

A Few Words about Study on High Mountain Archaeology

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Archaeological excavations and explorations deal with scientific study of human activities on earth relating to different disciplines of learning. When we relate the study of human activities on earth our study is multi-dimensional in nature. It is more related with the evolutions on earth. Geography in general and Geology, Zoology and Botany in particular in this context could be related with archaeology. Scientific study on all these disciplines will reveal the indicators for drawing any inference. Both macro and micro level analysis are the techniques being adopted for the study. At the macro level the study will be related with the study of humanity at large. When we limit our study to any specific branch it will be related with micro level study. The study on High Mountain Archaeology covers different branches of learning. On the one hand, it is related with geomorphology, while, on the other, it is also related with human activities in the remote past.

Nepal-German Project on High Mountain Archaeology is aimed at the exploration of human activities from the pre-historic period. The scholars and scientists have been striving their best to make research in different aspects. The study reports mainly focus the outcome of the research. The process of study is being continued. Results of the laboratory tests are being published. Analytical

studies of the artifacts and close observation of the sites, collection and study of resource materials are the processes being adopted. More thoughts are given on the subject matter. A seminar has been organised to invite the opinion of the scholars concerned. The present edition of *Ancient Nepal* deals with such studies.

The author would like to make a review of the articles included in this publication. Mr. Janak Lal Sharma, the ex-Director General of the Department of Archaeology has written a critical appreciation of a seminar on High Mountain Archaeology held in Nepal Administrative Staff College on the 9th March, 1993. He has also made review of the papers published in the journal of the Department of Archaeology, *Ancient Nepal* (No 130-133) June-January 1992-93.

Mr. Sharma has referred that the seminar on prehistoric archaeology was the first of its kind. All the papers presented by the German scholars were new except a few papers on anthropology. He states that the papers were based on developed scientific approach and analysis. These papers were the preliminary reports on archaeological explorations and excavations.

Mr. Sharma has mentioned that the field of archaeology has been divided into two parts i.e.

historical archaeology and prehistoric archaeology. To clarify further it has been divided into three parts: historic, protohistoric and prehistoric. According to Mr. Sharma, the history of Nepal upto the period of Lord Buddha is called historic period. It is based on the pillar inscriptions of Ashok. The periods prior to that are called protohistoric and prehistoric periods. The Nepal German Project on High Mountain Archaeology is mostly based on the prehistoric period and to some extent historic period. He refers that archaeology of Mustang is more related with geology, zoology and botany. The geological features of Mustang is very important for a geologist. It contains the stratigraphic and tectonic features of the eastern and the western Himalayas. He has given the reference of Tethys sediment of Thak Khola. By means of geological evidence man's antiquity is established. Geology remains are essential for relative dating and stratigraphical methods are used for establishing archaeological sequences. Mr. Sharma also mentions that prehistorians also use natural and physical sciences for information essential for drawing a complete picture of the man's past. He also makes mention of radiometric dating technique. It depends on the known rates of decay of a radioactive isotope or replacement of one isotope by another at a known rate. The first of these techniques to be applied to archaeology is generally referred to as carbon - 14. To elaborate the principle he says that all living organisms absorb radioactive carbon isotope from atmosphere. When an organism dies, the carbon isotope is no longer absorbed and what is already inside the organism begins to decay. As we know the rate of decay, the date of dead organism can be calculated on the basis of the amount of isotope remaining. The longer the time involved the less to measure, so that a point is reached where there is either too little to measure or nothing at all. Mr. Sharma also makes mention of enrichment technique being used recently to give reasonable result for the quantities originally too small to calculate. The author also gives an account of the basic principle of stratigraphy in archaeological

investigation through excavation. The other techniques mentioned in the article is the detection of differing quantities of fossil pollen grains of various plants found in the soil. The author also makes mention of aerial photography for searching archaeological sites. Magnetic detectors are also used for this. The other interesting new technique referred is the analysis of deep seacores.

Mr. Sharma has also pointed out that evidences unearthed so far shows man's birth place in Asia. He cites the example of recent discovery of fossils of *Ramapithecus* at Butwal (December 1980). He says that *Ramapithecus* is the earliest fossil primate which many anthropologists believe to be a direct ancestor of man. He also makes mention of the explorations in the Mount Everest area carried out under the auspices of Chinese Academy of Sciences. He expresses his hope that the information obtained in the Himalayas and Tibetan Plateau will help in tracing the transition from ape to man and in seeking missing links to the evolution of man. He also suggests the other methods known as palaeomagnetic analysis in field of prehistory study. He attaches more importance on the study of German scientists in the Southern Mustang and shows urgent need of extending the study upto Northern Mustang. To conclude, he refers archaeological excavation as a means of rebuilding history. In this context the author says that the project of High Mountain Archaeology has been proved to be an important step for study in finding the prehistoric and historic period of the history of Nepal. His review gives an account of multi-dimensional aspects of archaeological exploration techniques. It testifies the rich experience of the author in the field of prehistoric studies.

