

NEOLITHIC CULTURE OF KASHMIR

Khursheed Ahmad Bhat*

Imran Ahmad Wani*

ABSTRACT:-

*The term Neolithic is used, especially in archaeology and anthropology, to designate a stage of cultural evolution or technological development characterized by the use of stone tools, the existence of settled villages largely dependent on domesticated plants and animals, and the presence of such crafts as pottery and weaving. The time period and cultural content indicated by the term varies with the geographic location of the culture considered and with the particular criteria used by the individual scientist. The domestication of plants and animals usually distinguishes Neolithic culture from earlier Paleolithic or Mesolithic hunting, fishing, and food-gathering cultures. The Neolithic age is also called the new Stone Age. The Neolithic culture is unique in the sense that it represents the full transition from hunting and gathering to food-producing economy. There are two theories regarding to the origin of Neolithic culture. The first is the dispersal from west Asia, postulated on the strength of similarity of the ceramic tradition of Shah tape and other west Asian sites, from where a group of people migrated to south India, picking up enroute the *BosIndicus* (ox, cow) from the Indus people and other chalcolithic traits. The second is the independent origin with Bellary as the nuclear region for its dispersal. But, at present the origin of this culture is still a moot question. Most of the Neolithic sites are located at the foot of the hills or on top of low hillocks, overlooking plain valleys below. There are also instances of valley and plain-land sites. After selection of the site the area was leveled using earth and stone.*

Keywords: - Karewas, Pits, Ceramic, Chisels, Scrapers.

* Department of History Jiwaji University Gwalior M.P

Introduction

The Neolithic Era, or period, is a combination of two words (neo, “new”) and lithic, “stone”, or new Stone Age was a period in the development of human technology, beginning about 10,200 BC, according to ASPRO chronology in some parts of Middle East, and later in other parts of the world and ending between 4,500 BC and 2,000 BC. It ended when metal tools become widespread (in the copper age or Bronze Age, or in some geographical regions, in the Iron Age). So far as the pre-history of India is concerned the credit goes to Dr. Primrose, an Englishman, who was the first person to discover pre-historic implements (stone knives and arrow-heads) in 1842 at a place called Lingsugur in the Raichur district of Karnataka. On the map of the world, it was Sir Mortimer Wheeler whose efforts resulted in our knowledge of the entire pre-historic culture sequence of India, putting India firmly on the world map on pre-history.

Background

The beginning of the Neolithic culture is considered to be in the Levant (Jericho, modern day West bank) about 10,200 - 8,800 BC. It developed directly from the Epipaleolithic Natufian culture in the region, whose people pioneered to use of wild cereals, which then evolved into true farming. The Natufian period was between 12,000 and 10,200 BC, and the so called “proto-Neolithic” is now included in the Pre-Pottery Neolithic (PPN). As the Natufian had become dependent on wild cereals in their diet, and a sedentary way of life had begun among them, the climatic changes associated with the younger Dryas have forced people to develop farming. By 10,200 – 8,800 BC, farming communities arose in the Levant and spread to Asia Minor, North Africa and North Mesopotamia.

The only Neolithic settlement in the Indian subcontinent attributed to 7000 B.C. lies at Mehrgarh in the Kacchi plain, which is situated in Baluchistan, regarded as the “bread basket” a province of Pakistan. The Neolithic stratum at Mehrgarh seems to have emerged from a locally established Mesolithic substratum. The place witnessed seven cultures, out of these seven cultures; first three are regarded as Neolithic. The earliest was originally the camp bones and earliest food grains suggest that they were domesticated locally. Between 6000 and 5000 B.C there is a pattern of subsistence based on wheat, barley, sheep, goats and cattle. The overall

subsistence pattern shows affinities with contemporary cultures in Iran, Mesopotamia and Asia Minor. Some Neolithic sites found on the northern spurs of the Vindhyas are considered as old as 5000B.C but generally Neolithic settlement found in South India are not older than 2500B.C in some parts of southern and eastern India, they are as late as 1000 B.C, The people of this age used tools and implements of polished stone. They particularly used stone axes, which have been found in large numbers in a good part of the hilly tracts of the country. The north-western Neolithic tools represents rectangular axes with curved cutting edge. The north-eastern group shows polished stone axes with rectangular butt and has occasional shouldered hoes. The southern group is distinguished by axes with oval sides and pointed butt. In the north-west, its dwelling pits, the range of ceramics, the variety of stone and bone tools, and the complete absence of the Microliths distinguished the Kashmiri Neolithic culture. On the basis of axes used by the Neolithic man, we can distinguish three important areas of Neolithic settlements. First among them is to be found in north in the valley of Kashmir at a place Burzahom which is 24km from Srinagar. People lived here in pits, uses both polished tools made up of stone and tools and weapons made of bone. They also used pottery. It is interesting that there is only one other place whole of India where considerable bone implements are found, and that is Chirand, 40km from Patna on the northern side of Ganga. The second group of Neolithic people lived in the region to the south of the Godavari in south India. They live in the tops of granite hills or plateaus near the river banks. Stone axes and stone blades were used by them. They know the domestication of animals, agriculture, also rubbing stone querns. The third groups of people are those who had settled in the hills of Assam. Neolithic tools also have been found in Meghalaya.

Kashmir is a saucer-shaped valley with a length of 134km. a breadth of 38km. At its broadest point and a mean height of 1800m above sea level. It has a temperate climate and during winter the valley is covered with snow. It lies between Latitude $32^{\circ} 44' N$ & Longitude $74^{\circ} 54' E$ It has rich cultural diversity, as well as diversity of flora and fauna in the forest areas, and domesticated species outside the forest. Kashmir has a fairly rich diversity of plant life, which is the life support of almost all terrestrial eco-systems, with both humans and animals being entirely dependent on plants directly or indirectly. Besides its magnificent woods, enchanting lakes, rivers, species, plants and glorious snow clad mountains, it has a remarkable wealth of archaeological sites and monuments ranging from prehistoric times to the Moghul period. The

tradition of Kashmir says that Kashmir was once a lake known as sati-saris, the lake of sati. The lacustrine deposits locally known as karewas, which are dotted all over the valley, substantiate it.

