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Volume : II

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Dilip Kumar

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Preface

In different Civilization Art, Archaeology and Museology have been an important part of Indian society from Ancient times and it reached the highest level achieved by human being. Art is the basic part and archaeology comes second and then human have urge for Museology that means collection of artifacts for the people to know there rich culture from ancient times to till date. Archaeology including the study of prehistoric and early historic artifacts is naturally related to Art history. Various field works enhance our knowledge of early life in everyday. The present volume i.e. Art, Archaeology and Museology contains forty scholars research paper of International and National scholars of Indian Art, Archaeology, Architecture, Paintings, Museology, Buddhism & Pre – history like paper on *Manifestation of wisdom and comparison in Female Devotional form, Narsimha cult in Andhra Pradesh, Vaishnava Antiquities of Jagatsinghpur district, Early Buddhist metal image of South and Southeast Asia, critical understanding of the museum with its History, scope and Planning, A study of Archaeological, Ethnological and Historical museum of Pakistan, Lithic technological strategies and mobility: primitive Dictation in stone tool mechanism in Odisha, Idea and status about conservation for organic cultural relics in Sri Lanka, importance of visual literacy and its standers to promote user education programs in museum: a concept paper origin and growth of Archaeological sites museum in India*. These papers are helped to understanding Prehistory of historical era through archaeology and different aspects of Museology and Art.

It gives me immense pleasure to acknowledge my indebtedness and deep sense of gratitude to all those scholars and all the people who contributed to the publication of this book.

I don't find adequate words to express the constant support and encouragement given my mother Smt. Usha Devi, she stood by me at all the odd situations during the completion of this book and looked after all my needs for the completion of the work.

Last but not the least; I am grateful to M/s B.R. Publishing Corporation, New Delhi for agreeing to publish this volume and brining it out in a short time.

Patna **Dilip Kumar**

August 05, 2019

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List of Contributors

1. **Abha Mishra Pathak**
   Associate Professor, History of Art,
   Mahila Mahavidyalaya, BHU, Varanasi

2. **Abira Bhattacharya**
   Assistant Curator (Department of Anthropology), National Museum, Janpath, New Delhi-110011, India
   Email Id: abiradca@gmail.com
   Mobile No: +91-8586886163

3. **Amrita Chakraborty**
   Ph.D Fellow, Ancient Indian History and Culture, University of Calcutta.

4. **Anirban Banerjee**
   Technical Assistant, Gurusaday Museum & Research scholar, Calcutta University

5. **Arabinda Singha Roy**
   Guest Lecturer, Department of Archaeology and Museology,
   Ranchi University

6. **Avik Kumar Das**
   Ph.D scholar, Dept. of Museology,
   University of Calcutta

7. **Avinash Giri**
   Student, Department of Archaeology and Museology, Ranchi University

8. **Chammika Mallawaarachchi**
   Senior Assistant Librarian,
   University of the Visual and Performing Arts, Colombo, Sri Lanka

9. **C. P. Sinha. Dr**
   Ex. Director, K. P. Jayswal Research Institute Patna

10. **Chandra Apolo Mohany. Dr**
    Dept. of AIHC&A,
    Utkal University, Vanivihar, Odisha

11. **Dilip Kumar. Dr**
    Assistant Professor, Dept. of Ancient Indian history & Archaeology, Patna University, Patna, Mob. 7004834098,
    Email: dilip.arch@gmail.com

12. **D.P. Sharma. Dr**
    Ex- Director, Malviya Apartment,
    I.T.I. Road Karondhi, Varanasi- 221005
    Email-dpsharma54@gmail.com
    Phone-9839133178, 2575151

13. **Darshana**
    Research scholar
    Dept. A.I.H Kurukshetra University

14. **Falguni Pal**
    Research Scholar,
    Department of Museology,
    University of Calcutta

15. **Gopal Prasad Mandal**
    Ex Reader, Government of West Bengal Education Service, Ex Senior Fellow, Government of India, Ministry of Culture, Former Head of the Department, Government College of Art and Craft, Kolkata, West Bengal, India.

16. **Geeta Ojha**
Associate Professor,
Department of History,
Ranchi University

17. **Md Istiake Manik**
Student, International Master In Quaternary & Prehistory (IMQP), Muséum national d'Histoirenaturelle (MNHN), Paris, FRANCE & Instituto Politécnico de Tomar, PORTUGAL. Email: istiakemanik@yahoo.com

18. **Jalaj Kumar Tiwari. Dr**
Assistant Superintending Archaeologist
Archaeological Survey of India
Archaeological Museum, Vaishali
Vaishali– 844 128 (BIHAR)
Email jalajkumartiwari@gmail.com

19. **S. Krishnamurthy**
Assistant Epigraphist (Sanskrit)
O/o, The Director (Epigraphy),
Archaeological Survey of India, Mysuru.
Email: skmurthy84@gmail.com

20. **K.L.S.S. Sujeewani**
Education Promoting Officer,
Colombo National Museum, Sri Lanka

21. **K.C. Srivastava**
Excavation Branch - III,
Archaeological Survey of India, Patna

22. **Krishnendu Das**
Research Scholar,
Department of Archaeology,
University of Calcutta

23. **Mandrita Nandi**
1st class First,
Museology Department, C.U

24. **Manjushree Rao**
F6/4 Char Imli, Bhopal
Email: ramu36900@gmail.com

25. **Madhuri Sharma**
Malviya Apartment, I.T.I. Road
Karondhi, Varanasi- 221005
Phone- 9839222272

26. **Manoj Dwivedi**
ASA Jaipur Circle, (ASI)
Email: mkdwivedi1969@gmail.com

27. **Mastoor Fatima Bukhari. Dr**
Professor in Dept of Archaeology
Shah Abdul Latif University Khairpur
Sindh(Pakistan)

28. **Nighat Aslam**
Assistant professor in History
Government Degree College for women
Satellite town Bahawalpur (Pakistan)

29. **Namrata Kumari**
Research Scholar
NET, J.R.F, (U.G.C.)
Dept. of History, Patna University, Patna

30. **Nandini Mukhopadhyay**
M. Arch. Conservation,
School of Planning & Architecture,
Bhopal.

31. **Nishikanta Dwivedi**
Ph.D Research Scholar,
Dept. of History,
Ravenshaw University, Cuttak, Odisha

32. **P. R. Asanka Buddikasiri**
Former Demonstrator,
Social Science Research Centre,
University of Kelaniya, Sri Lanka

33. **Rangika Madhumali**
Former Assistant Lecturer,
Department of Archaeology
University of Kelaniya, Sri Lanka

34. **Subhajit Sen**
Lab Expert, King Fahd University,
Saudi Arabia,

35. **Sanjeewani Widyarathne**
Education Promoting Officer,
Colombo National Museum, Sri Lanka

36. **Sayada Prapty Alam**
Student, International Master In Quaternary & Prehistory (IMQP), Muséum national d'Histoirenaturelle (MNHN), Paris, FRANCE & Instituto Politécnico de Tomar, PORTUGAL,
Email: prapty39arc@yahoo.com

37. **Shikha Rai**
Research Scholar,
Department of AIHC & Archaeology,
Gurukul Kangari Vishwavidyalaya,
Haridwar

38. **Shilpi Roy**
Research officer (Conservation)
IGNCA, Ministry of Culture, New Delhi

39. **Serananan R**
Research Scholar,
University of Hyderabad.

