

# The Archaeological Research in the High Mountains of Mustang District

## An Assessment of the Situation

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Between the Annapurna and the Dhaulagiri High Himalaya Mountains, watered by Kaligandaki and its several tributary rivulets a series of caves had been dug out into the massif conglomeratic cliff rock-faces by people during a very ancient period. These are also open air ancient settlement sites in that region. The caves were dug between 20 to 50 meters above the river bed and faces towards south. They are arranged in one to seven tiers, cut one above the other, in the Southern Mustang, whereas in the Northern Mustang there are more than eleven storied caves dug over the mountains on the western side of Kaligandaki near Gumbakang<sup>1</sup>. The culture of those caves has been called Megalithic and Prehistoric by D.N. Tiwari<sup>2</sup>, who had started the investigation of the cave-burials of Chokhopani, on the left bank of Kaligandaki near Thak Khola close by the village of Tukuche. Dr. Angela Simons spells it as Prehistoric and Iron Age Culture<sup>3</sup>. She had the chance of exploring and excavating many burial caves in the Thak Khola and the settlement caves on the higher altitude of Muktinath. Prof. D.

Schuh has named the cave culture as Megalithic and Neolithic tombs<sup>4</sup>.

The caves are situated relatively at different heights. They are 2740 m at Jomsom, 2820 m at Kagbeni, 3070 m at Phudzeling, 3580 m at Dzong and 3730 m at Muktinath. The caves and the sites have been occupied from 9th century B.C. up to the 17th century A.D. In the Northern Mustang people are still living inside the ancient caves.

The institutions which have joined their hands in the 'High Mountain Archaeology Project' are the Coulfield Meisezahl Institute, Bonn, German Research Society, Institute of Prehistory, University of Cologne, Commission for General And Comparative Archaeology (KAVA) of the German Archaeological Institute, Bonn, and the Department of Archaeology, Ministry of Education Culture and Social Welfare, HMG, Nepal. The agreement for the archaeological explorations and excavations in Mustang had been signed in 1991. Under the agreement the actual excavation works

began from 1992. The subjects of studies under this project are: Settlement archaeology, Historical Settlement, Geography, Ethnology, Architecture, Dendochronology, Photography, Ethnology, Architecture, Photogrammetry and Cartography. This programme of study has been planned to be carried out in the Mustang district (in Nepal) and in the Valley of Indus near Laddakh (in India). The study of Mustang district is important because it is the meeting point of Hindu (from the South) and the Buddhist religions as well as in this region the two races of the Aryans and the Mongols have met and mingled. It had been beautifully sketched by Dr. F.K. Ehrhard about the Tibetan sources on Muktinath, often mentioned as Mu-mceni-Seta or Mu-Khun-Kseta in the Hevajra Mulatantra, where there were more than hundred springs and was the famous holy place both for the Hindus as well as the Buddhists.

### Beginning Of The Exploration Works

The first information about those caves had been given by Prof. G. Tucci of ISMEO, Italy. He had explored the region between 1953-55<sup>5</sup> and had briefly described about those caves. Dr. Harka Gurung, a Nepalese geographer had also collected valuable information about the caves in the Southern and the Northern Mustang<sup>6</sup>. An Indian scholar Swami Pranavananda had explored the area near Kailash-Manasarovara known to the local people as Purang, in the valley of Karnali river. In 1966 Lama Anagarika Govinda had also published some data about those caves. In the eastern Tibet Chinese scholars had explored and excavated some Neolithic settlements between 1978-1979. Another China-Japan joint team had given some information about the area in 1986. Dr. D. Schuh had explored the caves in 1986-1987. Archaeologist Dr. Angela Simons had been engaged in the explorations and excavations of the caves and some open air settlements sites from 1990, which is still continued.

### Summary Of The Discoveries

### The Caves, Sites and the Important Finds

D. N. Tiwari in 1985<sup>7</sup> found from the destroyed caves at Chokhopani two Copper or Bronze anthropomorphic figure-like objects, copper rings, wooden spoon, stone arrowheads, thin circular shell beads, cowrie shells, musk-deer teeth (used as necklace), human bones, handmade grey wares, pottery of Red and Buff colours, and Twin joined vases having inter connection holes. In 1991 Dr. Schuh had collected about one hundred pots which were ill-fired and had incised as well as cord decorations from the three funeral caves. A. Simons had found in 1992, 21 human skeletons which belong to 7 adults, 11 infants and 2 young persons. The grave furniture found from the caves were shell pendants, musk deer teeth necklaces, beads of bone, glass and achat, tubular bronze beads, carnelian beads, bronze object with stretched arms, bronze earrings, a birch bark (tree skin) pot and an iron object. Some of the vessels were full of meals offered to the dead persons. Dr. Angela's team in 1993 (March-April) had collected grey ware potshreds, thin-walled red pots having mica particles on the surface, bodkins or awls of schist stone, a carnelian bead, an iron object, tubular bronze beads and micro glass beads from the burial caves near Mebrak. The team had also found two perforated full vessels and five baskets. A document with Tibetan script was collected from a cave. Similarly, few wooden purbhas, ritual iron objects and a clay figure of house were also found. In this year Angela collected for the first time near Mebrak (location 42) three occupation stratas, with gaps in occupation between phase 2 and phase 3. The other important finds were bamboo arrow shaft, Iron arrowhead, leather bags, barbed iron arrow head with single tang, an iron knife blade, spinning whorl of deer antler, unspun animal hairs, wooden handle of a tool, one carved cambarb, and fragment of a mat or basket.

