Chapter II

THE PREHISTORIC CULTURES

The antiquity, history, and development of the prehistoric man through time is universally traced with the help of the reminiscences of the material culture, human fossils and contemporary primates. The material culture, in the beginning of human history, mainly consisted of stone tools which were made and used by man over the years gone by. With the culture in itself is the patterned behaviour (mental and physical) that individuals learn, are taught and practice in the course of their development and maturation within the social groups to which they belong, M. K. Nickels, D. E. Hunter and P. Whitten, The Study of Physical Anthropology and Archaeology, London, 1979, p. 264. As such by Prehistoric culture we mean to study the material culture, i.e. materials fashioned and used by man, of the past human cultures for which literary records or even verbal traditions do not exist for the understanding of the culture of human societies belonging to the Stone Age.

Stone is an inorganic material and thus imperishable and the tools made of it have survived over the years while as perishable organic material like wood, bone etc. if used as tools or for tool making in the beginning of prehistoric culture have not survived.

David Pilbeam and Elwyn Simons believe that the Miocene Ramapithecus population may have been (unfabricated) tool-using animals, ‘Some problems of Hominoid classification’, American Scientists, Vol. 53, 1965, pp...
manufacture and use of these stone tools there came into existence an archaeological age termed as Palaeolithic period. This, on the basis of shape, size and mode of manufacture of the tools, is divided into three successive periods as Lower Palaeolithic, Middle Palaeolithic and Upper Palaeolithic. During each of these archaeological periods a particular human species remained involved in the processing and use of the types of tools, as in the given table I.

98-120; to which L S B Leakey further added the evidence that this population broke open marrow bones, 'Bone smashing by Late Miocene Homonidae', Nature, Vol. 218, 1968, pp. 528-30. But the earliest record of fabricated stone tools of about 2.4 MY B.P. was found by Mary Leakey which were associated with first human primate – Homo habilis in stratified layers at Olduvai in Africa, Richard Leakey and Roger Lewin, Origins, New York, 1977, pp. 85-103; which subsequently evolved with the development of Homo species.

Palaeolithic Age, earlier called Stone Age, is the longest stage in the cultural evolution of man, dated from about 2.4 MY B.P. to about 9000 B.C. during which period varied types of stone tools were made but never ground to give them an even surfaces, M. K. Nickels, et al, Anthropology and Archaeology, pp. 234-64.

Lower Palaeolithic industry, the earliest in the sequence is characterised by hand axes, cleavers, and chopping tools, F. Bordes, The Old Stone Age, London, 1968.

Middle Palaeolithic assemblage contains all the above types but comparatively are smaller in size and have even-working edges. The characteristic types are based upon flakes struck from cores, mostly prepared for the purpose, Ibid.

Upper Palaeolithic tool types are lighter with characteristic types of blades and burins, Ibid.
Table 1: showing Archaeological/Hominid chronology

<table>
<thead>
<tr>
<th>Years BP x 1000</th>
<th>Geology</th>
<th>Archaeology</th>
<th>Homo species</th>
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<tr>
<td>7</td>
<td></td>
<td>Neolithic</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Holocene</td>
<td>Mesolithic</td>
<td>Home sapiens</td>
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<tr>
<td>40</td>
<td></td>
<td>Upper Palaeolithic</td>
<td>Neanderthals</td>
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<tr>
<td>80</td>
<td></td>
<td>Middle Palaeolithic</td>
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<tr>
<td></td>
<td>Upper Pliocene</td>
<td></td>
<td>Home erectus</td>
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<tr>
<td>8.00</td>
<td>Middle Pliocene</td>
<td></td>
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<tr>
<td>1.000</td>
<td>Lower Pliocene</td>
<td>Lower Palaeolithic</td>
<td>Homo habilis</td>
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<td>2.000</td>
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<tr>
<td>2.500</td>
<td>Upper Pliocene</td>
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As the fossil record of man himself is found very rarely, it is the discovery of stone tools which mainly facilitates the study of the existence and development of human cultures throughout various geographical regions of the world.\(^6\)

\(^6\) Australopithecine fossil remains, to whom *Homo habilis* belongs, was concentrated mainly in Africa. *Homo erectus* who followed him, seems to have spread to more areas as his tools are found at many places, in Europe, Africa and Asia despite the fact that his fossil record is available at few sites of the three continents. The next man in the evolutionary path, *Neanderthalman* fossil remains are again found at a limited number of sites of Europe and Asia but his tools are widely spread over a large number of sites in Europe, Africa and Asia. The modern man, *Homo sapiens sapiens*, crossed all frontiers and reached even to Americas and Australia to begin the history of man there and accordingly his cultural record is found all over the world, M. K. Nickels, *et al*, *Anthropology and Archaeology*. 
Palaeolithic Culture of Kashmir

During their extensive explorations of the Valley in 1930's for the study of geological stratigraphy and associated human cultures of the Pleistocene epoch, H. de Terra and T. T. Paterson found no Palaeolithic implements in Kashmir. They attributed its reason to the absence of man in Kashmir on account of severe and intense cold climate and violent tectonic disturbances which occurred in the Pleistocene epoch. However, the given theory was put to question when in 1969 Prof. H. D. Sankalia discovered two Lower Palaeolithic tools in the Ladder valley of Pahalgam.

Both of these two tools not only proved the presence of man in Kashmir but also established the antiquity of palaeolithic culture at the very earliest there. It is remarkable to note that both of these Lower Palaeolithic tools were the earliest in Asia as their stratigraphical locations and technique of manufacture suggests.

The earliest of these tools is a massive flake (Fig. 1.1) made on black Panjal traps, measuring 25.7 x 16.5 x 6 CMS. It was found embedded at the base of a bed of boulder conglomerate, which is about 5 meters above

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9 H de Terra and T.T. Paterson, Studies in the Ice Age in India and Associated Human Cultures, Washington, 1939.
10 Paterson reported a large collection of palaeolithic tools from the neighbouring Potwar Plateau of Punjab from the sediments which were correlated with the geological sediments of the Pleistocene Kashmir, Ibid, pp. 301-12; where however the tectonic upheavals played a definite role in fashioning the geomorphology of the Plateau.
12 Ibid.
the river level at Pahalgam and is about 15 meters thick. This conglomerate bed, itself composed of quartz, quartzite, Panjal trap, limestone all cemented by calcareous rock flour, has been ascribed by Paterson to have been deposited there during the II Glacial stage (Middle Pleistocene). In other words, the flake tool was deposited at the site during the early phase of the II Glacial stage; whereas, on the other hand, the earliest of such flake tools in other parts of Asia, which are typologically alike to the Kashmir type, were deposited there in the corresponding geological formation during the retreat phase of the II Glacial stage. Such tools found in Asia are now chronometrically dated to 2 MY B.P. and

13 The section exposed on account of road cutting at Pahalgam near the Golf Club, is on the East Ladder, Ibid.
14 H. de Terra and T. T. Paterson, Studies in the Ice Age
15 Ibid. pp. 301-12. These tools named pre-Soan by Paterson at Potwar are regarded by him the earliest human tools fabricated in Asia which were not found in situ but only on surfaces of such deposits which were regarded to had originated during the later stages of the II Glacial stage. Archaeologists like Stiles, Dennell however suspect these flake tools of Potwar to be genuine tools instead are called ‘nature facts’, R. W. Dennell, ‘The importance of the Potwar Plateau, Pakistan, to the studies of early man’, South Asian Archaeology, 1981 (1984).pp. 10-19. Perhaps on this analogy, D. P. Agrawal too tried to raise a question about the genuineness of the Kashmir tool, The Archaeology of India, 1982, London.
16 Siwalik series deposits in Pakistan have recently been studied afresh and magnetostratigraphically dated, by a team of archaeologists and earth scientists from Pakistan, USA and Britain. The chronometric dates for the revised Pleistocene sequence attempted at Potwar by Rendell have been matched for the archaeological implements found therein and are reported by H. Rendell, ‘The Pleistocene sequence in the Soan Valley, northern Pakistan’. South Asian Archaeology, 1981 (1984), pp. 3-9; B. R. Allchin, ‘Earliest traces of man in Potwar Plateau, Pakistan, a report of the British
correspondingly the Kashmir tool might be belonging to an age which is earlier than this chronometric date. The date for the deposition of this flake tool as such would fall in the Upper Pliocene epoch, sometime around 2.14 MY B.P., or still earlier if the arguments put forth by Prof. Sankalia are accommodated.


H. de Terra and T. T. Paterson, Studies in the Ice Age, accommodated their chronological framework of sediments of Kashmir within the then current view that the last ice Age began in the Pleistocene, some time around 1 MY B.P. and has been characterized by four major glacial episodes represented as in the Alps. This classical four-fold glacial history of the Pleistocene Kashmir has been questioned following the investigations carried over after them (Supra Chapter I) which have made it clear that Kashmir witnessed more than four such cold episodes in the Pleistocene and at least one such glacial activity was there in the Upper Pliocene epoch. This revised Pleistocene sequence is yet to be matched with that of de Terra and Paterson's. We also do not have at the present any chronometric dates for these glacial deposits, ascribed to various glacial episodes (by these two explorers) from where these archaeological implements have been found. However the Karewa profile which are stratigraphically laid, has provided certain chronometric dates. This profile has many conglomerate deposits at various depths, the first two from the base onwards, fall in the Pliocene dating somewhere between 3.15 and 2.50 MY B.P., Sheela Kusumgar, D. P. Agrawal and S. B. Kotlia, 'Magnetostratigraphy of the Karewas', Climate and Geology of Kashmir and Central Asia, the last 4 MY, 1985, New Delhi, p. 13.

As the man is considered to have started his history somewhere after 2.50 MY B.P. (supra Table I) it, therefore, seems appropriate to match the conglomerate bed of Pahalgam, from where the flake tool was found, with the conglomerate deposit of the Karewas, third in the sequence from bottom to top, dated sometime around 2.14 MY B.P. This date is near the 2 MY date of the Potwar tool which is stratigraphically placed later than the Kashmir tool.
accepted. He argued, in this behalf, that the flake tool of Kashmir, as its specific location at the base of the conglomerate bed suggests, itself belonged not to the II Glacial but to the I Interglacial stage as this date would be in accord with the sedimentological perception which requires some allowances for a time lag between the manufacture of the tools, and their dispersion and deposition through the geomorphic agencies.\(^{18}\)

The other tool, measuring 14.5 x 9.6 x 6.5 CMS, is a crude hand-axe (Fig. 1.2) roughly pear-shaped and is made on a quartzite nodule. It was found at the junction of the boulder conglomerate and brownish clayey soil. The 13 meter deposit of brownish soil which rests on the poorly cemented top portion of the boulder conglomerate at the same site of Pahalgam, wherefrom the flake tool was found, is assigned to the II Interglacial stage.\(^{19}\) This hand-axe of Pahalgam, too, is regarded by Prof. Sankalia to be the earliest in Asia on both technological and stratigraphical grounds;\(^{20}\) as (a) the Kashmir hand-axe is technologically Abbevillian\(^{21}\) whileas the earliest handaxes found in other parts of the Continent are the advanced

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18 H. D. Sankalia, *Pre and Protohistory*.
19 H. de Terra and T. T. Paterson, *Studies in the Ice Age*.
20 H. D. Sankalia, *Pre and Protohistory*.
21 Abbevillian is the earliest of the two stages of hand-axe tradition (bifacial core tools) named after the place name Abbeville in France. This industry is characterized by crude, massive hand axes, made by direct percussion method using stone hammer on stone anvil. The industry was also called Chellean, after the type site in Africa but is now called Lower Acheullian. F. Bordes, *The Old Stone Age*.
Acheullian\textsuperscript{22} types, and (b) the geological strata in which the hand-axe at Pahalgam was found is older in age than those deposits bearing hand-axes in other parts of the region.\textsuperscript{23} The stratum bearing the earliest hand-axes in Acheullian is the second stage of the hand-axe tradition named after the type site at St. Acheul in France. It is characterized by hand-axes which are refined, indicating an evolved stage from that of Lower Acheullian and are made by direct percussion method using soft hammer on hand to give controlled flaking. F. Bordes, \textit{Ibid.}

H. D. Sankalia, \textit{Pre and Protohistory}. The earliest Palaeolithic tools found in the region are found in the Potwar Plateau. These tools as claimed by Paterson (H. de Terra and T. T. Patterson, \textit{Studies in the Ice Age}, pp. 301-21) show two traditions (i) Soan tradition made on pebbles (mostly choppers also called pebble tools) including a small collection of flake tools called pre-Soan. The pre-Soan tools originated during the retreat phase of II Glacial and lasted till the beginning of the II Interglacial stage. \textit{Studies in the Ice Age}, p. 222, 265, 302. The pebble tools are divisible into three groups. Of these towards the middle of the II Inter-glacial stage, early Soan pebble tools emerged. Late Soan tools appeared during III Glacial and finally Evolved Soan tools during the IV Glacial stage. Whereas the last type represent the Middle Palaeolithic culture, the rest of these belong to the Lower Palaeolithic culture. The (ii) tradition is that of Acheullian hand-axes which appeared in the II Interglacial stage and continued till the late Soan pebble tools. It was believed by Paterson (\textit{Ibid}) that the two traditions had independent origin and the two co-existed without any amalgamation. Paterson further explained that the hand-axe element in Potwar got introduced due to the arrival of the African tradition, T. T. Paterson, and H. Drummond, \textit{Soan the Palaeolithic of Pakistan}, Karachi, 1962, p. 95. This was because the pebble tools and hand-axes were not reported from one single place which is what is being now contested after finding the tools belonging to the two traditions at one single location. M. Salim, ‘Hand axe collection of Northern, Pakistan’ \textit{Journal of Central Asia}, Vol. IV, No. 1, July 1981, pp. 142-175. Like wise the Kashmir tools from Pahalgam representing what appeared to Paterson the two tradition in Potwar, have not only been found at one archaeological site but even from the same geomorphological section.

