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An Archaeological Investigation of the Unexcavated Neolithic and Megalithic Sites in Kashmir Valley, India: Landscape, Settlement Pattern and Material Culture

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Abstract

This research embarks on an archaeological investigation of the sixty-eight fresh documented unexcavated Neolithic and Megalithic sites scattered throughout Kashmir Valley, India. Focused on three key aspects - landscape, settlement patterns, and material culture, the study aims to unveil the hidden historical treasures of this region. By employing advanced archaeological techniques and methodologies, the research seeks to shed light on the enigmatic past of Neolithic and Megalithic cultures that once thrived in this diverse geographical area. Through the analysis of artifacts, and geographical data, the study endeavours to reconstruct the ancient lifestyle, social and technological dynamics, and cultural exchanges that shaped the valley as a significant cultural crossroads between South and Central Asia. The findings of this investigation have the potential to deepen our understanding of the historical interconnections from prehistoric times of the region and contribute to the broader knowledge of human history and cultural evolution in the Indian subcontinent. In essence, this study analyses the archaeological material culture related to the designation of locations as human habitations during Neolithic and Megalithic cultures, their distribution over the Kashmir Valley topography, and the contextualisation of this knowledge within Kashmir and neighbouring archaeology. The main goal of the current study is to offer first-hand information of the sites reported during the new survey to get a general understanding of site types and to document their physical characteristics based on the comparison of material culture. This study has tried to use the knowledge to gain a deeper understanding of how people settled in the Valley throughout history, with particular reference to the Neolithic and Megalithic Periods. Only three out of sixty-eight Neolithic sites are excavated, and this study is a comparative analysis of the material culture, Landscape and Settlement pattern documented from these unexplored and unexcavated Neolithic sites across the Valley of Kashmir.

Keywords: Kashmir Valley, Menhirs, Neolithic Period.

Article Type: Research Article

Introduction

The first Neolithic site reported and excavated in the Valley of Kashmir (Figure.1) is Burzahom (De Terra and Patterson, 1939: 225-235; IAR 1960-61: 11), followed by the excavations of Gufkral (IAR 1981-82 :19-25) and Kanispur (Mani, 2000: 1-28). The first site is located in Central Kashmir's Srinagar district, the second in Pulwama in South Kashmir and the last in North Kashmir's Baramulla district. The earliest dated Neolithic site in the Valley of Kashmir is Kanispur ranging from 5300 to 4100 cal. B.P. (Mani 2000: 1-28), and a long period of relative cultural continuity is seen in the Northern Neolithic sites of Burzahom and Gufkral; dating ranges from 4900-3500 cal. B.P. (Bandey 2009: 80). Based on the presence of the menhirs reported at Burzahom and Gufkral, the recorded cultural sequence was that the Neolithic Period was succeeded by Megalithic culture (Khazanchi 2004: 18; Sharma 1982a: 19-23), whereas, Megalithic culture is absent at Kanispur (IAR 1998-99: 30-48).

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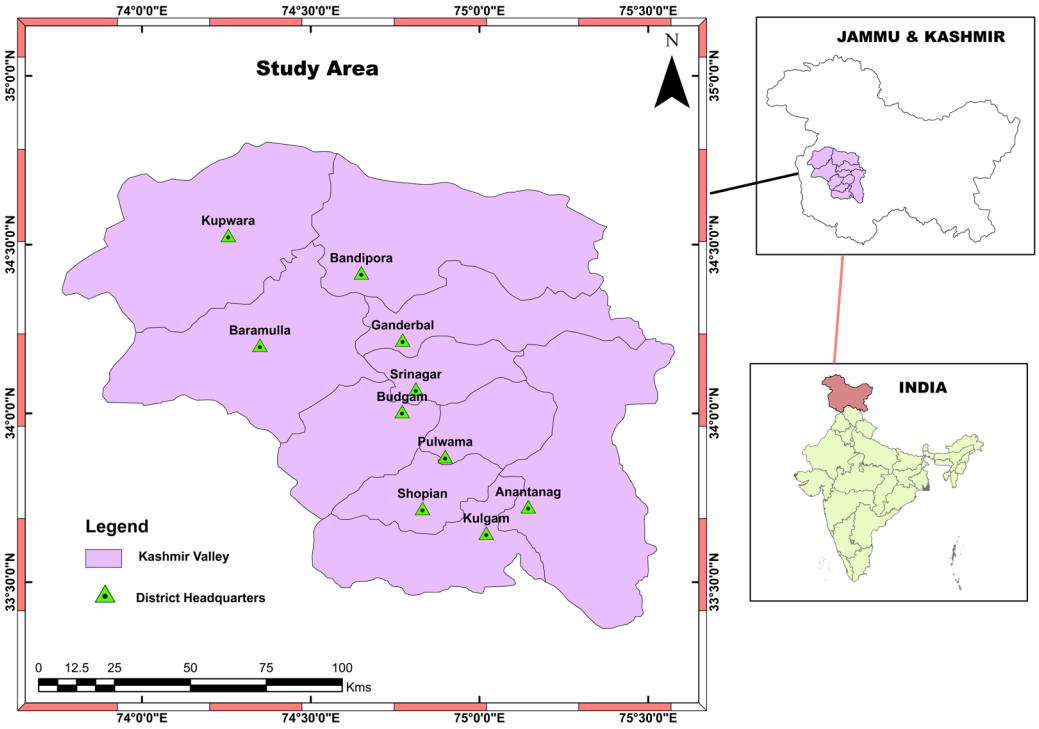


Figure. 1: *Map of Kashmir Valley India*

In addition, the unexcavated Neolithic sites (Table. 1) reported on the basis of surface collections include Nunar, Baimlun in Wangathnallah, ten sites from Anantnag to Pampore including Begagund, Haripariga m, Jayadevi Udar, Thajiwor, Olichibag, Pampore, Panzgam, and Sempur (IAR 1962-63: 9-10). Also, Damodar Udar, Kanayalwan, Brah and Waztal, Dadsar, Singhpora, Petha Gantamulla and Kanishkapora, Khor and Pattan, Dillion, and Parihaspora in Baramulla and Turkepora in Bandipora (IAR 1981-82: 16-25). In the Sindh valley near the confluence of Krankindi and the river Sindh, a Burzahom-type settlement was found near the village Kijpora, Haribous in Tral, Borus in Awantipora, Kaneer Budgam, and Aripathan in Budgam. Further explorations yielded more sites like Gopas Udar, Kriri Chak, Kuladur, Mukam Udar, Raiteng, Tapribal, Wanigom, Yohteng, Pinglish, Balpora, Romu, Shahpend Habshahsahib, Tsodur, Hayatpora khansahib and Koshund (IAR 1981-82: 16-25, and Pant *et al*. 1982: 37-40).

The recently reported Neolithic sites in Sopore, (Baramulla), including Qasimbagh, Hygam, Bose Wudur and Yunteng Bomai, located on flat-topped Karewa beds, reported, surveyed and partially excavated by Dr Mumtaz Yatoo (2012: 310-311) and Pethpuran Teng in Ganderbal (Betts *et al*. 2019: 17–39). The details of a fresh survey of the Neolithic sites (Figure.2) in Kashmir Valley

In order to establish knowledge of the site types, settlement patterns, and other aspects of the region, this section briefly discusses and evaluates some of the analytical approaches utilised to investigate the material culture found during the field seasons in the Valley. Here, the major goal is to establish a framework for systematically analysing and interpreting the field-collected archaeological data. An appropriate analytical approach was developed with the aid of several settlement surveys conducted worldwide and knowledge of their analytical techniques.

I expected to see much pottery strewn all across the landscape while conducting fieldwork. I also anticipated running across lithic and bone scattering. In order to establish comparable historical eras, I also intended to gather diagnostic pottery shreds from all the types of pottery I saw, such as pot bases, rim shreds, lids, and decorated or painted shreds. Pottery from recognised and dated sites in Kashmir was analysed and compared to documented typologies. All of this data was essential for establishing site categories, site patterning, and landscape, which

are the main concerns of this research. Information on site function and inter-site interactions was important in defining site/settlement patterning. I just used field walking to record data and gather information. I drew graphics of the diagnostic findings and took in-depth pictures of the locations and the material culture.

Table. 1:*Neolithic Sites in Kashmir Valley, India*

Sr. No.	Site	Geo-Coordinates And Elevation in Feet (ASL)	Menhirs	Pottery Type(s) Reported	Artefacts/Biofacts Reported During Survey	Excavated/ Unexcavated	Location (District) Habitatt
1	Turkepora	34⁰24'54" N 74⁰13'01" E 5402 feet.	No	-	-	Unexcavated	Bandipora
2	Kanispur	34⁰13'35" N74⁰25'30" E5209 Feet	No	Burnished, Black, Coarse grey, Dull Red, Fine grey, Red Wares	Pot Shreds	Excavated	Baramulla
3	Burzahom	34⁰10'5" N 74⁰54'40" E5890 feet	Yes	Burnished, Coarse grey, Combed, Fine grey, Gritty red wares.	Animal Bones, Stone tools, Bone tools, Pottery, etc.	Excavated	Srinagar
4	Nunar	34⁰15'02" N 74⁰48'19" E 6195 feet	No	Coarse Grey and Gritty Red Ware	Pot Shreds	Unexcavated	Banipora
5	Gurhama Sangri	34°22'05"N 74°40'00"E	No	Coarse grey, Dull Red Wares	Pot Shreds	Unexcavated	Bandipora (Near Wular Lake)
6	Baimlun	34⁰17'31"N 74⁰38'16"E5551 Feet	No	Fine grey, Gritty red wares.	Pot Shreds	Unexcavated	Baramulla Bairum
7	Sempur	33⁰4245 N 74⁰5805 E 5894 feet	Yes	Combed, Fine gray wares	Pot Shreds	Unexcavated	Pampore Pulwama
8	Pampur	34°02'05"N 34°02'75" E5236 feet	Yes	Coarse Grey, Fine Grey and Gritty Red Ware	Pot Shreds	Unexcavated	Pulwama
9	Shahpend	34°01'88"N 74°02'03"E5188 Feet	No	Coarse Grey, Fine Grey and Gritty Red Ware	Pot Shreds	Unexcavated	Pulwama
10	Olchibagh	33°57'42"N 74°56'19"E 5246 feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Tral Pulwama
11	Sombur	33°57'52"N74°55'33" E5236 feet	Yes	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Pampore Pulwama
12	Narastan	34°03'18"N 75°06'10"E	No	Coarse Grey, Fine Grey	Pot Shreds	Unexcavated	Tral Pulwama
13	Haripargom	33°53'19" N 75°4'19" E 5374 Feet	Yes	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Tral Pulwama
14	Begegund	33°53'53"N 75°3'43" E5380 Feet	Yes	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Tral Pulwama
15	Gufkral	33°53'46" N75°05'42"E5393 Feet	Yes	Coarse Grey, Fine Grey, Burnished, Gritty Dull Red, and Red Wares.	Bone and Stone tools	Excavated	Tral Pulwama