### Pottery

Handmade pottery of grey ware mostly ill-fired, red and ochre coloured ware and pots with lot of mica were discovered. There were big globular vases, storage jars (height 60 cm), cooking pots, water pots with pipe spouts, vases with flat and solid circular handles on the opposite side of the spout. A flask with spout and ring base, some pots with cord impressions, some with triangular or semi-circular incised decorations were found. Evidence of repairing pots tying the broken portions with thread of goats' hairs and smearing with resin had been noticed.

### The Architectural Features of the Caves

As it has already been noted that the caves had been dug into the steep rock faces mostly facing the sun and above the rivers, they were cut into six to eleven tiers. From the impressions still preserved on the walls and the ceilings it has been noticed that they had been dug or cut with crescentic weapons, like edges or chisels which were 1 cm to 14 cm wider. The inner faces were plastered with clay mixed with husk. The size of a cave was 12 m long, and 2 m to 4 m broad, the height being 1.20 m (Angela, Ancient Nepal No. 130-133, p. 2). Another cave was 10 m in length. There were doorway openings, windows (facing south and measuring 40X50 cm) and semi-circular niches 20 to 40 cm above the floor cut 40 cm into the walls. The rooms varied from one to twelve in number and the partition walls made of mud bricks. Along the cave walls sun-dried brick walls were constructed, which has also been reported from Purang (opposite Mansarovara) caves. At places there were stone masonry built to support the wooden galleries. To go upside on the upper caves within ladders or sometimes steps were cut within the caves. At places wooden galleries connected the several rooms of the caves. Most probably, these wooden members were added during the medieval periods. In the late phases the caves were occupied by the Buddhist lamas. Inside a cave (Schuh, Ancient Nepal. No. 130-133, fig. J) there was a raised platform and some of the cave

passages were partially blocked by bricks walls and small passages were left.

Inside many caves there were box or domed (Hemispherical-size 60 cm X 50 cm) grain storage bins made of sun-dried bricks and nicely plastered with clay. The bricks were of different sizes, which indicated the different phases of constructions. In a cave room there were square holes made to insert wooden or bamboo nails used for hangings. There were U-shaped or square hearths made with clay bricks having clay plaster. In a cave an altar-like structure of mud bricks was made. There were animal bones, metal objects, wooden purbhas and clay horse figure. There were stone walls resting upon the wooden beams (Angela, Ancient Nepal, 130-133; p. 2). Dr. Schuh has noticed that the upper three stories of the caves were meant for living, middle caves used as storage caves and the topmost might have been utilized as worshipping sanctuaries, as they were very small. There was also a watch tower built near the caves at Marjhong along the river Lo near Lo Mangthang. Thus we find that the caves had both the architectural features of rock-cut as well as structural constructions.

### The Open Air Sites or Habitational Mounds

At two areas near Muktinath, close to Khingar, Prof. H.G. Huttel excavated in 1991, a mound which was 130 m long, 80 m broad and 11 m high. The excavator had dated the site between 5th to 15th century A.D. He has noticed some similar pot shreds discovered at the place which had been excavated at Harigaon in the Kathmandu Valley belonging to the Lichchavi period. Some of the pots reported by the excavator (Ancient Nepal. No. 134, p. 14, Nos. 3, 6, 7, 8 and p. 15, No. - 1) may be dated between 2nd century B.C. to 2nd century A.D.<sup>8</sup> Dr. Angela Simons had also excavated ancient ruins near Kagbeni<sup>9</sup>, 30 m above the river Jhong, below a cave system which is 70 m above the ruined site. Apart from different phases of constructions, the excavator had noticed the

foundation of 34 houses. The C 14 dating from the B.C. 363-200, another dates from different upper stratas were 13th cent. A.D. and 17th A.D. (top most layer). From this excavation bronze ornaments and schist chisels similar to the Chokhopani caves were found. This proves the occupation at the site in a very early period as well as hints at the relationship between the open air sites and the cave dwellings which were partially contemporary.

### Food Materials of The Cave Dwellers And The Sites

According to the botanist of the team, Mr. K.H. Knoezer there were varieties of barley, wheat and buckwheat found from the caves. About 61 kinds of grain seeds both wild and cultivated types had been detected. Apart from these grains the meat food taken by the ancient settlers were of sheep, goat, cattle, yak, horse or mule and deer<sup>10</sup>.

Wheat had been grown in the Himalaya and the Hindu Kush region from very ancient times and the areas might have been the place of origin for wheat. This has been proved by the Indian scientists<sup>11</sup> as well as a Japanese specialist, Mr. Matsuoka<sup>12</sup>, who has proved that the two varieties of buckwheat were the traditional crops of the Himalaya region and are the oldest crops in the world. The wheat found from Iran and Jarmo Jerico predates Indian by 4000-5000 years. They have been excavated from Chirand (Bihar) & Burzahom (Kashmir) in the Neolithic period; Harappa, Kalibanga, Mohenjodaro in the Harappan period; Ataranjikhera in the OCP period; at Inamgaon, Kayatha, Navadatoli, Songaon in the Chalcolithic period; Bhokardan, Nevasa, and Ter in the early to late historical period.

The two varieties of Himalaya covered barley (Somane and Singtok) have been noticed by Mr. Nakoa to be still cultivated in Kagbeni. And a variety of Tibetan naked barley is grown in the

Northern Mustang. Barley has been noted from the early Indian sites like Chirand (Neolithic pd); Harappa, Kalibanga, Mahenjodaro (in the Harappan pd), and Ataranjikhera (in the OCP culture). The world's earliest records of cultivated barley dated 8000 B.C. come from west Asia, where its wild progenitor is also found<sup>13</sup>. At Mehargarh (Pakistan) the people cultivated barley during the 7th millennium B.C.<sup>14</sup>.