\textsuperscript{22} Acheullian

\textsuperscript{23} The Pre-Historic Cultures 51
Asia is chronometrically dated 700,000 B.P. There is no definite date available for the conglomerate bed on which the handaxe in Pahalgam was found but the corresponding conglomerate bed in the Karewa is dated to 1.6 MY B.P. and as such it is very probable that this hand-axe of Kashmir, too, has an age somewhere between these chronometric dates of 1.6 MY and 700,000 years B.P.

Following the discovery of these important archaeological tools, a renewed interest in the palaeolithic archaeology of Kashmir was initiated. Thereupon more stone-tools belonging to the Lower and the Middle Paleolithic periods were located from the high altitude river valleys of the Sindh, (Fig. 2), the Ladder (Fig. 3, 4 & 5) and the

Supra note 16

The chronometric date here is that of the fourth conglomerate bed in the Lower Karewas from the base onwards, Sheela Kusumgar, et al., Climate and Geology in Kashmir. As the Pahalgam 15 meter thick conglomerate bed, from where this tool was found, is divided into two parts by an unconformity, the top portion of it may represent this conglomerate bed of the Karewas. Even though this bed is separated from the previous bed of about 2.14 MY B.P. by mud and silts in the Karewas it is however clear from the palynological record that Kashmir had cold climate around 2 MY B.P., which may have persisted with slight variation and hence unconformity till about the arrival of brown silts at Pahalgam around 1.6 MY.

Prof. H. D. Sankalia was joined by R. V. Joshi, Z. A. Ansari and S. N. Rajguru in 1970 for the exploration of the geological sediments in the Sindh and the Ladder valleys in search of archaeological tools, after the discovery of earlier two tools. They found ten more tools from these river valleys, (Fig. 2), H. D. Sankalia, Pre and Protohistory.

R. V. Joshi, S. N. Rajguru, R. S. Pappu and B. P. Bopardiker, 'Quaternary Glaciation and Palaeolithic Sites in the Ladder Valley, J&K, World Archaeology, 1974, pp. 369-79, found ten more early Palaeolithic tools in 1972 from Pahalgam area (Fig. 3,4,5). One such pebble tool was collected by B. K. Sinha of A.S.I., Srinagar, from a terrace formed at the Ladder valley near Pahalgam, IAR, 1984-85, p. 167.
These tools were collected mostly from the geological deposits of II Glacial, II Interglacial and III Glacial stages assignable to the Middle and the Upper Pleistocene epoch, and, as such, manufactured intermittently after about 1 MY B.P. These comprise handaxes, choppers, discoids, scrapers and borers which could have been utilized for a variety of purposes like cutting, chopping, skinning, scraping etc. of bulbs, fruits and large sized wild animals wandering in Kashmir such as the antlered deer, the horse, the elephant, the rhinoceros, the bos, the felis, the pig and the giraffe.

These stone tools, belonging to the Lower and the Middle Palaeolithic periods, collected from high altitude river valleys suggest that (a) the presence of early man in Kashmir is not only proved but that too continuously through different archaeological periods even though no

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28 During their study for the Palaeoclimatic Project on Kashmir, D. P. Agrawal and others of the team found Palaeolithic site of chopper chopping complex comprising choppers, massive discoids, scrapers on the top of a terrace of the river Remibara at Balapura near Shopian. However, these were not found from a stratified context, D. P. Agrawal, 'The Kashmir Karewas - a multi-disciplinary perspective' *Man and Environment*, Vol. VI, 1982, pp. 1-4.

29 Middle Pleistocene age started after around 1 MY B.P. while as Upper Pleistocene began around 100,000 B.P. (Supra Table I).

hominid fossil remains have been located so far, (b) Kashmir during these archaeological periods was inhabitable at higher reaches even if the major parts of the Valley floor were covered by the vast lake without any drainage and (c) the shifting geological, environmental and ecological conditions did not hamper the living of man in the Valley but, instead, might have contributed for the development and evolution of tool types with varied technology. Such a stage of development in tool technology is reflected by the stone-tools found recently from the hills surrounding the Mansbal lake.

It was during our investigations that we located some palaeolithic tools in close vicinity of a few caves at Mansbal. Mansbal which is located at the foot of the Sindh valley, some 35 kms from Srinagar, has a deep and small lake surrounded by the Karewas and mountains. One such chain of mountains on the east of the lake has many folds and ridges wherein are found some habitable caves. These caves remain on an average at about 600 mts. above the existing lake level. The Palaeolithic tools were located on the gentile sloping mountain surfaces in the sections, which have been cut by rain gullies below the caves. The tools mostly bifacial comprise hand axes, pointed tools, cleavers and scrapers (Fig. 6 & 7), showing Middle

The natural drainage of the Valley was blocked on account of the rise of the Pir Panjal heights around 3.8 MY B.P. thereby turning the Valley into a vast lake which continued to grow till about 85,000 B.P. when the lake water left the Valley through the exit created near Baramulla; supra Chapter I.

Acheullian technique employed for their fabrication. These tools may as such belong to the Lower Palaeolithic period of the Middle Pleistocene epoch, as there are no Mousterian types found alongwith, these belonging to the Middle Palaeolithic period is doubtful.

As the Mansbal tools are from such places as located on the shores of the vast Kashmir lake, these may, therefore, suggest that man subsequently moved to comparatively low altitudes (around the vast Kashmir valley lake) wherein he located dwellings abodes in the form of caves. These caves would not only have enabled him to withstand the ravages of climate but also provided him protection against possible attacks from moving animals. These dwellings abodes would have further allowed man to acquire knowledge of the environment, develop human relationships and social groups for the very activities of survival. What the present discoveries have shown is that Mansbal is not only an important palaeolithic area but also provides a continuous history of palaeolithic tools and evolving human species who utilized the available means and progressively improved the tool fabrication technology. A further proof of the development in tool technology is reflected by the stone tools found from the loess deposits on the top of the Upper Karewas at Sombur, Srinagar. In size, substance and technique of their manufacture these tools are different from those referred to above. The Sombur tools are comparatively of smaller size and are made on jasper, siliceous lime-

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stones and trap. The tools are fabricated on prepared core technique and comprise burins, borers and points (Pl. I.1). On the basis of their size and technology involved for their fabrication it becomes evident that they belong to the Upper Palaeolithic period which followed the earlier two periods. Besides these tools, Paterson and others too collected ‘thin flakes’ fabricated on levallois technique from Sombur and alluvial terraces on the bank of Jehlum which likewise belonged to the Upper Palaeolithic period. As all these tools were found deposited in the loess which got deposited after about 85,000 B.P., the Upper Palaeolithic culture as such thrived in Kashmir some time after this chronometric date, during the Upper

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34 The technique involves careful shaping of a core by the removal of centrally directed flakes and the preparation of an extremity for the detachment of useable tools (F. Bordes, *The Old Stone Age.*)

35 Levallois, a type site in France, is the technique of removing small flake tools from the prepared core. These flakes are usually symmetrical and oval shaped, often without retouch and thus readily usable. On the striking platform of the levallois tools, small vertical flake scars, called facets, are observed. The use of this technique resulted in the production of not only symmetrical flakes but a subsequent large number of middle flakes from the same core, F. Bordes, *Ibid.*

36 H. de Terra and T. T. Paterson, *Studies in the Ice Age,* p. 233 and Chr. And J. Hawker (c.f. H. de Terra and T. T. Paterson, *Ibid,* p. 233). They do not exactly describe the nature of the tools nor are they sure about their period which is called by them to have belonged either to the Upper (late) Palaeolithic or proto-Neolithic culture.

37 The loess on the Lower Karewas got deposited after 200,000 BP while as on the Upper Karewas it started after 85,000 BP. Once the drainage of the Valley lake began, with the emergence of Jehlum at around 85,000 BP, the alluvial sediments on its banks soon were formed (supra, Chapter I).
Pleistocene epoch some time around 20,000 B.P. The traces of this culture however are available in Kashmir till the middle of Holocene, as the tool types, like parallel sided double scrapers, backed knives, flake knives etc. (Pl. 1.2 & 3) are traceable on the loessic deposits of the Upper Karewas till about 5,000 B.P.

The discovery of this evolved culture on the loessic deposits, therefore, points towards the fact that man shifted himself from the higher river valleys to the comparatively low levels and terraces once the geophysical conditions favoured such movements and the Valley floor became available after the drainage of the Valley lake and the Karewas had become stable. With the freshly exposed Valley floor, new ecological phenomenon would have set in on the evolved landscape around the

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38 The Upper Pleistocene started around 100,000 BP, supra Table I. The Upper Palaeolithic culture at Sombur may have started after the stabilization of Upper Karewas, once the lake got drained. As the tools are found embedded in the loess deposited on the Upper Karewas the culture may as such have started some time after 40,000 BP when the Upper Palaeolithic culture started elsewhere, supra Table I or around 20,000 BP as estimated by D. P. Agrawal, on the basis of second palaeosol associated with it, 'Palaeoclimatic data from Kashmir', *Palaeoclimatic and Palaeoenvironmental Changes in Asia*, New Delhi, 1988, pp. 8-9.

39 R. K. Pant, et al., *Man and Environment*, Vol. VI, p. 38. The tools were found from loessic horizons of such sites which have also deposits of aceramic and ceramic Neolithic culture in Baramulla and Budgam districts. There is no evidence which could lead to establish that these tools were exactly fabricated around 5000 B.P. as no such tools were found during the excavations of the Neolithic sites. These tools may have lost their utility some time before the Neolithic period of 5000 B.P. However, in the Indian sub-continent, such blade tools were in use as late as the Indus culture of 2500 BC., Bridget and Raymond Allchin, *The Rise of Civilization in India and Pakistan*, New Delhi, 1983, pp. 131-229.
Karewas as the animals would had found new pastures in and around the lakes and marshes nearby. A study of the above tools all pertaining to a period of about two million years is indicative of the reality of the development of incipient civilization and tool-culture in the Prehistoric Kashmir which was the offshoot of a gradual and evolutionary process. However, there is no information which could help us know as to how the early man withstood harsh climate and adopted himself accordingly at higher reaches in the fluctuating climatic conditions which Kashmir witnessed then. The problem is particularly very difficult as one is handicapped to say anything about the human abodes at higher river


The climate of Kashmir from around 2 MY to 10,000 BP has shown a lot of fluctuations which for longer duration's has remained severely cold when ice sheets at times covered the Valley almost upto the present day floor but most of the times the upper reaches remained fully covered. In between there were warm periods which would have allowed comparatively comfortable movement of men (supra, Chapter I). Biological organisms have capacity to adjust in fluctuating environments by becoming adaptive and man among them is more adaptive and as such would expectedly have had developed behaviour pattern to sustain in a wide variety of circumstances. The invention of fire and its proverbial spread in colder latitudes (earliest record available at Chou'kontein in China, is of 800,000 BP where it seems to had been allowed to bum for generations together, without mastering control of it but its subsequent control at Torraloba in Spain and many other European sites by about 400,000 BP), must have allowed humans to live in a far greater range of environments, M. K. Nickels, *et al. Anthropology and Archaeology*, pp. 233-392. In this regard archaeological explorations in Kashmir are yet to be taken.

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valleys\textsuperscript{42} and their social groupings or relations for the activities of survival.\textsuperscript{43} During the later stages as at Mansbal, early man shifted himself to caves where he could withstand the hazards of climate and grotto abodes might have also helped him to develop a social relationship necessary in primitive social grouping. This type of habitational site might have also helped to bring in a change in the overall human behaviour and to evolve an understanding of environment and ecological setting.

\textbf{B) Neolithic Culture of Kashmir}

The palaeolithic culture was followed by a more advanced culture represented by new types of stone implements ‘which were more skillfully made, more varied in form and generally polished’\textsuperscript{44} (ground). Besides the stone implements, the other important characteristics of this advanced

\textsuperscript{42} There are no indication what formed the abode of man in his early life. It could had been large shady trees to keep himself away from animals. But subsequently he lived in caves and rock shelters during Middle Pleistocene period wherever these were available. Neanderthalman even built warm dwellings using heavy mammoth bones as structural material and mammoth skin as roof cover to combat the cold climate at Molodova in Russia, F. Bordes, \textit{the Old Stone Age}.

\textsuperscript{43} The stone tools available to early man were not adequate in themselves to give man any advantage in direct confrontation with large carnivores. They helped in the killing of already trapped or surrounded animals. For this purpose alone man had to work in bands or groups of individuals. But life in dwellings like caves was significant as large number of humans lived together not only for protection from natural environments but also helping in the possible intensification of social relationship as was found at Chou'kontein in China where sometimes dead were even buried although the same man elsewhere has shown signs of cannibalism, F. Bordes, \textit{The Old Stone Age}.