"People's Participation in the Management of Local Affairs in Southern Mustang in the 19th and 20th Centuries" by Mr. M.L. Karmacharya gives the analysis of the old documents relating to the management of local affairs in the Thak Satsae and some other parts of Southern Mustang. Satsae is a region situated between Tukuhe and Ghansa

in the Southern Mustang known as Thakali region. In 1926 the people of the region were given a regulation providing civil rights. When the regulation was promulgated local people were given judicial power to settle minor local disputes. The Thak Satsae Dharma Panchayat Document was photographed by Prof. Dr. Schuh in 1990 in Ghansa. The document gives an account of the assembly of the Mukhiyas of 13 villages. The assembly was formed to manage the local affairs including social customs and settlement of local disputes. It aimed at the spread of education, prevention of epidemics and other diseases, promotion of trade and commerce, cottage industry and handicrafts and taking strict measures against evil traditions and undesirable activities in the community. It seems to be a copy of official document but it had not been endorsed with a seal or signature. The later portion of the document contained different decisions made on different dates from 1949 to 1959. The author draws inference that the 13 Mukhiyas representing 13 villages in the Thak Satsae region had formed themselves into a Dharma Panchayat under a constitution adopted by themselves and looked after the local affairs almost independently. The constitution had a provision of electing a working committee of 13 members known as Mukhiyas. The chairman was called Mir Mukhiya, the Vice chairman, Upa Mir Mukhiya and the treasurer, Tahabil Mukhiya. The meeting was held two times a year. The meetings were participated by the Kuriyas and bhaladamis, gentlemen from the localities.

The Panchayat tapped various sources as dues and revenues for its income. It levied birth as well as death tax. The Panchayat had taken measures like traditional banking system known as 'dhikar'. When one needs money for business the dhikar gives loan. It is just like a revolving fund.

The author also gives an account of Jhumsumba Document. The people of Jhumsumba (Jomsom) and Thini had concluded an agreement in 1938 to promote their local interest. Originally the people

of the two villages had made an agreement on sharing of water for irrigation purposes. Later on, the document records a number of decisions regarding matters of social importance of the two villages. The document includes the decisions regarding restrictions to cut down trees without the permission of Talukdars and punishment for other offenses regarding grazing of cattle in the fields belonging to others.

The author also gives an account of Ghansa Village Document. The document is related with the protection of forest and forest products and the grazing as well as agriculture lands. It also contains the decisions made between 1868 to 1954. They are related with hunting, management of labour, trade and industry, observance of festivals, keeping buffaloes in the village and so on.

Thus the author gives an account of the local people's participation in local affairs with reference of the documents available in Southern Mustang.

Dr. Niels Gutschow's paper entitled "Kagbeni : Structural Analysis of Dendrochronological Data" gives an analytical account of dendrochronological study. It is an analytical account of the samples collected in Kagbeni which included the samples collected from Kagbeni castle with historic core and surrounding courtyard houses. Samples of pillars, joists and beams were carefully selected for dendrochronological study. He mentions that the samples collected in March 1993 were analysed by the tree ring laboratory of the University of Cologne.

Dendrochronology is a scientific method of dating by the analysis of tree rings. Samples are carefully studied to indicate the dates. The samples are taken from the area of investigation. Several such samples are studied. The tree rings show the features of climatic effect. Study of the samples are based on the survey of houses and other structures.

While analysing the samples the author mentions

that structural analysis alone reveals the stages of development. He cites the sample of House 1 of Pemba Drolkar which shows four stages of development, and draws the inference.

Dr. Niels also gives an account of other 28 samples from 16 houses and 21 dated samples from the castle. By systematic study of the samples he indicates the date of construction of the houses and castle.

To conclude his paper he says that it becomes evident that data provided by dendrochronological findings have to be co-related with evidence from structural analysis in order to come to a reliable conclusion about the history of a house or a development of a village. He gives illustrations to testify it.