Regarding the meat used as food by the cave dwellers an idea can be formed from a detail analysis made by Prof. A. Vonden Driesch from the Khinga excavations site. Among the domesticated animals, bones of sheep, goat, cattle, hybrid of cattle yak, donkey, horse, mule, pig, dog, cat, and chicken were found. The wild animals were Blue Sheep, Musk deer, Bodak, Rat, Tree Mouse, Woolly hare, unidentified Rodents, Himalayan Vulture, Rock Pigeon, Cough, Mountain sparrow and Snow trout. Among the above mentioned animals some must be the older species existing during the early period of the cave settlers and some must have been introduced to the region at latter dates. In the caves some split bones, indicating the use as food, had been found.

The evidence of goat in the Himalaya and the Sub-Himalaya belt had been found from the upper Paleolithic period. Similarly, the bones of goat had been excavated from Pre-Harappan sites like Quetta, Zhob-Loralai and the matured Harappan sites. The remains of sheep had been collected from Mesolithic period and at Hallur (Deccan) in the Neolithic period<sup>15</sup>.

### The C14 Dates

Most valuable study of the Burial and the Open air sites had been the analysis of C14 samples collected from the explorations as well as the excavations. Angela Simons has collected many organic samples which had been dated and being illustrated in the following lines. Whereas the C14 dates from Huttel's excavations near Khinga has

not been made available.

- (1) **1992 work in the Burial caves at Chokhopani**  
Birch bark vessel used for C14 dating by Dr. Kromer, in the C14 lab at Heidelberg, gives the date as BP 2575 ± 19 (Cal. B.C. 801-792).
- (2) **Muktinath valley, Settlement cave at Jharkot** gives a C14 date of BP 2615 ± 25 (cal B.C. 810-799). This is similar to the date available from Chokhopani burial caves.
- (3) **A pit below a stone stair tower with animal bones and pottery** gave the C14 date as BP 2165+ = 44 = B.C. 805-766.
- (4) **Open Air Site of Jhong**, gave the date from Charcoal Samples as BP 2170 ± 30=B.C. 363-200. The upper layers of the same site gives the dates of 13 A.D. and topmost layer as 17th A.D.
- (5) **From a ritual cave hearth** the C14 date available ware A.D. 1008 ± 24 and A.D. 1012-1028.
- (6) **In the Muktinath Valley near Dzong, F system, location 3, D. Schuh and Gebauer collected samples from a hearth** which gave the C14 date of A.D. 811 ± 72.
- (7) **Location-2, Charcoal from a hearth in a cave** gave C14 date as 289 ± 68 B.C. (K.N. 4360 Nepal, 1990).

Plant temper from a brick gave the C14 date as A.D. 557 ± 20 (K.N. - 4358, Nepal, 1990).

#### **A Comparative Study of the Important**

#### **Antiquities from Mustang Caves with the Neolithic and Megalithic Sites in the Sub-continent**

The early settlers of Mustang have been called Megalithic and Neolithic by Mr. Tiwari<sup>16</sup>; Dr. Schuh named them as Neolithic and Megalithic<sup>17</sup>. According to A. Simons this was Prehistoric and Iron Age culture<sup>18</sup>. The writer of these pages saw some Neolithic, Chalcolithic and Megalithic connection with the Mustang cave settlers<sup>19</sup> on the account of their channel or spouted pottery, the heavy anthropomorphic figures like tools, copper bangles and bronze antiquities found from the caves. All the above scholars agree that the earliest phase of the Mustang caves belong to the Neolithic period. Let us now have a look into the antiquities found from the Neolithic and Megalithic periods in the sub-continent.

#### **The Neoliths of North-Eastern Region**

##### **Daoji Hading (North Chachar hills of Assam)**

At this site Neoliths with pottery had been discovered. The implements were shouldered celt, rectangular adzes, axes, chisels, corn grinders, mullers, milling trough of shale or sandstone. The pottery were cord-marked, incised herring bone design, basket design on grey ware, incised and stamped ware as well as the plain red ware.

##### **Sarutaru (Gauhati, Assam)**

From this site axes of shouldered and rounded butt end, handmade buff greyware to grey ill-fired & cord impressed ware were found.

It has been marked that the shouldered celt and the cord marked pottery are widely found in the East and South-East Asia. While the red ware shows affinities with the red pottery of yellow river valley extending up to Sichuan. The Neoliths of this region have been compared with the late Bacsonian of South-East Asia with influences

from Sichuan and Yunnan<sup>20</sup>.

### Neoliths of Mid-Eastern Region

**Chirand And Chechar** Chirand is situated on the confluence of Ganga and Ghagara the saran district whereas Chechar had been found on the northern bank of Ganga in the Vaisali district both in Bihar State of India. Three-fold cultural sequence had been found from these sites, which are Neolithic, Chalcolithic and Early Historical periods. The artifacts discovered were bone and antler, needles, bodkins, drills, points, borers, pins, celts, double-forked pick-axe with a curved socket for hafting (wooden handles) scrapers; chisels, awls, tanged and socketed arrowheads. The ornaments discovered were pendants, earrings and combs; T.C. objects were beads, steatite and chalcedony beads, bangles, serpent and bird figures. Chirand produced during the late Neolithic period beautiful beads of carnelian, agate, faience and steatite. Microlithic tools and series of hearths were also found. Among the food stuff were rice, wheat, six towed barley, lentil and green gram.

The pottery from the sites were red, grey, black and red wares, generally with burnished surface. The shapes were straight sided deep bowl, storage jars, basins, spouted bowl, vase with broad mouth and carinated neck. Some grey ware have designs like criss-cross lines, oblique, horizontal or vertical parallel lines, thumb and figure prints as well as corded designs. The C14 dates of Chirand in the Chalcolithic period has been 1100-650 B.C. whereas its date during the Neolithic period is fixed between 2375-1513 B.C.