16	Dadsar	33°54'14" N 75°05'14" E 5314 Feet	Yes	Fine Red Ware	Pot Shreds	Unexcavated	Tral Pulwama
17	Pinglish	33°54'47"N 75°08'06"E5342 Feet	No	Coarse Grey, Fine Grey and Burnished Wares.	Pot Shreds	Unexcavated	Tral Pulwama
18	Haribous	33°53'19"N 75°05'10"E5390 Feet	No	Fine gray wares	Pot Shreds	Unexcavated	Tral Pulwama
19	Barus	33°56'56"N 74°59'33"E5364 Feet	Yes	Coarse Grey and Fine Red Ware	Pot Shreds	Unexcavated	Pulwama
20	Jayadevi Udar	33°50'37"N 75°06'17"E5426 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Bijbehara Anantnag
21	Goripora	33°56'46" N 74°58'34" E5223 Feet	No	Fine Red Ware	Pot Shreds	Unexcavated	Pampore Pulwama
22	Kanelwan	33°47'47"N 75°09'35"E5406 Feet	No	Coarse Grey, Fine Grey	Pot Shreds	Unexcavated	Bijbehara Anantnag
23	Waztal	33°48'4" N 75°16'24" E 5412 Feet	Yes	Fine gray wares	Pot Shreds	Unexcavated	Anantnag
24	Brah	33°44'32" N 75°17'37" E5662 Feet	Yes	-	Menhirs	Unexcavated	Anantnag
25	Balapora	33°45'16" 74°52'40" E6417 Feet	No	Coarse Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Shopian
26	Romu	33°51'39"N 74°49'37"E5289 Feet	No	-	-	Unexcavated	Pulwama
27	Panzgom	$33^0$50'50" N $75^0$1'28" E n 5324 Feet	No	Coarse grey and Fine red wares	Pot Shreds	Unexcavated	Pulwama
28	Nilnag	33°51'20"N 74°41'31"E5592 Feet	No	-	-	Unexcavated	Budgam
29	Habshah Sahab	33°56'22"N 74°43'50"E5596 Feet	No	Coarse grey and Fine red wares	Pot Shreds	Unexcavated	Budgam
30	Khansahab	33°55'53"N 74°39'36"E5598 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Budgam
31	Dur Bugh	33°57'03"N 74°49'26"E5494 Feet	No	Coarse Grey Wares.	Pot Shreds	Unexcavated	Budgam
32	Budgam	34°00'35"N 74°44'16"E5698 Feet	No	Fine Grey Ware	Pot Shreds	Unexcavated	Budgam
33	Kaneer	33°56'26"N 74°43'55"E5427 Feet	No	-	-	Unexcavated	Budgam
34	Damodar Udar	34°02'47"N 74°44'44"E5203 Feet	No	Coarse Grey and Fine Grey Wares	Pot Shreds	Unexcavated	Srinagar (10 Kms South)
35	Koshand	33°53'41"N 74°36'19"E5433 Feet	No	Coarse Grey and Red Fine Wares	Pot shreds	Unexcavated	Budgam
36	Hayatpora	33°54'30"N 74°49'24"E5487 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Budgam
37	Aripathan	34°03'33"N 74°34'26"E5557 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Budgam

38	Kaladur	34°11'26"N 74°12'47"E5189 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Baramulla
39	Tapribal	34°06'04"N 74°12'51"E5226 Feet	No	Coarse Grey and Burnished Wares.	Pot Shreds	Unexcavated	Baramulla
40	Gopas Udar	34°08'29.4"N 74°18'06.7"E5182Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Baramulla
41	Wanigom	34°09'50"N 74°29'57"E5176 Feet	No	Coarse Grey and Burnished Wares.	Pot Shreds	Unexcavated	Baramulla
42	Kriri Chak	34°10'11.6"N 74°29'51.2"E5222Feet	No	Coarse Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Baramulla
43	Bata Chak	34°12'37"N 74°23'07"E5188 Feet	No	-	-	Unexcavated	Baramulla
44	Raiteng	34°16'00"N 74°30'47"E5210 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Baramulla
45	Huin	$34^0$10'67"N $74^0$20'78" E5198 Feet	No	-	-	Unexcavated	Baramulla
46	Yeuin Teng	34°16'31"N 74°15'41"E5239 Feet	No	Coarse Grey and Burnished Wares.	Pot Shreds	Unexcavated	Baramulla
47	Kaneshpur	34°13'19"N 74°23'41"E5157 Feet	No	-	-	Unexcavated	Baramulla
48	Bomai	34°21'59"N 74°23'25"E5219 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares	Pot Shreds	Unexcavated	Sopore Baramulla
49	Kanispur	34°13'29"N 74°25'46"E5167 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Excavated	Baramulla
50	Qasimbagh	34°13'26"N 74°29'50"E5216 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Sopore Baramulla
51	Pethpuran Teng	34°11'24"N 74°44'34"E5200 Feet	No	Coarse Grey, Fine Grey, Burnished and Gritty Red Wares.	Pot Shreds	Unexcavated	Ganderbal
52	DargTeng	34°18'00.7"N 74°52'23.3"E5232 Feet5177 Feet	No	Red Ware	Pot shreds	Unexcavated	Ganderbal
53	Singpora	34°12'25"N 74°25'15"E 5122 Feet	No	Fine Red Ware	Pot Shreds	Unexcavated	Baramulla
54	Peth Gantehmulla	34°10'39"N 74°15'47"E 5156 Feet	No	Fine red ware	Pot Shreds	Unexcavated	Baramulla
55	Khor	34°10'56"N 74°14'53"E 5276 Feet	No	-	-	Unexcavated	Baramulla
56	Mukam Udar	34°21'55"N 74°27'48"E 5314 Feet	No	Fine red wares	Pot Shreds	Unexcavated	Baramulla
57	Pattan	34°09'38"N 74°33'48"E 5183 Feet	No	-	-	Unexcavated	Baramulla

58	Dillion	34°10’06”N 74°37’21”E 5177 Feet	No	Coarse Grey, Fine Grey Wares	Pot Shreds	Unexcavated	Baramulla
59	Parihaspora	34°09’32”N 74°39’11”E 5282 Feet	No	Coarse Grey and Fine red wares	Pot Shreds	Unexcavated	Baramulla
60	Tsodur	34°07’34”N 74°38’48”E 5189 Feet	No	-	-	Unexcavated	Baramulla
61	Gordan	34°09’20”N 74°39’43”E 5180 Feet	No	Red Ware	Pot Shreds	Unexcavated	Parihaspora Baramulla
62	Palapur Pattan	34°10’25”N 74°33’54”E 5187 Feet	No	Coarse Grey and Fine Red Wares,	Pot Shreds	Unexcavated	Baramulla
63	Kijpora	34°16’27”N 74°53’36”E 5516 Feet	No	Coarse Grey, Fine Grey Wares	Pot Shreds	Unexcavated	Ganderbal (Sindh Valley)
64	Salia	33°48’25”N 75°16’32”E 5185 Feet	Yes	Fine Red Ware	Pot Shreds	Unexcavated	Anantnag
65	Hankwattan	33°37’28”N 75°10’25”E 5179 Feet	Yes	-	Menhirs	Unexcavated	Shankarpur Anntanag
66	Akahal	33°49’53”N 74°50’03”E 5213 Feet	Yes	-	Menhirs	Unexcavated	Pulwama
67	Devsar Tasirbala	33°39’12” N 75°06’13”E 5265 Feet	Yes	Fine Red Ware	Pot Shreds	Unexcavated	Kulgam
68	Malangpora	33°53’34”N 74°58’52”E 5262 Feet	Yes	Gritty Red Ware	Pot Shreds	Unexcavated	Pulwama

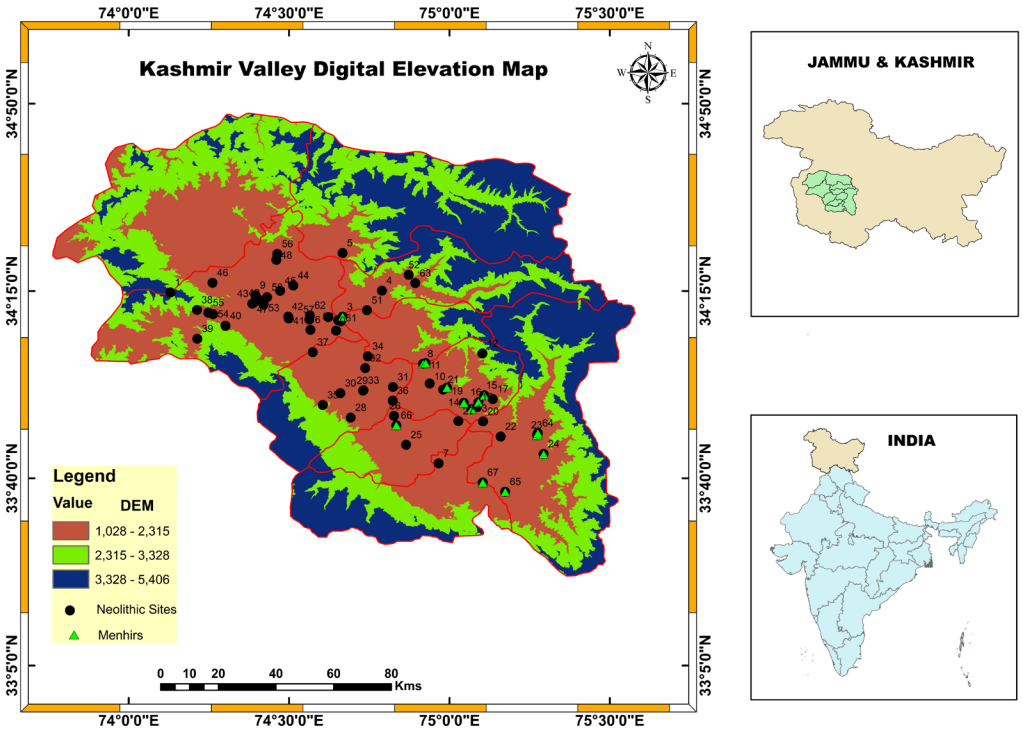


Figure. 2: *DEM of Kashmir Valley showing Distribution of Neolithic and Megalithic Sites.*

Neolithic and Megalithic Cultures of Kashmir Valley

Neolithic period began when man utilised more specialised, expertly created tools and utensils, he practised agriculture, raised domesticated animals, and produced ceramics (Agrawal 1992). According to A.K. Sharma, the Kashmir Neolithic began in the valley before approximately 2920 BCE and persisted until 1700 BCE, at which point a new generation of people arrived in the valley with the knowledge of Megalithic architecture, rice, and iron (Sharma 2000). According to some estimates, the climate warmed up around 5000 B.P., and humans began to move into the valley in great numbers with highly developed hunting skills (Saar 1992). They were both farmers and hunters. Mankind thereafter entered the Neolithic era, the remnants of which are dispersed across the valley (Sharma 2000). For a number of reasons, the Neolithic culture of Kashmir is distinct from the other Neolithic cultures in India. When compared to other Neolithic cultures in India, it is unique due to the growing size of the Neolithic settlements in the valley, the highly organised economy, the efficient handling of raw materials, the emphasis on environmental control, the cultural contacts with people from other regions despite limited communication options, and the simultaneous maintenance of their skill and standard of workmanship (Dikshit 1982).