There are many theories about the origin of Kashmiris. However, the exact origin of the people of Kashmir is not fully established and could be an interesting subject for research. It is not known whether any anthropological or any DNA study of Kashmiris has ever been attempted? There is only one definite and irrefutable scientific evidence about the beginning of human civilization in Kashmir and that is the Neolithic culture (new Stone Age). So far as the Neolithic culture of Kashmir is concerned, nearly forty Neolithic sites have been discovered, they are located on the elevated karewas deposits overlooking rivers and lakes. Very few of these have been excavated and the remaining sites are still waiting to be excavated.

The Neolithic settlements are found over the top of the loess deposit which according to dates c¹⁴ dates pre-dates these settlements and is not contemporaneous with its formation. A systematic survey undertaken in the valley of Jhelum from Anantnag to Pampur resulted in the location of series of such settlements at Jayadevi-Udar, Thajiwor (near Bijbehara, Anantnag), Gufkral, Begagund, Dadsar, Hariparigom, Olchibagh, Panchgom, Pampur, Sempur and Sombur (all now in Pulwama district). This was followed by other sites at Gurhoma Sangri, near the Wular Lake, Damodar Karewas south-west of Srinagar, Brah 9.6 kms above the archaeological monument at Martand, Waztal 3 kms inside Srinagar-Pahalgam road above sacred spring at Mattan.

The archaeological investigation reveals now that Kashmir had a highly developed Neolithic culture spread throughout the length and breadth of the valley. In order to know the origin, diffusion and the development of such a culture it is but necessary that serious attempts are made to uncover any of these potential sites. It is only then that datable evidence comes forth regarding the people, their houses, the amenities they enjoyed and the economic conditions they had to undergo to sustain themselves.

Survey of Neolithic sites of Kashmir

The Neolithic settlements are found over the top of the loess deposit which according to C¹⁴ dates pre-dates these settlements and is not contemporaneous with its formation. A systematic survey undertaken in the valley of Jhelum from Anantnag to Pampur resulted in the location of

series of such settlements at Jayadevi-Udar, Thajiwor (near Bijbehara, Anantnag), Gufkral, Begagund, Dadsar, Hariparigom, Olchibagh, Panchgom, Pampur, Sempur and Sombur (all now in Pulwama district). This was followed by other sites at Gurhoma Sangri, near the Wular Lake, Damodar Karewas south-west of Srinagar, Brah 9.6 kms above the archaeological monument at Martand, Waztal 3 kms inside Srinagar-Pahalgam road above sacred spring at Mattan.

The archaeological investigation reveals now that Kashmir had a highly developed Neolithic culture spread throughout the length and breadth of the valley. In order to know the origin, diffusion and the development of such a culture it is but necessary that serious attempts are made to uncover any of these potential sites. It is only then that datable evidence comes forth regarding the people, their houses, the amenities they enjoyed and the economic conditions they had to undergo to sustain themselves. The sites which are being excavated are below:-

1. Burzahom
2. Gufkral
3. Semthan
4. Kanishkapura

Burzahom

The site of Burzahom (latitude 34° 10' North and longitude 73° 54' East) in District Srinagar is situated 16 km. north-east of Srinagar by the shortest route via Nasim and 24 km. via famous Shalimar Gardens of Jahangir. The site is located on the ancient lake bed, locally called Karewas, and commands a panoramic view of the lush green fields of the valley and the shimmering waters of the Dal Lake which is hardly 2 kms away. With forests abounding in the hills around and with the lakes and the swampy areas lying at a stone's throw, the area is ideal for fishing, fowling and hunting, which is exactly what the earliest settlers did about 4500 years back. De Terra and Paterson first made the discovery of Burzahom during their expedition in 1935. They noticed Menhirs at the site. A limited excavation near the Menhirs was conducted by them which yielded some black polished ware with incised designs besides some bone and stone tools, the excavated remains were taken to be belonging to 'either a late or an early phase of the Indus Culture'.

The Archaeological Survey of India under the directions of Shri. T.N. Khazanchi undertook the systematic excavations at Burzahom from 1960 to 1971. The excavations have brought to light four cultural phases. Of these Periods I and II belong to the Neolithic, Period III to the megalithic and Period IV to the early historical period (Post-megalithic).

Period I:

The main feature of earliest settlers Period I was dwelling pits cut below ground level into the natural soil, which is mostly loess. The pits are well-like structures. The pits were dug out with long stone Celts and traces of the cuts made are still visible. The pits are circular or oval in plan, narrow at the top and wide at the base. The diameter varied according to the needs of the people. The largest of these pits measures 2.74 m. at the top 4.57-m. at the base and 3.95 m. in depth.

The presence of postholes on the periphery suggests a birch cover supported on wooden posts as protection against the inclemencies of weather. Though a few steps were provided in the deeper pits, these do not reach the bottom and probably would have narrowed down the living space and some other methods must have been used to reach the bottom. Descent into the smaller pits could be made directly from the ground level and as such no landing steps were provided. Presence of ash, charcoal and potsherds within these pits clearly indicate human occupation. From the evidence of stone hearths near the mouths of some of these pits, it can be inferred that the settlers led also an open-air life. Presence of shallow storage-pits, in close proximity also suggests that the pit dwellers used to shift to the ground level on sunny days or during summer months. The dwelling pits were thus the devices made by early Neolithic man to fight the severe winters of Kashmir. Besides the circular pits, pit chambers that are rectangular or sometimes squarish have also been found. These are also below the ground level. The size of these square/rectangular chambers varies. The recorded evidence of size of one of the rectangular chamber is 6.40 x 7.00 m. These chambers were also cut into the ground level up to a depth of roughly one meter. Some of these pit chambers had depressions on all the four sides, deep post-holes on the four Corners for the superstructure to cover the chambers perhaps with a sloping roof, storage pits and hearths in the centre. Some of the chambers

had stone hearths while the others had clay hearths, which indicates human occupation. Both circular dwelling pits and pit chambers were used for dwelling purposes. It is rather interesting that the pit chambers abound in the central portion of the mound and the dwelling circular pits are mostly on the periphery. It is quite likely that pit chambers were preferred since more members could be accommodated and could be more comfortable for residential purposes.