\textsuperscript{44} Sir John Labbock in 1865 as reported by Lord Avebury \textit{Prehistoric Times}, London, 1865, pp. 2-3.
culture were introduction of the agricultural practices, domestication of animals and manufacture of pottery. This advanced culture is termed as Neolithic culture – the New Stone Age which is the final stage in the lithic industry. Gorden Childe, the eminent pre-historian, even termed it as 'Neolithic Revolution', for being characterized by a vital transformation in human behaviour with which initiated the first economic revolution for the human beings for they first time seized to be food gatherers and, instead, become food producers and chose a settled way of life. This 'revolution' was not, however, a sudden violent catastrophe, it was rather the culmination of a progressive change in the economic structure and social organisation of the communities involved. The traces of this socio-

M. C. Burkit, *Our Early Ancestors*, Cambridge, 1926, pp. 50-57. Nevertheless at the earliest levels of this culture there are also aceramic horizons when pottery was yet to be manufactured.

C. J. Thomsan, 1846 divided the prehistoric material culture into three ages, as stone, bronze and Iron, on the basis of material used for the fabrication of implements which followed one another in that order, c.f. G. Daniel, *The Idea of Prehistory*, London, 1962, p. 47. Sir John Labbock (Lord Avebury, *Prehistoric Times*), further divided the Stone Age into Old Stone Age (Palaeolithic) and New Stone Age (Neolithic) denoting earlier and later ages respectively.

Gorden Childe, *New Light on the most Ancient East*, London, 1958, p. 23. Elaborating the term he says that food production is the deliberate cultivation of food plants especially cereals and the taming, breeding and selection of animals for domestication for which it was necessary to have knowledge of natural habitat and environment to tame and breed animals in continuous captivity.

Gorden Childe, 'The Urban Revolution' *Town Planning Review*, Vol. 21, 1950, p. 3. He even said that it was also an 'Urban Revolution' where the affected changes brought about, besides other factors, the dramatic element of population growth. It was actually the innovation in the primary structure
economic structure are visible from the varied material culture found at a large number of Neolithic sites spread all over Kashmir valley. Of all the Neolithic sites in the Valley only two, Burzahom extensively and Gofkral partially, have been archaeologically excavated.

The prehistoric site of Burzahom in Srinagar, having at the top of the site eleven megaliths, was first excavated in 1935 by H. de Terra; who came to the conclusion that the cultural remains of the site pertained to three different archaeological periods (Pl. II.1). The earliest of these periods was Neolithic for the cultural remains, found at the lowest habitational level, consisted of ground stone tools, bone tools and cooking which influenced all the aspects of life as a result of which more people grouped into communities to live a settled way of life, to make innovations and possibility of specialization, G. Childe, Piecing Together the Past, London, 1956, p. 87. The new economic factor however was not always the only source of subsistence, the earlier branches of economy, hunting, food gathering, etc. remained economically important and useful if the conditions so required even if the essence of economic transformation remained vital, V. M. Masson and V. I. Sarianidi, Central Asia: Turkmenistan before Achaeminids, London, 1972, p. 33.

The sites are mentioned in Appendix I, also see map 1.

Burzahom, lat. 30° 10'N and long. 74° 30'E is situated in the east of Srinagar on the Yandrahom Karewa near the foot of Mahadeva mountain. It is about 1.5 Kms. away from the Dal lake and is presently surrounded by extensive rice fields fed by the waters of Telbal Nala, which flows on the north-east of the site, just below the archaeological mound.

Megaliths, in archaeological terminology meaning huge large stones, formed a semi circle at the site. Most of these have now fallen down haphazardly and the rest leaning awkwardly. Also called Menhirs, the megalithic planted sites are mostly found in India in the south and are generally believed to be commemorative of dead human being, S. P. Gupta, Disposal of Dead and Physical types in Ancient India, Delhi, 1972, pp. 80-92.
H. de Terra could not assign a definite chronological date to the archaeological period. The next period was marked by the production of a copper pin and highly 'polished black ware' some of which having incised geometric design. These cultural remains were assigned by him to the Chalcolithic period, assignable to either the early or the late Indus Valley Culture. The final and the third period was considered as an early Historical period as the pottery finds belong to the 3rd-4th century A.D.

Contrary to de Terra, T. N. Khazanchi, who made excavations at Burzahom site extensively from 1960 to 1971, viewed the cultural deposits of the site as pertaining to four periods.

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52 H. de Terra and T.T. Paterson, *Studies In the Ice Age*, pp. 233-34. During this small scale excavation, near the megaliths, a depth of 11' - 8" (3.55 m) was reached in the loess without exposing the Upper Karewa. At 7' (2.10 m) a kitchen layer 'K' with charcoal was located. This was superimposed by layer 'B' and layer 'A' together 2 to 3 feet (60-90 CMS) thick.

53 This is because there was no known Neolithic site available in North India nor could de Terra relate Burzahom with the then known Mesopotamian Neolithic sites of 4000-6000 B.C., H. de Terra and T. T. Paterson, *Studies in Ice Age*, p. 234.

54 This is now correctly known as black burnished ware, infra this chapter.

55 Where copper/bronze replaces stone implements of previous age progressively it is Chalcolithic or Bronze Age period.

56 This was related with the then excavated site of Hanwan near Srinagar; where from early terracotta material of Buddhist period, mostly Kushan and post Kushan was found, R. C. Kak, *Ancient Monuments of Kashmir*, New Delhi, edition, 1971, pp. 105-111.

i) Neolithic period – I
ii) Neolithic period – II
iii) Megalithic period
iv) Early Historical period

Khazanchi based this periodization on the results drawn from the study of the several types of structural and other related material remains. S. P. Gupta, while subscribing to this periodization, remarked that there was no marked difference between the Neolithic and the Megalithic periods as the implicit economy and occupational pattern suggested. The two periods, nevertheless, were distinguishable in terms of plantation of menhirs during the Megalithic period. In other words, the Megalithic period experienced extension of the material culture that was already in vogue during the Neolithic periods. This is why Gupta has named this phase of culture as Neolithic- Megalithic period. S. S. Saar, another associate of Khazanchi at Burzahom, while supporting the four-fold division of the culture, unlike Khazanchi, said that the first Neolithic period was aceramic in nature as no pottery deposits were found during the period. Contrary to this, another

58 Khazanchi was supported for this periodization by one of his co-excavator, B. M. Pande, 'The Neolithic Culture in Kashmir – New Discoveries', The Anthropologist, Vol. 17, No. 1 and 2, 1970, pp. 25-41.

59 S. P. Gupta, Disposal of the Dead and Physical Types in Ancient India, pp. 82-83. A. Basu and A. Pal, too support the view of S. P. Gupta, Human Remains from Burzahom, Calcutta, 1980, p. 32,

co-excavator R. K. Pant divided the cultural deposits of Burzahom into five periods, which are:

i) Aceramic Neolithic period

ii) Early Neolithic period

iii) Middle Neolithic period

iv) Final Neolithic period

v) Early Historical period

Pant named the first period as Aceramic Neolithic for it was regarded by him to be devoid of pottery. He accordingly believed that pottery at Burzahom emerged and developed for the first time in the Early Neolithic period and the two subsequent periods were marked by the appearance of totally new types of pottery material or types. Like Gupta he did not separate the Megalithic period from that of the Neolithic period as it showed no material or economic differentiation. The material remains at Gofkral site in particular and other sites in general lend a considerable support to Pant’s scheme of five fold periodization as well as his consideration of the first period as Aceramic.

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62 Pant, et al, *Ibid*, have reported that during their excavations of loessic profiles they came across the Aceramic Neolithic deposits which are devoid of ceramic industry but contain other Neolithic traits as at Kuladur, Khan Sahib, Pyath Pather, Raiteng Nalla, Huin, Malpur, Batachak, and Nilnag.
The site of Gofkral, \(^{63}\) capped by menhirs like Burzahom was excavated by K. D. Banerji and A. K. Sharma. \(^{64}\) They divided its cultural deposits into three major archaeological periods as:

i) Neolithic period

ii) Megalithic period

iii) Early Historical period

The Neolithic period is further sub-divided into three periods as:

Aceramic Neolithic period I-A

Early Neolithic period I-B

Late Neolithic period I-C

Gofkral, lat. 33° 54'N and long. 75° 0' E. is situated adjacent to village Bonmir in Tehsil Tral, District, Pulwama, some 41 Kms. south-east of Srinagar. In Kashmiri, ‘Gof’ is a cave and ‘Krai’ potter; and at Gofkral 35 caves have been excavated some time in the past, on the slopes of the Upper Karewa which are mostly occupied by the present day potters for the storage of their finished pottery. The archaeological mound measures 400 Mts. north-south and 75 meters east-west and is located some 35 meters above the road level. On the eastern side of the mound are found a few menhirs, none of which is in its original upright position. The archaeological mound being an top of the Upper Karewa is surrounded below by rice fields. IAR, 1981-82.

They based their periodization on the fact of absence of pottery in the Neolithic period I-A and its appearance and subsequent development during the rest of the periods as well as on the basis of structural changes in the habitational apartments available in different periods.

It seems certain now, particularly after the excavations at Gofkral and observations made at other sites in Kashmir, that the Neolithic Culture in the Valley began with an Aceramic period. Though Pant's five fold periodization appears to be realistic yet one faces several problems in adhering to it. In the first place, the material culture at Burzahom is separated out differently. Secondly, Pant who based his classification on pottery, did not take into account the evolution of residential houses and rest of the other material culture for the differentiation of various periods. In view of this particularly because of lack of stratigraphical details, the standard periodization adhered to in the present study would be that of

65 The earliest cultural stage of the Neolithic period in Kashmir was devoid of pottery, and even though Khazanchi could not recognize it at Burzahom, it is now rightly called as Aceramic period. Considering the material culture, particularly the habitational constructions that were exposed by Khazanchi pertaining to the Neolithic period II at Burzahom, it becomes evident that this particular period has been most probably divided by Pant into two periods, called Early and Middle Neolithic. This particular cultural stage at Gofkral seems also to have been divided by Benerji and Sharma into two periods, called Early and Late Neolithic. What has been named as Megalithic period at both sites, it certainly is an extension of the Neolithic economy even though new cultural traits are introduced, and, therefore, there is seemingly no contradiction in naming it as Final Neolithic period by Pant. However it becomes difficult for us to divide the Neolithic material culture exposed at Burzahom in four periods for want of details based on stratigraphy.
Khazanchi and Banerji for the study of the material culture found at Burzahom and Gofkral respectively.

**Chronology:**

In the absence of stratigraphical details and proper excavation reports of the excavated sites, radiocarbon (C\(^{14}\)) dates available from the habitational deposits of the two sites of Burzahom and Gofkral remains our sole source of information to arrive at a general time-bracket date for the Neolithic period of Kashmir. The following dates estimated are based on 5730±40 years half life value of C\(^{14}\) wherein 1950 AD is the basic year to convert these dates into BC/AD(BP). All these dates are basically uncorrected for C\(^{14}\)/C\(^{12}\) variations and the correction factor available (MASCA)\(^66\) for BC radiocarbon dates are as such given in separate column.

\(^66\) All the C\(^{14}\) dates are measured after assuming that C\(^{14}/C^{12}\) ratio has remained constant in the atmospheric carbon dioxide. However, dendrochronology, the tree ring dating, of sequios (Sequais gigantea) and bristlecone pines (Pinus aristata) have shown that the consistency of atmospheric carbon (C\(^{14}/C^{12}\)) is not strictly valid. Therefore, for most periods, corrections have been applied to radiocarbon dates to adjust them with true dates attained after using dendrochronology; which are called MASCA (after Museum Applied Science Centre) corrections attempted after C\(^{14}\) dates were obtained from samples, spanning about 10 years each, of the long lived dendro dated trees in the laboratories at University of Arizona, California and Pennsylvania USA, Elizabeth K. Ralph, H. N. Michael and M. Han, 'Radiocarbon dates and reality, MASCA Newsletter, Vol. 9, No. 1, The University Museum, Pennsylvania, Philadelphia, 1973, pp. 1-20.
<table>
<thead>
<tr>
<th>Neolithic Period</th>
<th>C14 date67</th>
<th>MASCA date68</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period I</td>
<td>2375 ± 120 BC</td>
<td>2920-2940 ± 130 BC</td>
</tr>
<tr>
<td></td>
<td>2235 ± 115 BC</td>
<td>2650-2780 ± 125 BC</td>
</tr>
<tr>
<td>Period II</td>
<td>2100 ± 115 BC</td>
<td>2550 ± 125 BC</td>
</tr>
<tr>
<td></td>
<td>2025 ± 350 BC</td>
<td>2340-2460 ± 360 BC</td>
</tr>
<tr>
<td></td>
<td>1825 ± 100 BC</td>
<td>2120-2140 ± 110 BC</td>
</tr>
<tr>
<td></td>
<td>1850 ± 125 BC</td>
<td>2160 ± 135 BC</td>
</tr>
<tr>
<td>Megalithic period</td>
<td>1542 ± 108 BC</td>
<td>1720 - 1760 ± 120 BC</td>
</tr>
<tr>
<td></td>
<td>707 ± 103 BC</td>
<td>800 ± 103 BC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neolithic Period</th>
<th>C14 date69</th>
<th>MASCA date70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period I A</td>
<td>3130 ± 100 BP</td>
<td>1340 - 1370 ± 110 BC</td>
</tr>
<tr>
<td>Period I B</td>
<td>3980 ± 120 BP</td>
<td>2350 - 2460 ± 130 BC</td>
</tr>
<tr>
<td></td>
<td>3570 ± 110 BP</td>
<td>1920-1950 ± 120 BC</td>
</tr>
<tr>
<td></td>
<td>3470 ± 110 BP</td>
<td>1710-1750 ± 120 BC</td>
</tr>
<tr>
<td>Period I C</td>
<td>3570 ± 100 BP</td>
<td>1920 - 1950 ± 120 BC</td>
</tr>
<tr>
<td></td>
<td>3340 ± 100 BP</td>
<td>1600- 1630 ± 120 BC</td>
</tr>
<tr>
<td></td>
<td>2790 ± 110 BP</td>
<td>1030 - 1080 ± 120 BC</td>
</tr>
</tbody>
</table>

The above C\(^{14}\) dates after using MASCA correction give a date of 2940 BC for the Neolithic period I of Burzahom but as the sample collected for the chronometric dating is not from the base of the habitational deposit of the Neolithic period I in Kashmir – the period may have, therefore, started still earlier sometime at the end of 4\(^{th}\) millennium B.C. Although the Gofkral Neolithic period I-A date (1340-1370 BC) is not in conformity with other dates of the succeeding period from that site, yet, considering the...