In Kashmir, the Neolithic Period was followed by the Megalithic Period. Such constructions do not have any similarities to Neolithic civilisation in the remainder of the Indian subcontinent. Standing stones in the Menhir style serve as a representation of the Kashmiri Megaliths. These upright stones can be found in clusters or even singularly in certain situations. The other material culture is showing continuity of preceding Neolithic period and it seems the advanced Neolithic period. This study documented 13 Megalithic sites in the valley identified with presence of Menhirs or Megaliths (Figures. 3-13).

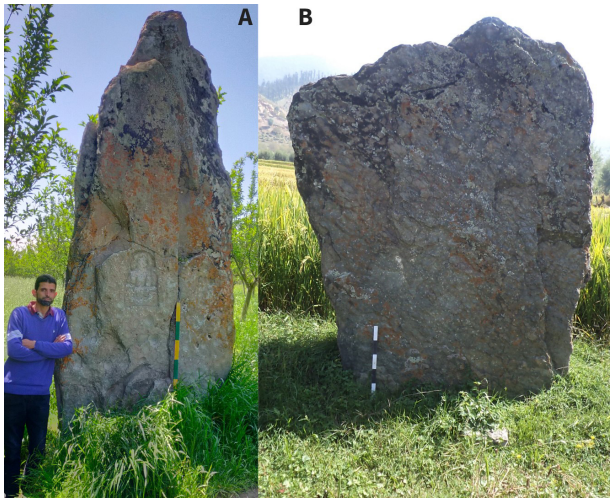


Figure. 3: *Standing Menhirs at A: Dadsar and B: Waztal.*



Figure. 4: *Menhir with cupule marks at Haripargam*



Figure. 5: *The Fallen Megaliths at Gufkral*



Figure. 6: *Menhirs with Capule marks*



Figure. 7: *Fallen Menhirs*



Figure. 8: *A Fallen menhir at Devsar*



Figure. 9: *A dressed Menhir at the Neolithic site of A: Sombur and B: Barus*



Figure. 10: *A fallen menhir at Begagund*



Figure. 11: *The megaliths at Burzahom.*



Figure. 12*: A Menhir with cup marks at A: Malangpora and B: Akahal.*



Figure. 13: *Fallen Menhirs at Hankwattan.*

Landscape and Settlement Pattern of Kashmir Valley

The settlement pattern is indispensable in geographical and archaeological studies and cannot function without understanding the area's landscape. On the other hand, falling short of settlement pattern studies, the latter has very less meaning in its empirical understanding of cultural behaviour in space. Willey (1974) developed and defined the settlement pattern approaches through his Viru Valley project in Peru. He looked into how people of the culture have dispersed themselves over the

landscape determined by various factors such as natural environment, cultural technology and social institutions (Willey 1974: 149-176). To do this, a variety of methodologies must be used, including archaeological explorations in various geographical features, site reconnaissance both at random and systematically (e.g., transect survey), sampling of cultural materials, recording of archaeological features, and the use of geospatial tools like GIS and GPS (Kvamme 1999).

Landscape approach or settlement pattern studies are frequently interested in comprehending space via maps, notwithstanding archaeologists or geographers (Crawford 1922; Childe 1928). Maps have aided in developing ideas through geographic context and field research, helping them comprehend the distribution of archaeological sites in space. Today, geospatial technologies like remote sensing, GIS, satellite imagery, and GPS are used to study settlement patterns and the terrain (Prabhakar and Korisettar 2017). Figure 14 reflects the contours of the Kashmir valley where the Neolithic settlements are situated.

The Kashmir Valley is a hilly region with a diversified topography and physiographic scenery. It is a fertile area surrounded by mountains and Karewa features, and it is situated next to vital communication routes, creating a region that has seen human habitation from prehistoric times. Kashmir Valley has an average height of 1550 masl, with the Himalayas to the north and Pir Panjal to the south.

In geographical and archaeological research, settlement pattern is essential because it cannot operate without an awareness of the surrounding terrain. However, the latter falls short of analyses of settlement patterns and has little significance in its empirical knowledge of cultural behaviour in space. This section examines these findings in order to demonstrate how they have improved our knowledge of the settlement patterns in the Valley. This is the first time a comprehensive survey has been utilised in Kashmir to examine trends and patterns in the settlement. In order to take into account sites in connection to their larger landscape setting, no study akin to this has ever been done in Kashmir.

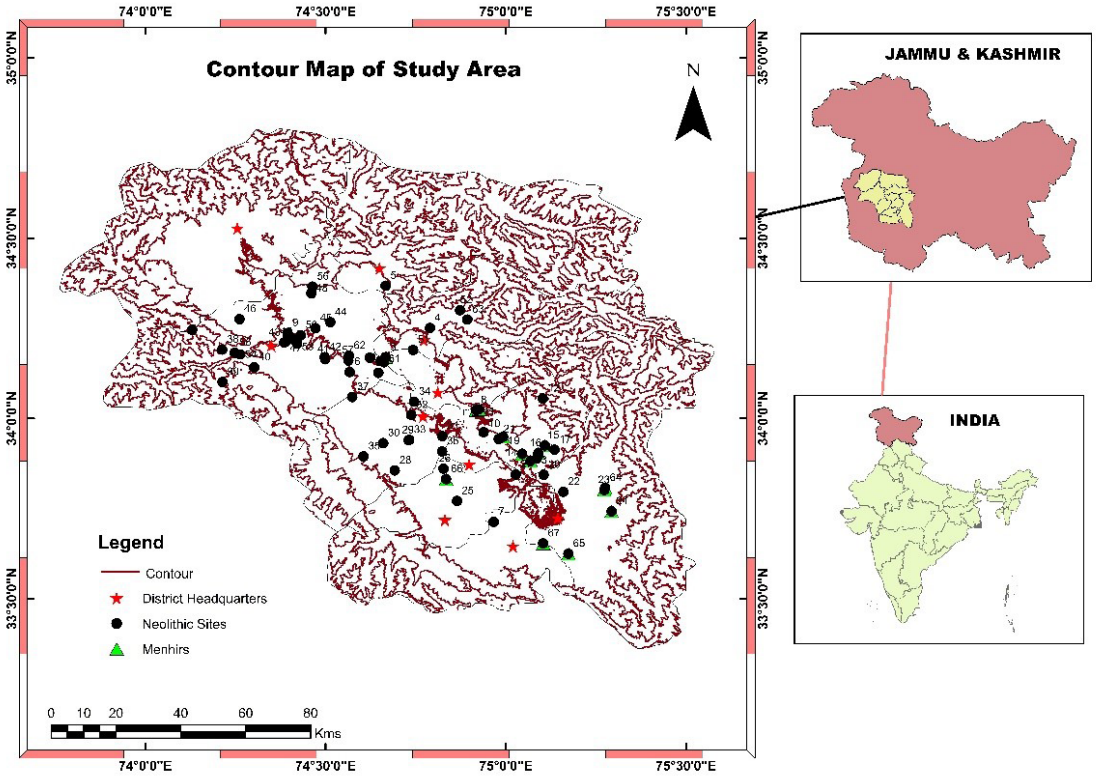


Figure. 14: *The Contour Map of the Study area with Neolithic Sites .*

Karewas

The Valley of Kashmir 32° 17' – 37° 5' N and 72° 40' – 80° 30' E, appeared in the present-day world map during the later stages of the Himalayan orogeny (Agrawal 1992: 44-45). During the Miocene epoch, due to the 'continental drift' a series of geological, morphological and environmental changes in the Indian sub-continent gave rise to the formation of Himalayas (Nickels *et al*. 1979: 167-169; De Terra and Paterson 1939). It affected the course of drainage resulting in the inundation of water in the basin of valley without any outlet. In this extended Pleistocene Lake lacustrine mud deposits got accumulated, and subsequently the water flowed out through a breach caused by earthquakes in the north-western Himalayan range (Hugel 1840) left behind the Lake deposits known as Karewas (locally called Wudurs) or flat-surfaced plateaus. The distribution and area occupied by the Karewas in the valley is given below in the map (Figure 15).

The buried valley floor is probably a major factor in the existence of Lower and Middle Palaeolithic material on mountains. The earliest known site is Sombur, in southern Kashmir; it is situated on Karewa on the valley floor and dates to the Upper Palaeolithic, some 18000 years ago. At this point, Kashmir's rivers had utterly dried up and the Karewas had developed and stabilised. Later, these stabilised Karewas in Kashmir saw a boom in Neolithic activity, as evidenced by sites like Burzahom, Gufkral, Kanispora, early historic activity, as evidenced by Kanispora, Semthan, and Ushkar, and later historic activity, as evidenced by Avantipora, Martand, Parihaspora, Pattan, and Tapar (Agrawal 1992: 45-46, Bandey 2009; Khazanchi, 2004; Mani 2000; Mitra 1984; Pant *et al*. 1982; Thapar 1980; Tripathi 1987: 23).