The earliest settlers at the site used handmade earthen pots. Many types then in use continue to be used in the villages of Kashmir even now. The pottery is mostly crude handmade ware, the color being chiefly steel grey, shades of dull red, brown and buff. They are coarse in fabric and finish and are represented by bowls, vases and stem. Mat impressions are a recurrent feature on many types especially on pots having a flat base which indicates that they were made on mats. Wheel made pottery is however, absent in this period. No evidence has come across during excavations regarding the disposal of the dead in Neolithic Period - I. The total absence of any burials of this period may indicate that the people may have adopted some other practice for disposal of the dead. Apart from the unique structural sequences, bone and stone tools are characteristic. Bone tools as an organized industry is most developed here. The types are prolific and the manufacturing techniques provide an interesting insight into the level of development.

The main types are harpoons for fishing, needles with or without eyes and awls used probably for stitching skins, spear points, arrow-heads and daggers for hunting game, scrapers for treating skins. Tools have also been fashioned out of antler horns. The main types in stone are axes, chisels, adzes, pounders, mace-heads, points and picks. There is no positive evidence for cultivation of cereals but a stone quern has been found during excavations in one of the pit chambers.

Period II: In the next stage there are structures in mud or mud bricks with regular floors made of rammed karewas soil. Extensive timber structures are also indicated from the numerous postholes found at the site. These extensive structures suggest some sort of a community living. The pits and chambers used in the earlier period were no longer used, some of these were filled up and plastered with mud and covered with a thin coat of red ochre to serve as a floor. The use of red-ochre during this

period was noticed in a major portion of the site excavated. Superimposition of floors has also been noticed in this period. In one of the trenches, as many as forty-five well-arranged post-holes were noticed. Covering an area of 3.96 m. x 1.21 m. Associated with another floor were a hearth and an oval pit with a mean diameter of 1.04 m. A few mud platforms were also found with partitions walls on them. A few copper arrowheads were, however, found in Period II which may have been due to commercial contacts. Pottery is generally handmade. A burnished black ware of medium fabric made its appearance in this period. It included such shapes as the dish with a hollow stand, globular pot, jar, stem with triangular perforations and a funnel-shaped vase. A distinctive type in the black burnished ware was a high-necked jar with a flaring rim, globular body and flat base. On the lower part of the neck were incised oblique notches. The deluxe ware of the period is the black burnished ware. There were, however, a few painted pots, which may have been imported.

Towards the close of the Neolithic levels a wheel made red ware pot containing 950 beads was found. The beads are one of agate and carnelian and show an excellent workmanship. A red ware wheel made painted pot with horned figure from the early levels of Period II has also been found. This period indicates peculiar burials, which were found mostly within the settlement. Human beings were buried in oval pits, mostly dug into the house floors or in the compounds with the inner side of the pits plastered with lime. A noteworthy feature of the human burials of this period was the use of red ochre on the bones. Four of the human skeletons found were buried in a crouching position. The burials showed both primary and secondary interments, the former containing extended articulated skeletons and the latter only selected bones. Excepting in a few cases, no grave furniture was noticed.

On the other hand whole animals or their bones were sometimes deposited with the human skeletal material. Evidence of trepanning showing seven finished and four unfinished circular holes on the skull was present in one of the burials. The animals represented in the burials are dog, wolf and ibex the most interesting amongst these was a burial showing skeletal remains belonging to five wild dogs and antler's horn. It appears that pet animals particularly dogs, were sacrificed and buried along with

the human body. The objects both in stone and bone of this period are similar to those of the earlier one but are more in number and better finished. Interesting are the rectangular harvesters with a curved cutting edge and two or more holes on either side and double edged picks in stone and long sized needles with or without eye in bone. However, a unique composite tool has been found in this period. It is a borer on a long hollow bone like the cobbler's poker. .

Period III: The Neolithic period is followed by megalithic culture associated with the erection of massive stones or Menhirs, most probably commemorative. The material culture of the megalithic people is characterized by the use of a gritty red ware pottery. Bone and stone tools continue to be in use but the incidence is pretty less. The only marked difference is the use of wheel-made pottery. A few metallic objects have also been found. Besides, the Menhirs, rubble structures have also been found.

Period IV: The last activity at the site is early historical period and it can be dated a little earlier than the Buddhist site of Harwan ascribable to the 3rd-4th century A.D. Mud brick structures have been found. The pottery was predominantly a wheel made red ware. A few metallic objects have been found.

Neolithic Art: The earliest attempt at art in the Neolithic period is evidenced in Period II by the discovery of an engraved stone slab found, fixed in a rectangular structure forming some sort of a tank. The engraved face was placed upside down, making it non-functional in the place in which it has been found. The stone slab (base width 70 cm.) is flat on both faces the engraved side being smooth compared to the un-engraved one. Towards the top it is partially damaged, as a result the uppermost part of the scene is slightly lost. The engraving depicts a hunting scene showing an antler being pierced from behind with a long spear by a hunter and an arrow being discharged by another hunter from the front. The topmost portion shows two suns and a dog. Showing two suns may probably have some symbolic value and perhaps may indicate hunting in daylight. It may also indicate that they were worship sun. If the presumption is correct then one sun may be depicting the rising sun and another setting sun. Another stone slab showing an incomplete pattern has

also been found from the same structure.