67 D. P. Agrawal and S. Kusumgar, *Prehistoric Chronology and Radiocarbon dating in India*, New Delhi, 1984, p. 68. The dates were measured by Tata Fundamental Laboratory.

68 The MASCA dates are after Elizabeth K Ralph, H. N. Michael and M. Han, *MASCA Newsletter*, who presented the corrected dates from 1840 AD to 4760 BC both in calibration curve and table form.

69 The Gofkral C\(^{14}\) dates were estimated at Birbal Institute of Palaeobotany, Lucknow, *IAR*, 1982-83, p. 147; A. K. Sharma, *Puratattva*.

70 Supra note 68.
amount of habitational deposit of this aceramic period, which is far greater than any other period here, it is accordingly substantiating that the Aceramic period existed for much longer time than any other period here.\(^{71}\)

It can as such be believed that aceramic period at Gofkral too started sometime around the beginning of the 3\(^{rd}\) millennium B.C. if not earlier. This is collaborated by another C\(^{14}\) date from the Aceramic Neolithic horizon at Pytha Pathur of District Baramulla. This horizon is dated by C\(^{14}\) to 4310 ± 150 B.P. (2350 BC)\(^{72}\) which when corrected is estimated to 2920 ± 160 B.C.\(^{73}\) That the sample from period IA at Gofkral does not provide accurate age of this period is further proved by the chemical analysis of bone samples collected there. This analysis has shown deposition of higher percentage of fluorine content in them during the Aceramic period than the rest of the periods,\(^{74}\) when fluorine as a rule grows constantly with age.\(^{75}\)

The C\(^{14}\) dates are quite regular for the succeeding Neolithic periods which began around 2500 B.C. and continued till about 1700 B.C. wherein period IC at Gofkral may have began around 2000 B.C. The C\(^{14}\) date of 1030 B.C. from period I-C at Gofkral may actually be of the Megalithic period as a similar date of 800 BC. from Burzahom marks this period. These dates on


\(^{72}\) IAR, 1982-83, p. 142.

\(^{73}\) Supra note 68.

\(^{74}\) Chemical analysis of the bone samples was done by Smt. A. A. Kashirsagar of the Deccan College, Pune, A. K. Sharma, *Puratattva*.

\(^{75}\) Flourine ions when come in contact with the burial bones, these are absorbed and locked in the bones by the replacement of hydroxyl ions and these accumulate progressively. The difference in the percentage of the fluorine accumulation buried in a particular deposit determines the differences in the age of the deposits these bones are buried.

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the whole provide a general time bracket of 3000-1700 B.C. for the Neolithic periods and for the Megalithic period, following without any break, there are not many C¹⁴ dates available to mark its exact time bracket. Yet the two dates from Burzahom indicate that the period did start around 1600-1700 BC and may have continued till about 800 BC. For over simplification we have used the following time-bracket of dates in this work:

<table>
<thead>
<tr>
<th>Time Bracket</th>
<th>Burzahom</th>
<th>Gofkral</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000-2500 B.C.</td>
<td>Neolithic I</td>
<td>3000-2500 B.C.</td>
</tr>
<tr>
<td>2500-1700 B.C.</td>
<td>Neolithic II</td>
<td>2500-2000 B.C.</td>
</tr>
<tr>
<td>1700-1000 B.C.</td>
<td>Megalithic</td>
<td>2000-1700 B.C.</td>
</tr>
</tbody>
</table>

The detailed account of the material culture as exposed at the two sites pertaining to the Neolithic culture is given below:

i) **Pit Structures:**

a) Burzahom Neolithic Period I:

One of the important characteristics of the material culture of Burzahom during the Neolithic period I was the presence of pits which were cut below the ground level in the natural soil. The pits were of two types (i) circular or oval shaped deep pits, and (ii) square or rectangular shaped shallow pits. The former are called as dwelling pits and the latter as pit chambers. Khazanchi noted that both types of pits at Burzahom were

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76 See also last chapter for collaboration and cross checking of dates.

77 T. N. Khazanchi in his first report, IAR1960-61, p. 11, said that these dwelling pits had been dug in the Upper Karewa the natural soil there. But the natural soil in which the Neolithic habitation lived at Burzahom is loess which is what has been also attested by B. M. Pande, *The Anthropologist*, p. 24.
used by the Neolithic man for dwelling purposes and their inhabitants, as such, were called pit-dwellers. These pits were spread all over the site, but circular pits were found mostly to be located near the boarders of the site while as square type were generally concentrated in the central area of the site. Varied in their depth, these pits were dug out in the loess deposits with the help of long celts/picks – a fact attested by the trace marks of the cuts affected in the soil of their walls, which are still traceable.

The circular pits were well like structures, conical in form, narrow at the top, wide at the base (Pl.II.2) and varied in depth, on an average between 1.5 to 2.5 meters. The largest of these pits measured 2.74 meters at the top or mouth, 4.57 meters at the base or floor and 3.95 meters in the depth. These deep circular pits had three landing steps, cut in their sloping walls, which made entry and exit possible for the inhabitants. However, as these landing-steps, reach from the top of the pit to a depth of only 1.20 to 1.50 meters, it is conjectured that the inhabitants used some other means, like a wooden ladder, for further descending and ascending.

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80 T. N. Khazanchi, Illustrated Weekly of India, p. 26. Many such examples are still found at Burzahom which bear the trace marks of the tools that were employed for the digging of these pits.
82 The number of landing steps depended upon the depth of the circular pits but their number in no case was more than three.
purposes. Khazanchi's belief that these circular pits were made and used for dwelling purposes is based on the finding of certain arrangements within these pits which could have facilitated dwelling in these pits. The evenly made floors as well as, in some cases, portions of wall surfaces of the pits were mud plastered. Moreover, some pits were provided with niches or alcoves in the walls and, in one case, two adjacent pits were found interconnected by an arched corridor, plastered with mud (Pl. III.1). Besides, in many of these pits were found some utility objects like stone and bone tools, hand made pottery, ash and charcoal, suggesting human occupation. Each of these circular pits contained a cover of roofing above their mouth which was supported by wooden posts – a fact evident by the presence of post holes which were found at intervals along the periphery of their mouth. The roofing cover which might have been conical in shape, was presumptively made of perishable material, like hay and birch bark as many of the pits contained birch-bark pieces, burnt or otherwise, together with pieces of charcoal and ash. Khazanchi's viewpoint that these circular pits were meant for dwelling purposes, significantly find further support from the presence of hearths or ovens near the mouth of these pits. These hearths, made either of stones or bunding of mud, were

86 Birch in Kashmiri is called 'Burza', and as such possibly the site carries the name from the Neolithic times on account of its extensive use for the roofing. However, the same material was used extensively for the roofing of houses in Kashmir till the use of galvanized iron sheets in the middle of 19th century.
surrounded by three to four post holes, suggesting a roof cover on wooden posts for these fire ovens.\textsuperscript{87}

This phase of pit dwelling seems to have lasted for a considerable period of time as is indicated by the findings of three succeeding occupational layers accumulated there.\textsuperscript{88} The noteworthy feature of each of such succeeding occupational layers is that the pit size became progressively larger, retaining all the above mentioned arrangements and facilities that have been named, were necessary and were for residential purposes.

These residential facilities were further improved by digging storage pits near the dwelling pits. These storage pits too were conical in form, narrow at the top and wide at the base but were small and shallow and varied between 60-90 CMS.in diameter. Like the circular pits, they too were provided with roof covers on wooden posts. A proof of these being meant for storage purposes is that these pits contained such material as animal bones, broken pots, bone and stone tools, broken or otherwise, charred hey, birch bark and burnt clay.

As compared to the circular pits, the pit chambers were of different types of habitational structures.\textsuperscript{89} These were square shaped, shallow in depth averaging between 0.30 to 1 meters. The largest of these, commonly called community hall, located at the centre of the site was a square of 11.0

\textsuperscript{87} T. N. Khazanchi, The Illustrated Weekly of India.
\textsuperscript{88} IAR, 1973-74.
\textsuperscript{89} IAR, 1966-67. It was during this season's dig that such structures were reported for the first time, even though, S. S. Saar, says that these were found after first two years dig, Archaeology.
meters while the common types were 6.40 x 7 Mts. in size. Above the ground level, each pit had a super structure mainly built on wooden posts. These posts were driven at intervals in the floor of the pit chamber along its periphery on all the sides. The intervening spaces between the posts were made of wattle-and-daub to form the compact walls of the pit chamber. The corner post-holes of the chambers being comparatively deeper and wider suggesting thereby that corner posts were stronger to support the slopping roofing. A shallow drain which ran along the external periphery of the chambers, in all probability, was used as a means to stop entry of the rain water into the chambers, thus saving their walls from soakage. Internally the earth walls of the pit chambers were plastered with mud. Likewise their floors too had such mud plaster while in some cases these floors bore a coating of red ochre. Generally at the centre of the floor of each pit chamber there was placed a hearth, lined with clay (Pl. III.2). Such hearths mainly contain ash and burnt clay. Around these hearths were found three to four post holes, possibly to facilitate erection of conical shaped wooden tripods over the ovens for roasting animal meat. Within the chambers there was also sometimes marked a separate space for storage. Some of the pit chambers were even partitioned to make them two chambered. That these semi-subterranean chambers were used for dwelling purposes is proved not only by the above mentioned habitational

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arrangements but also by the finding of utility material within these chambers consisting mostly of stone and bone tools.

b) Gofkral Aceramic Neolithic Period IA:

Like Burzahom, Gofkral also had both types of pits during the earliest period of Neolithic culture. The circular likewise were conical in shape, narrow at the top and wide at the base (Pl. II.3). On an average their diameter at the top was 1.50 meters and 3.80 meters at the base. They too were provided with shallow and small storage pits and both types of pits were provided with roof covers on wooden posts. The rectangular pit chambers, however, were only 20-30 CMS. deep in the cut out soil but were identically provided with a super-structure on wooden posts; the gaps in-between the posts were filled with reeds for providing compact walls of wattle-and-daub. The Aceramic Neolithic period at Gofkral had two occupational levels. In the first one (Phase I) the floors of the habitational pit chambers, storage pits and the working area around them were plastered and painted with red ochre paste. Such a feature was absent in the second occupational layer (Phase II). Not only that some of the earlier pits (Phase I) were remade to enlarge their dimensions whileas some of the pit chambers were partitioned to make them two chambered during the second occupational level (Phase II).

The given details of the pit structures were essential factors to establish that both the dwelling pits and pit chambers were made and used by the early settlers of the Neolithic Kashmir for their dwelling purpose. While explaining the need for the two types of pit structures for the habitational purposes simultaneously, Kaw believed that although pit
chambers were more comfortable for residential purposes, the dwelling pits were devised by the Neolithic man to fight the severe winters of Kashmir.\textsuperscript{94} Contrary to this observation, Saar held that only square shaped pit chambers were meant for dwelling purposes as the circular shaped pits, on the other hand, were neither compact habitational units nor were the hearths placed near their mouths part of these pits.\textsuperscript{95} Defending his arguments he said that the drain like elements taking right angles near the mouth of the circular pits,\textsuperscript{96} including the hearths were actually the ghost alignments of once abandoned pit chambers on the floors of which these circular pits were dug out. He further elaborated that these circular pits were neither suitable nor maintainable for dwelling purposes as it became evident, soon after these got exposed during the archaeological excavation, that their edges cracked and wall surfaces sagged and crumbled down due to the process of drying up of their soil.\textsuperscript{97} Given this the Neolithic man could not have afforded to jump into and climb out of these pits without breaking the undercut edges which were rather more weak under continued stress of their occupants and thus making it uncomfortable to live in them. Saar on the other hand, believes that these circular pits were the grave pits of human population of the first Neolithic

\textsuperscript{94} R. N. Kaw, *Essays in Indian Protohistory*, pp. 221-22. T. N. Khazanchi even said that the settlers led an open air life during the summer months, and hence the open air hearths, *Illustrated Weekly of India*, p. 26.