However, Khazanchi (2004: 13) and Pant *et al.* (1982: 40) claim that sites extended across the entirety of Kashmir during the later historic era and

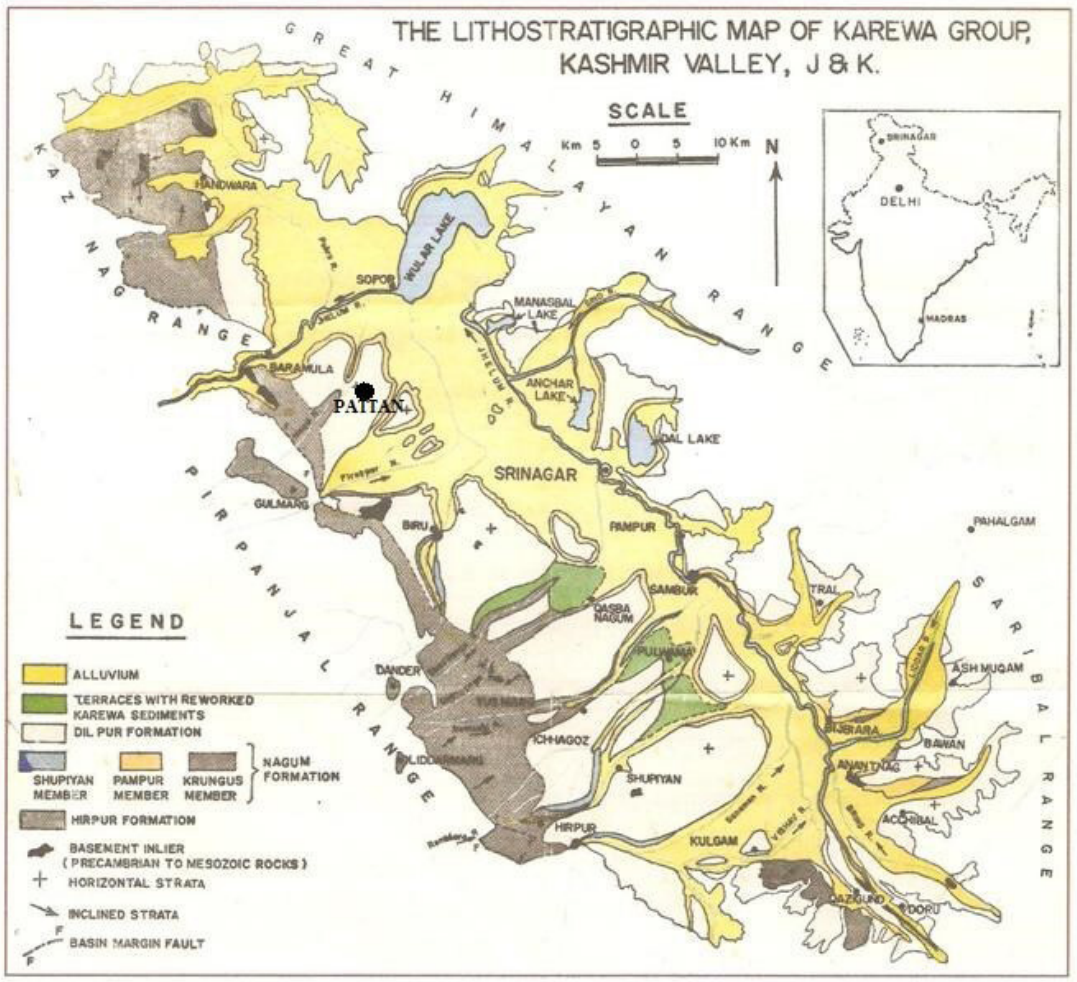


Figure. 15: *Karewa distribution map of Kashmir valley (After: Wadia 1970:93).*

throughout the later historic Period. Very few early historic sites from the Neolithic or early historical era have been discovered on mountain slopes, with Harwan being one of them. The location of recognised archaeological sites in Kashmir are on the Karewas is all that is known about them.

According to the current study's findings, the Neolithic material culture was retrieved from the Karewas, providing evidence for Neolithic activity there. The sections of the Karewas with the Neolithic material remain can be seen below (Figures. 16-18). This is no indication of Neolithic activity in Kashmir outside of Karewas The new findings reveal that there is a consistency in the position of sites on the Karewas, notably during the Neolithic periods in Kashmir Valley. There may be a number of causes for this tendency, but the increasing water levels or the unsuitable Karewas or land surface in the valley appear to be a significant one. Since water from north Kashmir drained through Baramulla last, Karewas and the ground surface were exposed later than in south Kashmir (Agrawal 1992) that is why Neolithic sites with megaliths are found in South Kashmir but not in North Kashmir.

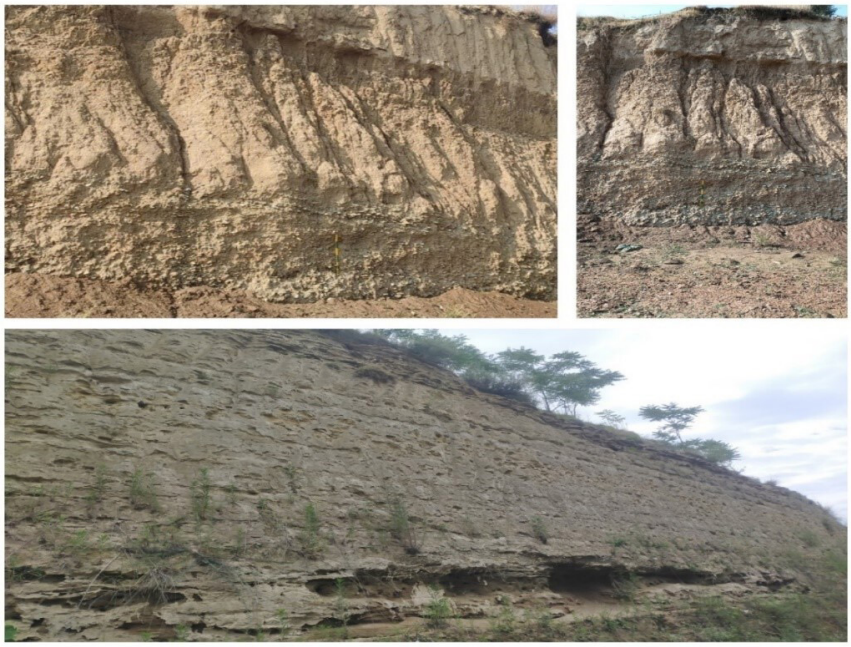


Figure. 16: *Exposed sections of the Karewas with the Neolithic Sites on the top.*



Figure. 17: *The Exposed sections of the Neolithic sites on the Karewas.*



Figure. 18: *Exposed sections with visible Neolithic material remains.*

Mounds

Other than the huge number of early and later historic sites on Karewas, the placement of sites appears to have continued in the Valley of Kashmir, moving to other physical features such mounds or elevated surfaces on the valley floor. Many sites in Kashmir exhibit a similar phenomenon of structures built on high surface features. Beginning with Semthan, a multi-period site (c. 7th century BCE to c. 5th century CE) that has been largely excavated on a high plateau of Karewa soils and has a material culture profile of over 10 metres (IAR 1981: 69-70; Shali 1993: 109-112). Second, there is a Neolithic and Kushan site at Kanispora that is positioned on a mounded surface (Mani 2000), albeit it is unknown why these sites were placed there. Single-period sites like Harwan, Ushkar, and Parihaspora were constructed on low mounds, exposing their structures.

Locally known as Teng in Kashmir, the mounded landforms on which the sites were placed. Most of the sites on these Tengs are multi-period sites displaying Neolithic and Early Historic or Early Historic and Later Historic material culture; however, occasionally, a single site will appear (either early historic or later historic). It is difficult to pinpoint a specific cause, but it is possible that sites were situated on raised surfaces because low areas in the Valley were unsuitable due to higher water levels or because of the threat of flooding from rivers during the early and later historic periods.

It is evident that such behaviours were common during the prehistoric and early historic periods when considering this pattern of settling on natural mounds (Figure.19-21) and the lengthy periods of building and developing these sites into artificial mounds. This kind of settlement in the Valley could have been caused by inundated water in the valley bottoms. The findings also imply that several of these features were inhabited over the course of more than one consecutive chronological era, initially during the Neolithic then during the early historic era, and finally during the later historic era.

As we know Kashmir was once a sizable Lake drained via Baramulla around 85,000 years ago by the Jhelum and Pohru Rivers. Today's lakes like Wular, Manasbal, and Dal are regarded to be the Satisars, or remnants, of this sizable lake. On a mountaintop overlooking Manasbal Lake, Middle Palaeolithic material culture was discovered by Bandey's survey (2009). The Jhelum River is seen from the Neolithic site of Kanispora. Historic sites from the past and present have been found on or near the banks of the Jhelum River (Mitre 1983a;



Figure. 19: *Section of a Neolithic site exposed on a mound.*



Figure. 20: *Mouth of a Neolithic Pit and a pot shred in its section.*

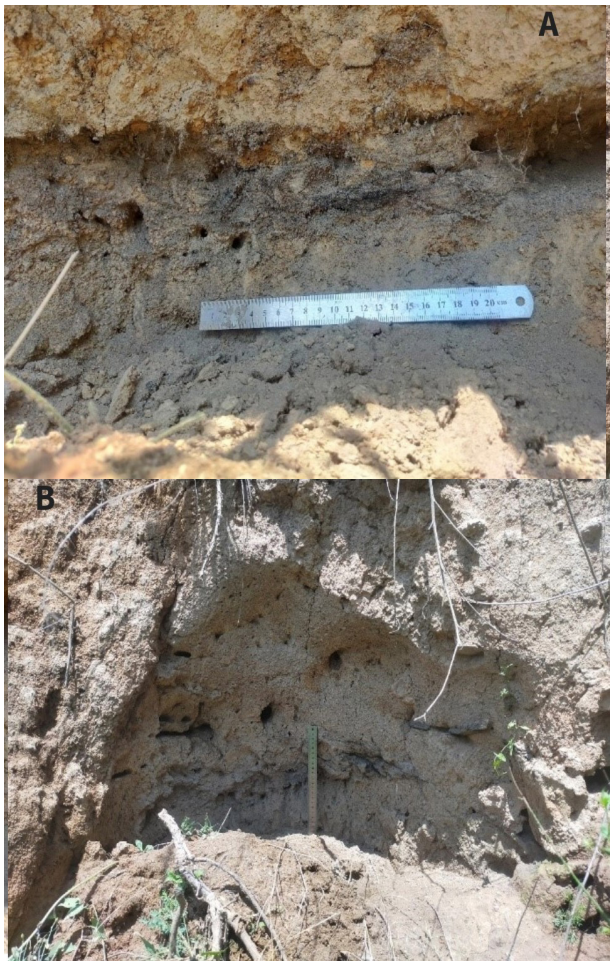


Figure. 21: *A: An Ash layer and B: A Pit at Qasimbagh Neolithic site.*

Shali 2001). In Kashmir, there are several instances of such places, including Semthan, Kanispora, Ushkar, Parihaspora, Tapar, and Avantipora. Sites from the eras of 800 BCE to 500 CE tended to be found near lakes and rivers or on raised plains, such as Semthan, according to Agrawal (1998: 74) and Shali (2001: 152). Most of the Neolithic sites identified so far are situated along River Jhelum and its tributaries.

Methodological Analysis of the Material Culture

A variety of material culture related to the sites was recovered during the fieldwork, and additional items were recorded in situ. The tools used in the material culture were bone, stone, and pottery. On several scales, this material culture was investigated. Pottery was examined to determine chronological dates, compare and contrast artefacts from sites that date from the same era but are located in different places, determine the scale of a site, and other factors. The analysis of bone tools and stone artefacts used similar techniques. The analysis of material culture revolves round the transition from Neolithic to Megalithic Period in Kashmir Valley, as described below.

