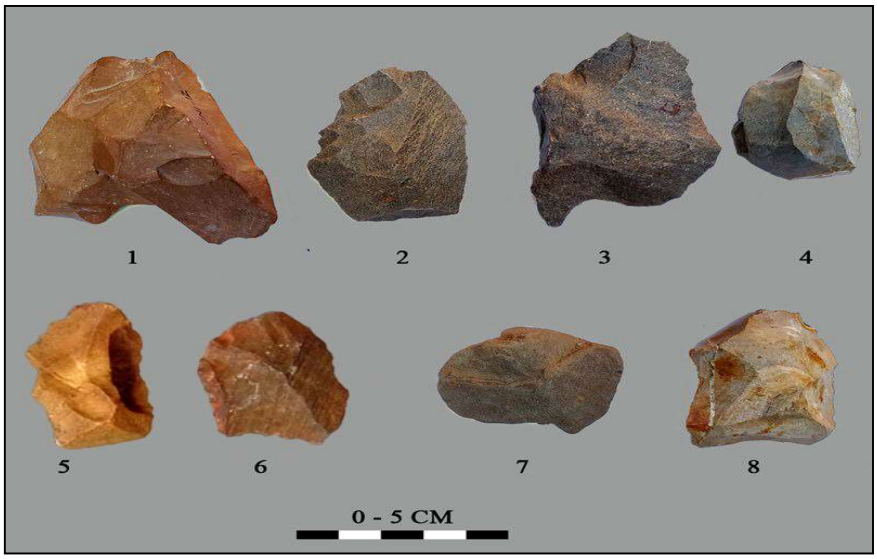

Figure- 5- flake of Junani

The current paper marks n- 1008 (20.75%) of flake during the period of investigation in the river Jhaun and the foothill of Barapahad. To make tools production bountiful kinds of raw substances been used such as Quartzite,quartz chert, chalcedony and Agate that are much accessible..

Blade

It is a word used in archaeology, a long, narrow, sharp edged, thin flake of stone; it has been used as an instrument in the Prehistoric times. This flake is parted by striking from a prepare core with the help of hammer. Its length is twice in width. It is a instrument, can be the blank from which two - edged knife, burin or spokes been produced. Blades are categorized as length: width 2:1; width thickness with less than 20% dorsal cortex, exhibits one or more dorsal ridges running equal to the percussion axis (Mendaly 2019:439). A blade has equal sides that marks running down its back parallel with the sides.

The current research in the Barapahad blade consist n- 240 (8.37%). The raw substances recommends that the blades are made on chert that are accessible in the side area. During the time of research copious blades are fresh in nature and made of black chert, green Chert and brown chert.