\textsuperscript{95} S. S. Saar, *Archaeology*.

\textsuperscript{96} It is for the first time that this is being reported, S. S. Saar, *Archaeology*, p. 7; T. N. Khazanchi in his reports, *IAR*, do not mention it.

\textsuperscript{97} There are still a few exposed circular pits at the site which do not show any sort of such damage after about 30 years of archaeological excavation, except what is expected due to the wear and tear of visitors at the site.
period. It may not be out of place to mention here that Khazanchi reported no such burial arrangement for the said period but only in the Neolithic period II and Megalithic period buried in circular cone shaped grave pits. In support of his theory Saar termed the whole of utility material found in these circular pits as grave goods wherein however no human burials were found; and in those grave pits of period II and III where dead were located Basu and Pal asserted that the grave goods associated with humans merely consisted of some beads, a few stone and terracotta pots.

It seems that Saar has misinterpreted the archaeological evidence as only a few circular shaped pits contained funeral materials but not belonging to that period. Saar in fact makes one to believe that a large number of circular pits were dug in advance for the expected dead. It seems quite unreasonable, even if it is presumed that all these circular pits were actually the dug out grave pits yet, on the contrary, the arrangement of roof

A Basu and A Paul, *Human Remain from Burzahom*, p. 4; see also Appendix II at the end of this chapter.

A Basu and A Paul, *Ibid*, report only ten grave pits in which human skeletons were found which belonged to the Neolithic period II and the Megalithic period at Burzahom.

The exact number of circular pits found during the excavations of T. N. Khazanchi is not known, but only in the season of 1961-62, 16 such pits were unearthed, *IAR*, 1961-62. The number of unearthed pits as such would have been large enough and still more if we count those along the periphery of mound which got exposed due to the earth cuttings there in 1982, ten years after the excavations were completed in 1971, and contain no funerary material.
covers supported on wooden pots should not have been there at all. Pant ruled out the possibility of the circular pits having ever been used for dwelling purposes, however, he argued that they were actually the remnants of the storage pits of the Middle (III) and the Final (IV) Neolithic periods (Pant's classification). He assigned those pits to the later Neolithic periods on the basis of the presence of a particular type of pottery in them. We have reservation to accept the view point of Pant regarding their assignment to the later periods mainly because the archaeological and stratigraphical evidence is contrary to it. As the mouths of the most of these pits were found sealed by compact floors of the Neolithic period II, it implies that the pits belonged to the Aceramic Neolithic period. Since it is also reported that larger number of these pits were found without any deposit of pottery, it adds weight to this inference. It is also a fact that these pits were mostly located on the slopes of the archaeological mound,

No roof cover was found in the grave pits belonging to the Neolithic Period II and the Megalithic period at Burzahom. In fact these grave pits were dug out in the floors of the houses of their respective periods and once a dead man was buried, these were filled with earth to cover the dead (infra sub heading Grave Structures, Chapter II).


S. S. Saar, Archaeology, p. 17, reports that 96% of the total circular dwelling pits were without the deposits of pottery even though T. N. Khazanchi earlier reported (IAR 1960-61) that these contained hand made pottery which he however describes together with that of Neolithic period II pottery (IAR 1961-62) without identifying these separately. Further it is also now established that period I at Burzahom as at Gofkral was Aceramic in nature.

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therefore, it is very likely that the pottery, wherever, found was washed away from the upper reaches of the mound. Given this situation, it seems very reasonable to conclude that the circular pits were actually the storage pits of the Aceramic Neolithic people who lived in square pit chambers only, and what appeared to Khazanchi the landing steps in the deep circular pits, were basically the relic floors of the storage pits formed on account of the continuous digging during the successive occupational levels of the Neolithic period I. And the hearths and their post holes found near their mouths were actually the ghost alignments of the erstwhile chambers, in whose floors they were dug out, as has been pointed out by Saar.

ii) House Structure

a) Burzahom Neolithic Period II:

During this period at Burzahom the earlier pit structures were abandoned, filled up and in their places square or rectangular houses were raised completely over the ground. The floors of these houses were made of rammed earth mixed with ash and charcoal. These floor platforms were subsequently plastered with mud and painted with a coat of red-ochre. Over these floors were raised superstructures mainly on wooden posts which were driven at intervals in the floors of these houses (Pl. III.3) There is no evidence as to how the gaps between the wooden posts were abridged, nor do we know anything about the material used for the roofing.

Three such occupational levels were reported from this period at Burzahom (IAR 1972-73) and the number of landing steps, in general, was three in the deep circular pits; thereby indicating that on three occupational stages the same pit area was dug to make the storage place which would not have been traversed as frequently as a dwelling pit to cause any damage to the undercut edges.
of these houses. However, the bulk of the burnt wooden materials recovered from many of these houses at successive intervals is indicative of incidence of fire as well as suggestive of the fact that wood may have been used extensively for these structures. Some of these large houses were even partitioned to make them multi roomed structures. There is also evidence that on the prepared platforms, of rammed earth and mud, houses were built of mud or mud bricks. In each of these houses was placed a fire-oven. One such large oven was in the form of a deep and wide pit, having a charred lining, in which was found a large number of animal bones especially of deer indicating thereby that the oven pit might have been used as a communal hearth. The community living is also attested by finding of a large community house belonging to this period.

In some cases these houses were provided with storage pits which were dug adjacent to the houses and had an average diameter of 1.04 meters. It seems that these settlements survived for a long period as several of their

There is no mention of the number of the rooms that were created because of the partitions.

It is only in the first years report (IAR 1960-61) that mud or mud brick houses are mentioned while as in the subsequent reports these are not repeated. However, T. N. Khazanchi repeats their mention again in 1976 (Illustrated Weekly of India, 1976, p. 27). We do not however know whether there were any wooden posts used alongwith the mud and mud bricks for their construction.

IAR, 1960-61.

IAR 1961-62 mentions it which seems to have been partly excavated by the time the report was sent for is publication as the dimension 3.94 x 1.20 meters do not make it large structure nor the number of 45 post holes almost in straight alignment suggest so. In the subsequent reports it does not get repeated and, therefore, it does not look to be a community house but a common house.
occupational levels were found (Pl.IV.1). Along with these houses a rectangular structure formed of upright stone slabs (Pl. IV.2) filled partially with fine sand was also traced out. The structure is described as a tank and one wonders, if the presence of the sand was meant for filtering water in the tank.

b) Gofkral Early Neolithic Period IB:

During this period the pit structures of aceramic period of Gofkral, too, were filled up and in their place houses were raised on the ground. They had 5 to 7 CMS. thick floors, compactly made of yellow clay mixed with ‘lime’. It seems that these houses were under extensive use that is why their floors were repaired at least 5 to 6 times during their occupations. The walls of these houses were raised on wooden posts, driven at intervals in their floors. The intervening spaces between the posts were filled up with reeds, to form wattle-and-daub walls. The chunks of burnt clay with deep and wide reed impressions found on their floors are also indicative of the fact that the houses might have got destroyed due to recurring fires. During the same time, besides wooden houses, some other houses were made of mud and rubble. There is no such evidence available as could lead to infer what formed the material for their roofing. Apart from these house

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110 IAR, 1961-62. However the number of occupational levels is not recorded.
112 T. N. Khazanchi, Illustrated Weekly of India, p. 27.
113 One such instance showed that a two compact walls of mud, mixed with ‘chunam’ running parallel to each other, 10 CMS. uniformly wide throughout and having same space in between, were raised. The nature of this construction is not exactly known for reasons that most parts of it were not excavated, A. K. Sharma, Puratattva, No. 11.
types, a circular deep pit cut through the rammed earth was also found, which was having a mud plastered circular entrance. On one of its sides were some landing steps, cut unlike those found at Burzahom during the Neolithic period I. The purpose underlying the digging of this pit is not known.

c) Gofkral Late Neolithic Period –IC:

In the subsequent Neolithic period IC, not only that the construction of earlier house types made of wood, mud and rubble was continued but even circular houses made extensively of mud were raised simultaneously.\(^{114}\) Circular storage pits were also dug but there was no provision in them for raising roof covers on wooden posts along their periphery like that of the storage pits belonging to the Aceramic period. It, therefore, compels one to suppose that their mouths might have been covered by a removable roof cover.\(^{115}\) This period was also characterized by the presence of a large number of refuse pits and dumps.

d) Burzahom Megalithic Period III:

Even though structures of the previous type built on wooden posts continued to remain in vogue during the succeeding Megalithic period at Burzahom yet a new style for the construction of houses was introduced by way of raising neatly built rubble walls (Pl. IV.3). Some of these rubble

\(^{114}\) Burzahom also had mud or mud bricks houses during the Neolithic period II alongwith wooden houses, supra note 107.

\(^{115}\) A. K. Sharma, *Puratattva*, No. 11.
structures seem to be huge and roughly semi-circular.\textsuperscript{116} Besides, the Megalithic people also erected massive and large sized menhirs, planted in deep and wide pits which were themselves cut in the floor levels of the Neolithic period II. These menhirs were kept erect with a dry packing of rubble.

e) Gofkral Megalithic Period II:

Like Burzahom, large sized menhirs were erected at Gofkral during the Megalithic period. However, these were planted in shallow pits with the help of broken pebbles. During this period various occupational levels were traced at the site, each of them bearing the remnants of house floors. We have, on the other hand, no evidence which could bear upon their superstructures. The people during the period at Gofkral seem to have used these houses for a pretty long period of time that is why we find existence of large number of refuse pits, sinking deep into the natural soil and from which all kinds of refuse, like large quantity of pottery pieces and discarded animal bones, were recovered.

iii) Grave Structures:

The information regarding the graves both for human beings and animals for the disposal of the dead is known from the archaeological remains of Burzahom pertaining to the Neolithic period II and the Megalithic period.\textsuperscript{117} During these two periods people dug circular shaped grave pits

\textsuperscript{116} One such structure was built on the filled up circular pit of Neolithic period I, however its exact plan is not complete but seems it had an opening on the south east, IAR, 1961-62.

\textsuperscript{117} IAR, 1962-63. There is no evidence how the dead people at the site were disposed off during the Neolithic period I.
for the burial of the dead. These pits were narrow at the top and wide at the base, measuring 1.17 meters and 2.03 meters in diameter respectively. These graves were found within the habitation area, mostly underlying the floors of the houses at a depth ranging from 1.20 to 2.90 meters. Their wall surfaces were often plastered with lime; and, after the burial of the dead, were filled with earth mixed with ash, stone pieces and potsherds. Besides the burial of humans, some of these graves were also used for the burial of animals. However, there were also separate graves for animals which like-wise were located in the habitation area and looked alike in form. The details of the burials is given in Appendix II.

iv) Neolithic implements:

During the course of excavations at Burzahom and Gofkral, a large number of implements were found. These implements include about 2000 bone tools, some of which were fashioned out of antler horns. They comprise harpoons, spear points, daggers, scrapers, awls, needles, borers, chisels, arrow heads, polishers and harvesting tools (Pl. V & VI). Starting with a limited number they increased four times during the subsequent periods, as is known from the following table.

Burzahom details as known from IAR, 1960-61 to 1973-74 but without giving the number of the tools found. However, the number of these tools as said above is provided by T. N. Khazanchi, Illustrated Weekly of India.

Mohammad Naseem, The Neolithic Cultures of North Western Indo-Pakistan sub-continent, New Delhi, 1982, p. 176; he has provided the details on the basis of information collected from T. N. Khazanchi which however are 1796 from period I and II including surface collection. No such details are known from Gofkral, except the following after IAR, 1981-82.
Table II: Distribution of Bone tools at Burzahom

<table>
<thead>
<tr>
<th>Tools</th>
<th>Period I</th>
<th>Period II</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrapers</td>
<td>6</td>
<td>24</td>
<td>49</td>
</tr>
<tr>
<td>Skin cutters</td>
<td>10</td>
<td>21</td>
<td>48</td>
</tr>
<tr>
<td>Needles</td>
<td>15</td>
<td>51</td>
<td>117</td>
</tr>
<tr>
<td>Awls</td>
<td>12</td>
<td>51</td>
<td>88</td>
</tr>
<tr>
<td>Arrow heads</td>
<td>34</td>
<td>137</td>
<td>300</td>
</tr>
<tr>
<td>Short dagger type points</td>
<td>27</td>
<td>111</td>
<td>202</td>
</tr>
<tr>
<td>Medium dagger type points</td>
<td>9</td>
<td>54</td>
<td>109</td>
</tr>
<tr>
<td>Large dagger type points</td>
<td>22</td>
<td>85</td>
<td>178</td>
</tr>
<tr>
<td>Pin type points</td>
<td>8</td>
<td>43</td>
<td>75</td>
</tr>
<tr>
<td>Double edged points</td>
<td>30</td>
<td>171</td>
<td>360</td>
</tr>
<tr>
<td>Horn points</td>
<td>14</td>
<td>60</td>
<td>111</td>
</tr>
<tr>
<td>Spear heads</td>
<td>9</td>
<td>38</td>
<td>86</td>
</tr>
<tr>
<td>Harpoons</td>
<td>8</td>
<td>37</td>
<td>68</td>
</tr>
<tr>
<td>Harvesters</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Composite tools</td>
<td>2</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>206</strong></td>
<td><strong>884</strong></td>
<td><strong>1796</strong></td>
</tr>
</tbody>
</table>

*The total number of implements includes tools from surface collection.