Pottery is the most reported artefact retrieved from the surface and in context at these sites. The regional survey's core methodology, like many others, was the collection and analysis of pottery; understanding potential site interactions and functions by examining them inside or between the sites in an area is one of the other objectives (Meyer 2003: 14; Millett 2000: 54). Although the study's research issues were complex and intriguing, time and resources were limited and lack of scientific analysis in laboratories. As a result, the collection of all the pottery from the sites was prohibited by these limits, and the collection of only diagnostic shreds would have revealed only a limited amount of information regarding the representativeness of the pottery on the ground (Mattingly 2000: 8;

Meyer and Gregory 2003: 48). In order to strike a balance, a sufficient number of pottery shreds that varied in fabric (colour, texture, inclusions), surface treatment and ornamentation (slips, incisions, perforations, decorative designs), the body part of a vessel (rim, neck, shoulder, handle, body or base), and other factors were collected.

As pottery was recovered from almost all the sites, it was a key component of the study. In terms of its analysis, I concentrated on two key issues: typology and categorisation and possible chronology. Pottery analysis in connection to these concerns enables a clearer understanding of a site's purpose, its time of occupation, and relationships within and across sites, according to Carrete et al. (1995: 63), and Millett (2000: 53-54). Importantly, the relative age of the pottery with previously excavated or investigated sites in Kashmir, as well as the breadth of information in the form of prior datasets, were the foundations for the quality of dating the sites in the current research.

An important ignored aspect of analysis of Neolithic material culture is the overlooking of wood or wooden tools. Wood was readily available to Neolithic people in abundance. Even in present day life wood or wooden equipment play a significant role in every sphere, e.g., construction of houses, agricultural implements, etc. The usage of stone tools and the pottery production was difficult without the use of wooden equipment as hafts, making long handgrips of stone tools for effective usage, wooden hilt to a stone weapon for effective usage in hunting. The wooden sticks are still used by the cattle herders and shepherds to control their livestock while grazing. Therefore, ethnographic evidences also substantiate that wood was a part and parcel of Neolithic tool kit.

Typology and Categorisation

This method of categorising ceramics is based on detecting apparent similarities and different patterns. Sorting ceramic shreds or vessels into groups includes making sure that members of one group resemble one another more than they do members of other groups (Millett 2000: 54-55; Sinopoli 1991: 49). Although there is just a handful of Neolithic, early, and later historic sites in Kashmir that have documented ceramic typological information, these include Burzahom, Gufkral, Kanispora, Semthan, etc. (Agrawal 1998; Bandey 2009; Ghosh 1996; 1964; 1965; Mani 2000; Mitra 1984; Rao 1986; Shali 1993; Sharma 2000).

In order to observe the typologies existent at these sites and compare them with the published data, I returned to these locations. Therefore, a solid foundation was established for developing a new typological sequence of pottery using the published typological details from these sites, the published literature of excavated sites that provided the pottery dataset, and the new typological details obtained by visiting sites and their archives within the present research and by categorising shreds and being able to examine for similarities and variations in ceramics across the whole Valley.

Along with typology, the categorisation of pottery offered a complex analytical tool for identifying and classifying potteries in regions without local typologies. Since the Neolithic group already had a comprehensive understanding of hierarchical systems for classifying pottery into broad groupings like coarse, fine, and burnished ware, classification was clearer. The primary criteria for classification were the raw materials, clays, tempers, and embellishments utilised in a vessel (Blakely and Bennett 1989: 6-7). As a result, I divided the ceramics into more or less distinct groups based on how similar and different the physical and material appearances were.

In order to propose a relative date for such finds, and by extension sites or portions of sites, I analysed lithic material culture by classifying them according to their morphology and compared lithic tools reported from excavated sites in Kashmir with lithic assemblage found during the fresh survey on the basis of their typology, possible function, and manufacturing technology. Following morphological analysis of lithic artefacts, comparisons were made to comprehend and maybe even provide relative ages. This study and comparison procedure published artefacts with radiometric dates from the excavated and studied sites of Burzahom, Gufkral, Kanispora (Bandey 2009; Ghosh 1996; 1964: 136; 1965; 1969; Mani 2000; Mitra 1984; Shali 1993; Sharma 2000).

Pottery

The pottery from all the Neolithic sites is categorised into four types: gritty ware, burnished ware, fine ware, and coarse ware (Figures. 22-29). These four items are regarded as the diagnostic items from Kashmir's Neolithic era (Bandey 2009: 122-131; Ghosh 1964: 19; Mani 2000: 1-28; 2008: 234; Mitra 1984: 22-23; Sharma 1982b). Among the four types of pottery, coarse ware (sometimes referred to as rippled rim pottery) stands out for

its use of black and grey colours, pedestal and ring bases, and surface ornamentation of wavy lines or dots. Due to surface striations, fine ware—also known as combed grey ware—has been discovered in two colours: grey and buff. The mat or basket imprint that can be seen on the base of most instances serves as its distinctive design feature. Burnished pottery also comes in two shades of black and steel grey has a pedestal and flat bases, and has carved triangle motifs on the stem and rim region of the pots. Gritty porcelain is available in red and buff tones, and many specimens have pedestal bases without any decoration.

The earliest and only excavated Neolithic sites where these four ceramic styles were discovered are Burzahom, Gufkral, and, Kanispora. During later expeditions to determine the distribution of the Neolithic material culture in Kashmir, these four ceramic types were also documented from several locations in Kashmir (Bandey 2003a, b; Joshi 1990: 34; Mitra 1984: 16-17; Pant *et al.* 1982: 38; Yatoo 2012). The descriptions of these pottery types gave the relative age range of each form of pottery in Kashmir by Saar (1992) and Pant *et al*. (1982) and the interpretation of these descriptions by Bandey (2009: 121–135). According to their estimates, gritty red or buff pottery first occurred between 1700 and 1000 BCE, followed by burnished ware between 2000 and 1700 BCE, and coarse grey and fine grey ware between 2000 and 1700 BCE.

Coarse grey ware comprises spherical cooking pots with pedestal or flat bases, rippling rims, and basins among the shapes that were examined (and some chosen pieces were drawn) from the four ceramic kinds. Bowls, jars, and spherical-bodied pots with, out-turned collars and rippling rims have all been identified as examples of fine grey pottery. Burnished grey or buff ware was made in the shapes of high-necked jars with flaring rims, globular bodies, flat bases, bowls with or without stands, dishes on stands, spherical pots, and vases and miniature pots. Gritty red or buff porcelain has been identified as pedestal-based bowls and tiny miniature pots. Once more, these forms match those described in the four ceramic types from Burzahom, Gufkral, and Kanispora.

During the field survey the pottery types reported include hand-made grey ware of different shades like dull red, brown and buff were represented by bowls, vases and stems. Mat impressions are a recurrent feature on many types especially on pots having a flat base indicating their production on mats. Varieties of fine pottery represented by bowls, globular pots, jars, stems, and funnel shaped vessels have been found. In addition, dishes with hollow stand, stems with triangular perforations and high-necked jar with a flaring rim, globular body and flat base, which was deluxe ware of the period. The pottery was made through coiling technique.

From some of the unexcavated Neolithic sites, hand-made pottery comprised mostly coarse grey with small number of dull rough red ware, black burnished ware, with knobbed designs was found. The shapes represented are big jars, bowls, vases, and basins, dishes on stand with mat impressed bases, pinched designs, and reed impressions, oblique designs with rough interior and exterior surfaces. Neolithic period, pottery consisted of grey ware, burnished grey ware, wheel turned black burnished ware and a few red gritty ware shreds were found. The shapes continued with an addition of funnel shaped vases and high-necked jars with flaring rim, globular body and flat base. Decorations include mat and cord impressed bases, reed and straw impressions, pinched and oblique designs on the neck region etc. Few pot shreds are characterized by graffiti marks.



Figure. 22*: Handmade Coarse grey ware and combed ware pot shreds from unexcavated Sites.*



Figure. 23: *Coard impressed, incised and circle designed Neolithic pottery.*



Figure. 24: *A: Coarse ware, B: Combed ware, C: pinched Neck, D: Handmade, E & F: Mat impressed base.*



Figure. 25: *A: Handmade, Coarse and Gritty Wares and B: Shreds with perforations and graffiti.*



Figure. 26: *Fine grey ware pot shreds from unexcavated Neolithic sites.*



Figure. 27: *A broken pot in Section and same pot after cleaning.*



Figure. 28: *Neolithic Mat impressed bases from various Neolithic Sites.*

Similar forms of pottery have been found at Swat in Pakistan's Kalako-deray (Period III, 1505 BCE), Loebanr III, and Ghalegay, according to Stacul (1976: 17–24; 1977: 251; 1987: 45–48; 1993: 71–78). Using similarities in mat-impressed bases and the plastic ornamentation on the vessel body portions, he linked two of the four ceramic types—fine grey ware and burnished ware—to those of the Neolithic Burzahom in Kashmir (Stacul



Figure. 29: *Plain buttoned bases from Neolithic sites.*

1976; 1977; 1997: 48). Stacul discovered parallels between the forms of the fine ware he refers to as gritty brown ware and burnished ware, including jars, hemispherical bowls, and bowls-on-stand with rippling rims and mat imprinted bottoms (Stacul 1993: 78). Additional parallels between the tiny pots discovered at sites various sites and those discovered at Kalako-deray (Stacul 1995: 111, 124) and Aligrama (Stacul and Tusa 1975: 314) in Swat, Pakistan, may be detected. Additionally, in the current survey from the Baramulla District, beautifully carved holes (perforation) on fine porcelain pot-shreds were seen. Similar kinds were also identified at Burzahom. In the past, only Burzahom-made stone or bone implements, such as mace heads and harvesters (both stone and bone), had such holes. However, Burzahom and Gufkral are known for their perforated ceramics and during this study perforated bone and stone tools were retrieved from unexcavated sites also.

Description of Various Pottery Types Retrieved from Various Neolithic Sites of Kashmir Valley

Four main categories of pottery were recognised during the field survey: coarse grey ware, burnished grey ware, gritty dull-red ware and fine grey ware, and. When hit, fine grey ware makes a ringing sound and has a fine texture, colour, thin section, and light weight. Preparation is dominated by strip method.

A brief description and drawings of most common pottery types collected as surface finds and in the sections is given as under:

Most of the pottery made of coarse grey clay is mat-impressed, with a few small exceptions made for fine grey and rough red ware. The pottery is handcrafted and improperly baked; it is

produced with coil method for creating pots and strip technique for appliqué. The decorations are distinct and not smudged, which suggests that the pottery was turned on a turntable. The majority of the pottery is poorly baked and handcrafted, with no distinction between strip and coil styles.

Darkish grey spots are on the surfaces of coarse grey pottery (1 to 10 in Figure. 30), suggest indifferent firing or reduction conditions. Coarse grey ware is consistently fired to dull grey or dark grey. Gritty red pottery is dull brown, while fine grey pottery is drab or ashy grey. The predominant form has irregular cracks caused by coarse sand grains and is a coarse grey ware. The paste is made up of particles of quartz, gritty sand, and crushed rock. Quartz and thicker grit are frequently used in the tempering process for large storage pots.