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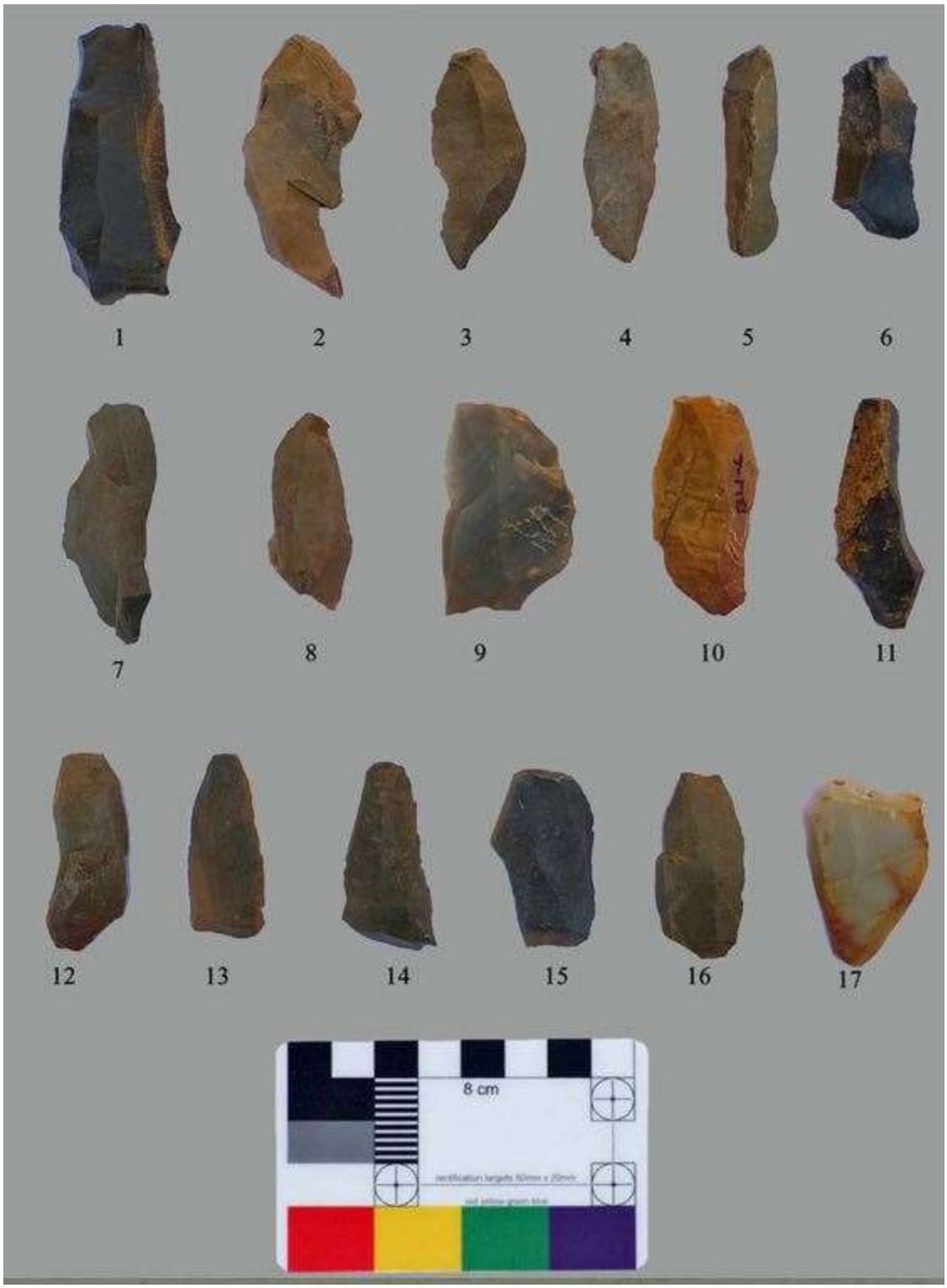

Figure – 6 Blade of Junani

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Bladelet

The term bladelet is applied to subset of Blades, which have a minimum length of less than 50mm and a maximum width of less than 12mm (Mendaly 2019:439). A total number of Bladelet is 216 (15.89%) and made on Chert and chalcedony.