### Mahagara

The site is in the Allahabad district of U.P. State and is a single period Neolithic site representing six structural phases. The antiquities discovered from the site were - Neolithic blades, microliths,

stone querns, mullers, sling-balls, celts, bone arrowheads, t.e. beads, slashed and split animal bones with a cattle house. There were four types of pottery which were handmade. They were (A) Cord impressed, (B) Rusticated, (C) Burnished red and (D) burnished black. The pots were - bowls, globular jars, spouted bowls, handis (cooking vessels) and basins. The date of the site according to B. K. Thaper can be placed around 2000 B.C.

### Koldihawa

This site had also been located in the Allahabad district of U.P. State and has three periods of cultural deposits - Neolithic, Chalcolithic and Iron Age. The Neolithic phase contained archaeological objects like ground stone tools, microliths and handmade pottery. The pots found were cord-impressed, rusticated and burnished wares.

### Sites In the Kashmir Valley

Let us now study about some of the sites situated in the Valleys of High Himalayas on the West of Mustang. There are two important sites excavated near Srinagar. Among them one is Burzahom situated at 16 kilometer north-west of Srinagar and the other is Gubkral which is 41 km. south-east of Srinagar. Burzahom had three-fold cultural sequence beginning from Neolith, followed by Megalith and Historical periods. At Gubkral three phases of Neolithic periods had been discovered. In phase IA they used to collect food but also cultivated wheat, barley, lentils, peas and clover. They eat the meat of wild animals like ibex, bear, wolf as well as domesticated cattle, goat, and sheep. Utilized underground pits of circular, oval, rectangular and square shapes for construction of huts. The shallow pits treated with red ochre paints were used as grain storage bins. They also made rubble wall and mud platforms. The bone tools used were points, needles, harpoons and scrapers. The stone tools of this phase were axes, adzes, drills, picks, pestle, pounders, quern and mace heads. They also made tools of antler's horn.

In phase I B, they still lived digging pits. T. C. pots were made with hands. The pottery are thick greyware, fine greyware and gritty dull red ware. The shapes were globular jars, bowls and basins usually having mat-impressions. The bone tools they used were harpoons, needles, awls and arrowheads. In stone, chisels, hoes, adzes were discovered. Circular hearths were also found. In phase I C, which was the last phase of Neolithic period, they made bone points, needles, double edged picks, spindle whorls and rectangular or semilunar stone harvesters. The knives were made of stone and bones. They had holes to fasten wooden handles. T. e. bangles, Cowrie, shells and pendants of light green jade stone were the other finds from the site. Copper arrowheads, bangles, rings and pins were the metal objects of this phase. The main pottery types were high necked jars, bowls and basins made of burnished grey ware. The C14 dates range between 2400 - 1500 B. C.

It will be here well justified to mention that in the Deokhuri - Dang valley of Western Nepal few years ago Dr. Gudrun Corvinus of Erlangen University of Germany had discovered Neolithic settlement sites with polished celts associated with stone blade and cord-marked pottery of light red colour in Dang and Tui Valleys.<sup>21</sup>

### Megalithic Sites Compared To Mustang Caves

There are different categories of caves in Mustang such as the Burial caves, the Residential caves, Storage caves and the Ritual caves. D. Tiwari and A. Simons have already reported on the community burials found in the caves on the bank of Thak-Khola between Chokhopani and Marpha. We have an example of Megaliths from the Leh Valley from where comparable antiquities with the Mustang burial caves had been reported.

The Leh valley Megaliths have cists or chambers built of dry stones with steps leading into it. The cist is covered with several undressed capstones. The chamber had multiple fractional burials.

About twenty skulls were found in one grave, placed upon the wooden shelves. They belong to the dolichocephalic (long headed) people. The skulls were kept on the shelves, whereas other bones were placed in the pots. All the pots were hand made. They were jars with flaring rim and short shoulder, loop handled bowls and bowls without handles. Pots painted in red pigment and incised designs like spirals, ladders and zig-zag bands. Among the antiquities were few bronze weapons, used in the devil dance of the Himalayan tribes. The burial also contained bronze beads, pendant, buttons, spouted vessel, a bracelet and a seal bearing cross and circle design<sup>22</sup>. At several places of the Himalayas as at Leh, the hills of Dehradun and even inside Tibet simple slabbed cists, sometimes containing collective burials have been reported<sup>23</sup>. It is interesting here to quote about Chalcolithic burial furniture found at Nevasa. They contained bowls and spouted pots, beads of copper and carnelian stone. Even copper beaded necklace around the neck of a child was found.

### A Comparative Study of the Antiquities from Mustang with Other Sites in the Sub-continent

#### The Pottery

Generally the handmade pottery found from the caves of Mustang have similarity in shapes and designs with the Neolithic, Chalcolithic and Megalithic pottery from many excavated Indian sites. The spouted pots, channel spouted or lipped basins and lipped bowls have been found from Brahmagiri, Nasik, Nevasa, Navadatoli (all in the Chalcolithic - copper - bronze pds.), T. Narasipur (Neolithic - Chalcolithic pd.), Chandoli, Daimadabad, Nagarjunkonda, Oriup (near Bhagalpur), Songaon (Neolithic - Chalcolithic pd.), Gilunda, Ahar, Sonapur, Pandu Rajardhipi (in Bengal), and at Inamgaon. At Khurdi (in Rajasthan) a copper channel spouted bowl had been excavated. These shapes are continued even in the P.G. ware - NBP sites like Banjarhi (5 Km.

south of Lumbini in Nepal<sup>24</sup>). They have been found from the Megalithic layers at Koldihawa (C14 date of which was  $1440 \pm 120$  B.C.). Spouted vessels associated with burials had been found from Lothal, Rojdi, (Harappan pd.) Brahmagiri, Chandoli, Eran, Inamgaon, Jorwe, Nagarjunkonda, Nevasa, (in the Chalcolithic - copper - bronze pds.), Piklihal and Songaon (in the Neolithic - Chalcolithic pds). Mr. C. Margabandhu has rightly pointed out that ceremonial vessels were used in the burial and religious occasions. They are known from many sites in India<sup>25</sup>. Regarding the perforated pots found from the Mustang caves, it has to be noted that similar perforated pots had been found from Harappan sites, Neolithic and Chalcolithic period sites at several places in India.