Fine grey ware (13, 14, and 15) has a finer, less porous matrix and thin to medium ceramic thickness. It is consistently burnt to an ashy grey or dull grey colour. Sand, crushed rock, and quartz grains make up the majority of the paste's ingredients. (11 and 12) Gritty red pottery has a rougher, porous matrix and is light brown in colour.

The three main utensils come in the following shapes: *matha* (matka), *noat* (ghara), *deg* (handi), *tsoad* (smaller pitcher), *voar* (lota), *pyala* (bowl), and *dulla* (deep basin). The *matha* kinds of Figures 1, 2, 3, 5, and 15 are contrasted with the *tsoad* types of Figures 4, 6, 7, 8, and 9.

The ceramic has subtle decorations but no noticeable surface treatment. Rims are occasionally be lightly pinched or squeezed at predetermined intervals to create a theme. In other situations, softer pinching is more typical. The outside surface of the rim is the only place where ornamental motifs may be found. One instance involves the external application of a second band beneath the rim, with the shoulder grooved and pinched at regular intervals to create a pattern of projections and depressions.

Weed, reed, and rush brushing is a surface treatment for pots. An incised pattern is created by the thorough brushing, which is deepest in number 2. With the exception of the *dulla* type (no. 26), which has obliquely horizontal brushing, most pot types have either vertical or oblique brushing.

Four different brushing techniques are noticed, with imprints that vary in width and depth from wider and deeper to narrower and more spaced. In the shorter sweeps, the lines are appropriately spaced, while in the larger sweeps, the lines are frequently put tightly together. In the thinner ones, the imprints are thin, and it could take some help for the eye to recognise the pattern. Inner surfaces exhibit oblique or horizontal brushing, frequently in an uneven and disorganised manner. Sometimes there isn't any brushing at all.

One distinguishing characteristic that shows various weaving patterns is the mat imprint on pot bottoms. It seems like turntable movement was used to shape and dry the pots on mats. Chevron, horizontal and vertical strip combinations, cross-wise patterning, and horizontal and vertical strip patterns are among the available patterns. These patterns offer stimulating areas for further research.

Figure 30, item No. 1. A specimen of coarse grey pottery with a thick core that shows sand and crushed rock material with a concave neck and curving rim. The surface has a dull grey colour with the mouth and neck form of a Kashmiri *matha*. There is a pinched decoration design below the rim, and the centre is somewhat unoxidized Smokey grey.

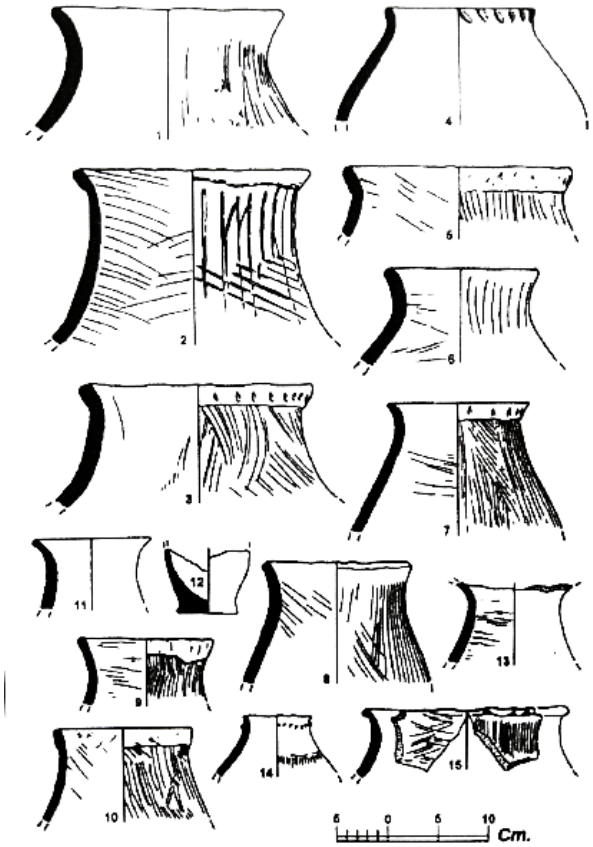


Figure. 30: *Illustrations of various Neolithic pottery types.*

Item No. 2. An appliqué band creates a curving, outwardly thickened rim on a piece of coarse grey pottery, displaying a decorative design. The clay is just somewhat gritty, and the neck is lengthy. With oblique horizontal brushing in the bottom section and deep outside brushing in the upper part, the surface has a dull grey colour. The long neck and additional characteristics point to a Kashmiri *matha* type—which is utilised in communities to store grain.

Item No. 3. Crushed rock, gritty sand, quartz inclusions, and a curving rim with a Smokey grey centre are characteristics of a coarse grey ware fragment. The shape of the mouth and neck is similar to a Kashmiri *matha* type. The rim is gently pinched and features a pattern of depressions and protrusions. An uneven internal brushing is seen on the periphery.

Item No.4. A shard of coarse grey ware with a smooth rim point to a Kashmiri *deg* type vase. There are protrusions and depressions on the rim due to frequent pinching or pressing. Crushed rock particles and an unoxidized, Smokey grey core make up the core. The surfaces have a drab, dark grey colour with faint indications of oblique and vertical brushing. There is no brushing on the interior surface.

Item No. 5. A shard of coarse grey pottery with an uneven pattern and an out-curved rim suggests it is of the Kashmiri *matha* type. The surface is dull grey, and the rim has been gently squeezed or pinched on the outside. A crooked design is created by brushing the inner surface.

Item No.6. A shard of coarse grey ware with a curved rim indicates that it is similar to Kashmiri *noat*, with a thick core composed of quartz, grit, and sand. The inside surface is dark grey, and the outside is drab grey. There is horizontal brushing on the inside surface and gentle brushing on the outside surface.

Item No. 7. A long-necked vase with a smooth, curving rim on a piece of coarse grey pottery suggests it is a Kashmiri *tsoad* type. Grit, sand, and quartz grains make up the core. The exterior brushing is done with care, both vertically and horizontally, creating an uneven pattern that complements the irregular design of the rim.

Item No. 8. A fragment of coarse grey pottery with a curving rim adorned with a delicately pinched outer rim. A Kashmiri *tsoad* type is suggested by the shape of the mouth and neck. There is vertical brushing, dark grey surfaces, and an unoxidized, smoky grey core with grit and sand.

Item No. 9. A shard of coarse grey ware with soft pinching and a curved rim, points to a Kashmiri *tsoad* type. There is a dull grey exterior and a dark grey interior. The piece of fabric is medium in texture and has some oblique and vertical brushing.

Item No. 10. A piece of coarse grey pottery with a long neck and a slightly curved rim points to a Kashmiri *tsoad* type. There is a dark brown portion on the inside and a dull grey outside. The fragment is medium-weight cloth with a core of quartz and sand that is unoxidized and Smokey grey.

Item No. 11. A gritty red ware fragment with a flared rim and longer neck, suggesting a Kashmiri *voar* type. The fragment is coarse fabric with thick grit, sand, and quartz core. Decorative features are missing. External brushing with soft, pointed light material is indicated by thin horizontal lines in the upper neck.

Item No. 12. A damaged bowl fragment in rough red ware with dull brown surfaces, no brushing, and a thin, coarse fabric core with grit and coarse sand tapering to a thick disc base.

Item No. 13. A fine grey ware fragment with a flaring mouth suggests a Kashmiri *voar* type. The outer surface is ashy grey, while the inner one is dull grey. The core is unoxidized, smoky grey, and less tempering is evident. The outer brushing is vertical and unevenly spaced.

Item No. 14. This fragment of exquisite grey pottery has a narrow, curving rim, a grooved shoulder, and a shape resembling a Kashmiri *voar* (lota). The inside is dull grey, while the outside is ashy grey. The inside surface is rough and lacks brushing, while the exterior surface has an appliqué band with a beaded motif.

Item No. 15. A fine grey ware fragment features a curved rim, a Kashmiri *matha*-type mouth and neck, and ashy grey surfaces. The vase is made of fine clay with limited tempering, with vertical, relatively fine external brushing and haphazard internal brushing.

Figure 31, Item Nos. 16 – 24. These are broken pieces of coarse grey pottery vases, mostly the bases. The majority of the vessels have thick or medium-thick bodies, with sides that taper to disc bases. Cores show heavy grit, sparsely pulverised rock, coarse sand, and occasionally little quartz fragments found as filler. No. 20's inner surfaces are rough. Nos. 17 and 19 have dark grey surfaces.

There are signs of brushing in nos. 16, 19, 21, 23, and 24; they are primarily obliquely horizontal. It is highly noticeable in numbers 16 and 19, giving the appearance of an engraved pattern. The lines in number 24 are quite thin. The impressions of different patterns left by these shards collectively have a specific meaning that influences the weaving techniques and patterns of matting.

Item No. 25. A broken, coarse grey ware vase with a deep bowl-like outline, thick sides, and a mat impression on the base, with no brushing visible, is found in its lower portion.

Item No. 26. A coarse grey ware fragment features a thickened rim with an irregular pattern. The surface is dark grey, with a core of thick grit and sand. The outline suggests a Kashmiri dulla type, with horizontal and oblique brushing. *Dulla* type pots are common and useful during religious ceremonies.

Item No 27. A broken fragment of a coarse grey ware vase with a thickened rim, dull grey exterior and brown inner surface, larger than no. 26, indicates significant tempering. Outer surface bears lines due to oblique horizontal brushing.

Item No. 27a. A coarse grey ware variant with a slightly curved rim, coarse body surface, and unoxidized smoky grey core with grit content. Inner surface is rough, outer surface has haphazard brushing.

In figure 32, the illustrations represent the various types handmade basins from various unexcavated Neolithic sites of Kashmir valley. The shapes include 1. Convex sided bowl, 2. Convex sided bowel with pedestaled ring base, 3 – 4. Shallow basin, 5. Shallow basin with straight base, 6. deep bowl with tapering straight sides and straight base, 7. deep convex sided bowl and base having mat impression, 8. bowl with straight sides and base having ledge, 9. bowl with straight base carrying mat impression.