Gufkral

GUFKRAL (literally Guf-cave, *kral-potter*) a site inhabited by potters who utilize the caves cut into the karewas was excavated by the Prehistory Branch of the Archaeological Survey of India from 18 August to 20 October, 1980-82 by A.K.Sharma. On the slopes of the 35 m high mound, there are a number of caves, both single and multichambered with pillars. Some, particularly on the southeastern side, are occupied by Kral's both for residential and storage purposes. Others, which are deserted, had their openings closed due to collapse of the earth. Inquiries so far have revealed that the oldest Kral, a centenarian, was born in one of these caves. It is proposed to undertake investigations of a few of these caves to ascertain their antiquity. The site, Latitude 35°54' N, Longitude 75°60' E, is situated 41 km southeast of Srinagar near the Tehsil town of Tral in the Pulwama District of Jammu and Kashmir State. It can be approached by the Avantipur-Dodsar-Tral road. It is located on an extensive deposit of upper karewas adjacent to the village Ban-Mir between two Nallahs that join Jhelum nearly 10 km to the west. At the top the mound measures 400 m long north-south and 75 m wide east-west. Maximum height of the mound from the road level on the western side is 35 m. In the exposures on the northern extension of the mound a thick deposit of conglomerate could be seen by cross bedded sand, light yellow slit, and karewa. The conglomerate is composed of limestone, trap, and quartzite with boulders. On the eastern edge of the mound, almost in the center, are found a number of Menhirs on the slope. None is in its original and upright position. A few have rolled down to the bottom of the mound and are used by the Kral's for washing clothes.

Cultural Sequence

The site was explored in 1962-1963 by the Frontier Circle of the Archaeological Survey of India. The aim of this season's dig was to learn the culture sequence at the site; hence the dig was restricted to almost the center of the mound, where a maximum of 3.10 m of habitational deposit was encountered over the natural soil. On the northern side of the mound another 5 m of deposit was expected as indicated by rain gullies and side scrapings. Some scrapings were also made in the rain gullies that revealed oval and rectangular pits. In all six quadrants, each measuring 4.25 X 4.25 m was opened, out of which natural soil was reached in five. One of the excavated quadrants was near one of the Menhirs. The excavation revealed five periods of occupation:

1. Period IA Aceramic Neolithic
2. Period IB Early Neolithic
3. Period IC Late Neolithic
4. Period II Megalithic
5. Period III Historical

Each period of occupation was clearly sealed by a floor of the subsequent period. The most significant finds of this excavation were: (a) presence of a well-defined Aceramic Neolithic level, the deposit varying from 35 cm to 1.10 m; (b) identification of cereal grains; and (c) faunal assemblage dominated by wild animals in the lower levels, slowly leading almost exclusively to domesticated animals in the middle and upper phase.

Period IA: Aceramic Neolithic

The Aceramic Neolithic Period, having a deposit of 35 cm to 1.10 m, was sealed by a continuous floor of yellow compact clay mixed with "Chunam" running in all the trenches. Two phases of occupation could be distinctly marked by the presence of two floor levels, one on the top of the natural soil and the other after a deposit of nearly 30-35 cm.

Settlement pattern

The settlement pattern consisted of large and small dwelling pits cut into the loessic deposits, being circular or oval in plan with narrow mouths and wide bottoms. They varied in diameter from 3.80 m to 1.50 m at the top. Large dwelling pits generally belonged to Phase 1 and were only 20 to 30 cm deep, unlike dwelling pits at Burzahom which were very deep (up to 3.96 m). These pits were surrounded by storage pits and hearths. A number of postholes were noticed around the pits and the hearths to support the superstructure of grass and reed. Recovery of mud chunks with reed impressions indicates that most probably the bases of the superstructures were plastered with mud to give them strength and to prevent entry of water and snow from the sides. In phase 1, the floors of the dwelling pits and storage pits, all cut into the loessic deposit (top of natural soil) and their working levels in a wide area, were plastered with red ochre paste. Such treatment was not available in the floors belonging to Phase -2. Some dwelling pits cut in phase 1 were subsequently enlarged and used in phase 2 also as indicated by the successive deposits inside these pits. In phase 2, two-chambered dwelling pits were also available and were deeper than their counterparts in phase 1. Hearths of phase 1 were rectangular, whereas in phase 2 both circular and rectangular hearths made of burnt clay were available. One of the circular hearths

had its floor and sides plastered with mud. This circular hearth was 93 cm in (outer) diameter and 30 cm deep. It had postholes on its outer periphery. The presence of these postholes and the large quantity of ash from inside the hearth, along with pebbles, indicates that the animals hunted were roasted by hanging them over the fire in the hearth supported by the poles. The maintenance of floors, covering a wide area around the pits, shows that people used to live outside during warm seasons and occupied dwelling pits in winter; roasting of food (both flesh and grains) was done only outside as no hearths or fire places were found inside the dwelling pits.

Artifacts

Among the artifacts used by the settlers are polished stone Celts, both finished and unfinished, stone points, with one and both end sharp, made of Himalayan Trap; also, one broken unfinished ring stone, pounders and querns. A large quem with a depression on the working surface and showing red ochre paste adhered to it was recovered from the red ochre-treated floor near the dwelling pit in one of the trenches. Twenty-seven bone tools both polished throughout the body and only at the working tips were recovered. They were shaped out of long bones, splinters, and horns. Most of these were points and arrowheads. Besides two awls, some piercers and scrapers were also recovered. Of special note, however, is a polished bone needle with a damaged eye. In the majority of the tools, tips had been charred to give the required strength to the working ends. Piercers were used for making incisions and for tearing open the flesh after the animal was killed and skinned; scrapers were used to scrape fat from the flesh. Bone tools were mostly made from the green bones, bones of sheep, goats, Cervus, and ibex being generally preferred. Advantage was taken of the natural curves, depressions, and articulation ends of various parts to make different types of tools. Arrowheads were tiny like microliths with only their tips charred and polished. Among the ornaments recovered were one cylindrical, highly polished spacer bone bead and two steatite beads, one cylindrical and another barrel-shaped. A piece of a terracotta marble was also recovered.

Animal Remains

The animal remains amply demonstrated that in the Aceramic Neolithic period at Gufkral, people were predominantly dependent on wild game. Domestication of a selected variety was just being introduced. The animals represented were wild sheep (*Ovis orientalis*), wild goat (*Capra aegagrus*), wild cattle (*Bos namadicus*), Red deer (*Cervus elephas*), wolf (*Canis lupus*), Himalayan ibex (*Capra ibex*) and bear (*Ursus*). Sheep (*Ovis aries*) and goat (*Capra hircus*) were

the only animals being domesticated and formed 5 and 3 percent of the total assemblage, respectively. With the exception of *Canis lupus*, all the animals hunted were herbivorous. This is possibly due to the fact that these animals were easily available in the surrounding hills and slopes. *Ovis*, *Capra*, *Bos*, and *Cervus* formed the largest percentage of animals hunted, *Ovis* dominating over all. Specimens indicate that cattle and goats were large, well-built animals, whereas the sheep were of a smaller size.

