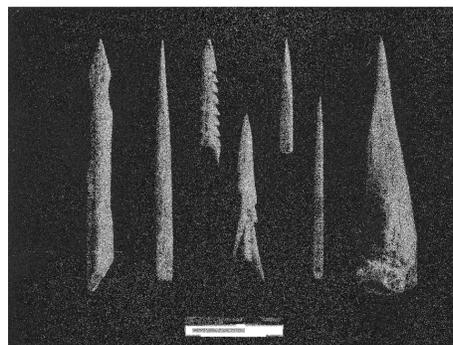
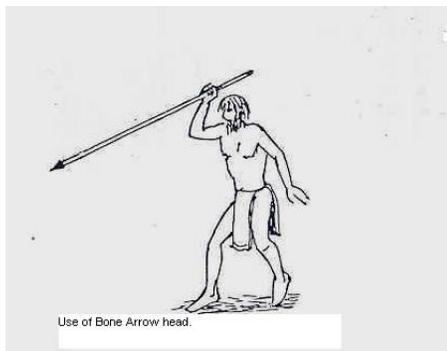
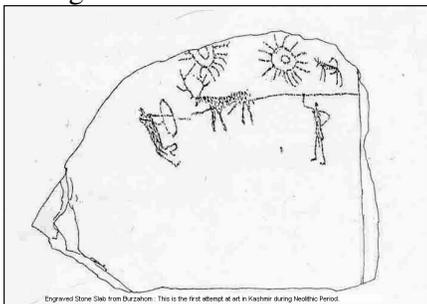


DISCOVERY OF PLANT HUSBUNDARY IN STONE AGE PERIOD -KASHMIR

- R.N. KAW

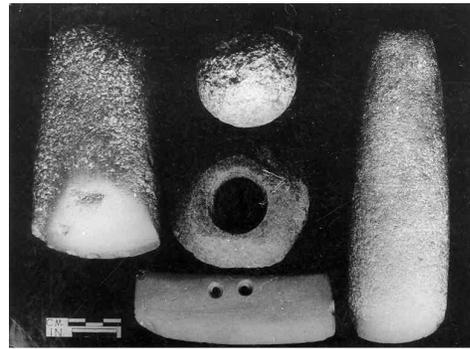
Burzahom in the district Srinagar is situated 16 kms. northeast of Srinagar on the Karewas. It was first brought to light by De Terra and Paterson of Yale and Cambridge University in 1939. This was followed by systematic excavations by the Archaeological Survey of India under Shri T.N.Khazanchi from 1960-1971. The excavations have brought to light four cultural periods. Of these, periods I and II belong to Neolithic, period III to the megalithic and period IV to early historical period. The Neolithic culture shows certain unique characteristics which single it out from the other Neolithic cultures of India. The earlier inhabitants lived in pits which were later replaced by structures of mud and mud bricks built on ground level. Besides, wide range of bone and stone tools, burials of animals with human skeletons where also recovered.

The early Neolithic people depended mostly on hunting, fowling and fishing. This is indicated by the high percentage of spear-heads, arrow heads, and harpoons and also by the hunting scene engraved on slate stone.



There is no positive evidence for agriculture from the site. However, harvester, stone querns, flake knives, mace heads and some seeds of wild plants alone amply knowledge of plant husbandry.

The investigation of the site for botanical remains was initiated by Prof. G.M.Buth, Department of Botany, Kashmir University on 24 soil samples from different levels of Neolithic period I and II (2325 – 1500 BC) .



The samples thus recovered belong to wheat, barley and lentil. Besides charcoal pieces from post holes were also recovered. The majority of these pieces were identified as pine – the main source of timber in Kashmir.

This is the first direct evidence of plant husbandry of the Neolithic from the site.

The plant remains recovered belong to both wild and cultivated groups which are :

Cereals

Barley grains.

Pulses.

Woods.

Weed Seeds.

It appears that in ancient India, particularly Northwest India, cultivation of *T. sphaerococcum* was widespread and Burzahom was one such site.