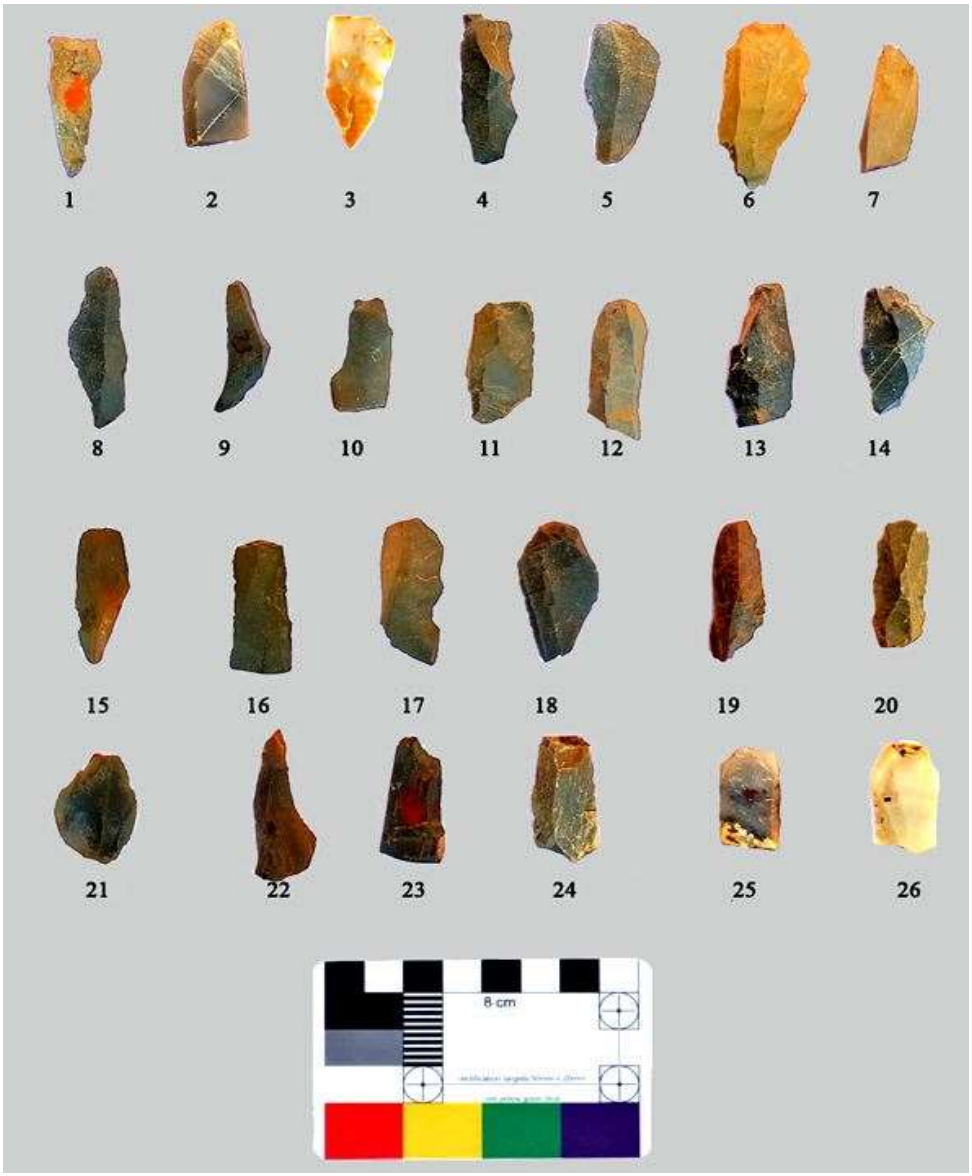

Figure – 7 Bladelet of Junani

Handaxe

The handaxe was largely considered a cultural product until recently. One of the most well-known early artifacts is a Prehistoric handaxe, which has been identified as unique for more than 150 years. It is part of a tradition that dates back more than 1.5 million years and is found throughout much of the ancient globe.The size of a handaxe is fairly large, having a mean of 14-18 cm in most of the sites of the world (Wynn and Gowlett 2018:22).