Grains

Evidence of grains obtained by floatation technique by Dr. M. D. Kajale, of Deccan College, Postgraduate and Research Institute, Pune, indicates that in this period people had already realized the importance of grains for food and were either collecting and/or had started cultivation in a limited area. The second possibility is remote as, so far, no harvesters and good specimens of ring stones have been recovered from this period. However, detailed examination of the grains recovered is underway and may throw some light on the species. But one thing is certain. In the Kashmir Valley wheat, barley, and lentils had a much earlier antiquity than did rice, which is the staple food of Kashmiris in the Valley today and which is grown extensively all over the Valley. Wheat, barley, and lentils are. At present cultivated in a very limited area and became common only in recent times with the arrival of Sikhs from the outside. It will be interesting to investigate when and why the earlier grains almost totally disappeared from the Valley and were replaced by rice. What were the circumstances that led to the total change in the food habits of the people of the Valley? Was rice introduced with the arrival of a new wave of people? Positive evidence in this direction is available from the excavation as rice was recovered from Period II, which is marked with the arrival of Megaliths at the site and could be safely dated to c. 1000 B.C. pending C14 tests. The following grains were recovered from the Aceramic Period: (I) *Hordeum vulgare* Linn-six row barley; (ii) *Triticum* sp.-wheat ;(iii) *Lens esculenta* Moonch-Lentil, Masur and (IV) *Lithospermum arvensense*-a weedy plant.

Period IB: Early Neolithic

The Aceramic Neolithic Period IA was followed, without any break, by the Neolithic Period IB. This period is represented by a nearly 40 cm thick deposit and yielded a large quantity of charcoal, Handmade Neolithic pottery made its appearance in this period; an overwhelming percentage was of grey ware with a few sherds of rough dull red ware. The shapes represented

were big jars, bowls, basins, and one stem piece of dish-an-stand in coarse dull red ware. The decorations included mat impressed bases, pinched designs on the neck region and reed impression only on exterior and also both on exterior and interior of the pots. Pottery was mostly incompletely oxidized.

Settlement pattern

Settlement pattern of this period was indicated by the presence of a 5 to 7 cm thick floor made of yellow compact clay mixed with "Chunam" running throughout in almost all the trenches. At some places this floor was repaired at least five to six times. The most important building activity of this period was the construction of mud and rubble walls. Parallel with the mud and rubble walls, another wall-like structure was sometimes encountered. This wall-like structure was made of mud mixed with "Chunam" and was uniformly 70 cm wide and separated from the mud and rubble wall by the same amount of space. The real significance of this structure will be clear only after it is fully exposed. The total disappearance of dwelling pits from this period shows that the settlement pattern had completely changed with the introduction of pottery. People had now started construction of mud and rubble walls. The period was also characterized by extensive burning activity. From one of the trenches huge quantities of charcoal and charred wood pieces were recovered. Stored wooden logs may have burned or one of the residential portions was destroyed by fire.

The artifacts of the period included only one stone point, one broken ring stone, and 19 bone tools (mostly well-polished points, two piercers cum scrapers shaped out of splinters, and one spatula).

Animal Remains and Grains

The period was marked by a sudden spurt in the domestication of animals such as sheep, goats and cattle. Sheep and goats still dominated the scene with the size of the goats becoming smaller. Wild sheep, goats, and cattle continued to be hunted but less than before. The percentage of dog bones increased with a marked reduction in the percentage of wolf bones. Short-horned cattle were present. The presence of bones of red deer, ibex, and bear indicates that hunting was still the main source of food. Many of the pieces bore sharp cut marks. In the long bones holes were carefully cut to extract the bone marrow. Domestic fowl (*Gallus*) was added to the menu.

While cutting the animals to pieces care was taken to retain large pieces of bone which could be used for shaping tools. This is supported by the fact that the percentage of tiny splinters

recovered was much less as compared to other places excavated. Apart from all the grains of Period IA continuing, the common pea (*Pisum arvense* Linn.) was added.

Period IC: Late Neolithic

Period IC, belonging to the mature phase of the Neolithic Period, was represented by a 70-80 cm thick habitational deposit and was sealed by a thick whitish floor throughout. It was also characterized by the presence of large number of refuse pits and dumps.

Pottery consisted of grey ware, burnished grey ware, and rough thick dull red ware, along with the introduction of black burnished ware and wheel-turned black burnished ware. A few examples of red gritty ware were also found. All the shapes of Period IB continued and long-necked jars were introduced. The dish-on-stand with triangular perforated designs on the stem region on grey burnished ware was also introduced. Decorations included mat and cord impressed bases, reed impression to create roughened surface on grey and dull red ware, pinched designs on the neck region and incised oblique designs in the neck region in dull red ware, knobbed designs on the neck region of the wheel made black burnished ware. A sherd with graffiti was also recovered.

Artifacts

Stone objects were scarce. Only one unfinished stone celt was found. Stone points, which had almost disappeared in Period IB, appeared again in good number. Other stone objects included querns, pounders, and balls. Double - holed harvesters-one having incised decoration on one side and spindle whorls on stone and pottery were the important objects that appeared in this period. Spindle whorls having large holes indicate the start of spinning of thick threads for woolen garments. One stone engraver used by potters for removing extra clay while finally shaping the pot before drying was also recovered. Other cultural assemblages included terracotta bangles, potsherds with graffiti marks, and terracotta with relief designs. Of special significance was the recovery of a copper hair pin with flattened coiled head from the upper levels of this period, similar to one found at Chanhudaro. This artifact may point to some foreign contacts.

The period yielded the largest number of bone tools, most of which were well polished points; the majority had been shaped out of splinters. The tips were generally charred and sharp, particularly in the case of micro tools as arrowheads. A few awls, one spatula, and a harpoon were other tools represented. A bone object with four oblique incised grooves was also found.