40. **Sima Yadav**
Faculty, DIHRM

41. **Soumoni De**
UGC/SRF Dept. of Museology
Rabindra Bharti University, Kolkata

42. **Soumya Ranjan Sahoo**
Addl. Tahasildar, Kotagarh, Khandmal, Odisha, Email: soumrjn@gmail.com

43. **Shreyashi Choudhuri**
Lecturer, Dept. of History
Calcutta Girl's College Calcutta

44. **Sudakshina Mukherjee**
Rabindra Bharti University, Kolkata

45. **Sulekha Banerjee**
Independent Research Scholar,
C2C/2/141, Janakpuri New Delhi
Email: suban13@gmail.com

46. **Swarnlata Kumari**
Librarian, Upendra Maharathi Shilp Anusandhan Sansthan, Patna
Email: karnminu2015@gmail.com

47. **Vinay Kumar**
Assistant Professor,
Dept. of AIHC & Archaeology,
BHU, Varanasi, UP
Email: vinaykumar166@yahoo.com

48. **Vivek Kumar**
H. No. 220, Chiranjiv Colony,
B.T.M. Road Bhiwani, Haryana
Email: v.vivekarora@gmail.com

49. **Vivek Shukla**
Junior Research Fellow,
Dept. of AHC & Archaeology,
University of Allahabad,
Email: vivekmailbox4u@gmail.com

19

A Study of Archaeological, Ethnological and Historical Museum of Pakistan

Nighat Aslam[1] and Mastoor Fatima Bukhari[2]

Introduction

A museum is defined as the association, which protects and takes care of the collection of unique objects such as scientific, artistic and the historical objects and make them accessible for public view. A museum is a non-profit, permanent institution in the service of society and its development, open to public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study, enjoyment" (Ambrose & Paine: 2006; 11) Museum educated the societies about the past of human and their environment through material evidence. The objects in a museum relating to ancient cultures and civilizations are organized in such a manner that viewers can look on the exact picture of the past. In this context the role of museums became very important. The transformation of objects of ancient civilization and culture customs of the people and historical memorials, shrines preserve in the museums. Human customs traditions and culture are being generally transformed from the one generation to another generation. It is obvious that the human beings gained knowledge through the history and developed it gradually. All human beings have desire of knowledge and this desire lead them from known

1. Assistant professor in History Government Degree College for women Satellite town Bahawalpur (Pakistan).

2. Professor in Dept of Archaeology Shah Abdul Latif University Khairpur Sindh (Pakistan).

to unknown. Man tried to get all the records of ancient human beings through the passage of time and kept it. He developed different methods and approaches to preserve all getting records. Museums are the best approach to preserve these human records. The museum is prerequisite to be preserved and displayed objects with the modern and scientific methods. The museum provides the educational facilities to the scholars and students. Museum is not only educational organization in the proper sense but rather a source of knowledge. Museum is a building or place where works of art, scientific specimens and other objects of permanent value are kept and displayed. Museum is a center of human civilization, customs and culture. It can be means of communication of ideas about cultural achievements of other peoples. The museum offers the access to public record and transforming information. The museums of Pakistan are very informative place for students, scholars and common people to attain knowledge from these objects. The museum has many purposes like safeguard of human heritage, collection of antiques for learning, transformation of knowledge and research, promote tourism and culture. There are established different types of museums in the world. Museum can be distinguished by its collection of nature mostly museums are called Archaeological museum, Art museum, History museum, General museum, Natural History museum, Science museum, Ethological museum, Geological museum, Industrial museum and Military museum. The museums divided according to their categories and called Government museum, Municipal museum, University museum, Commercial museum, Private museum and Army museum. The important thing is to define area of the museum; they may be called National museum, Regional museum, and Local museum and City museum.

The design of museums has evolved throughout history; however, museum planning actual mission of the museum along with planning of space that the collection of the museum will be in housed. According to the Intentional museum planning, the potential founders of museums should form a committee first, and reach out to the community for input as to what the museum should supply or do for the community. Museums should be planned according to community's needs. (Dar. 1981; 34)

This is fact that museums have planned and designed be different according to their collections, but on the whole, they adhere to planning a space that without difficulty public accessed to the objects and easily look at displays. Museum planning would also provide us the starting point of chronological order of displayed items along with other operational responsibilities in arrangements and maintenance of the standardized museum.(Dar:1981;127) Dr Dar has described all the parameters to run a museum, he provide the guidelines that, how to prepare the plan for a new museum, what is the role of a curator and a director during establishing a new museum. Studying collection, sort out the collection, cataloguing the objects, how to display the objects, lighting system, and how to prepare the informative descriptions and mount them to understand the objects. In the end he provided a proper and up standardized guide lines how to run a museum under the curator and curatorial staff, what are the responsibilities of the staff for care and maintenance and to provide the security measures. Mainly the case study has been applied in this research paper with some other fact finding

tools. I have been taken some steps to complete the information. A questionnaire from fills by the management of museums and interviews also conducted the museums administration. Further more regularly visits the museums for surveying the material and getting information. The internet also used for searching the data about museums of Pakistan.This research is consisting on Museums of Pakistan which are vast subject due to its great contribution in historical research and rich collection in the field of archaeology, history, culture of different civilization. Thus this research has been taken following aspects: Brief and general introduction of museums of Pakistan, General information about the museums of Pakistan and Glimpse the galleries of the museums.