#### The Use of Mud Bricks

In the caves of Mustang mud-bricks have been used as partition walls, support walls against the rock surface, for storage bins and for making hearths. Angela reports that they had been used from the earliest periods, but their use in successive periods had also been confirmed. The earliest site belonging to the Pre-Harappan phases like Kotdigi (in Sindha, Pakistan) and Kalibanga (in Srinagar dist., Rajasthan) have confirmed the use of mud-bricks. They had been largely used in all the Harappan sites of India and Pakistan. Both the Pre-Harappan and the Harappan period can be dated between 3000 B.C. to 1500 B.C. The first Neolithic site in India to use the mud-bricks is Gubkral near Srinagar, in Kashmir (in around 1500 B.C.). Manufacture of clay-bricks and rarely burnt bricks had been continued in the Chalcolithic - Bronze Age sites like Ahara, Nagada, Gilunda, Karoria and Koldihawa (in Allahabad). The date range of these sites is between 2650 to 1180 B.C. In the OCP culture they have been found at Lal Quila and Ambakheri (both in U.P. State). The use of mud-bricks houses at Hastinapur and Ahicchatra had been confirmed in the PG ware period (900 - 800 B.C.).

#### Grain Storage Bins And Ovens

From the Neolithic period man left the life of a wanderer, started living at a fixed place, cultivated and stored grains. Thus grains were kept in the pit silos (plastered with ochre), mud-brick storage bins and small quantities were preserved in the storage jars. During the Neolithic period pit silos treated with red ochre were excavated at Burzahom. At Inamgaon (a Chalcolithic site in the Pravara Godavari basin dated 1000 - 700 B.C.) pit silos were made. At Ahar and Gilund (Chalcolithic pd. 1800 - 1200 B.C.) we find the use of mud-brick storage bins (brick size -  $40 \times 22 \times 7$  cm,  $33 \times 13 \times 10$  cm) to store grains. Gilund had also white clay lined pits and ovens. In all the Harappan sites ovens had been discovered.

#### Use of Antler's Horn

The objects made of antler's horn had been found from (the first phase I) of Gubkral, Chirand (Saran, Bihar) in the Neolithic period.

#### Spindal Whorls And Sling Balls

Spindal whorls are circular objects with one or more holes in the centre. They are used as flying wheel in a spindle made of bamboo, wood or metal. They were used in twisting the threads. Different materials like terra-cotta, bone, shell, faience, stone, metal or wood had been used to make a wheel. Within the sub-continent they have been found from Harappan sites, from Burzahom and Chirand (in the Neolithic pd.), Inamgaon, Bagor, Ahar, Gilund (in the Chalcolithic pd.) and continued to be used even in the PG ware sites like Hastinapur and Alamgirpur. Outside this sub-continent they had been discovered from Ghassul and Megiddo in Palestine, Nagada in Egypt and Troy in Greece during 3000 - 2000 B.C.

The sling balls have been found from the Harappan sites, Mahagar, Chiranda (in the Neolithic pd.), Gilund, Nevasa, Brahmagiri (in the



Chalcolithic pd.), Lal Quila and Saipai (in the OCP culture).

### Metal Objects

The metal objects found from Mustang caves are copper, bronze and iron. Let us now look into the earliest introduction of these metals in the earlier cultural periods in the South Asian region. Copper as well as bronze was introduced in the Neolithic period within a similar timeframe<sup>26</sup>. In the Harappan sites both copper and bronze antiquities had been discovered. Copper objects like arrowheads, bangles, rings, and pins were found from the last phase of Neolithic period at Gubkral (Kashmir). Limited number of copper objects were found from Kakoria (in UP). A very interesting picture has been presented by the site of Ganeshware (dist. Sikar, Rajasthan, in the OCP culture) where large number of copper tools with microliths had been excavated. This was the area which supplied ores for Harappan cities. From Khapa (a megalithic site dated 1000 B.C.) bronze, copper, and iron objects were discovered. Bronze objects were also found from Nilgiri and Raigir<sup>27</sup>. At Khurdi (a Chalcolithic site in Rajasthan) copper chisels, parasu like sheets and a channel spouted bowl had been excavated. In the sites of Malwa culture (between Chambal and Malwa) copper and low grade bronze objects like chisel, rings & bangles had been found.

### Iron objects

Iron has been found in the Chalcolithic period of Chirand and Sonpur, at Hallur (in the Megalithic pd. 1000 B.C., Karnatak State) at Noh and Malwa (Central India, in the black and red pottery level, which is post Chalcolith but pre-NBP). Iron had been found from the PG ware sites. B. K. Thaper (p. 114) puts a time-frame of iron in the sub-continent as 1000 - 700 B.C.

### Beads

Stone, faience, bronze, and steatite beads are found from the Harappan, Neolithic Chalcolithic, OCP and early Megalithic periods (between 3000 - 600 B.C.). It is true that some of these people or sites manufactured the beads in their home country but most of the beads (either in raw material or the finished products) must have come through trade links from far-off countries. In the caves of Mustang beads of agate, carnelian stone, shell, faience, glass, bronze and bone have been discovered and large portion of these materials had been transported through trade.