Animal Remains and Grains

By this time the domestication of animals was fully achieved. Herds of sheep (*Ovis Aries*), goats (*Capra hircus*), and cattle (*Boss indicus*) were domesticated. The size of these herds was considerably reduced. Sheep and goats continued to dominate the percentage of animals. The number of dogs increased. Two important new species, namely pig (*Susscrofa*) and fish, made their appearance. Bones of hare (*Lepus*), hedgehog, rodents, and beaver were also recovered.

All the grains found in Period IB were also recovered from Period IC. Complete domestication of animals, and the advent of harvesters and spindle whorls indicated that by this time the Neolithic people at Gufkral had adopted a well-settled life where the practice of agriculture, cattle breeding and herding, and weaving of woollen cloth became the way of life. Hunting was now restricted to red deer and ibex on a limited scale as the percentage of these animals had become considerably reduced. Contacts with the outside world had also begun.

Period II:

Period II, which is associated with the arrival of menhirs on the site, has been designated as the Megalithic Period. It is represented by a habitational deposit nearly 50-60 cm thick. In one of the quadrants near a fallen menhir a pit cut in layer 3, containing a large quantity of packing material comprising broken pebbles, was exposed. Since no menhirs are standing and as huge quantities of broken pebbles are littered over the site, concentrated mostly near the menhirs, it appears that the menhirs did not have very deep foundation pits and that they arrived much later. But this needs to be checked further. The period was marked by the presence of a nearly 10 cm thick floor running through out, with few breaks due to pit activities. The period also witnessed considerable pit activities. A number of refuge pits sinking down to the natural soil were cut. From these pits large quantities of pottery and animal bones were recovered.

Burnished grey ware, gritty red ware, and thick dull red ware continued from the previous period but the percentage of thick dull red ware and wheel-made pottery increased. Wheel-made dull red ware made its appearance. Shapes included jars with shapeless rims, long-necked jars, bowls, basins, dish-on-stand and medium-sized globular jars. Pinched designs in the neck region, incised designs, and combed surfaces obtained by brushing with straw and reeds were available. Vessels with channeled spouts were introduced.

Many large ring stones, both finished and unfinished, were recovered. Stone points had almost disappeared. Other artifacts included a copper point, a wooden bead, pestles, spindle-whorls with

medium-sized holes, and a miniature pot. The only cowrie shell found was from this period. The bone tool industry was neglected; only 20 tools were recovered and they were not well polished. New innovations were bone handles shaped mostly from the tibia of sheep/goats to take advantage of the shape and bone marrow sockets. These handles were meant to hold smaller tools for easy operation. A fine cobbler's awl was also recovered.

All the grains of earlier periods continued. Rice (*Oryza sativa* Linn.) and millet (*Eleusinecoracana*) were introduced towards the end of this period. Animals represented were cattle, sheep, goats, dogs, pigs, ibex, and fowl. It appeared that hunting had almost come to a close as only ibex bones were recovered. This animal was probably hunted or captured for the sake of its horns. The percentage of sheep and goats continued to be higher than that of cattle.

Period III

Period III represents the historical occupation on the site. A thick compact floor made of whitish clay was running almost throughout, sealing the Megalithic period. The limited excavation has not yielded any structures except floor levels so far; but in the exposed areas in other parts of the mound, thick rubble walls could be noticed.

Handmade pottery continued but was dominated by wheel-made thin bright red ware. Shapes encountered were jars, bowls, miniature pots, lamps, vases, dishes of Harapan shape. Knobbed lids, lids with bowls, double-rimmed pots, and cup-on-stand. A few sherds of black-painted red ware with stamped designs were collected. Stone bowls were also found. The artifacts included crude bone tools, mostly points, one fine polished bone handle, ring stones, pounders, a few stone points, and a huge terra cotta circular disc (that appears to be a halo on the back of the head of an image). Iron was introduced in this period. All the grains of the previous period continued with definite evidence of rice (*Oryza sativa* Linn.) from the lower levels of this period. Animal bones recovered were identified as those of cattle, sheep, goats, dogs, pigs, cats, fowl, and rodents.

Semthan

Semthan (75° 9' longitude; 33° 48' latitude) is located on an elevated plateau in district Anantnag near Bijbehara on the Jammu Srinagar national highway. The site comprises six contiguous low and high mounds. At the highest point of the mound the habitation deposit is about 18 meters. A small scale excavation at Semthan was started in 1977 by the north western circle of the

Archaeological Survey of India. Later systematic work was carried out for three sessions from 1981 to 1983 under the direction of R. S. Bisht the then superintending archaeologist. Certainly, in the words of G. S. Gaur, —Semthan excavation is a step towards bridging the gap between the Neolithic and the Kushan periods in Kashmir. The Semthan excavations have given a sequence of cultures starting from the middle of the first millennium B.C up to the late medieval times. Significantly Semthan has provided important evidence about two hitherto unknown cultures in the valley of Kashmir namely the pre NBP and NBPW. About other cultures- Indo-Greek, Kushan and Hun - the site provides additional information. The important finds revealed by Semthan excavations on different successive cultures is given below.

Period 1st - Pre - Northern Black Polished Ware (700-500 B.C.)

Houses: This period shows regular building activity which is borne out by successive floor levels. However no house plan could be observed. Yet it is probable that the earlier inhabitants of Semthan lived in hutments. This is indicated by post holes and evidence of thatched roof with prominent grass impressions.

Antiquities: The important antiquities include terracotta and bone beads. There is also evidence of the use of copper and iron as several pieces of copper and an iron. Arrow head and iron slag were also recovered.

Pottery: The significant discovery of the period is the presence of pottery which has been classified into five types of fabrics (1) sturdy red ware of fine paste made carefully on the wheel and treated occasionally with bright red slip, (2) a thin sectioned pottery with deep chocolate slip, (3) dull red ware with incisions making multiple wavy lines, Criss-cross patterns, etc., (4) burnished grey ware, (5) handmade crude ware of poor clay tempered with stone grits. The main shapes include a dish cum bowl on stand, deep bowl like lid with the central knob, a dabber based pot probably resembling gobbet, cooking vessels etc.