Culture heritage and museum history in Pakistan

The culture heritage of Pakistan is spread over thousands years ago, starting from prehistoric period to till date. There is a lot of evidence from the prehistoric and historic period. Million years old earliest stone tools found to the Soan valley and displayed many museum of Pakistan (Feather&Sturges;2003) and abroad. The prehistoric caves rock shelters workshops and excavations reported in the Rohri Hills and the Thar Desert further testify the existence of prehistoric occupations in Pakistan. The evidence of the Neolithic culture phase dating from 9th to the 4th millennium BCE comes from the sites of Mehergarh, Gumla Jhandi Babar-1 and Sheri Khan Tarakai. The excavations at Kot Diji and Rehman Dheri provide substantial proof of this period in Sindh and Khyber Pakhtunkhwa respectively followed by an urbanized and developed Indus valley or Harappan Civilizations, which was almost contemporary to the Egyptian and Mesopotamian civilizations, followed by the Gandharan grave culture or prehistoric cemetery sites dating to the 2nd millennium BCE were discovered in Swat, Dir, Malakand, Bajaur, Mohmand, Chitral, Peshawar and Taxila. The Gandharan civilization existed in this region from 6th century BCE to fifth century CE. The Achaemenian rule, Greeks Maurya, Indo Greeks, Scythian, Parthian, Kushans, Sassiani, White Huns.Hindu Shahis, Gahaznavids, Mughals Durranis, and Sikhs British ruled there and left their footprints in this region.Cultural zones surrounded by these districts are discernable which have infused the living culture of communities, influencing their standard of living, value system and world vision giving the regional distinct cultural (Deshpande:1999; 101-103) characteristics reinforced through their shared languages. Although the built assets are restricted inside the regions yet its imperative expressions of poetry and verbal narratives, song and dance are deep-rooted within the culture of the region, in particular Pakistan. The impact of material culture of the earliest common of the Civilization can still be found in the pottery making traditions and in the motifs and designs which carry on to be used.(Mughal : 1977, 90)

The development of museums were done in the region wherever today Pakistan started soon after the establishment of the British Government for preserved and display this rich heritage tangible and intangible culture. The first museum was established in Karachi in 1851, followed by one each in Lahore in 1864, Quetta in 1900 and Peshawar in 1907. All of these were public museums and represented mostly ethnological collections. Besides, a few museums were also constructed in some institutions of Lyallpur in 1909 and Lahore in 1910

Natural History Museum in Government College and Zoological museums, one each at Islamia college, Peshawar and Rawalpindi both in 1934 for education and research purposes. As a result of large Scale explorations and excavations, a number of site museums were established at Taxila in 1918, Mohenjo-Daro in 1925and Harappa in 1926. In 1937 a private museums was established at Lahore with the title of Faqir Khan. (Dar ;1981:13) The heritage of ancestor at the time of independence on 14 August 1947come from a treasure which can be called Pakistan national heritage. Pakistani nation can feel of proud its wonderful past, Pre Islamic and post Islamic period as far back as Pre historic times Pakistan is corresponding the world ancient civilization like China, India, Mesopotamia and Egypt. (Cummings:1991) In Pakistan, Museums are at first working with education ministry but later Department of Archeological & Museum handed over to Ministry of culture and the Department of Archeological & Museum established many museum in Pakistan. The National Museum of Pakistan was established in Frere Hall on 17 April 1950, replacing the defunct Victoria Museum. The Swat museum was founded by the Wali of Swat in 1959 and Dir museum in 1969 by the Governor of KPK then NWFP province. The Archaeological museum of Bhanbore Sindh wasestablished in 1967, Archaeological museum Mohenjo-Daro Sindh in 1967, Umerkot museum Sindh in July 1968, Sindhology museum, university of Sindh Jamshoro, in 1970 were established in province of Sindh and Bahawalpur museum in 1974 was founded in Punjab. A visible development in the establishment of museums was observed; six archaeological museums were added to the list in Pakistan during 2002 -2006 by the provincial Directorate of Archaeology and museums Government of the Khyber Pakhtunkhwa under the Directorship of Prof Ihsan Ali. Later on, three more museums were added to the list by the Hazara University and Mansehara in 2007-2008, one by Abdul Wali Khan University Mardan in 2012 were established by prof Ihsan Ali during his tenures as Vice Chancellor. All these museums are located in Gor Khuttree, Peshawar, Pushkalavati Charsadda, Mardan Hund Sawabi Chitral district Bannu district Abbottabad district Hazara university Mansehra and Abdul Wali Kahan university Mardan. All the museums are functional and represent archaeological Historical and cultural profile of the respective regions of the country. Some museums are also proposed and under projection like site museum at Takhit-i-Bahi, Khyber Pakhtunkhwa, Tribal museum Khyber agency FATA and museum in every district of Pakistan. Government of Pakistan has constituted different rules for the protection of antiques and excavation of archaeological site, the foreigners as well as the local organization. These laws are Antiquities Act 1975 and Excavation Ordinance for the 2001.

Review of the literature and discuss with the existing studies, resources and research is very important to generate a new piece of work and also pass up the researcher to create an identical piece of work. It also facilitates us to be aware of the key area of the subject beside with different part of additional omitted points or can also help us to identify our range of the research. (Dar: 1981:12-20) On the basis of the main objectives of the research we necessitate to study different dimensions of the museums for presentation of the items and collectibles along with its overall structure. For this purpose following critical re-examine

of existing literature would help us to produce the logical framework for the study of the museum *(Paula:1989; 59–78)*

The museums of Pakistan

After discussing the international and national standards we need to declare some currently best operational museums of Pakistan. After over viewing of these museums we would discuss the Archaeological, Historical and Anthropological museums in Pakistan named as follow

1. Victoria museum Karachi Sindh
2. National museums of Pakistan Karachi Sindh
3. Archaeological museum Mohenjo-Daro Larkana Sindh
4. Sindhmuseum Hyderabad Sindh
5. Archaeological Museum Bhanbore Sindh
6. Archaeological museum Umerkot Thar Sindh
7. Sindhology museum Jamshoro university of Sindh Sindh
8. Archaeology & Anthropology Museum Shah Abdul Latif University, Khairpur Sindh
9. Lahore Museum Lahore Punjab
10. Archaeological museum Harappa Sahiwal Punjab
11. Taxila museum Taxila Punjab
12. Bahawalpur Museum Bahawalpur Punjab
13. Lyallpur Museum Faisalabad Punjab
14. The Peshawar museum Peshawar KPK
15. City Museum Gor Khuttree Peshawar KPK
16. Swat museum saidu Sharif Mingora KPK
17. Dir museum Chakdara KPK
18. Pushkalavati museum Charsadda KPK
19. Mardan Museum Mardan KPK
20. Hund Museum, Swabi KPK
21. Bannu Museum, Bannu KPK
22. Chitral museum Chitral KPK

23. Kalasha Dur museum Chitral KPK
24. Abbottabad Museum, Abbottabad KPK
25. Hazara University Museum, Mansehra KPK
26. Museum of Archaeology and Ethnology, Abdul Wali Khan University Mardan KPK
27. McMahon Museum, Quetta Baluchistan
28. Islamabad museum Islamabad Federal capital
29. Lok Versa museum Islamabad Federal capital
30. Quaid-e-Azam university museum Islamabad Federal capital

1. Victoria Museum Karachi Sindh

This was the first museum founded by Sir Bartle Frere in 1851 in Karachi. (Morley 1981:10) Originally the museum contained objects of both archaeological and ethnological nature and was representing the artistry, archaeology and natural history of the country. The museum building was later used by the Karachi Municipal Corporation Department in 1870. Similarlyin1908 various alterations and constructions with in and the surrounding of Burns Gardens entirely lost the uniqueness of this museum in footings of its architecture and use, so due to lack of interest and awareness about the role of museums in societies. This museum continued unrestrained since 1870 and the lot of the materials is not known as there is no record available of it.