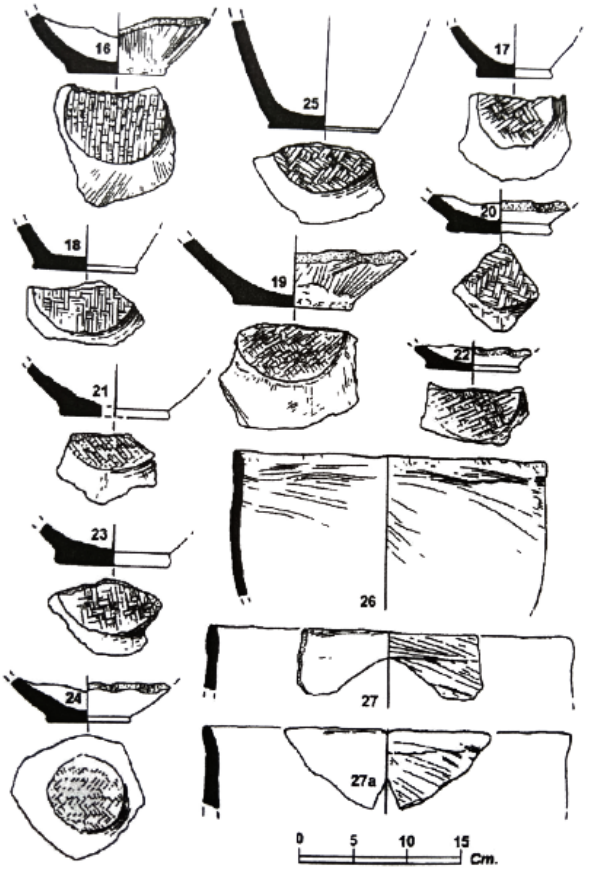


Figure. 31: *Illustrations of various Neolithic pottery types.*

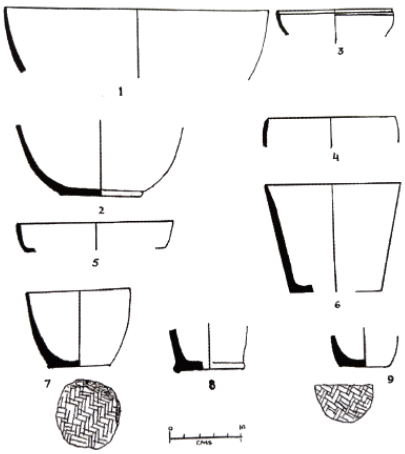


Figure. 32: *Handmade bowls and basins.*

Relative Chronology of the Neolithic Pottery from Unexcavated Sites

The development of pottery in the Kashmir Valley is indicative of larger Neolithic patterns in South and Central Asia, where the emergence of permanent agricultural settlements, social stratification, and trade networks are correlated with a growing complexity in ceramic shapes and ornamentation. The variety of pottery types found in the area suggests a wide range of practical purposes, demonstrating the complexity of Neolithic culture in the area.

Based on archaeological investigations at important sites like Burzahom, Gufkral, and Kanispur where strata of habitation offer a history of cultural evolution, the chronology and type of Neolithic pottery in Kashmir. Archaeologists can learn more about the technical, economic, and social

elements of Neolithic life in the Kashmir Valley because to the extensive collections of pottery that have been found at these sites.

It's crucial to remember that the precise dates and stages of these ceramic types may change in light of fresh archaeological finds and improvements in dating methods. By dividing pottery into these groups, we can create a relative chronology of Neolithic Kashmir, which advances our knowledge of the ancient history of the area. The primary pottery types retrieved from the unexcavated Neolithic Sites include the coarse grey ware having medium to thick fabric, fine grey ware, gritty dull-red ware, and burnished grey ware. These are the diagnostic wares that were reported from Burzahom and Gufkral excavated Neolithic sites. Therefore, the comparative study of the pottery types from excavated and some important unexcavated Neolithic sites with visible archaeological potential, show similarity. The chronology of Neolithic pottery from excavated sites is given in table 2:

Coarse Ware (3000 – 2500 BCE, (Bandey 2009): All throughout the Neolithic era. These pots, which are made from readily accessible local clays, are frequently left plain or very slightly ornamented. They are probably employed for common household tasks like cooking and storing since they are usually thick-walled and rough-textured.

Burnished Ware (2500 – 1700 BCE, (Bandey 2009): Initially seen in the Late Early Neolithic, it becomes increasingly prevalent in the Mature Neolithic. Because the pot is burnished before it is burnt , these pots are renowned for having bright, smooth surfaces. Burnished ware suggests an evolution in the methods of creating pottery as well as a potential shift in social mores because these more decorative vessels may have been employed for ritual or meal service.

Gritted Dull Red Ware (2500 – 1700 BCE, (Bandey 2009): Mostly in the Early to Mature Neolithic for the Gritty Dull Red Ware. Grit and clay are used to create this kind of pottery, which adds strength. Low temperatures are typically used during firing, giving it a dark red colour . These pots appear to have been practical, used for everyday duties based on their drab sheen and grainy texture.

Fine Grey Ware (1700 – 1000 BCE, (Bandey 2009): The Fine Grey Ware was more prevalent from the Late Neolithic to the Transitional period. Fine Grey Ware, which has thin walls, fine texture, and a grey tint produced by carefully regulated fire conditions, is an example of technological improvement in pottery production. These bowls are occasionally adorned and frequently have a polished surface, suggesting that they are used in more specialized settings, maybe even ceremonial ones.

Stone Tools

During the survey of the unexcavated Neolithic sites, grounded Celts (Figure. 33), Three ponders and a broken piece of saddle quern (Figure. 34), Two sling balls and broken pieces of ground stone tools (Figure. 35), a ring stone and a broken celt and stones mace heads (Figure. 36), were recovered from various unexcavted Neolithic sites. Panjal trap, a kind of volcanic rock frequently found in Kashmir, is used to make the majority of these tools; samples have been found in both Burzahom and Gufkral (Ghosh 1964: 21; 1969: 13; 1996: 11; Lal 1971: 10; Mitra 1984: 20; Sharma 1982a; 2000).

During the field survey ten polished stone Celts were retrieved as surface finds. The length measurements of the Celts are 16 cm, 14 cm, 18 cm, 16 cm, 15 cm, 14 cm, 24 cm and three are broken. In addition three ponders measuring 8.5 cm, 17 cm, and one is broken with two sling balls were also reported. Two mace heads with perforations were also collected as surface finds during the survey. All these stone tools are identity markers of Neolithic culture in Kashmir valley. Three stone with depressions were also photographed near the sites seems saddle querns (Figure. 37).

Table. 2: *Relative Chronology of the Neolithic Pottery of Kashmir*

Neolithic Period I (3000 – 2500 BCE)	Handmade thick course grey ware	Handmade Burnished grey ware	Handmade gritty dull red ware	Handmade fine grey ware
Neolithic Period IIA (2500 – 1700 BCE)	Handmade Black burnished ware	Wheel-made Burnished dull grey ware	Wheel-made Burnished grey ware	-
Neolithic Period IIB (1700 – 1000 BCE)	Wheel made dull red ware	Gritty red ware with shades of bright red and light grey	Fine Grey Ware	-



Figure. 33: *Neolithic Celts.*

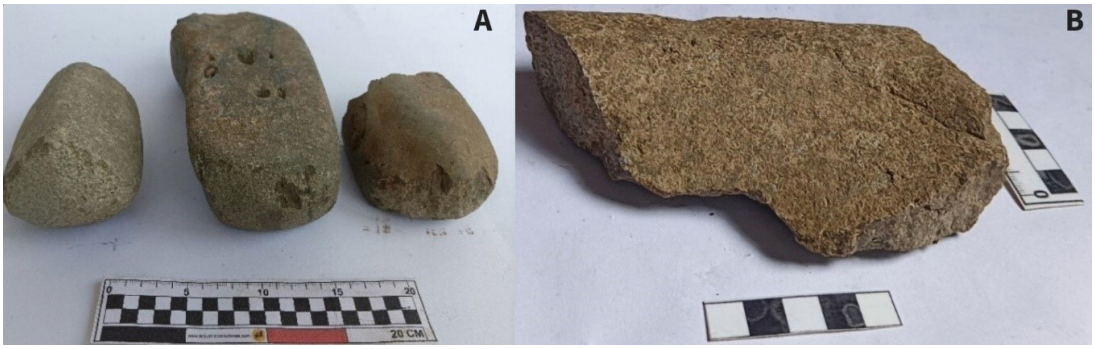


Figure. 34. *A: Three ponders and B: A broken saddle quern.*

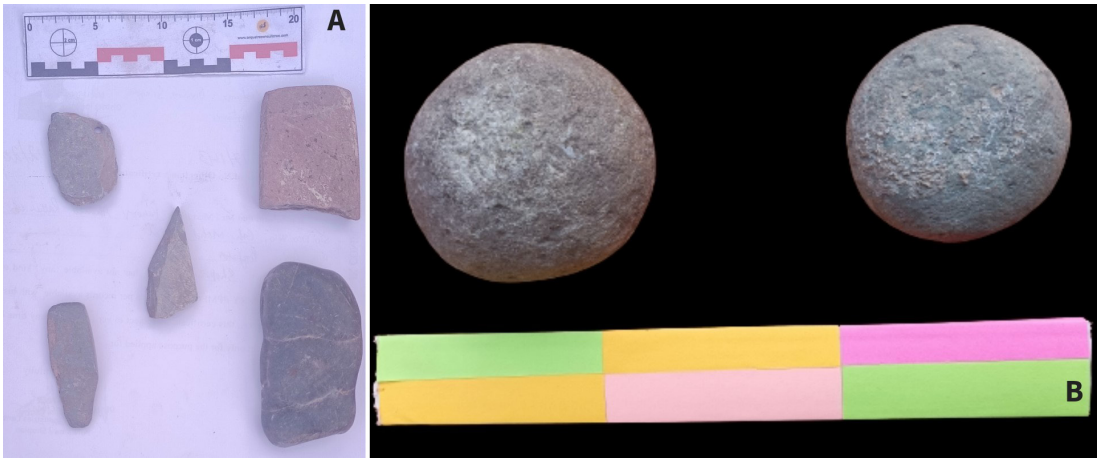


Figure. 35: *A: Pieces of used stone tools and B: Sling balls.*



Figure. 36: *A: A mace head and a broken celt and B: Ring stones.*



Figure. 37: *Saddle querns.*

Khazanchi proposed that the stone tools of Burzahom are typologically distinct from those discovered in the Indian plains and southern Neolithic when analysing them (Gosh 1964: 21). Some of these instruments, such harvesters, sling balls, and Celts, have analogues in Swat and Sarai Khola in Pakistan (Stacul 1994: 235-237). There have been reports of stone harvesters in Kashmir's Burzahom and Gufkral with nicely carved holes (Ghosh 1964: 21; Mitra 1984: 23). A rectangular bone harvester with two holes in the middle of the butt was found during the current survey.

At Kalako-deray in Swat, Stacul (1993: 89) identified 10 identical implements for the first time and called them rectangular/oval sickles. Stacul classified these items as harvesting tools after analysing them in comparison to prior descriptions and presentations of related artefacts (Anderson 1943; Chang 1963; Thapar, 1985; and Watson 1970; cf. Stacul 1980). According to Stacul (1980: 74), this indicates that China had an influence on Kashmir and Pakistan throughout the second millennium BCE. Stacul saw the harvesters of Burzahom as a diagnostic artefact of the Northern China Neolithic Culture (Yangshao and Longshan civilisations), referring to the studies of Thapar (1965) and Gupta (1979). (Stacul 1980). The identification of typological resemblances and interpretations of the uses of these artefacts from the recent survey with those from other Neolithic sites in Kashmir and northern areas like Pakistan and China.