Whileas the polish of these tools was not good during the Megalithic period, in the earlier stages on the whole these bone tools were well made with efficient working edges and their tips, particularly that of micro sized arrow heads, were charred for efficient use (the details of their utility in the infra chapter). Likewise, about 1500 stone tools\(^{120}\) were also found during

<table>
<thead>
<tr>
<th>Period</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>27 bone tools comprising mostly points and tiny arrow heads, including two awls, some pierces, scrapers and a needle.</td>
</tr>
<tr>
<td>IB</td>
<td>19 bone tools, mostly points including one spatula, and two pierces cum scrapers.</td>
</tr>
<tr>
<td>IC</td>
<td>41 bone tools, mostly points including few awls, a spatula, a harpoon and a bone object with four oblique incised grooves.</td>
</tr>
<tr>
<td>II</td>
<td>20 bone tools including an awl, bone handles and arrow sockets.</td>
</tr>
</tbody>
</table>

\(^{120}\) T. N. Khazanchi, *Illustrated Weekly of India.*

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the excavations. They comprise points, celts, adzes, chisels, wedges, grinders, pounders, pestles, querns, mace heads, hoes, pickaxes, scrapers and harvesters (Pl. VII & VIII). The number of stone points was comparatively large in the assemblage as is known from the following table.\(^{121}\)

<table>
<thead>
<tr>
<th>Tools</th>
<th>Period I</th>
<th>Period II</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adzes</td>
<td>18</td>
<td>41</td>
<td>115</td>
</tr>
<tr>
<td>Celts</td>
<td>9</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>Chisels</td>
<td>5</td>
<td>19</td>
<td>51</td>
</tr>
<tr>
<td>Wedges</td>
<td>3</td>
<td>21</td>
<td>66</td>
</tr>
<tr>
<td>Points</td>
<td>104</td>
<td>305</td>
<td>528</td>
</tr>
<tr>
<td>Sewing knives</td>
<td>1</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Scrapers</td>
<td>2</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Arrow heads</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Picks</td>
<td>-</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Hoes</td>
<td>2</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Mace-heads</td>
<td>4</td>
<td>35</td>
<td>104</td>
</tr>
<tr>
<td>Sling balls</td>
<td>6</td>
<td>35</td>
<td>122</td>
</tr>
<tr>
<td>Grinders</td>
<td>21</td>
<td>56</td>
<td>104</td>
</tr>
<tr>
<td>Harvesters</td>
<td>-</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175</strong></td>
<td><strong>592</strong></td>
<td><strong>1320</strong></td>
</tr>
</tbody>
</table>

* The total includes the tools from surface collection.

Mohammad Naseem, *The Neolithic Cultures of North Western Indo-Pakistan*, p. 175; he has provided the details of these tools as per the information collected from T. N. Khazanchi. No such details are known from Gofkral except the following after *IAR*, 1981-82.

- **Period IA**: Celts, points, one unfinished ring stone, pounders and querns.
- **Period IB**: One point, one broken ring stone.
- **Period IC**: One celt, fourteen points, querns, balls, harvesters with one having incised decoration on one side and spindle whorls in stone as well as in terracotta. Besides, one stone engraver used by potters for removing excess clay while scraping the pots was also found.

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The stone and bone tools provide substantial information about various activities of mankind in the Neolithic Kashmir (for details infra chapter). Generally speaking some of these tools were made by the Neolithic man for fishing and hunting purposes, while others like knives and scrapers were used to turn the killed animals into plateable food. There were also digging tools which might have been used for various digging operations including agricultural activity. The agricultural products seem to have been ground with milling tools before turning them into food. Carpentry and weaving were rendered possible with the use of various other types of tools, like-wise there were tools fashioned in copper which, however, were used at later stages. Copper objects comprised tanged arrow heads, rings, bangles, antimony rods (Pl. IX.1) and hair pins (Pl. IX.2).

Copper objects were first located from the layers belonging to period II at Burzahom, IAR, 1964-65; IAR, 1971-72; and then continued in period III (Megalithic) and period IV (Historical), IAR, 1964-65. However, S. S. Saar, Archaeology, p. 14, reports that all the copper objects were found from a layer belonging to the period I. He seems to have missed the stratigraphical location of these as becomes known at Gofkral, infra note 124.

Copper objects at Burzahom consisted of arrow heads and a coil from period II, a knife from period III and a double edged point from period IV, IAR, 1964-65; two copper rings and a copper needle from period II, IAR, 1971-72. However, T. N. Khazanchi and K. N. Dikshit, ‘Gray ware culture of Northern Pakistan, J&K and Punjab’, Puratattva, No. 9, 1980, pp.47-51, have reported these as arrow heads, bangles and a pin belonging to the earliest levels of periods II. They have also provided a photograph of these objects, which we have re-produced as Pl. IX.1 above and shows besides 7 arrow heads, a ring, a part of a ring bangle and 6 antimony rods/awls/pins.

From Gofkral only few objects have been found, these are an ornamental double head spiral hair pin from upper levels of period IC, a copper point from period II, IAR, 1981-82; a copper bangle besides points and rods in iron from period II, A. K. Sharma, IAS and ISPQS, 1982.
They also had ornaments made of semi-precious stone beads, paste, steatite, terracotta and bone.¹²⁵

v) **Pottery**

The Neolithic people also mastered the craft of pottery making. A variety of hand made pots as well as wheel made pots were made, but the former survived for a longer period of time. These pots in gray, dull red, gritty red, red and burnished wares emerged at various levels of the Neolithic period carrying various types of shapes (Pl. X). Those found by Khazanchi at Burzahom (Fig. 8, 9, 10 & 11) can be summarized in the following table.¹²⁶

At Burzahom 950 carnelian and agate beads were found as a hoard, in a terracotta pot, from the layers of period II, IAR 1964-65. In addition over 400 carnelian and agate beads and pendants (period not mentioned) and 26 beads, possibly of gold, are reported from period III, IAR, 1971-72. Besides these, 5 carnelian beads were recovered from the neck region of a burial of period II, one soap stone circular bead and one small barrel shaped paste bead were found as grave goods from two burials of period II, A Basu and A. Pal, *Human Remains from Burzahom*, p. 14. The beads found at Gofkral are, one cylindrical highly polished spacer bone bead, one cylindrical and one barrel shaped steatite bead from period IA, a wooden bead from period II, a terracotta bangle from period IC, IAR, 1981-82, two semi precious beads one of which is of carnelian from period IB and a canine shaped stone pendant from period II, A. K. Sharma, *IAS and ISPQ*, 1982.

IAR, 1961-62; H. D. Sankalia, *Pre and Protohistory*, has divided the pottery shapes of Burzahom into nine groups. These are:

1) Hemispherical bowl with a ring base, 2) Bowl with outgoing sides, with probably stand, 3) Deep bowl or cups with straight sides or outgoing sides, 4) Funnel mouthed vessel (lower part unknown), 5) Small elongated vessel with a bulging belly, cylindrical neck and ring base, 6) Large high necked jar in steel gray ware, 7) Small wide mouthed vessel with a beaded rim, 8) A small thick based dish or plate (usually these are used for kneading dough, though here the vessel is comparatively small), 9) Stand with a triangular perforation and parallel grooves on the body.
<table>
<thead>
<tr>
<th>Period</th>
<th>Cultural stage</th>
<th>Ware type</th>
<th>Shape</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Neolithic</td>
<td>Handmade coarse grey ware</td>
<td>Bowl, vase, stem piece (of a dish on stand)</td>
<td>Mat impression on the base</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hand made coarse dull red ware having shades of brown and buff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Neolithic</td>
<td>Same as above</td>
<td>Dish, dish on stand, bowl, globular pot, funnel shaped vase, jar, high necked jar and basin.</td>
<td>Lower part of neck of jar with incised oblique notches Basin with obliquely cut rim</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hand made grey or black burnished ware.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Megalithic</td>
<td>Predominantly wheel made red ware.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some wares of preceding period continued limitedly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it has been generally agreed that there were Aceramic horizons at Burzahom, the pottery therefore, emerged when over ground houses were built. According to Saar the pottery developed in the following order at Burzahom.\(^{128}\)

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127 The burnished ware is reported to have been found in period I, IAR, 1960-61, but in subsequent report 1961-62, it is not reported so.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cultural stage</th>
<th>Ware type</th>
<th>Shape</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Aceramic</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>II</td>
<td>Ceramic Neolithic</td>
<td>Fine hand made gray ware</td>
<td>Bowl, vase jar</td>
<td>Mat impression on base and pots having reed/straw brushed combed surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hand-made burnished gray ware</td>
<td>Square bowl</td>
<td>Mat impression on base</td>
</tr>
<tr>
<td>III</td>
<td>Megalithic</td>
<td>Burnished ware continue, but is degenerated</td>
<td>Big and small jars, bowl, vase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gritty red ware with shades of bright red to light gray.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pant on the other hand gave a detailed account of the development of Neolithic pottery. Based on the technique of pot building and evolution thereof, he categorized the pottery into four types which accordingly emerged in the following sequential order at various sites besides at Burzahom.\(^{129}\)

\(^{129}\) R. K. Pant, 'Kashmir Neolithic – A Reappraisal', IAS and ISPQ Conference, Allahabad, 1980. He gives the shape names in Kashmin which we have named in English wherever possible. The wheel made Kot Dijian pottery as found at Burzahom is called by Pant as intrusive element alongwith copper objects and carnelian and agate beads.
<table>
<thead>
<tr>
<th>Period</th>
<th>Cultural stage</th>
<th>Ware type</th>
<th>Shape</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Aceramic</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Early Neolithic</td>
<td>Thick course hand made gray ware</td>
<td><em>ledj or handi, veer, tsod (vase).</em></td>
<td>Deep but irregular brush marks</td>
</tr>
<tr>
<td>III</td>
<td>Middle Neolithic</td>
<td>Fine hand made gray ware</td>
<td><em>Martabana, surai (long necked jar), pyala (bowl shallow), tour (bowl deep), aniuth (dish deep), dish on stand, veer, dul (globular pot).</em></td>
<td>Deep incised brush and scraping marks and the rim of pot having incised nail decoration</td>
</tr>
<tr>
<td>IV</td>
<td>Final Neolithic (Megalithic)</td>
<td>Hand made gritty red ware</td>
<td><em>note (jar), tsod (vase), pyala (shallow/cup bowl), toak (dish).</em></td>
<td>Incised decorations are common</td>
</tr>
</tbody>
</table>

Even though the above table is not in consonance with the periodization of Khazanchi or Saar, yet the given development of pottery clearly points out the fact that once the Aceramic phase was over the first pottery made was coarse and thick gray-ware, followed by fine gray-ware. Both of these types of wares developed one after the other, in that sequential order, in the period II (of Khazanchi) which Pant seems to have

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130 S. S. Saar, *Archaeology*, p. 32, seems to have missed the thick coarse gray ware which is widely available not only in Burzahom but elsewhere in Kashmir (see infra note 140). He, however, mentions that the fine gray ware was having thin section, fine texture and light in weight, and when struck gives ringing sound.
divided into two: Early and Middle Neolithic, possibly on the basis of these two wares. Along with the fine gray-ware, which because of brushing marks is sometimes called combed ware,\textsuperscript{131} there also developed the burnished ware. Both Khazanchi and Pant have said that they were hand-made,\textsuperscript{132} but Saar differentiates the wares into both hand made and wheel made burnished ware on the ground that hand-made burnished ware have mat impression on the pot bases while wheel turned burnished pots are without such impressions, instead he says that they exhibit beautiful symmetry.\textsuperscript{133} Gritty red ware pots were the predominant type during the Megalithic stage along with wheel made red-ware. The above conclusions are generally supported by the finds at Gofkral (Fig. 12 & 13) which are summarized in the following table:\textsuperscript{134}

\textsuperscript{131} The fine gray ware carried deep incised brushing and scraping marks, Pant, IAS and ISPQS, 1980 and is called as combed ware, R. K Pant, Claire Gaillard, \textit{et al., Man and Environment}, Vol. VI, pp. 37-40.

\textsuperscript{132} Khazanchi in his reporting has said that burnished ware was hand made. IAR 1961-62, but earlier he reported that wheel made burnished red ware was also encountered IAR, 1960-61 and that too from period I.