Lentil is a small genus restricted in the wild to the Mediterranean and South Eastern Asia. Its progenitor, *Lens orientalis*, is distributed mainly in Turkey, Syria, Israel, Northern Iraq and western and northern Iran. It is also the area from where the earliest archaeological evidence of lentil cultivation comes. Lentil is associated with the beginning of the agricultural revolution in the Old World. It was more or less regular comparison of wheat and barley diffusion in the Near East, the Mediterranean and Central Europe. The presence of lentil in the Burzahom Neolithic is the earliest record and probably the only record from Northwest India. Its presence in the Burzahom Neolithic is, therefore, significant.

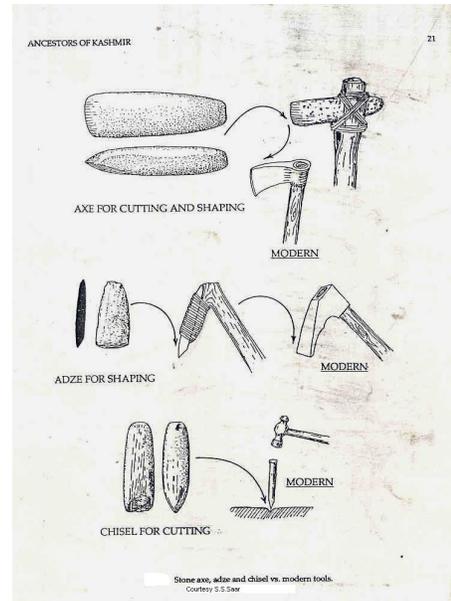
Possible source of the crop.

Harappans extended their sphere of influence to neighbouring area and Burzahom could be one of them. This is borne out by the fact that the cereals recovered from Harappa are the same found in Burzahom. The pre-Harappan pot, and large number of carnelian and agate beads found in the Neolithic levels of Burzahom also indicate a sort of limited contact with the riverine plains of the Indian subcontinent during the Indus-Period. The presence of lentil in the Burzahom Neolithic further explains that the Neolithic people of Burzahom had wide contacts with the other neighbouring areas. The similarity between the assemblage of Burzahom and from the north through the passes connecting these areas.

Burzahom in Kashmiri means home or place of birch. That birch was available during the Neolithic times is proved by burnt birch found during the excavations. Birch (*Betula utilis*) is a moderate sized deciduous tree forming the upper edge of arborescent vegetation in the Himalayas at 14,000 feet. The nearest source could be *Mahadeva Tirtha* 25 kms. towards east. The site may have been surrounded by forests in the vicinity with water bodies and swampy areas. The first settlers must have cleared isolated patches of land for cultivation of wheat, barley and lentil. The micro wear studies on the Neolithic artifacts conducted by Dr. Pant in 1979 reveal that most of the axes were used for wood cutting and chopping and some for dressing wood. Similarly adze were used for digging earth and flake knives for reaping the crop.

The main occupation of the people of Burzahom had been hunting and fishing (food gathering) whereas the herding of cattle, sheep and goat is evidenced of mixed farming of wheat barely and lentil continued from period I to II without any new addition to these crops. They also utilized the local plants particularly pine as the main source of timber and *Ulmus*, *Salix* were probably used for fuel or fire woods. Bark of *Betula* was mainly used for thatching purpose.

The association of weed seeds with cereals is either deliberate indicating a primitive stage of farming when both wild as well as cultivated plants were utilized as food or the weeds were merely contaminants of the harvested crop.



R.N. Kaw

Sh. R.N. Kaw retired as Chief Photographer from Archaeological Survey of India. He was associated in Excavations at Burzahom- Kashmir from 1963 to 1970. Due to his association in this excavation he wrote many articles. A detailed article under the title "Plant husbandary in Neolithic Burzahom, Kashmir" by Prof. G.M.Buth and R.N.Kaw is published in " CURRENT TRENDS IN GEOLOGY VOL. VI – CLIMATE AND GEOLOGY OF KASHMIR AND CENTRAL ASIA – The Last four million years"

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