2. National Museum of Pakistan Karachi Sindh

National museum of Pakistan is the more famous museum of the Pakistan. This museum is situated in the Burns Garden square surrounded by Muhammad Bin Qasim Road and Din Muhammad Wafai Road, Sharah-e-Kamal Ataturk Road and Ziauddin Road. The public arrival is near the A.M. Law College. The National Museum of Pakistan was established in Frere Hall on 17 April 1950, replacing the defunct Victoria Museum. Frere Hall itself was built in 1865 as a tribute to Sir Bartle Frere, a Commissioner of Sind during the 19th century. Once the Museum was inaugurated then the Government of Pakistan considered it wise to constitute an Advisory Council in 1950 with a primary duty to council of the Museum on the issues of enriching its collection through new acquisitions and purchase of antiquities and works of Arts. The Museum was shifted to the present premises located in Burns Garden, Dr. Zia-ud-din Ahmed Road in 1970. Although, Farer Hall is very impressive building but it is not fulfilled the necessities of a modern museum. Now Buns garden building is a multistory building and consists of four floors and different floors of building have different section. The area of building is 3, 888sq yard and only ground floor and first floor are used for the exhibitions. The building is exactly designed for the use of a museum. In front of the museum a lush green Burns garden lawn added the beauty of the museum with an area 54000sq yards. The basic objective of establishing the National museum was to collect preserve study and exhibit the

rich collection records of the cultural history of Pakistan which portraits a colorful picture of Pakistani regions. In 1970 there were only four galleries in the museum. Overtime the museum grew with the building currently housing a total of eleven galleries including a Quran gallery, pre- historic gallery, proto history gallery, late Harappa gallery, Gandhara gallery, Islamic art gallery, coin gallery, freedom movement gallery, ethnology gallery and postal stamp gallery. The galleries have unique and outstanding collections of antiques.

The Quranic gallery has more than 50 rare copies of holy Quran. The most important volume of holy Quran is belonging to the period of Abbasi caliph Mustasim Billah in Nuskh script written by Jalal al Din Yaqut. The different gems gold silver copper are used ornament borders in pages. Quranic verses are in scripted by the celebrity artist on the walls of gallery in different phonetic styles. (Jahan 1972) The prehistory period this is known as the Stone Age too. The prehistory gallery consist stone tools. Remains of Mohenjo-Daro were displayed very well-designed style in this gallery. The display objects in the gallery household pottery, figurine of mother goddess, jewelry, terracotta figurine of human being and animals. After the of writing period called proto history period and covered the period from 2600 B.C to 1700 B.C Indus valley civilization is belonging to proto history, it is also mentioned as matured Harappa. The exhibit objects in this period include household pottery, Goblets for drinking, tiny pots, kitchen objects, granary, engraved seals, bronze objects, and terracotta objects, stone objects, stone for crushing spices, alabaster articles, daily housewares, terracotta and stone sculptures specially king of priest and dancing girl, different religious artifacts, objects used for weight, touch stones, terracotta animal figurines, chess, jewelry made of different materials and terracotta toys specially bull cart. The famous statues of dancing girl of the Mohenjo-Daro appeal to the visitors in this gallery. Late Harappan gallery had the statue of a Mohenjo-Daro priest king and other objects of these period. Some portraits are also displayed on the wall of this gallery. Rich collection of Gandharan art is also show in Gandharan gallery of the National museum of Pakistan. Some stupas, sculptures of Buddha and Bodhisattva and relief panels presented scenes from the life of Buddha are display in this gallery. The statues include those of Buddhist priests, terracotta toys and other statues of deities such as Saraswati, Vishnu, Lakshmi and Durga Devi are also kept in this gallery. Islamic art gallery shows the collection from 712 to 1857 A.D (Muhammad Bin Qasim to Bahadar Shah Zafar) This gallery convey a clear picture of Muslim ruled in Sub continent. There are also display some other objects related to Muslim period includes calligraphy, painting, Hand crafts, vases, architecture specimens, pots, toys, tools, weapons, embroidery dress and pottery. Coins are the important source of history and have eminent place in the museums. The coins are reflected the political, social, economic and cultural activities of a nation and regions. The National museum Karachi has ninety thousand ancient coins in its collections associated with different periods.(Nasir 1997) The history of coinage goes back to 6th century B.C. The display of the coin gallery related to Achaimanian empire to British period. Freedom movement gallery is ornamented from the portrait of the freedom movement'sprominent leaders from Sir Syed Ahmad Khan to Quaid-e-Azam including female prominent leaders.. Some personal belonging of Quaid-e-Azam (founder of Pakistan) are also display in this gallery. In personal appropriate

of Quaid-e-Azam includes note book, vase, maps, cigarette, key lockers, coats, pants shirts also display in the gallery. Sofa set with table which is used by Quaid-e-Azam are also exhibit in this gallery. There are further more few books display related to freedom movement like Asbab Baghat ul Hind by Sir Syed Ahmad Khan and Indian Muslim League report 1914. There is also an ethnological gallery represent living culture of all regions of Pakistan. The National museum of Pakistan has good collection of postal stamps but these stamps are not display in any gallery of the museum. These stamps are preserved in a store of museum and display only important National days.The museum also contains an important collection of items relating to Pakistan cultural heritage. Some 70, 000 publications, books and other reading material of the Archaeology and Museums Department were also shifted to the National Museum so that general public could see them. Every year National Museum holds around a dozen exhibitions on National Days and other occasions. (Dani : 1970)The museum timings forvisitors are 10 AM to 5 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. Museum closed on every Wednesday and corresponding to 9^{th}&10^{th} of Muharram 12^{th} of Rabulawal. Jumatulwidha, EidulFitr and Eid-ul-Zoha.*The entry fees* are different for all categories like General public Rs 10, foreigners Rs 200, students with teachers free, scholars or researchers free and government delegation free. By tickets available at reception counter. Free conducted tours are available at specified hours for students and groups of visitors.

3. Archaeological Museum Mohenjo-Daro LarkanaSindh

Mohenjo-Daro museum is a site museum and located 200 meters away from the archaeological site of Mohenjo-Daro in Larkana district Sindh. The great building of museum built skillfully with few pillars and walls. The building of museum is very simple and elegant with very basic facilities but house of the most precious antiquities of Pakistan. The museum was established in 1967. The display contains artifacts which are found from the archaeological site of Mohenjo-Daro.