\textsuperscript{133} S.S. Saar, \textit{Archaeology}, p. 33

\textsuperscript{134} IAR, 1981-82.
<table>
<thead>
<tr>
<th>Period</th>
<th>Cultural stage</th>
<th>Ware type</th>
<th>Shape</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>Aceramic</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>IB</td>
<td>Early Neolithic</td>
<td>-Grey ware in overwhelming %age, -Few rough dull red ware</td>
<td>Big jars, bowls, basins</td>
<td>Mat impressed base, Pinched design on the neck region on jars</td>
</tr>
<tr>
<td>I C</td>
<td>Late Neolithic</td>
<td>-Grey ware, -Burnished grey ware, -Burnished black ware, -Rough thick dull red ware, -Wheel made black burnished ware, A few examples of red-gritty ware.</td>
<td>All the shapes of IB Long necked jar, Dish on stand in burnished grey ware</td>
<td>-Mat and cord impressed base, -Reed impression on surface of gray and dull red pots, pinched design on the neck region in dull red ware -Knobbed designing on the neck region of wheel made black burnished ware</td>
</tr>
<tr>
<td>II</td>
<td>Megalithic</td>
<td>-Burnished grey ware, -Gritty red ware, Thick dull red ware with higher %age -Wheel made dull red ware.</td>
<td>Jars, long necked jars, Bowls Basins, Dish on stand, Globular jars, Vessels with channelized spouts</td>
<td>Pinched design on neck region, Incised design, Straw and reed impressed combed surfaces</td>
</tr>
</tbody>
</table>

Put together, the evidence of pottery appearance and development, both at Burzhahom and Gofkral, suggests that for the first 500 to 600 years,

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136 Ibid.
137 Ibid.
138 Ibid.
139 Ibid.
of the Neolithic culture between 3000-2500 B.C. there was no pottery made in Kashmir. There upon from 2500-2000 B.C. only coarse and thick grey pottery was made with a little share of rough dull red ware. Then from 2000-1700 B.C. a variety of pottery types and shapes (Fig. 14) were made, wherein fine combed grey ware was followed by burnished ware, which was only hand made as Pant’s radiography showed. Alongwith, red-gritty ware also makes its appearance. From 1700-1000 B.C. the red-gritty ware continued alongwith burnished ware but thick dull-red ware predominated then. Also during this stage of the culture wheel-made dull red ware appeared. Thus the presence of a particular type of ware at a given site in Kashmir may, therefore, demarcate the relative Neolithic stage of the site. This criterion however cannot hold true in respect of their shapes, as certain shape was available throughout the Neolithic period in different sites.

The surface collection of different pottery types as found from the following sites may indicate a particular stage of Neolithic or in other words that the site was occupied at different stages of Neolithic expansion in Kashmir valley. These are reported by R. K. Pant, Gaillard, et al., *Man and Environment*, Vol. VI, pp. 39-40: Key + Present - Absent

<table>
<thead>
<tr>
<th>Site</th>
<th>Coarse Grey</th>
<th>Combed or Fine Grey</th>
<th>Burnished</th>
<th>Gritty Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bajapur</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Gopas Udar</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Hayalpur</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Khan Sahib</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Koshund</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Kiri Chak</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Kuladur</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Mukam Udar</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Pinglish</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Raileng</td>
<td>+</td>
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<td></td>
<td>+</td>
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<tr>
<td>Romu</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Shahpend</td>
<td>+</td>
<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>Taparbal</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Wanigom</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Yeh Teng</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Begagund</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Haripariqom</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Jayadevi Udar</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Olchibagh</td>
<td>+</td>
<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>Pampur</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Panzgom</td>
<td>+</td>
<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>Sempur</td>
<td>+</td>
<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>Sombur</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Thajwot</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>
wares; (Fig. 16 & 17) for example a variety of bowls is seen in gray ware which continued in the burnished ware as well as in red ware. But the high necked jar with flaring rim and globular body having a flat base (Fig. 11.13) was a distinctive item in the burnished ware. Likewise the burnished ware had a polish of low order with coarse fabric during the Megalithic period which makes it distinct from the earlier period. In this period, nevertheless, the red ware wheel made pottery was distinctively represented by miniature sized vase. Mention may here be made of two wheel made large sized globular red ware pots. One has parallel grooves on its body with an open large mouth. and the other has a black painted bull head on its body, (Fig. 15.5) both of which were found at Burzahom without having a parallel reported elsewhere in Kashmir.

Summary

The given details of the prehistoric material culture indicate that man has left behind an ample evidence of his existence in Kashmir. To begin with, he fabricated large sized crudely made Palaeolithic tools which were located at many places, first in high altitude river valleys and then subsequently at the foot of these river valleys. There is also an evidence which suggests that at the Middle Pleistocene stage the ancient men even dwelt in rather comfortable caves and such other shelters, and evolved tool technology to produce better types of tools. During the evolved stages of Palaeolithic period, there are instances which suggest to infer that Valley floor was subsequently utilized by him to live on. After this long period of about two million years of wandering man in the Neolithic period finally
settled down around 5000 B.P. to start a new period of existence. With this a new type of material culture emerged which provides eloquent clues as to how the pre historic man for about more than 2000 years lived in Kashmir.

The details of the habitational structures of this archaeological period indicate that the presence of pit chambers marked the Aceramic Neolithic period from the aceramic Neolithic periods. On the other hand, the Megalithic period, which itself was an extension of Neolithic period, was marked on account of plantation of megaliths at Burzahom and Gofkral, otherwise the habitational structures were alike. The above study has also shown that square or rectangular shaped pit chambers were made in the beginning of the Neolithic civilization around 3000 BC for dwelling purposes. They were dug out partly in soil and partly raised over the ground on wooden pots. The posts separated from each other were interconnected by wattle-and-daub to form compact walls. The roofing cover on the wooden posts was made of hay and birch bark. Each of such dwelling pit chamber had all around a shallow drain for protection against rain water, percolation and soakage. Inside, the chamber had mud plastered soil walls and at the centre of the plastered floor was a hearth to make the apartment warm as well as to facilitate cooking that included roasting of animal meat hung on wooden tripods. Sometimes such living apartments were even partitioned. Associated with these living apartments there were cone-shaped subterranean storage pits having a roofing raised on wooden posts. They were sometimes dug into the left over floors of the once abandoned pit chambers but generally were along the periphery of the archaeological site. Around 2500 BC when the next stage of Neolithic
period began, people constructed houses exclusively on the ground. These houses with prepared floors had compact walls of wooden posts, wattle-and-daub, like in the previous period. These wooden houses continued to remain in vogue for next 1500 years in the succeeding stages when new type of houses in mud, mud and rubble, and rubble only were also built. Occasionally some of these houses were partitioned to create two roomed facility. Even though there is no clear evidence to suggest what constituted the roofing material, yet we can presume it to have been of hay and birch bark as in the Aceramic period. For the storage of utility articles, there were either separate places within the houses or subterranean pits but adjacent the houses. Sometimes large pits were also dug to dump day-to-day refuse.

There is no indication how the people disposed off their dead during the Aceramic period. However in the succeeding periods, they dug circular cone shaped subterranean graves mostly under the floors of their houses for the burial of their dead. Even some of their animals, pet or otherwise, were also buried in the same way either in separate graves or alongwith the humans.

In this era of the pre-historic period, the people in Kashmir made new types of stone tools to work with. They show variation in form and size from that of the preceding Palaeolithic period. Alongwith a large number of stone tools, bone tool industry was also employed. Even copper implements were occasionally used during the latter stages. There is evidence that even ornaments were made and used. After about 500 years of their settlement, the Neolithic people in Kashmir made new strides by
innovating pottery. Varied in texture and colour, shades and form, the pottery constituted an important component of the Neolithic culture in Kashmir.
Appendix - 1

NEOLITHIC SITES OF KASHMIR: A SUMMARY

Explorations have revealed an extensive spread of the Neolithic culture in the valley of Kashmir – see map. The Neolithic Industry, generally speaking, appears on the top of Karewas in the loessic deposits. Most of these sites are located near streams, rivers or lakes.

The first site reported was Burzahom by de Terra and Paterson in 1935.¹ They also report a settlement at Nunar in district Srinagar where at 7 feet (2.1 meters) below the surface a Neolithic level resembling that of Burzahom cultural deposit was found. They also recovered from the clay at a depth of 20 feet (6.1m) pottery of the Megalithic Age at the village Baimlun in the Wangat Nallah of the Sindh valley. Exploration carried after them revealed a large number of Neolithic sites in the Valley. Those carried on the Himalayan flank from Anantnag to Pampore revealed the Neolithic assemblage from ten sites² (Pl. XI.1) These are Begagund, Gofkral, Hariparigoam, Jayadeva Udar and Thajwor in tehsil Tral, district Pulwama; Olchibagh Pampore, Panzgoam and Sempur in tehsil Pampore of district Pulwama. From these sites burnished, coarse grey, combed and gritty red

ware was obtained (Pl. XII.1, 3, 4). Of these ‘dwelling pits’ were found at Gofkral, Olchibagh and Sempur. ‘Dwelling pits’ were also found at a place in Damodar Uder 10 kms south west of Srinagar.\(^3\) A ground axe and a harvester was found at Gurhoma Sangri situated on a high terrace intruding into the Wular lake, about 48 kms north west of Srinagar, on Srinagar Bandipur road.\(^4\) Menhirs of Burzahom types were found at Begagund, Gofkral, Hariparigoam, Pampore and Dadsar in Tral.\(^5\) These were also found at Brah and Waztal near Martand in Anantnag.\(^6\) Along with other the Neolithic assemblage Kanyalwan in Bijbehara yielded pottery similar to the one recovered from period II and period III at Burzahom.\(^7\) Besides these, some more Neolithic sites were reported subsequently which are; Singhpur, Pyatha Gantamula and Kanishpur in tehsil and district Baramulla,\(^8\) of these from the last site a celt was also collected later on.\(^9\) In Baramulla district the other sites having Neolithic assemblage are Khor and Pattan in Pattan tehsil\(^10\) and Dillion (also called Chandigarh), Palapur and Gordan at Parihaspur of Pattan tehsil.\(^11\) From an agricultural field at Tarkpur in district Baramulla, on Sopore-Bandipora road, along the Wular lake, were found two celts, one is 40 cms and other is 50 cms long (Pl. XI.3). These celts are pecked, ground and polished having unifacially

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\(^3\) IAR, 1961-62
\(^4\) Ibid.
\(^5\) IAR, 1966-67
\(^6\) IAR, 1969-70
\(^7\) IAR, 1976-77
\(^8\) IAR, 1981-82
\(^9\) IAR, 1985-86.
\(^10\) IAR, 1984-85
\(^11\) IAR, 1985-86.

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bevelled cutting edge.\textsuperscript{12} Above the agricultural field, at here, on the raised
ground are found some of the remains of the Neolithic period including a
large quern. In the Sindh valley, near the confluence of Krankindi and the
river Sindh, was found Burzahom type settlement near village Kijpora.\textsuperscript{13} It
also yielded an adze and grey ware pottery. Haribous in Tral, Borus in
Avantipur, Kaneer, Budgam and Aripanthan in Budgam and Kanishpur in
Baramulla also yielded the Neolithic pottery\textsuperscript{14} (Fig. 16 & 17). Further, more
explorations added some more Neolithic sites where from different types of
pottery was collected. These are Kriri Chak, Kuladur, Mukam Udar,
Tapribal, Wanigom, Gopas-Udar and Yah Teng in Pattan tehsil; Raitang in
Tehsil Baramulla, Pinglish in tehsil Tral; Balapur in tehsil Shopian, Romu in
tehsil Pakharpur, Shah Pend in tehsil Pampore, Habashah Sahib in tehsil
Tsodur, Hayatpur, Khan Sahib and Koshund in Biru tehsil.\textsuperscript{15} Of these sites,
ochrus red alongwith burnished ware is found only at Habashah Sahib
while as at Romu only gritty red ware is found. The rest of the sites have a
mixed pattern of ceramic distribution in which course grey and burnished
ware is found every where while as combed ware and gritty red ware are
found at some other sites.\textsuperscript{16} Similarly combed ware was also found from

\textsuperscript{12} IAR, 1984-85

\textsuperscript{13} The site was explored in early eighties of the 20\textsuperscript{th} century by Shri S. L. Shali
of Centre of Central Asian Studies, University of Kashmir.

\textsuperscript{14} Pottery collected from these sites by this researcher is drawn as in Fig. 16 &
17.


\textsuperscript{16} See for details, foot note no. 140, supra chapter II.
the site located about a half a km. ahead of Narastan temple in Tral\textsuperscript{17} (Pl. XII.2) as well as from Dur village near Khan Sahib in Budgam\textsuperscript{18}. Besides the Neolithic pottery this site also yielded two mace-heads and fragment of stone bowl and a part of quern. Some of these sites are having aceramic horizons as well. Besides Gofkral, the excavation of the loessic profiles at Kuladur in Baramulla and Khan Sahib in Budgam have shown that aceramic Neolithic deposits were found below ceramic Neolithic horizons\textsuperscript{19}. Such aceramic horizons are also exposed along the road cutting across loess at Pyatha Pathur in Baramulla\textsuperscript{20}; as well at Raitang in Baramulla\textsuperscript{21} thereby establishing that the Neolithic assemblage in the Valley at the earliest was devoid of pottery, which developed subsequently.

\textsuperscript{17} The site was explored by Dr. Kuldip Bhan, Department of Archaeology, M. S. University of Baroda in April 1982
\textsuperscript{18} The site 20 kms. south-west of Srinagar, on a Karewa top, is situated on the left bank of a tributary stream of river Jehlum and was explored by this researcher in May, 1982.
\textsuperscript{20} \textit{Ibid.}
\textsuperscript{21} \textit{Ibid.}
Appendix – II

**HUMAN AND ANIMAL BURIALS AT BURZAHOM**

The Neolithic human skeletal remains were found at Burzahom while at Gofkral the one year's excavations did not expose any of them there. Most of these skeletons were more or less complete and all of these were individual burials. Sharma reports that in all nine human burials were excavated of which six belonged to the Neolithic period II and three to the Megalithic period,¹ while Basu and Pal, who carried anthropological studies on these skeletons, say that ten burials were found of which seven belonged to the Neolithic period II and three to the Megalithic period.² However, both reports do not mention which of the skeleton number belonged to what period. We are describing these period-wise making the

¹ A. K. Sharma, 'Neolithic Human Burial from Burzahom, Kashmir' Journal of Oriental Institute of Baroda, Vol XVI, No. 3, 1967, pp. 239-42; IAR, 1962-63 gives their number 8, five of the Neolithic period II and 3 of the Megalithic period. B. M. Pande maintains the number of burials was in all 9 and also says that the one found below the menhirs, of an adult male reclining on the back (Burial no. 8 in our text of this appendix) was wrongly taken to be of the Neolithic period II in the IAR, 1962-63, (Pl XXVA); while this is actually of the Megalithic period as reported correctly by Sharma, p. 241-42, (pl. III).