### The Bronze And Copper Objects

It will be here appropriate to discuss about some bronze and copper objects (figs 9 and 10 of Angela's article in the present volume) recovered from the burial caves on the bank of Thak Khola which is located on the lowest altitude among the entire cave settlements. There are basically three bronze objects - (i) bronze or copper sheets looking like headless anthropomorphic figures, (ii) a bronze figure with four cross and a hole on the top center, and (iii) the copper bangles. The above objects or similar objects were not found from the upper settlement caves.

### The Anthropomorphic Figures

The headless anthropomorphic figures have been called by Mr. Tiwari as chest protectors<sup>28</sup>, a simple sheet by Angela<sup>29</sup>, but the writer<sup>30</sup> saw some far-off relationship in them with the anthropomorphic figures discovered from the Ganga basin. There are different types of such figures, which must be related to some rituals or used as weapons. They are : (i) the Copper Anthropomorphic figures from Ganga basin. Till now altogether nine such pieces have been found from Bisauli, Fatehgarh, Sheorajpur, Sarthauli and Saipai (all in UP). (ii) The Parasu discovered from Sarthauli (dist. Saharnpur, UP), Khurdi (dist. Nagpur), Lothal (in Punjab) and Mitathal (110 Km. N. West of Delhi). The two earlier sites

belong to the Chalcolithic periods whereas the lower two sites are typical Harappan. (iii) The anthropomorphic figure which has been found about one and half years before and deposited in the DOA office, Kathmandu, come from Jagatpur village in Tikapur police post near Dhangarhi, in the Kailali district of the far-western Nepal Terai<sup>31</sup>. The figure was found while digging clay for making bricks. It has a projected head, two arms (which are not clubbed like the pieces in the first category but are short and slightly bent), and two (flaring out) legs. The piece was 36 cm (14", long, 10 cm to 28 cm (4" to 11") broad and weighs 3 kg. 800 gms<sup>32</sup>. (iv) The fourth type of copper (?) anthropomorphic figures or sheets have been found from the burial caves in Chokhopani (Mustang) which are located at 2700 m above sea level. These two figures are without pronounced semi-circular ridge or head, the hands and the legs are simply flanged out. The copper sheets are hammered and cut according to the size. It can be noticed that the hammer marks found over the body of Chokhopani figures fairly compare with the Ganga basin figures, illustrated by B. B. Lal<sup>33</sup>. The weight of the figures from Chokapani, each piece is 1 kg. 650 grams and are 38 cm longer. From the point of weight also the pieces seem to have some connections or influences from the copper tools found with the OCP cultural sites in the Ganga basin and can be placed between the Parsu and the Jagatpur figures.

Still, however, the metal analysis of the Jagatpur and the Chokhopani figures have not been done. Before we reach at any conclusion about the Chokhopani figures they have to be closely examined and studied. Whereas the Jagatpur anthropomorphic figure definitely belongs to the Ganga copper hoard culture and the area has to be explored thoroughly for further discoveries.

Another bronze figure found by Schuh<sup>34</sup>, from a central burial cave of Thak Khola, is in the shape of a cross or also symbolising a human figure with two horns on the head and a hole. The figure

might have been used as a digging equipment as the lower portion is looking like a spade, the two arms were to support two wooden poles which were tied by ropes inserting into the hole and pulled by one or two persons as plough. The chemical analysis of the figure shows that it contains 45 % copper, 30 % tin and 4.5 % zinc. Angela has rightly pointed out that the figure from the burial caves of Mustang can be compared from western regional sites than the Ganga basin. It is to be noted here that the copper alloyed with tin and some times with zinc have been found from Punjab, Baluchistan and Sindh area<sup>35</sup>. But simply on the metal differences of bronze tools Angela has tried to prove that the Mustang culture had no relationship with the Chalcolithic or the OCP culture. Whereas the writer has demonstrated above that bronze objects have been found from Harappan sites, in the Malwa culture, Megalithic site at Khapa, Ranchi and Leh. Apart from the bronze cross object and beads, Mustang caves have also copper rings or bangles. Enough facts and figures have been illustrated above to show that the antiquities from Chokhopani are comparable to the Neolithic, Chalcolithic and the Megalithic sites found in the south Asian region.

#### Assessment of the Complexes and Future Course of Action

Apart from the above facts we have to study and consider about some other examples of the sites in the region. The type of developed caves supported with rock cut and structural constructions, mud-brick storage bins displaying sufficient amount of grains they produced, and sophisticated antiquities with very small numbers of lithic tools, prove that the earliest or the first settlers of the Mustang caves belonged to some advanced stage or the last phase of Neolithic period. It might be a transitional phase where the Neolithic society was changing over to more advanced culture. Now we have to examine that the late Neolithic culture of Mustang stepped forward in a smooth and gradual way to the latter phases or leaped over the

Megalithic phase. We have seen that the Neolithic sites of Chechar, Chirand, Inamgaon and Koldihawa developed slowly into the Chalcolithic, Iron Age and Early historical periods. This development has been very rightly pointed out by Dr. H. D. Sankalia (1962, 155): "Chronologically the development of various regions (in the subcontinent) is very uneven (still it) began with Neolithic and passing through Chalcolithic or Bronze Age (it passed on) into Iron Age or Early Historical period".<sup>36</sup> There is another set of example from Gubkral (near Srinagar) which had Neolithic period followed by Megalithic and early historical period. Similarly, at Hallur there had been an overlap of different cultural phases like Neolithic, Chalcolithic and Megalithic periods.