The exhibit objects in the museum include household pottery, Goblets for drinking, tiny pots, large pots, pot for Childs bath, pot used for music, kitchen objects, granary, engraved seals, bronze objects, and terracotta objects, stone objects, stone for crushing spices, alabaster articles, daily housewares, terracotta and stone sculptures specially king of priest and dancing girl, different religious artifacts, objects used for weight, touch stones, terracotta animal figurines, chess, jewelry made of different materials and terracotta toys specially bull cart. (Marshal :1931) All these objects discovered from various parts of Mohenjo-Daro site and displayed at the first floor of the museum in forty showcases illuminated by natural light. A stone wall also built with those heavy stones that discovered during excavation of the site in the first floor. The first floor also has a beautiful imaginary view of the Mohenjo-Daro city with Indus River on its background drawn on the wall is flanked by museum showcases. The ground floor consists of few reliefs of objects, graphic illustration, maps and curator office. The entry of the museum is by the main gate and the booking and book shop also located at the main gate. The museum are open for visitors 9 AM to 5 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. Museum is open all to public on all six days

of the week but Wednesday closed.*The entry fees* are different for all categories like General public Rs 20, children Rs 10, foreigners Rs 300, students with teachers freeand scholars or researchers free. By tickets available at reception counter. Free conducted tours are available at specified hours for students and groups of visitors.

4. SindhMuseum Hyderabad Sindh

Sindh is a province of Pakistan keeping its own historical and cultural heritage. Sind museum Hyderabad is situated in the Hyderabad. Hyderabad is the second largest city of Sindh and situated in the heart of Sindh. The Sindh museum Hyderabad is established for the collection of cultural objects and their preserving, studying and exhibit the records of the rich history of Sindh. The Sindh museum is a great way of getting a quick overview of the Sindi culture, heritage and the Indus valley civilization. This museum is a great center of Sindhi culture. Objects from different ruling periods of Sindh like Samma, Soomra, Kalhora and Talpur periods can be found inside the museum. We can find their defense material like sword guns and others things which were used by rulers for their defense. The museum was firstly established in 1768 by Mian Ghulam Shah Kalhoro, the famous ruler of the Kalhora Dynasty, along the bank of the river Indus upon the ruins of Neroon Kot. (Qurashi:2011) The museum provides awareness about the Sindhi culture and civilizations depicting the village life as well as the ancient life of Mohenjo-Daro. The museum also maintaining models and artifacts of Sindh associated to ancient, mediaeval and modern periods. The museum established a gallery where displayed the work of well-known people in the field of art culture and others field of life.

The museum has three galleries. The first gallery belong for young school children. The second gallery has archaeological objects covering prehistoric Sindh till the British rule. The third gallery belongs to Sindhi embroidery, woodcarving, household tools and models of village life. These galleries of the museum have an abundant items belonged to the cultural and historical heritage of Sindh. It provides the tourists a great view of ancient civilization and present culture of Sindh with art and craft. The museum is full of handicraft and different music instruments kitchen objects, dresses of women and men, jewelry are also part of museum. The whole museum represents a real picture of Sindhi culture and heritage especially in rural areas. This museum covers all aspects of life of Sindhi people their living style, their working style and their traditions. The museum are open for visitors 10 AM to 5 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. Museum is open all to public on all six days of the week but Wednesday closed. *The entry fees are* different for all categories like General public Rs 10, foreigners Rs 200, students with teachers free and scholars or researchers free. By tickets available at reception counter.

5. Archaeological Museum Bhanbore Sindh

Bhanbore Museum Sindh is situated in Bhanbore or Bhambore district Hyderabad 64 kilometer east of Karachi. The name of Bhanbore was associated wait a Raja of 10th

century but Bhanbore is more than ancient site in Sindh dating back to the 1st century BCE. (Crocco : 1964) This site belong to Scythian-Parthian period and later this site controlled to Muslims after their attack 8th to 13th century and it was also known as a sea port with the name of Debal. Three different periods 1st to 13th century in history of Sindh are associated to this site, the Scythian-Parthian, the Hindu Buddhist and the early Muslims. It's believed Muhammad Bin Qasim entered Sindh through this city and he built a first mosque of south Asia at this place. Sassi Pannu folklore is also related to this city. Sassi a young girl belong to Bhanbore. Bhanbore was very important archaeological site and Initial excavation was started by Majumdar in (1928).

In 1958 a large scale excavation was started under the department of Archaeology. During the excavation lot numbers of antiquities Islamic and pre Islamic periods founds in the site like pottery, coins, glass objects, bone objects, terracotta objects, metals objects, ivory objects, beads and pendants. After excavation, it was urgent need of a museum for preserve the wealth of material. In this regard a foundation stone laying in 1960 for construction a museum building as a site museum named archaeological museum Banbhore by Department of Archaeology and Museums, Government of Pakistan. The museum was inaugurated in 1967. The site and museum was shifted to the culture department of Government of Sindh in 2010. The museum building consists of two rectangle Halls. The Bhanbore museum consist those objects that are excavated from this site. The display objects in the museum are pottery shards, metal work, jewelry and tools. All the objects display in the twenty showcases with chronological orders. The museum has also some objects of the old age civilization. The model of the excavated site is placed openly in the center of museum building. The stone slabs of Kufic inscription are exhibited on the eastern side of the hall. The western side is covered the diorama related to Muhammad Bin Qasim. (Khan : 1960) The first showcase of museum is full objects with different periods and the other show cases are occupied with pottery, moulded pottery, glazed pottery, vessel, ivory objects, stone objects, glass objects, terracotta objects, iron objects, copper objects, coins, beads, stamps and pendants etc.

6. Archaeological Museum Umerkot Thar Sindh

The museum was situated in the district of Umerkot in the Sindh province. It is also known as the name of Amarkot. Umerkot basically is a fort and the birth place of great Mughal emperor Akbar. Amarkot fort was firstly built by Rana Amar Singh in 11th century. The ancient fort had been founded with the town itself. The present fort was constructed on the site of old fort by Mian Noor Muhammad Kalhoro in 1746 (Nadeem; 2001, 70). Another important folklore associated this place the story of Umer Marvi. Umer was a local ruler and he wants marry with a beautiful Thar girl Marvi. She refused his proposal and was imprisoned in the historic fort of Umerkot but after some years she was realsed for her courage. After 1947 this fort was taken over the government of Pakistan. In 1968 Government of Pakistan decided built a museum inside the fort of Umerkot. The Archaeological museum of Umerkot was established in July 1968 by the federal minister of education Qazi Anwarul Haque inside the fort of Umerkot. The museum is situated western side of fort. The museum building was

very small and comprises only a single room where displayed the royal documents, coins, manuscripts, paintings and calligraphy related to Mughal periods specially the reign of king Akbar. Therefore new building of museum was constructed in 2006 after a long time.