Cereals: The remains of various cereals found at the site are rice, wheat, barley, mong and lentil. The largest quantity of cereals encountered is wheat followed by barley and rice. A very important evidence coming from Semthan is the grey ware found in period 1st and 2nd, most of which show affinity with the contemporary grey ware in the swat valley and also some kind of generic relationship with the late phase of the post Harappan pottery of the Banawali - bra phase of the plains in the Punjab and Haryana. It further testifies to the coming of Aryans who began immigrating in Kashmir not later than 1500 BC as shown by the finds obtained from the

megalithic period. Especially the multi-cropping system, stone walled houses, rectangular stone sickles which along with horses and burnished grey ware in swat around 1700 BC have been explained in the context of immigrations of indo-Aryans. Recently a site has been spotted on the highest terrace of village Hutmur overlooking the river lidder. An exciting discovery was of plain grey ware under the remains of a later structure. The plain grey ware, as we know, is anterior to plain greyware. A later work, Nilmatapurana, the canonical work of Kashmiri Brahmans written in 7th or 8th century A.D also records the arrival of Aryans.

Period II:

Having an occupational thickness of about 1.35 cm this period is underlined by the following developments:

- 1: Presence of northern black polished ware in association with red and grey wares. However the grey ware found here is different from that generally found in association with NBPW elsewhere. The common shapes were dishes, bowls, vases,
- 2: Cooking pots and rimless handles.
- 3: Punch marked copper and silver coins.
- 4: A rubble wall and the use of mud clods even for making of floors.
- 5: Copper and Iron objects as well as bone points.
- 6: Terracotta Balls and Beads of semiprecious stone and terracotta.
- 7: Presence of new plants which were absent in period one namely oat, urad (fossilus mongo), pea. The finds obtained from period 2nd especially NBPW and punch marked coins fit in a big gap in the history of Kashmir as prior to this excavation there was no conclusive evidence about the Mauryan occupation of Kashmir. The Ashoka mentioned in the Rajtarangni was declared by Kalhana as the local ruler provoking controversies about his real identity. The Semthan finds set at rest the conflicting opinions by clearly demonstrating that Kashmir was a part of Mauryan empire. It is a common place fact that where ever the Mauryan extended the boundaries of their empire, the political domination was accompanied by cultural conquest especially represented by NBPW and punch marked coins found in all parts of the Mauryan Empire. Although Kalhana calls Ashoka as the local ruler his information about the belief of the ruler is faultless as he portrays him a Buddish ruler who constructed many Viharas and stupas. It is significant to note that subsequently in the course of explorations many more NBPW sites namely Bonugantmula and Kanishpur in Baramulla were spotted showing

wide spread distribution of Mauryan culture. Understandably Mauryan impact on Kashmir proved of considerable significance considering the far advanced Mauryan culture underlined by intensive use of iron, wide spread rice culture, prevalence of writing, plenty of punch marked coins, NBPW introduction of burnt bricks and ring wells, rise of towns and elaborate administrative system. Significantly it is for the first time that we hear from any source about the foundation of a city. According to Kalhana Srinagar was built by Ashoka. And the chronicler also credits Jaluka the successor of Asoka for having introduced an elaborate system of administration as he credits him for having established eighteen offices instead of seven existing by then. The Mauryan period is also remarkable for the introduction of Buddhism as most of the Buddhist sources attribute the introduction of Buddhism in Kashmir to Majjhantika a monk of Varanasi sent to Kashmir by Ashoka in accordance with his policy of sending missionaries to different countries to propagate Buddhism.

Kanishpur

Kanishkapura or modern Kanishpur (Lat. 34°13' N and Long. 74° 24' to 74° 25'E), a prolific Neolithic and historical site in the Baramulla district of Kashmir, was excavated by A. K. Sharma in 1998-99 while working as Superintending Archaeologist of the Srinagar Circle of the Archaeological Survey of India. The Neolithic remains were excavated in Kanishpur Neolithic phase -1 and Kanishpur Neolithic phase -2 areas while the historical remains beginning with Kushan period were found in all the three areas excavated, i.e. KNP -1, KNP -2 and KNP-3. Interestingly, it has been revealed that after the Neolithic settlement, the site was reoccupied only during the Kushan period when Kanishka seems to have established a city on his own name as mentioned in the Rajtarangni of Kalhana.

At Kanishkapura evidence of Aceramic Neolithic (Period I) was found to be only 15 to 20 cm thick in the layer 8 overlying the natural soil at Kanishpur Neolithic phase -1 which is bereft of any ceramic industry. From this layer polished stone celts was found. The average thickness of the ceramic Neolithic (Period II) levels at Kanishpur Neolithic phase -1 and Kanishpur Neolithic phase -2 was found to be 1.60 to 2.0m. It has been inferred that the Neolithic population settled on the flat top of the Karewas at Kanishpur Neolithic phase -1 and later after enlargement of their settlement they occupied the slopes at Kanishpur Neolithic phase -2. Four successive floor levels along with post-holes were noticed at Kanishpur Neolithic phases -1 which are parts of rectangular houses which most probably had thatched roofs. Five bone points and six polished

Stone Celts were recovered during excavations. The ceramic industry comprised both handmade as well as wheel turned pottery. Fine grey ware of medium to thick fabric, coarse grey ware, red ware, dull red ware, black wares of both plain and burnished varieties are important types. Evidence of brushing the wet surface of pots with reeds and mat impressed designs on the disc bases of pots has been found. Pinched designs on appliqué bands and incised oblique decorations on the neck and rims of handmade vases have been frequently found. Similar decorations are also found on the body of the pots. Series of deep incised lines, notching and semi-perforated decorations were noticed on stems or stands of pottery, particular Lyon dish-on-stand. The important shapes include bowls, shallow bowls, or dishes-on-stand, jars, vases and long-necked vases. The evidence of copper objects in the form of a bangle piece, a needle, two pins, an ear or nose ring and a chisel from the late Neolithic levels at Kanishkapura suggests the Chalcolithic contacts, probably with the Harappan, as also found in similar levels at Burzahom and Gufkral.