#### Studies Still To Be Done

Angela Simons and her team of archaeologists have done the marvelous works of research in Mustang but there are works still to be done in the following areas.

- (1) We have to study and classify the antiquities locally manufactured and imported from outside Mustang.
- (2) The study of the correct stratigraphic position in selected caves where the layers are well preserved. We have to separate the antiquities of each layers and try to specify their cultural affinities.
- (3) The study of pottery is still incomplete. We have to see that apart from handmade pottery in the earliest phases, when the slow wheel or fast wheel turned pottery had been introduced in the caves : we have to separate clearly the Neolithic, Chalcolithic or Megalithic and the Early Historical potteries.
- (4) Metals found from the caves are Bronze, Copper and Iron. Specify the phases or

periods of their introduction in the cave cultures. Metal analysis has to be done about Copper and Iron. Try to find out the mines (Bihar, Rajasthan, West Asia or local mines) from where the ores or the metal objects have been imported.

- (5) Why the burial caves are found only in the lower regions of Thak Khola ? Please check whether they can be found further in the Muktinath or on the northern part of Mustang district.
- (6) Excavate some of the caves in the Northern Mustang and extend the research works on the west and some where on the south of Purang, close to the Mansarovara lake. Try to find out the earliest settlement caves. This will give the idea about the direction of the entry of the earliest settlers.
- (7) Period of introduction of Buddhism into the region should be specified. Whether the Himavanta Pradesh mentioned by Asokan edicts, Life legends and the early Buddhist Pali literature in Mansarovara and the Muktinath area. The Pali literatures repeatedly mention about the Anotaptadaha (Manasarovara)<sup>37</sup>. This means that Buddhism was introduced in the region in the early Christian era.
- (8) Measurement and classification of the mud-bricks within the caves and their study with the comparative data will give the picture of the Age.
- (9) Clear data about the period of introduction of wooden members into the caves have to be collected. Wooden members in architecture were introduced in the Harappan cities, in Pataliputra during the Mauryan period and in the Western Indian Caves in the 2nd cent.

B.C.

## Conclusion

There are many research works still to be done in the area. The information about the earliest settlers of the caves, their area of migration and about their race has to be known. Though there are some helpful clues which have emerged after the research works have been done in the Mustang caves and the settlement sites. The earliest people who had reached the region were in the late Neolithic period and their bronze antiquities, pottery, manufacture of mud-bricks and similarity of burial sites indicate that they might have migrated from Kashmir (Srinagar - Leh) valley. It will be still proved if we can get the anatomical report about their race (check whether they are dolicocephalic people) and other features. At present it seems that the earliest settlers migrated from Kashmir to the Mansarovara Lake area, then moved slowly towards east and reached the Mustang district from where some families again

moved to Sikkim<sup>38</sup>, to Bhutan and also to Assam. It is here quite relevant to quote Dr. W. Haffner and Dr. Pohle (Ancient Nepal, No. 135, p. ) that 'the extremely elevated high laying mountain valleys inhabited (now-a-days) by Tibetan ethnic groups (or a mixed race), the High Himalayas form a geographical unit that extends in the West as far as Laddakh and in the East as far as Bhutan.' Similar study report has been produced by Robert Shafer<sup>39</sup> who says "we may reconstruct the migrations of the Aryans, ..... the Dardic branch remained in north west India, the Daradas, Kashmiris and some Khasas (some having been left behind in the Himalayas of Nepal and Kumaon)".<sup>19</sup> According to the maps produced by Shafer it is clear that the Khasas lived at the upper course of the Sutlej near the Manasarovara lake in the times of Bharat War<sup>40</sup>. It will be still interesting to note here that the Asoka legend ascribes about his military actions against the Khasas (on the Western Nepalese territories) when he was a prince, shortly before the death of king Bindusar.

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- 1 Information obtained from a short note about the explorations done by the team of Angela Simons in August 1993, submitted to DOA.
  - 2 D.N. Tiwari, *Cave Burials form Western Nepal, Mustang*, Ancient Nepal, No. 85, 1984-85, pp. 1-12.
  - 3 Angela Simons, *Trail Excavation of a Cave System in Muktinath Valley*, Ancient Nepal, No. 130-133, 1992-1993, PP. 1-9; *Preliminary Report on the 1992 Campaign of the Team of the Institute of Prehistory, University of Cologne* (in the present volume).
  - 4 Dr. D. Schuh, *Introduction*, Ancient Nepal, No. 130-133, pp. F-K
  - 5 G. Tucci, *Journey to Mustang*. 1952, Kathmandu, 1953; Reprint 1977.
  - 6 Harkha Gurung, *Maps of Nepal*, Bangkok, 1983.
  - 7 D. N. Tiwari, Ancient Nepal, No. 85, pp. 6-8, Plates 1-8.
  - 8 Prof. Hans. G. Huttel, Ancient Nepal, No.-135, pp. 1-17.
  - 9 Dr. Angela Simons, Ancient Nepal, No. 136. (in the present vol.)
  - 10 Dr. Angela Vouden Driesch, *Faunal Remains From Early House in Khinga*, Ancient Nepal, No. 134, pp. 18-22.
  - 11 A. Ghosa, *Encyclopedia of Indian Archaeology*, 1990, pp. 6-7.
  - 12 Dr. Predita Pohle, *Geographical Research on the Cultural Landscape of Southern Mustang*,