The new museum building consists of three main galleries with two lobbies where display old swords, guns, pistols, armors, arrows, bows, helmets, photographs. The objects related to Thar Desert life displayed in two galleries. The special object displays in the museums are large number of coins belonging to Mughal period. There are also displays a large number of paintings representing the Mughal School of art, portraits of important Mughal emperor and specimens of calligraphy, royal documents, silver jewelry and statue of Jain religions are displayed in the museums. Some cannon balls and stone carvings recovered from unsystematic excavations in the fort are displayed in the outside of the museum. The entry of the museum is through the main gate and the booking office and book shop also situated at the main gate. The museum are open for visitors 9 AM to 5 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. Museum is open all to public on all six days of the week but Wednesday closed.*The entry fees* are different for all categories like General public Rs 20, children Rs 10, foreigners Rs 300, students and scholars or researchers free.

7. Sindhology Museum university of Sindh Jamshoro Sindh

Sindhology museum is situated at the entrance point of university of Sindh Jamshoro. Sindhology museum is a part of the Institute of Sindhology University of Sindh. (University of Sind:1977). The collection of the museum started in 1970 and collected lot of masterpieces from archaeological material, coins, pottery, jewelry, wood work, leather work, metal work, thread work, paintings and photograph. The objective to establish this museum in the university is to display the objects, setting up dioramas of various ethnic groups of Sindh, the pictures of famous personalities of Sindh. There are many galleries in the museum like Archaeological gallery, Ethnological gallery1, Ethnological gallery11, prominent personalities gallery, General gallery, Coins gallery, Benazir Bhutto Gallery, Dr N.A. Bloch corner, Arms gallery with Mir Talpur court, Photographic gallery, Indus painting gallery, Ethno-musical gallery. The wide variety of collection has been displayed inthe following galleries of the museum.

The prime purpose of this museum is to collect and organize material for the concentrated and comprehensive study relating to ancient civilization and the present Sindh. Basically it is an ethnological nature museum and great center of living culture of Sindh but some other objects exhibit in the museum represents the history and archaeology. (Myer: 1993) The museum can be visited any day of week from 9AM to 5PM. The Anthropological research Centre and Sindh arts gallery is responsible for the maintenance of the museum with the coordination of the institute.

8. Archaeology & Anthropology Museum Shah Abdul Latif University, Khairpur Sindh

The museum is representative of the collection of all archaeological periods recovered throughout Pakistan. The collection is housed in a building that contains two major display

Halls and several other galleries, among are the Buddhist objects on the ground floor with Library and Photographic Lab. The Ground floor, where archaeological material collected by Department of Archaeology through various surveys and excavation Projects has been displayed experimentally.

On the First floor, the major hall is reserved for anthropological items; for these common traditional features of societies from all provinces of Pakistan as they exercise in their daily life. The cultural assemblage like, arms, embroidery, jewelry, coins, ancient documents etc would suffice the display.

In general setup, Museum illustrates the arts, crafts and cultures of the country from earliest human occupation down to recent times. In many countries Archaeological research is carried out in the Museums as well, apart from the universities, and plays the role of laboratories for the archeological institutions, but in Pakistan it is the academic research and analytical studies, the museum being established by us is being built on scientific lines where we will have the facility for analytical studies. In fact this would be the first in Pakistan with such facilities. This Museum has a well-equipped chemical and conservation laboratory for the treatment and preservation of Museum specimen (metals, stone, pottery, bones, etc.) in addition to working room and storage space.

9. Lahore Museum Lahore Punjab

The Lahore museum was established by the East India Company in 1856. Firstly this museum was opened in a Mughal building Wazir Khan Baradari named Lahore central museum. It was also known with the names of Jubilee museum, and Punjab museum. This museum was represented archaeological, historical and ethnological culture of the region. After some time the collection of museum increased and museum was shifted to the nearby vacated Punjab Exhibition building in 1864. J.L.Kipling was appointed its first curator in 1875. However, a new and permanent building for the Lahore museum was found in 1893that time when jubilee institute was completed. This institute comprised Mayo school of arts and the Lahore museums. The present Lahore museum is still occupied this locations, situated Mall road near Anarkali Bazar and old food street in Lahore. The museum was shifted there in 1894. The present building of the Lahore museum was designed by the famous architect Sir Ganga Ram. Later on the Mayo school of Arts was shifted to its neighboring as a separate entity. (Rahmani:1999).

The building of museum consist two floors and seventeen permanent galleries. The name of the galleries General gallery, Islamic gallery, Hindu Jain, and Buddhist gallery, Pre-Historic and Indus civilization gallery, Gandharan art gallery, Miniature paintings gallery, Ethnological gallery, Arms and armor gallery, contemporary crafts gallery, independence movement gallery, Pakistan postage stamps gallery, Coins gallery, Medals gallery, Manuscript and calligraphy gallery, Lahore museum is famous for its rich collections of objects in history art and craft, archaeology, fine arts, applied arts, Hindu Jain and Buddhist art, Islamic art, Islamic manuscript, miniature paintings, contemporary paintings and ethnological material, due

to this collection it is the biggest museum of Pakistan. The museum displays archaeological materials from pre historic to Hindu Shahi and Sikh periods. The masterpieces of the Gandharan art are display in the museum. The fasting Buddha from the Gandhara art is a best piece among all of its unique collections.(Alam:1988) The museum has a lot of collection of coins especially in Hellenistic and Mughal period. The museum has a large collection of painting related to Mughal, Sikh and British period. Some Beautiful objects of doorway and woodwork associated with Mughal and Sikh period display in the museum. The museum has also great collection of ancient jewelry, pottery, musical instruments, armory objects, coins and sculptures. We can also see some others beautiful objects in the museums during the visit like Chines vase, ivory miniatures, small canons, gems wooden doors, stone tools of Harappa, Hindu deities in brass, marble and wood, a Buddhist stupa, a Jain temple, abstract paintings, Quranic calligraphy, furniture from Swat, clay figurines, contemporary block printed cloth, musical instruments from Northern Pakistan, embroidered textile, replica photographs, stuffed animals, outlining personalities and events of the independence movements. The famous Pakistani artist Sadequain is renowned the ceiling of the entrance hall with a large painting. The museum is open for visitors 9 AM to 4 P.M in winter and summer 9 AM to 5 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. Museum is open all to public on all six days of the week but Friday it remained closed and on the first Monday of each month museum also locked for the visitors for maintenance. It also closes on actual days of 9^{th}&10^{th} of Muharram 12^{th} of Rabulawal. Jumatulwidha, Eid ul Fitr and Eid-ul-Zoha.*The entry fees* are different for all categories like General public Rs 20, children Rs 5, foreigners Rs 400, camera charges Rs 25 and students Rs 5.

10. Archaeological Museum Harappa Punjab

Harappa is an archaeological site in Punjab situated in Harappa 24km west to Sahiwal district Punjab Pakistan. The site takes its name from a modern village situated near the earlier course of the Ravi River which now runs 8 km in north. The current village of Harappa is 6 km from the site. The site of the ancient city consist the remains of an ancient city which were part of Indus valley civilization. This civilization also called Harappa civilization, centered in Sindh and Punjab. The city had 23, 500 residents and occupied about with clay sculptured, houses at its greatest extent during the mature Harappa period. The ancient city of Harappa mostly damage during the British period. The bricks of the remains were used as track ballast in the construction of the Lahore –Multan railway. In 1922 Mr Wats started excavation of this site. Some of the major discoveries on display include seals, games, weights, pottery and figurines of all sorts, tore, jar, and pestle.