Mr. Sukra Sagar Shrestha, Dr. Angela Simons and Dr. Werner Scön have jointly written the 'Preliminary Report on the 1992 Campaign of the Team of the Institute of Prehistory, University of Cologne.' In this paper the writers have given the status of the cave system in the southern Mustang before the excavation and exploration were carried out by the Institute of Prehistory, University of Cologne. Numerous multistorey cave systems were dug by the men into the faces of the rock massifs situated alongside the riverbeds. In the Mukthinath Valley remains of ancient village sites with ruined houses and former field systems were located in the direct neighbourhood of such cave systems, Dr. Harka Gurung and Prof Dr. Dieter Schuh carried out the first survey in that area. Then a preliminary archaeological study was carried out in the upper Mukthinath valley in 1990. This yielded a series of radio carbon dates. The Cologne University made an archaeological research programme. Its aim was to carry out excavation works in selected cave systems and connected sites and collect the data to build up a chronology of the prehistoric and medieval settlement of the high mountain region of Nepal. The programme also aimed at making efforts to find out the connections between the cave settlements and cave burials of

one of the known sites in Thak Khola in 1985. In 1992 the Cologne University team together with the counterpart from Department of Archeology, HMG carried out field works. Field works were carried out at three sites, namely, Thak Khola near Dzar (Jharkot) and Dzong (Jhang) in upper Mukthinath and near Kag (Kagbeni) in lower Mukthinath Valley.

The paper gives an account of the funerary caves at the site of Chokhopani. It was completely buried by rock debris. For the installation of the waterpipe of the power station the rock debris were removed. While removing them at least three cave burials at different levels were opened. The pottery, bronze, shell pendants, beads were recovered. In October 1991 Dr. Dieter Schuh found the caves endangered by heavy water erosion. More than 100 ceramic vessels of different types and some metal ornaments were recovered. After Dr. Schuh's departure, some unauthorised persons climbed into the caves and destroyed the remaining structures. In 1992 the upper chamber was excavated. The house of several individuals and a number of potsherds and an iron nail were recovered. In the Chokopani funeral caves the dead were buried with their ornaments. Numerous ceramic vessels were probably filled with meals for the dead and put into the grave chamber. The metal objects from Chokhopani included anthropomorphic figures. The radiocarbon dates of Chokopani findings take us to 801 to 792 B.C.

The paper also gives an account of the cave system in Dzong (Jhong) opposite to the village site of Dzar (Jharkot). It contains six multi-storey cave system. An 8m long passage connects several cave rooms in the interior of the rock. The storing structures are mostly box-shaped. Some of the cave rooms are furnished with hearths & their ceilings are covered with soots. The walls of many caves are plastered with mud tampered with plant remains. The walls of some chambers show traces of elaborate paintings bearing witness to the last occupation of the caves by Buddhist hermits. The radio carbon dating of the findings shows the early

date as 810 to 799 B.C.

In the paper the authors have also have explained the cave systems and ruins in the lower Muktinath valley the site of Pludzeling. About one hours walk to the east of Kag (Kagbeni) lies the cave system and ruins of ancient settlement. It goes back into prehistoric times. Remains of 34 houses are preserved on the river terrace above the river Dzong. There are remains of ruined buildings which belong to 13th century. The radiocarbon analysis of a charcoal sample from this feature shows that the site was already inhabited in the Iron Age period i.e. 363 to 200 B.C. (three to 400 years later than the period represented in Chokhopani). However, a fragment of a basket dug in the easternmost peak of the rock massif yielded radio carbon date as early as 805-766 B.C. The team of the archacologists also discovered the ruins of a tower. The archaeologists say that they found charcoal animal bones, metal objects and ornaments of paper with Tibetan script drawing in the remains of cave chamber. These are all the remains of fire ceremony. They also found stone image of Boddhisatto placed at the former entrance of the ancient village.

The paper says that as a result of the field work of 1992 the following informations are available.

1. The cave systems were used mainly as settlements where everyday life took place. Radio carbon dates and the number of finds suggest their connection to the funeral caves in the Thak Khola.
2. The caves provided shelter during the attacks by enemies
3. They provided probably as the quarters of hermits who lived and worked there.

Moreover, the paper illucidates the information with the maps, caves shown in the maps, pottery recovered from different sites and other artifacts.

Mr. Chandra Prasad Tripathee in his paper entitled "Archaeological Excavation at Khingar

and Dzarkot" has explained the objectives of the excavations at Khingar and Dzarkot that started from 1991. The main objectives of the excavation are : 1) to reveal the cultural sequences of Muktinath Valley, and 2) to corelate the sequences with the fortresses and cave settlement of that area, and 3) to acquire scientific archaeological datas regarding the settlement history of the high Himalayan belt. The writer elaborately mentions the procedure of excavations at both the places i.e. preliminary survey, hypothesis of the excavation, use of contour map, plan for laying out the trenches, achievements of the season's work, analysis of the findings and finally, the dating etc. While giving the account of the Khingar mound, the author says that the structural remains exposed showed three settlement phases in the mound. The remains showed that the settlers constructed the fort in the centre of the mound in the first phase. In the second phase they constructed small houses, and finally, in the third phase the settlement was extended to other possible areas and fortified them by erecting walls all around.

Mr. Tripathee indicates that the study of potsherds provides indicators to corelate the architectural phases of the mound. They also provide information for dating.

He also gives account of excavation carried out in Dzarkot just in front of the ruined castle. The castle was built without any foundation. The diagnostic value of the potsherds over there is very poor according to the author. To conclude, he says that these excavations provide information for setting models.