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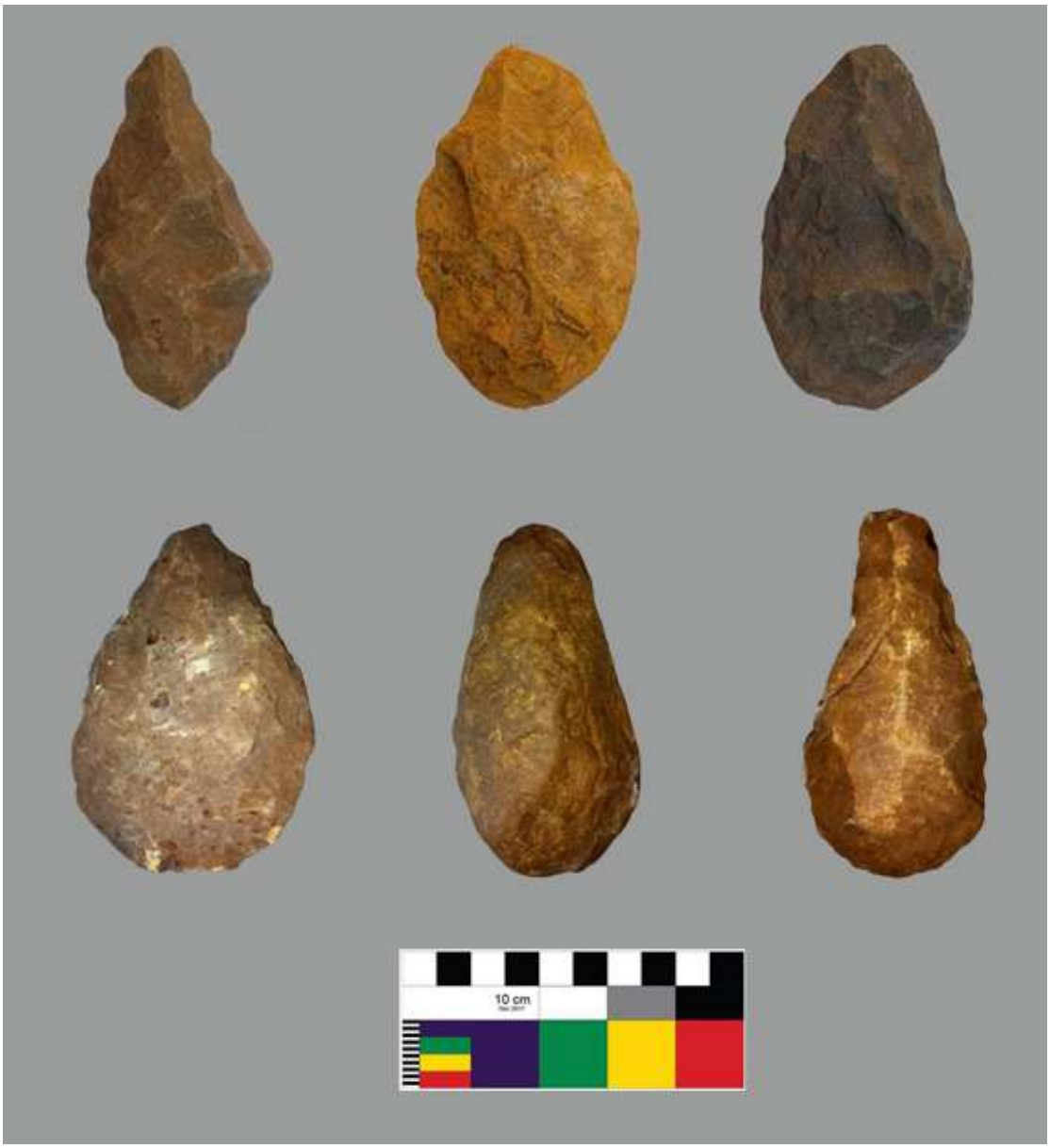

Figure -8 Handaxe of Junani

There are 20 hand axe could be found in the Jhaun river such as Junani -1 n- 4, Junani -2 n-6, Junani -3 n-6, Junani 4 n-8 chronologically that consist of 0.92% of lithic collections. Four broken hand axe could be found in nature although the conditions of the hand axe are very fine. That are made of quartzite that are used for digging up, cutting and smashing of killed animals and boring the hide of animal skin.

Cleaver

In archaeology, Cleaver contains two faces in the group of Prehistoric stone tools. It is made of a massif flake and a core. Cleaver is ordinarily a tool with a transverse working edge (Bhattacharya 1979:28). It is essentially a tool made on a broad, rectangular or rarely triangular or convex side flake or end flake (Sankalia 1964:55). The function-based study of a cleaver has been proposed on its two parts, the edge and butt, as they are the working portions of a cleaver. The action had

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been done by the edge, and the butt portion had been used to hold or haft. It's probable function is chopping meat and wood, clearing shrubs and small trees from the spot selected for habitation, removing skin and cutting, as well as cutting the tree trunk, brunch, and bone, etc (Chatterjee 2016:511).