Excavations at Kanishkapura have given the evidence of emmer wheat or *Triticum dicocum* which is found from early Harappan deposits at Kunal in district Hissar (Haryana) where evidence of pit dwelling has also been noticed - a common feature of Neolithic settlement at Burzahom.

Palaeo-botanical studies have brought out thirteen kinds of grains, seeds and fruits from Neolithic deposits at Kanishpur (Kanishkapura), dated from about 3000 BC to 2000 BC. Hulled and naked forms of barely (*Hordeum vulgare* and *H. vulgare* var. *nudum*), bread wheat (*Triticum aestivum*), emmer wheat (*Triticum dicocum*), lentil (*Lensculinaris*), field pea (*Pisumarvense*) and grass pea (*Lathyrussativus*) which constituted main ingredients in the agricultural economy during Neolithic-Chalcolithic times in the Mediterranean zone and which were disseminated in the Kashmir Valley from the regions where we may expect the Neolithic people to have received cultural influence. Almond (*Prunus amygdales*) and walnut (*Juglansregia*) evidenced by their fruit shells, acquired the dietary preference. Common vetch (*Vicia sativa*)- a common weed in pulse-crop fields, morning-glory (*Ipomoeasp.*) poppy (*Papaver sp.*) and alfalfa (*Medicago lupulina*) have also turned up in the carbonized material examined.

Conclusion

The Neolithic culture of Kashmir has its own distinctive traits not shared by its counterpart in elsewhere in India. The wide range of tools and implements were used by the Neolithic people of Kashmir like Harpoons, axes, celts, hammers, pestles, pounders, quens, mace heads, double edged

long and short points etc. which shows that they were familiar with art of making of tools for their usage. In early times they were in small in number, but with the passage of time there number increased. The dwelling pits with chambers and without chambers covered with leaves of birch tree are found which shows that they knew the art of making of houses and also they were not lived wondering life but they lived a settled life. The pottery items which are found indicates that they were familiar with art of making of utensils for their domesticate purpose. The human and animal burials which found in Neolithic period implies that the imagination of Neolithic man over the death of the human and hints the religious-emotional aspects of man. The grains which are found in Neolithic culture of Kashmir like wheat, barley, millet, lentil and rice etc. shows that they were having a high level food and also knows agriculture very well. The animals which are found in Neolithic period like sheep, goat, dog, pig and ox etc. indicates the people of Neolithic period were also having the knowledge of domestication of animals. The images of hunting and two suns engraved on the stone slab found in Neolithic period indicate that the people having knowledge about the art of engraving. All these features of Neolithic culture show that the people of that time were economically developed. In present times the people uses the techniques of making tools, pottery, and agriculture of Neolithic people. It is because of Neolithic culture that Kashmir came on the Archaeological map of the world and also got worldwide importance. In short we can say that Neolithic culture brought a great change in the life of the people of the Kashmir and also developed them economically, because tourists from all sides of the world came here and spend lot money in order to visit these sites.

Referances

1. Agrawal, D.P. "Man and Environment in India through Ages" New Delhi, 1992, p. 55
2. Agrawal, D.P "Indian Archaeology", a review, New Delhi 1962-63, p. 9
3. Agrawal, R.C. "Kashmir and its Monumental Glory" New Delhi 1998, p. 50
4. Ahmad Iqbal, "Discoveries of Kashmir" J&K 2005, p. 9-10
5. Asthana, Shashi "History and Archaeology of India's contacts with other countries", New Delhi 1967, p. 77
6. Bamzai, A.K. "Archaeological Remains in Kashmir" Lahore, 1935, p.18

7. Bamzai, P.N.K. "Cultural and Political history of Kashmir" volume-1 'Ancient Kashmir' New Delhi 1994, p. 57
8. Banday Ahmad Ajaz "Prehistoric Kashmir" Archaeological History of Paleolithic and Neolithic cultures, New Delhi 2009, p. 151
9. Basu A, "Indian Archaeology" 1960-62, a Review, New Delhi, p. 32
10. Gaur, G.S. "Semthan Excavations in Archaeology and History (Gosh Memorial)", ed. By B.M. Pande, New Delhi, p.37-38
11. Kaw, R.N. "Earliest settlers of Kashmir" New Delhi 1978, p. 1
12. Khazanchi, T.N "North-Western cultures of India". News Letter's 7 and 8, Shimla 1977, p. 80
13. Khazanchi, T.N. "Pit-dwellers of Burzahom" The illustrated Weekly of India, Bombay 1976, p 5
14. Khazanchi, T.N. "The grey ware culture of Northern Pakistan, Jammu and Kashmir and Punjab" New Delhi, 1980, p. 99
15. Mani, B.R. "Further Evidence on Kashmir Neolithic in the Light of Recent Excavations at Kanishkapura", Journal of Interdisciplinary Studies in History and Archaeology, J & K, 2004, p.142
16. Mani, B.R. "Kashmir Neolithic and early Harappan" a linkage, Lucknow India 2006, p.233
17. Middle miss, C.S. "Lignite Coal fields in Karewas Formation of Kashmir valley" Recording of Geological Survey of India, vol.55, 1924, p.178
18. Rai, R.A. "History of Ancient Kashmir" New Delhi 2007, p. 32
19. Sahni, B. "Karewas of Kashmir", Current Science, Vol- 55, New Delhi 1936, p. 77
20. Shali, S.L. "Kashmir history and Archaeology through ages" New Delhi 1993, p. 61
21. Sharma, A.K. "Neolithic Gufkral", Central Asia and western Himalaya- A Forgotten link, Ed. G. M. Buth, Jodhpur 1989, p. 105
22. Sharma, Sanjay Prakash "Kashmir Through ages" Town, Temples, Mosques, Gardens, Lakes and culture, Jaipur 2004, p. 16

23. Thapar, B.K. "Early farming communities in India" Journal of Human Evolution (London) 1978,p. 10-11
24. Thapar, B.K. "Problems of the Neolithic cultures in India". A Retrospect.Purtattava(New Delhi) 1974, p. 61-62