Christian G. Seeber in his paper, "Reflections on the Existence of Castles and Observation Towers in the Area under Investigation, the Southern Mustang (Thini, Jomsom, Dandkardzong, Jharkot)" gives his reflections after the study of the observation towers located at different sites in the Kali Gandaki Valley. By giving reference of the previous research the author says that the existence of these towers were used for many purposes. The

Kali Gandaki Valley as it lay on the trade route to Tibet from India, different political powers tried to control it. The towers were built to station the soldiers at the time of war. They were placed on strategically favourable elevations as to enable the view of surrounding roads. They were used for defensive purposes i.e., to protect the local dwellers from hostilities. They were also used for levying the duties and the taxes and to control access to valleys. Dendrochronology indicates that Garabdzong and Kagbeni were constructed in the 16th century in Jharkot, Dzung and Dankardzong in the early 17th century.

The author makes mention of the political powers that ruled in the modern Mustang. Their chronology is as follows:

Greater Tibet	-	7th to 9th Century
Gung Jhang	-	13th to 14th Century
Jumla	-	16th Century
Ladakh	-	17th Century
Jumla	-	18th Century
Gorkha	-	Late 18th Century (1789)

Source : Jackson (1978)

Dr. Ehrhard has also referred the existence of castle in the surrounding of Muktinath. Mr. Jackson quotes Gungthang Chronicle and describes "Mukhun" as one of the 13 'dynastic castles' built in the 13th century by Gungthang King (1253-1280).

Mr. Seeber also makes mention of the castle ruins which were found during the field work of 1993. The ruins of the castles are: 1) The Gazab Dzung fortress; 2) Castle like group of buildings above Kunglithing; 3) The Lubra observation tower; 4) The Dankardzong fortress; 5) A large fortress above Pikling; 6) The fortress of Kagbeni; 7) An observation tower on the cliff above derelict Phutseling; 8) The fortress of Kalon, east of Khyinga; 9) The fortress of Dzung; 10) The fortress of Jharkot; 11) An observation tower on

the hillock north of Jharkot (above the cave systems) and 12) An observation tower on the eastern flank of derelict Newa, West of Dzung.

The author mentions that the castle ruins of Garaledzong, Dankardzong and Piklin can be characterised as refuge castles. They were in all probability employed in the time of war by neighbouring villages as protection against encroachments. He also refers that the existence of a subterranean supply of drinking water within the castle (Garaledzong, Jharkot). It proves that the castles were intended for long term use.

The author says that the existence of refuge castles allowed defence against aggressors. The existence of weapons-guns and swords etc. in Thini bear witness to this. Many towers like ruins with upto 3 storeys in the periphery of villages (Lubra and Phutselin) are all placed in strategically favourable elevations which enable a view of surrounding roads.

The author says that the ruins of Kagbeni show that they were used for levying of duties and taxes on commodities and transport animals. The internal structure of the fortress consists of several narrow rooms which indicate their usage as a palace. The author surmises that the bronze mirrors were used for long distance communication. Such mirrors were found during an excavation by Hüttele in the abandoned settlement of Kalon (near Khyinga).

He mentions that the mirror is made of a bronze disc with two reflecting sides. The inner side of the mirror is concave while the outer is convex. The patina is light and bronze - coloured on both sides. This form is similar to the Central Tibetan bronze mirror originating in the Han dynasty (1st century B.C to 1st century A.D). The author describes Dandardzong castle as long as 35 metres. Beneath the southern part of the village there is an artificial cave. The women and children get shelter there during the wars against Jumla Empire. The author also describes the features of the abandoned village situated on the road to Kagbeni about 2 Km from

Jomsom on the left bank of Kali Gandaki (Kunglithing) and the abandoned village of Garabdzong.

Mr Charles Ramble in his paper entitled ' Civic Authority and Agrarian Management in Southern Mustang' makes remark on a nineteenth century land tax register from Kagbeni. In his paper he explains the inter connections between agrarian practices, polity and local rituals. The author attaches archival value to the documents. These documents reveal the state of affairs of southern Mustang in the eighteenth and nineteenth centuries. He presents the paper in two parts. In the first part he summarises the contents of land-tax register of Kag (the KSM). The document

provides fragmentary informations on catagories of land holding households and community held fields that are liable to special forms of taxation. In the second part he presents a broader picture of the social organisation surrounding the payment of land taxes. The author says that Prof. D. Schuh photographed the text of documents in 1989. The tax consists of four main sections. Each section lists all the households in Kag, identifying them by the name of the principal householder. Each household is followed by a figure stating the seed capacity of the land attached to it. The paper explains the way in which tax liability is assessed on the basis of seed capacity. The author explains the theme with detail illustrations.