Figure – 9 Cleaver of Junani

The recent field investigation in the Jhaun river there are n - 8 (0.14%)of cleaver found in Junani site 1, 2 and 4. The condition of the cleaver is very well and all cleavers are made on quartzite which material are available in the Barapahad.

Pick

This instrument is long, narrow and heavy pointed core tool, slight bend in profile curtailed at one and spotted at the others. It is renowned from the hand axe by its colossal cross section and enlarged spotted edge.

Figure- 10 pick of Junani

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At the time of research in the Jhaun river and the foot hill of Barapahad, there could be 3 kind of pick got in the Junani site 1 and 4. The two pick made of quartzite

Ring Stone

That are thick and round shaped stone with a hole in the middle. Only one site Junani -1, ring stone was found in the current archaeological research in the small and large branch of the river Jhaun and the foot hill of Barapahad.

Figure- 11 Ring Stone of Junani (Site- 1).

Hammer Stone

That are made of hard stone. It is made of diorite, quartzite, and other sturdy substances capable of the amount of work with the least wear; it must be grainy in most cases to grind the pecked surface as work progresses. It can hardly be doubted that men living in an age of stone must have been conversant not only with the best source of material but also with its adaptability for particular uses (M'guire 1891:303). Only the two sites Site like Belbahali 1 and 2 Hammer Stone are found. It is used for produce any kind of tool; rather it may have been used to detach sizable proportion of chunk from boulder for tool production (Mendaly and Hussain 2015:361).

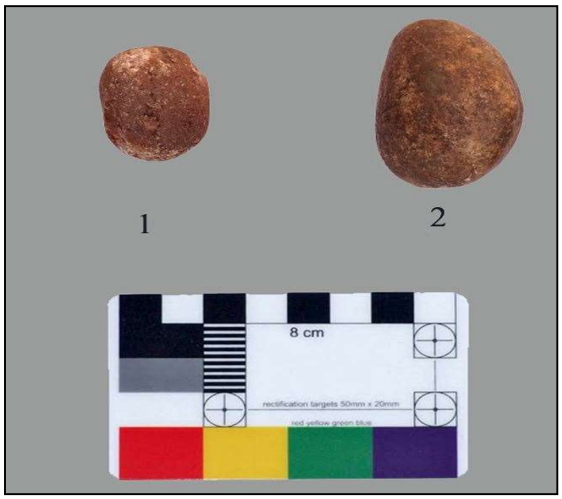

Figure- 12 Hammer Stone of Belbahali (Site - 1 and 2)

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Chips/ Chunks

When many detached pieces of discarded or not used as a tool or not modified into a tool, they are call debitage (Mendaly and Hussain2015:361). During the time of field investigation in the Jhaun river and the foothill of Barapahad hill there are as many as 260 (23.83%) Chips/Chunk are found.

Discussion

The antiquities found in the region show that the Hominins captured this region during the Pleistocene age. The sites of the Jhaun River show a multicultural period site. Minor of them present middle Paleolithic culture, whereas majorities represent microlithic culture (both geometric and non-geometric culture).

The differences in the stone instruments show that Prehistoric humans settled this area for a long period of time. The instrument found in the Barapahad hill areas and Bank of the Jhaun River is as equal as the stone instrument found in the Bargarh Upland and other parts of the state(Behera et al 2015 ; Mendaly and Hussain 2015; Deep and Mendaly 2016; Behera and Thakur 2018). The current paper is the result of preliminary research, and it seems impossible to conclude the current investigation due to scarcity of time and scientific data. The proofs that we get from the region open a new chapter in the Prehistoric archaeology of the Bargarh upland.This interdisciplinary investigation of this path may provide new data regarding Prehistoric human colonization and other matters.

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