Bone Tools

The unexcavated Neolithic sites provide a good selection of bone tools. They were likely utilised extensively in a variety of tasks, including fighting, hunting, skinning, sewing, knitting, and weaving, drilling, cutting, and sawing, according to their form, size, and number. The available bone tool types are described and shown in this part of the paper as under:

Double Pointed Bone Tool and an Arrowhead

A 14.5mm bone tool with two sided points and a 5.4 x 3.2 mm bone arrow-head was retrieved during the survey at Qasimbagh Neolithic site (Figure. 38).



Figure. 38: *Double pointed bone tool and a bone arrow head from Qasimbagh Neolithic site.*

Perforated Knife or Harvester and Dagger Type Single Edged Perforated Long Points

Rectangular in shape with two holes that are 20 mm apart and appropriately perforated from both sides immediately below the non-cutting edge. With an inner diameter of around 5 mm and an exterior diameter of approximately 8 mm, both holes are virtually identical and equally spaced from the lateral borders. Its craftsmanship is excellent, and the surfaces are quite smooth and slightly shiny. The edge is straight, sharp, and slightly nicked throughout after being secured by bevelling—dimensions: 100 mm, 46 mm, and 8 mm. Six broken bone needles are also from the surface collections (Figure. 39).

Two bone tools are made from metapodial bones that have been longitudinally divided by grooving along the vertical axis while keeping strong proximal ends for butts or handles. These are complete in every way and made by removing the butt, or an articular surface, from the proximal

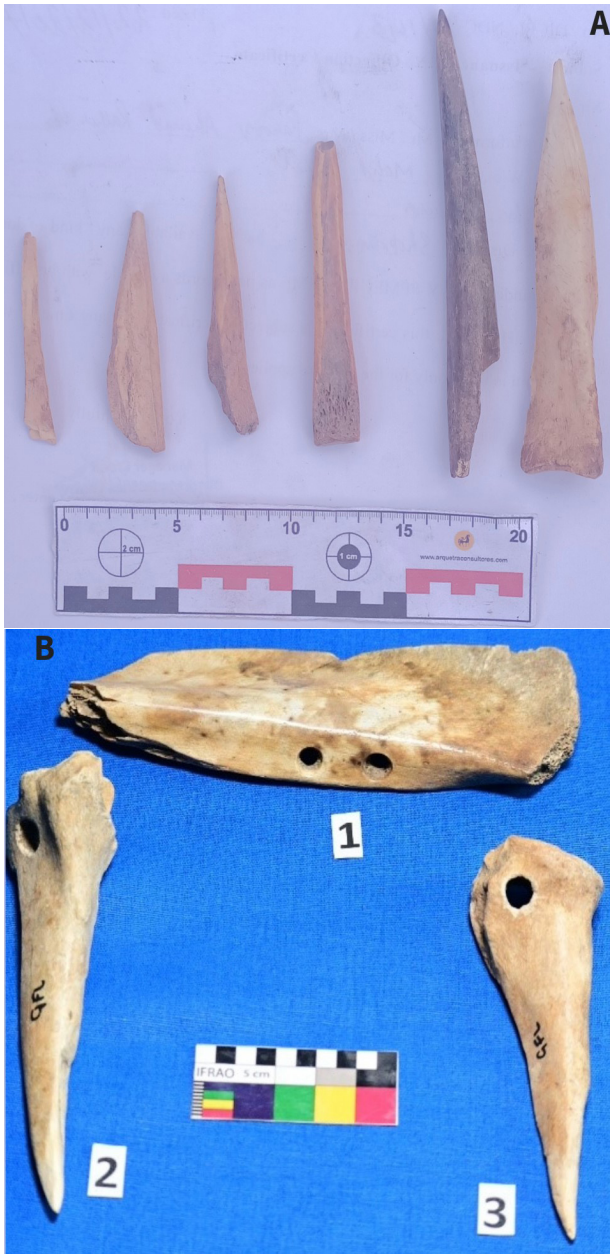


Figure. 39: *A: Broken bone needles and B: A perforated knife/ harvester (1) and bone points (2&3).*

end of a meta-podial bone that has been divided longitudinally. There is a butt end. The shaft has been smoothed by grinding and is well-dressed and formed. The surfaces are shiny. Usage may be how certain exposed surface areas acquired their high shine. Maximum craftsmanship is limited to the bottom, oval to rounded, totally rounded cross-section of the instrument, which is 34 mm above the tip. This component has been honed and polished to create a long, sharp point. The shaft's edges are rather sharp and incisive as they taper towards the pointed tip. The marrow cavity is hollow and the area above the midpoint may be seen from the tool's interior side as concavo-convex. Near the butt end, the median sulcus is visible. 160 mm is the length.

Another one is complete, and the shaft is crudely dressed, with sides that taper off unevenly from the butt end up to the rounded bottom half of the shaft before abruptly creating a point at the tip around 10 mm long and thin. Due to usage, there are evident signs of glossiness. The length as of now is 156 and 160 mm is the anticipated length. Six broken polished points and needles were also collected during the survey (Figure. 40 (item no. 2-3).

A Spatula and an Antler

A spatula measuring 14.4 cm long was retrieved in the sections of the unexcavated Neolithic sites during the survey A polished antler with visible signs of usage was found during the field survey. It is 16.4 cm long, 3.34 cm thick at the top and 1.83 cm thick at the tip. An unfinished bone tool with prominent original bone features with very meagre changes was also found (Figure. 40). A good number of bone fragments, including a jaw, tibia and fibula of sheep, were also reported (Figure. 41)

Terracotta

In the current study, a site yielded the lone example of what may have been a terracotta disc

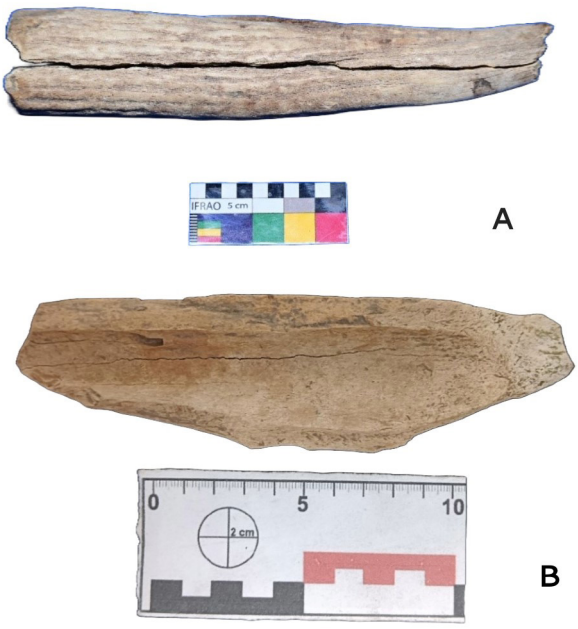


Figure. 40: *A: An antelar and B: A spechula.*

with a mat impression. Additionally, a site revealed clay pieces that might have been used in plastering the walls of caves or wattles and Doubs (Figure. 42).



Figure. 41: *Bone pieces from the Neolithic Sites found in Sections.*



Figure. 42: *A: A Circular Terracotta Disc with Mat Impressions and B: Clay Pieces used for Plastering Dwelling Structures.*

Discussion

The "Neolithic to Megalithic transition" was more about changes in how people interacted with and understood the environment than it was about a transformation from one archaeologically created social totality or institution to another. In an effort to deconstruct the transitory or transient hunter-gatherer: permanent or semisedentary (proto) agriculturist scenario to the erection of the menhirs, this style of approach rejects the dualist interpretations.

Instead of seeing new forms of architecture, habitats, transformations of plants and animals, and other things, as the result of historical and material conditions that people understood, lived in and through, and reworked as they went about their daily lives within these landscapes over time, the interpretive challenge now becomes how to view the social strategies of sedentism, and of plant and animal domestication to the beginning of Megalithic period.

Pottery was seen and gathered from all surveyed sixty-eight Neolithic sites in the Valley, among other types of material culture. According to Bandey (2009: 122-133) and Yatoo's (2012) new interpretation of Burzahom (Ghosh 1964: 19) and Gufkral material (Mitra 1984: 20–23), the pottery was divided into four types. All the sites produced coarse and burnished goods, however some of the sites produced fine and gritty red pottery. And at various neolithic settlements little burnished ware pot shreds and ring bases were discovered. Additionally, burnished ware ceramics from a single site included graffiti marks.

Stone tools were also discovered and gathered from the few locations in a similar manner. Six different kinds of tools were seen in total, and most sites had more than one kind of tool category. For instance, five locations included more than one type of tools, but just one (celt) was present at a single site. Pounders, grounded celts, mace heads, harvester, or Knife, muller, and sling balls were also found at the sites under survey. At few locations, wattle and daub plaster fragments were seen and gathered together with pottery and stone implements. A terracotta disc with mat impressions and were also discovered.

Within the context of Kashmir, South Asia, and Central Asia, this study has provided interpretations of the material culture, settlement pattern, and contacts during the Neolithic Period. Some significant interpretations were proposed through rigorous analyses of landscape elements and material culture both inside and outside Kashmir. Neolithic material culture was described as being as diverse and unique as that discovered at the important sites in Kashmir, and it was also highlighted that this material culture had similarities with cultures outside of Kashmir in South and Central Asia. Neolithic sites in Kashmir Valley appear to have shared characteristics with important sites in Kashmir in terms of material culture and some unique traits in terms of settlement information and artefacts.

Kashmir has a diverse terrain with several geophysical elements. Most of the Neolithic sites were discovered inhabiting terrain types such as Karewas and mounds. Some intriguing patterns hint that these features may have been purposefully picked for colonisation at various times throughout prehistory. The Neolithic sites identified through the material culture are located along the radius of water bodies, particularly near to the river Jhelum and its tributaries. The theme requires further archaeological and scientific study of the landscape, settlement pattern and material culture and excavation of more sites.

While we shall extensively explore the dynamics of Neolithic and Megalithic cultures of Kashmir valley taking into account factors such as continuity, transition, change, similarity and difference, it is also crucial to note that these cultures may have existed in isolation. The archaeology of Kashmir valley in South and Central Asia has always affected and been impacted by its neighbours and commercial partners from afar. Understanding themes of cultural diffusion and indigenous development is crucial since these two fundamental issues of continuity, transition and change dominate debates of archaeological explanation in Kashmir archaeology. Although archaeological research in Kashmir valley has progressed far beyond the simplistic models. However, early interpretations of only excavated sites and artefacts from Burzahom, Gufkral and Kanispur had a significant impact on the growth of archaeological explanation. We will examine this influence, as well as other archaeological discussions, in the light of landscape, settlement pattern and material culture from unexcavated sites of the valley.

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