² A. Basu and A. Pal, Human Remains from Burzahom, p. 3. This work and that of A. K. Sharma form the material for the text of this appendix.
two reports as the base as it has been maintained that the distinctive feature of the human burials of the Neolithic period II was the use of red-ochre paint on the bones; and generally had the north-east to the south-west or the south-east to the north-west orientation. Both the reports maintain that during the Neolithic period II two of the burials were fractional or secondary and the remaining were primary articulated burials. The numbers provided to the skeletons by the excavators being not in the periodwise order have, therefore, been given in the brackets to avoid confusion.

Neolithic Period II

Burial 1: One of the primary articulated burial was of a child (skeleton No. 2), kept in flexed or foetal position (Pl. XIII.2). It was lying on its left side with its head placed towards the west to give the west-east orientation. The milk teeth were seen distinctly. The grave pit of the child was just below the left foot of a skeleton of Megalithic period and was sealed by a thick yellowish floor of a hut.

Burial 2: This adult burial (skeleton no. 8) was lying on its left side in the south-east to north-west orientation. The body was flexed, in crouching position with arms raised upto head and palms covering the face (Pl. XIII.1). The burial had five carnelian barel shaped beads near the neck region. The grave pit 3.15 meters below the surface level was dug 2.8 meters deep.

Burial 3: This adult (skeleton no. 7) was placed in the north-east to the south-west orientation, resting on its right side, the skull leaning towards the north-east. The skull has seven finished and four unfinished holes in
the norma lateralis position on the parietal bone between bregma and lambda. These are trephinations (Pl. XIV.1). The body is in crouching position, like that of the Burial 2. In the grave pit were found a soapstone circular disc bead. Animal bones and antler horn pieces were also recovered at various levels of the grave. An animal jaw was found painted with red ochre. The grave pit was 2.33 mts deep and was plastered internally with lime and sealed by a yellowish floor.

Burial 4: The adult burial (skeleton no. 10) was in extended primary articulated position. This was in the south-west to the north-east orientation, unlike the other burials of this period. The skull had been found considerably damaged, possibly on account of the thrusting of stone pieces inside the grave as these stone pieces were found in the grave filling. A circular stone bowl was also buried along with the burial. The grave pit was dug into an earlier ‘dwelling pit’ which contained profuse quantity of pot sherds.

Burial 5: This adult skeleton (skeleton no. 9) was found in primary articulated position. No other details of this skeleton are available.

Burial 6: This is secondary burial (skeleton no. 5). This is partially articulated, in the south-east and the north-west orientation. The skeleton seems to have been buried earlier in a flexed position. In its secondary state, hands and legs of the skeleton were folded up at the ankles and knee points (Pl. XIII.3). A small barrel-shaped paste bead was found in the grave while outside the grave, but in the same layer, was found a terracotta pot filled with red ochre. In the grave itself two long conical stones were placed in inclining position towards the leg on the top of the pit. The grave
was dug 1.25 mts deep and plastered internally with lime. The pit was sealed by a floor of yellowish sandy clay.

Burial 7: The second secondary burial (skeleton No. 4) had only the skull and long bones deposited in a cluster, meaning thereby that it was disarticulated burial. The skull was placed in the east-west orientation. This burial was found in the grave at the depth of 1.60 mts.

Megalithic Period (III)

Burial 8: The adult burial (skeleton No. 1) was in primary articulated position in the west-east orientation. It was kept in a reclining position, resting on its back. It was almost in a sitting at ease posture with its head tilted towards the right shoulder. This aslant skeleton had its head at a higher level (1.67 mts deep) and feet at a lower level (2.41 deep from the top). The right leg was bent a little and brought below the stretched left leg at an angle. Near the right foot the pit had a cluster of big stones on which the left foot was placed. (Burial 1 was placed near its feet) (Pl. XIII.2). This grave pit was dug irregularly with sides slanting and tapering towards the top. Its sides were lined with stone pieces. Five miniature pots in red ware were placed along the skeleton, three on the right and two to the left of left leg.

Burial 9: An adult (skeleton no. 3) was placed on its right side in a flexed, crouching primary articulation. Its orientation was the north-west to the south-west. The grave pit oval in shape and plastered internally with lime was 1.77 deep. A skull of dog was buried deep in the same grave pit.

Burial 10: The third burial of this period (skeleton no. 6) has been named as 'accidental burial' by Sharma as the skull was severed from the torso and
put in the norma occipitalis position towards the leg region, in an
undisturbed pit. It, therefore, is partially articulated having north-south
orientation. Fragmentary bones of goat were also found in this grave pit at
various levels.

The skeleton material in many instances were in a very poor state
of preservation, extremely fragmentary and bones in most cases badly
broken. This is largely due to heavy stone coverings of the graves. However the anthropological studies have shown that of the ten individuals
five were males, three females, one juvenile and one child. The sex of
child and young person was not determined for they have had not attained
the characteristics which are used for differentiating males from females.
The following list gives the sex of the individuals as per their Burial
numbers:

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burial 4</td>
<td>Burial 2</td>
</tr>
<tr>
<td>Burial 5</td>
<td>Burial 3</td>
</tr>
<tr>
<td>Burial 6</td>
<td>Burial 9</td>
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<tr>
<td>Burial 8</td>
<td></td>
</tr>
<tr>
<td>Burial 10</td>
<td></td>
</tr>
</tbody>
</table>

Even though the assessment of the exact age of these skeletons
was not carried, yet their age grouping was carried in five year periods and
accordingly their age determination is as follows:

4  *Ibid*, p. 8
The height of all male members except Burial 6 is almost same. The estimated statures of the male members bearing Burial nos. 4, 5, 8 and 10 are respectively 177.1 cms, 178.5 cms, 176.4 cms and 173.4 cms; and all those skeletons are regarded to fall under tall category. Similarly females also have uniformity of stature, the estimated values of the two females (Burial 2 and 3) are 159.1 cms and 163.8 cms. The values of arms and legs indicate that Burzahom people possessed relatively long legs in relation to arms.

Basu and Pal determined the physical affinities of Burzahom human remains with the available skeletal remains of a few Neolithic sites of South India as well as with the skeletal finds from mature Harappan culture at cemetery R 37 Harappa. As their measurements have shown that with the exception of one skull (Burial 10) all their metric features are precisely similar and can therefore, be considered as predominant and basic human element at Burzahom during the Neolithic period. All these skulls are markedly dolichocranic (dolichocrany is expressed by high values of head and low values of head breadth or in common language these are long headed) and their measurements and indices showed that these heads are closer to Harappan skulls from R 37 cemetery than any of Neolithic skulls.

6 Ibid, p. 72
7 Ibid.
8 Ibid, p. 72
9 Ibid, pp. 73-80
from the South Indian sites of Tekkalakota, Nagarjuna- Konda and Piklihal. The female skulls differ from male skulls in the usual pattern of sexual dimorphism but the proportions are mostly similar. The major features of this long headed individuals are; long and narrow head, protruding occiput, somewhat low receding forehead, medium to prominent superorbital ridges, prominent glabella with distinct post-glabellar salcus, high vertical portion height and sturdy build with tall to medium stature. On such comparison these Burzahom people resemble Harappa R 37 series than it does with any of the Neolithic people of India. The estimated mean stature of the Burzahom male series (169.57 cms) falls within the range of the average values of stature observed in the living population of Punjab. Similarly the occurrence of Charles facet in two femor bones of Burzahom are found in high frequency in Punjabi skeleton. The presence of squatting facet on the tibia bones of Burzahom skeletons has been also found in Nal, Kish ‘A’, Anan and Hissar III materials of Central Asian people. All this point towards a fact that all these people belonged to one racial group which as the present Punjabi indicate belonged to the caucasoids. As the physical features of these long headed people of Burzahom shows no appreciable differences from that of Harappa R 37 people, Basu and Pal, therefore, are inclined to assert that their measurements and indices point towards genetic affinity between Harappa and Burzahom people and even suggest ethnic continuity in spite of cultural differences.
Animal burials

The evidence regarding animal burials comes from the Neolithic period II, the Megalithic period at Burzahom\textsuperscript{10}, like that of human burials. Those excavated from period II were both of primary and secondary burials. Like humans, the animals were buried in dug up graves, oval in shape, narrow at the top and wider towards the bottom. Two examples were unearthed, in one case, the grave pit was irregular in shape. One of the example was of a dog, buried in flexed position, having the north-south orientation where the skull was towards the north and caudal region towards the south (PI XIV.2). The second one was a fractional burial. The large egg shaped grave pit, cut in the floor of a house, contained fragmentary bones of five wild dogs and two antlers of barasingha (*Cervus duculce*). The dogs were represented by five intact skulls to which were attached portions of vertebral columns. Other fragmentary bones were mostly ribs, limb bones and fragments of pelvis (filling of the grave was without any ashy material). All the loose bones bore fracture marks and were kept without any order (PI. XIV.3). On the other hand, in a wide and deep pit having a charred lining was found a large number of loose bones, particularly of the deer.

In the Megalithic period, like wise both complete inhumation and fractional type of animal burials have been found. The primary burials were

\textsuperscript{10} A. K. Sharma, ‘Animal Burials from Burzahom – A Neolithic settlement in Kashmir; *Journal of Oriental Institute of Baroda*, No. 1 and 2, 1968, pp. 40-44; IAR, 1962-63 gives their number as three of the Neolithic period II and two of the Megalithic period. Sharma, however, provides information for more than five animal burials; and accordingly his details form the basic material for our text.
of two types, single flexed and double flexed. Two examples of single flexed burials were excavated. One was of a dog and other was of a wolf in graves without any grave goods. In case of wolf bones, though in articulated condition, they were completely charred and the grave pit was filled with large quantity of ash, meaning thereby that the animal was burnt in situ and later on filled up. It was the only type of this kind found. Double flexed burials were mostly of dogs and in two cases of wolves. The dead animal was buried in flexed position either on its right or left in the north-south orientation. Only in one case the skeleton of a dog was found to be lying in supine position, resting on its back with legs upwards. The grave in this type of double burial contained two animals, mostly two animals of same type and in several cases these were dogs. There was one exception in which one wolf was buried along with a dog. The two animals in such a double burial were, however, placed at two different levels, meaning that same grave was used on two different occasions for two animals. The incidence of animal burial during this time was large enough than the proceeding period indicating that the practice had become fairly common. In addition to these types, there were also fractional burial types as well during the Megalithic period. In a pit were buried bones of various animals at two different levels. The dis-articulated bones of a Himalayan ibex (Capra falconera) were buried (Pl. XIV.4) at an upper level, nearly 1.90 mts below the surface level, whereas at a lower level, nearly 2.20 mts below the ground level, were buried fragmentary bones of dogs, sheep, goats and antlers in a group without any articulation.
Besides these types of animal burials, some of animal bones were found from the graves of humans. These were of dog, sheep, goat and stag. These were always dis-articulated and were deposited along with the human body in the same grave pit either at the level where the human body was put or at a higher level. Some of these may have as such formed part of food-offerings to the dead person. It has been even suggested by Sharma, that pet or other animals were sacrificed to honour the dead person and some bones of such animals picked up, probably after making feast of the flesh of the sacrificed animals.\(^{11}\) (See infra Chapter V for further discussion) He has further added that fractional burial of dogs during the Neolithic period II may have also belonged to this category of sacrificed animals. He feels, particularly from the fracture marks of their bones, that the dogs were sacrificed, stripped of their flesh and then ceremonially buried. Allchins report that dog was apparently almost a cult animal in the Shilka cave culture of the upper Amur; and dogs were until recently sacrificed and buried with their owners among such people as the Gilyaks, Ulchis and Goldis of this region.\(^{12}\) But Gupta adds that the dog was hardly considered pious enough to be sacrificed as such.\(^{13}\) Gorden Childe on the other hand records that dogs were found buried with their masters in Egypt in the Amartion or Nagada I graves as well as in Haliopolis cemetery.\(^{14}\) Such incidence of dog burial with humans at Burzahom are only few,

\(^{11}\) Ibid.


\(^{13}\) S. P. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, Delhi, 1972, p. 81.

precisely one dog head was found with Burial 9 while as in another instance dog bones were found at a higher level in a grave pit of a human burial. The incidence of dog burials without humans as found at Burzahom have been also found in the Neolithic culture of North China, particularly are reported in the Ang-Ang Hsi culture of Manchuria. On the other hand the pit having a charred lining and containing large number of animal bones may have been used as a communal hearth with or without any religious significance, while as the animal burial practice itself may indicate animal cult akin to totemism (see infra chapter V for further discussion).