A museum was established at this site in 1926 now known archaeological museum of Harappa. Harappa museum is an archaeology and site museum and its present building was built by the Government of Pakistan in 1966. Harappa museum is a small but good museum due to its unique antiques. The museum has stored many historical things that were used 5000 years ago. The display contains artifacts which are found from the archaeological site of Harappa. The exhibit objects in the museum include household pottery, tiny pots, large pots, pot used

for music, kitchen objects, granary, engraved seals, bronze objects, and terracotta objects, stone objects, stone for crushing spices, alabaster articles, daily housewares, terracotta and stone sculptures, different religious artifacts, objects used for weight, touch stones, terracotta animal figurines, chess, jewelry made of different materials and terracotta toys specially bull cart. All these objects discovered from various parts of Harappa site and displayed at the first floor of the museum. The object of the Harappa museum is great treasure of Pakistan and very nicely preserved in the museum. The museum is open for visitors 9 AM to 5.30 P.M. Museum is open all to public on all six days of the week but Saturday closed It also closes on actual days of 9th&10th of Muharram 12th of Rabulawal. Jumatulwidha, Eid ul Fitr and Eid-ul-Zoha and *entrance fees* are General public Rs 20 and foreigners Rs 300.

11. Taxila Museum Taxila Punjab

Archaeological museum of Taxila located in Taxila province of Punjab and 35 km Taxila museum Sir Alexander Cunningham first started archaeological survey of Taxila and discovered many sites. During the period of 1913-1934 Taxila was excavated by Sir John Marshal Director General Archaeological survey of India and found lot of material like sculpture, jewelry, pottery and household objects. Initially these materials were displayed in a temporary hall, after some time this hall was shifted in a museum.(Marshal 1951) The foundation stone of a new building of a museum was laid by the Viceroy of India Lord Chelmsford in 1918 but this museum officially inaugurated in 1928 (Ashraf &Lone 2005:41) with a rich collection of Gandharan art, coming from the three ancient cities of Bhir Mound, Sirkap, Sirsukh and the dozens of Buddhist stupas and monasteries discovered in Taxila valley by Sir John Marshal.

The museum building and galleries was designated in Greek style. Taxila museum is a site museum and consist comprehensive collection of Gandharan art. The museum has most beautiful and significant collection Buddhist stone, stucco and terracotta sculptures and stone relief. Along with sculptures and relief there are other thousands objects displayed like Hindu and Jain religion objects, pottery, silver gold jewelry, precious and semi-precious stone objects, beads, coins, iron objects, stone, stucco and terracotta objects. (Khan 2005) All these mostly 4000 objects are relating from the period 600 BC TO 500 AD. Taxila museum due to its collection is became the world excellence heritage center and great Buddhist civilization. This all types of material are presented subject wise in the six galleries of the museum inside the wall showcases and table show cases. The table showcases built in the center of the galleries. A complete stupa displayed in the middle of the main big hall comes from the Buddhist monastery of Mohra Morada, schist stone sculptures of Buddha, Bodhisattva and relief panel presented scenes from the life of Buddha, sandstone sculptures of Bodhisattva and Suri god exhibit in the wall showcases, archaeological map of Taxila sites and some small findings are also display in this hall. The stucco sculptures of Buddha and Bodhisattva comes from Mohra Moradan (Dani:1999) and Buddhist sculptures carried from Jaulian monastery, glazed tiles of Kushan period are displayed in the second gallery of the museums. The third gallery of the museum has stucco heads of different appearances, big Buddha heads, relic's caskets and sleeping Buddha from Bhamala monastery. A stupa within railing is also display

in the middle of the third gallery. The fourth gallery of the museum shows silver and gold jewelry brought from different sites of Taxila. The Aramaic inscription of Asoka, Kharoshti and Brahmi inscriptions, small terracotta figurines, small terracotta ceremonial tank model, iron objects, arrowheads and nails are the important object which display in the fifth gallery of the museum. The sixth hall is the last gallery of this museum where we appreciate silver glasses of different shapes, bowls, spoons, toilet trays, small pottery pieces, terracotta bowls and plates.

12. Bahawalpur Museum Bahawalpur Punjab

The existing Bahawalpur Museum is a museum of archaeology, art, heritage and modern history. The museum was established in1974 situated in Bahawalpur under the control of the Bahawalpur District Government (Dar, 1983, 5). The museum is neglected by the Federal Government as well as Provincial Government. Display and artifacts are not fulfilling the requirement of a museum. Bahawalpur has a very rich historic background, goes back to the Neolithic period down to the Mughals then native state. The story of ignorance of this region is not a new issue; there is no activity for tourist attraction in this region, for visitors in or outside the country form far. The Bahawalpur Museum is performed in the poor state of condition. It can play an important role as the representative and cultural center of the region and could be a platform to develop the tourism by preserving and promoting the art, artisan, and handicrafts, improvement of small industries, in the field of the woodwork, leather items, camel skin art, embroidery and textile. All of these issues are showing technical deficiencies in the museum. Therefore, it is necessary to reorganize this museum with the representation of the historical and archaeological facts. Reasonable arrangements of the items would also be helpful to create the attraction for the public as well as researchers and state in terms of entertaining, knowledge and revenues respectively. At the opening moment the museum of Bahawalpur has six sections or galleries, (i) Archaeological Gallery, (ii) Islamic art Gallery, (iii) Manuscript hall, (iv) Pakistan freedom movement Gallery (v) Ethnological Gallery (vi) Miscellaneous section. (Dar, 1983;4-5) Now the museum is consisting of nine galleries.