- Ancient Nepal No. 134, pp. 57-81.
- 13 A Ghosa, *Encyclopedia*....., pp. 6-7.
- 14 Abdul Azizfarooq, *Prehistoric Civilization of Baluchistan*, The Archaeology, 1988, Karachi, vol-I, No.-1, p. 70.
- 15 A. Ghosa, *Encyclopedia*, 1990, P.3.
- 16 D.N. Tiwari, Ancient Nepal, No. 85, P. 6 & P. 9.
- 17 Dr. D. Schuh, Ancient Nepal, No. 130-33, P.K. & P.F.
- 18 Dr. A. Simons, Ancient Nepal No. 130-33, P. 8. In her recent article she has refuted the Chalcolithic relationship with the early settlers of Mustang Caves.
- 19 T.N. Mishra, *A Brief Survey of Nepalese Archaeological Activities and Antiquities*, Proceedings of Third/South Asian Archaeological Congress, Islamabad, 1988, Dept. of Archaeology and Museums, Govt. of Pakistan, P. 72; Ancient Nepal, No. 103, P. 6 and P. 4, footnote 7.
- 20 B.K. Thapar, *Recent Archaeological Discoveries In India*, UNESCO, 1985, PP. 43-44. Mr. Thapar has remarked that the pottery of Neolithic sites in Eastern India is 98% handmade and 2% wheel turned.
- 21 G. Corvinus, Ancient Nepal, No-86-88, pp. 4-5 and P-10; Corvinus, "*The Prehistory of Nepal from the Paleolithic to the Neolithic*", A brief note submitted to DOA recently.
- 22 A. H. Fancke, *Antiquities of Indian Tibet*, New Imperial Series, ASI, 38, Calcutta-I, pp. 64-74; A. Ghosa, *Encyclopedia*, Vol - I, pp. 120, A. Ghosa, *Encyclopedia*, Vol - II.
- 23 A. Ghosa, *Encyclopedia*, Vol - I, p. 115.
- 24 Dr. S. B. Deo, *Archaeological Investigations in the Nepal Terai - 1964*, DOA, HMG, 1968, p.10, PL-III.A. A Lipped basin of Crimson-slipped ware was found from Banjarhi.
- 25 A. Ghosa, *Encyclopedia*, Vol - I pp. 188-189.
- 26 A. Ghosa, *The City In Early Historical India*, Simla, 1973, pp. 2-3, Mr. Ghosa has said that 'the regional character of copper and bronze age cultures is - their mutual contacts .. and the practice of extra-regional trade, concentrating upon the import and export of metal'. He further adds that - 'trade started during the last phase of Neolithic period'. Similarly V. Gordon Child says that the results of the introduction of bronze into the Neolithic society were followings - It gave effective means of production and transportation of technology of manufacturing tools, organised trade for the import of metal, formed a class of people who did not produce food and were engaged in metallic tool production, to feed those trading class, and to exchange metal objects (tool and ornaments) people started storing food.
- 27 B. K. Thaper, *Recent Arch. Discoveries*, UNESCO, 1985, pp. 110-111.
- 28 D. N. Tiwari, Ancient Nepal No. 85, pp. 1-12.
- 29 Angela Simons, *Preliminary Report on the 1992 Campaign*, (in the present volume).
- 30 T. N. Mishra, Ancient Nepal, No. 103, 6-15.
- 31 Photo - I.
- 32 The figure was kindly supplied by the police office of Tikapur on the 2049-1-1 . DOA expresses its heartfelt thanks to the police office Tikapur and Police Head Quarters, Kathmandu.
- 33 B. B. Lal, *Further Copper Hoards*....., Ancient India, No. 7 Plates - V, VI, IX.
- 34 Angela Simons, in the present Vol, fig 9, No - 1.
- 35 Ghulam Mustaba, *Conservation of Metal Antiquities*. The Archaeology, 1988, Vol - I, p. 37. The

metal analysis given by the writer is (i) Bronze - having copper 84 % to 96% and tin 4% to 16% (ii) Brass - Copper 60% to 70% alloyed with zinc 40% to 30%.

B. B. Lal, *Further Copper Hoards from Gangetic Basin and Review of the Problem*, Ancient India, No - 7, p.37. The analysis of the metal given by Mr. Lal is following - Copper 98.77%, Nickel - 0.66% whereas some of the antiquities from the Harappan sites (they have both copper and bronze objects), Hissar, Anu (Persia) and Caucasia (South Russia) are bronze objects.

36 H. D. Sankalia, *Prehistory And Protohistory In India And Pakistan*, Bombay, 1962, pp. 155.

37 Dr. Bharat Singh Upadhaya, *Buddha Kalina Bharatiya Bhugol*, 1961, Allahabad; Quoting Dipavamsa (3/10) and Mahavamsa (1/317) the writer refers about the six Buddhist monks who went to propagate Buddhism in the Himalayas during the period of Asoka. The leader of the team was Majjhima and other associating monks were Kassapagotta, Muladeva, Alakadeva, Sahadeva and Nandabhissara. The Milindapanho (1st cent. B.C.) mentions about the important rivers like - Ganga, Yamuna, Achiravati, Sarabhu, Sindhu, Sarasvati, Vettavati Vitansa and Chandrabhaga. The Commentary on Suttanipata refers about the seven lakes of the Himalaya mountains including Anotatta (Manasarovara).

38 During the recent technical meetings about the Mayadevi Temple Restoration the writer had been informed by Mr. Munish Chandra Joshi about the important early cultures excavated in Sikkim.

39 Robert Shafer, *Ethnography of Ancient India*, Wiesbadon, 1954, p. 43.

40 P.H.L. Eggermont, *The Year of Buddha's Mahaparinirvan*, The Dating of the Historical Buddha, Edited by H. Bechert, Vandenhoeck and Ruprecht in Gottingen, Part - I, P. 24 ; P. 241 - "Two great warriors entered his service. They marched ahead of him, cutting a path through the mountains. Asoka was welcomed in the kingdom of the Khasas."