The divisions of the galleries are as follows. The first Gallery connected with Pakistan movement photographs, the second gallery named Islamic art gallery, third is Archaeological gallery, fourth gallery named miscellaneous section, fifth and sixth galleries are calledethnological gallery1 and 11, seventh Gallery is named manuscript and calligraphy hall, eighth gallery consist of Nawabs of Bahawalpur and their family Photograph and called Bahawalpur gallery. The ninth gallery, display does not related to museum accept one and there are display paintings and models made by children of different schools of this region. The details of the display objects in the galleries are as follow. Pakistan movement gallery is the first gallery of the museum, have positioned with the entrance gate. The pictures illustrate 200 years periods of Muslims struggle against of British rule1757 to 1947A.D. We observe here all the well-known leaders of All India Muslim league. The Islamic art gallery consists of textiles, wooden objects, glazed pottery and tiles, Ivory works, Bangles, Metal wares and Armoury objects related Muslim period and their living culture. The archaeological gallery

is consists of different sections like i pre- Harappa ii Harappa iii Gandhara art iv Hindu art. Later than the archaeological gallery, we notice a tapered way devoid of name, leading to the Ethnological galleries. There is displayed some miscellaneous object as postage stamps, coins, and Medals. The fifth gallery is consisting of regional arts and crafts. There are some dioramas depicting the life and culture of Cholistan and Southern Punjab. The sixth Gallery is the second part of Ethnological gallery1.The display objects related to regional cultures. Just the textiles objects are display there. The seventh gallery is consisting of Quranic Manuscripts and some other equipment concerning Islamic Arts. This part is also interconnected to Muslim period. (Dar :1983;4-54) The eighth gallery consists of black and white Photographs Nawabs of Bahawalpur. The photograph consists of the manners of the rulers of Bahawalpur, their belongings and the pictures of their family associates. The Last gallery is called children gallery. The display material in showcases is only handmade model and paintings made by different school children.The museum is open for visitors 9 AM to 4 P.M but display galleries are closed for lunch break and prayer 1 to 2 P.M. It closes on actual days of 9^{th}&10^{th} of Muharram 12^{th} of Rabulawal. Jumatulwidha, Eid ul Fitr and Eid-ul-Zoha and *entrance fees* are General public Rs 20 and foreigners Rs 200.

13. Lyallpur Museum Faisalabad Punjab

Lyallpur museum (Lyallpur is the old name of Faisalabad) is an ethnology museum situated in Faisalabad Punjab Pakistan. The museum is located on university road in front of Faisalabad district council and close to district courts and opposite to the Zia council Building near clock tower. The location of this museum is very popular and busiest place, accessible to every side for the visitors. Firstly Dr M Aamer Sarfraz (consultant and DME) presented a proposal for a museum to prevent the cultural heritage of Faisalabad region.The foundation committee comprise on Dr M Aamer Sarfraz (Chairman) Dr Touqeer Shah (Secretary to Chief Minister) Haseeb Athar (Secretary Education) and Saeed Wahlah (Divisional Commissioner officer). It has a Board of Governors now headed by the Commissioners Faisalabad Division. The museum was inaugurated by the Chief Minister Punjab Mian Shahbaz Sharif in 2011.

The museum of Lyallpur consists of ten galleries which represent the ancient and modern history and culture of Lyallpur/Faisalabad. The named of galleries are Orientation Gallery, Regional Heritage Archaeological gallery, Muslim to Sikh period gallery, Sandal Bar gallery, Chenab colony Gallery, Lyallpur gallery, Thought and act gallery, social beauty gallery, Textile gallery and Pakistan movement gallery. The museum is showing the fine collection of historic and regional objects and paintings.

14. The Peshawar Museum Peshawar KPK

The Peshawar museum is an archaeological and historical museum and great house of Gandhara sculptures. The Peshawar museum is a wonderful place full of veritable wealth of art and sculptures. It situated between the Deans hotel and the old city, five minutes' walk from Jail Bridge and Railway station of Peshawar city, now capital of Khyber Pakhtunkhwa

province. It is close to the government house on the main road that runs from the old city to the cantonment railway station. The red brick building of Peshawar museum was built in 1906 as "Victoria Hall" in the memory of Queen Victoria and officially opened in November 1907. In early days the Peshawar museum ran the Peshawar Municipality but in 1917 the museum was transferred to the supervision of the local government. The superintendent of the archaeological survey of India, Frontier circle acted as curator of the museum but when in 1927, the frontier circle office moved to Lahore; so a full time curator was appointed for this museum and the building along with antiquities was shifted to the provincial government. After independence, the museum goes to under the direct control of the director of public instructions, Government of Khyber Pakhtunkhwa, and then was NWFP. After that an autonomous body under a board of governors, headed by the chief secretary, was instituted to run the affairs of the museum in 1971.In 1992, the Khyber Pakhtunkhwa, and then NWFP established a Director of Archaeology and Museums to ensure better protection, preservation, promotion and safeguarding of the archaeological and cultural heritage of the province, therefore the Peshawar museum became part of the provincial Directorate. The actual two story building was built in a British and Mughal style architecture, consisted of a main hall and two side's corridors on the ground floor and first floor, prevailed by four stylish domes and small pinnacles on all corners. Originally the museum had only one exhibition Hall but on the eastern and western side of the building, two halls were added in a similar style in 1969-1970.In 1974-1975 a second floor was added to the two sides of halls. After this the building structure of museum consist a long hall flanked by side galleries and with a raised platform at the end opposite the door, was the ball room. A new block under a project "Extension of Peshawar museum" was approved in the year 2002 at a cost of Rs.33.11 million. The project had two components first an extension of the museum to construct an Islamic Block with two galleries, a conservation laboratory, two halls for the reserve collection, office of the provincial Directorate and a cafeteria. The second component was a complete renovation of the current building including replacement of showcases, lighting, labeling and display works all existing galleries along with renewing the floor, ceiling and structures. When the project was completed, the objects were display according to international standers. In 2004-2005 the project was completed and museum was further expanding who has already been described.

The museum since its early days housed a rich collection of the Gandharan art pieces, excavated and discovered from the major sites of Gandharan like Shah-ji-Ki-Dheri in Peshawar district, Sahri Bahlol, Jamal Garhi, Shahbaz Garhi and Takht-i-Bahi in Mardan district and Aziz Dehri in Swabi and from other Gandhara sites excavated by British, Italian, German and Pakistani scholars. The present collection has approximately 14000 objects. The main collection contains Gandharan sculptures, coins, manuscript, inscriptions, jewelry, pottery, weapons, dresses, Mughal and later period paintings, household objects, handicrafts, statues, ancient books, early versions of holy Quran and Kalash effigies. All these objects represented the early history to modern time period. The museum collections display in the entrance, side galleries and upper galleries of the museum. The exhibition area covered 4850 square ft. At present the Peshawar museum is famous for its best collection and has one of the largest

collections of Gandharan art belong to the Buddhist period. This museum is also known to be the one of the biggest collections of extensive Buddhist art in the world. The Buddhist art consist of Gautama Buddha and Bodhisattva stone, stucco and terracotta sculptures, figurines and other Buddhist objects. The Buddha life story, miracles, worship of symbols, relic casket and individual seating and standing Buddha and Bodhisattva sculptures and ethnological objects of that period are display in the main hall and other three galleries of the museum. All the antiques are prize possession but the relic casket of Kanishka discovered from Shah-ji-Ki Dheri is the outskirt of the Peshawar museum throughout the excavation material during 1908-1909.The inscribed casket in Kharoshti consist three pieces of Buddha bones which were given to the Buddhist society of Burma by the British Government. The Brumes society re-enshrined them at Madalay. This unique relic casket is on exhibit in the Peshawar museum. The 8625 coins are display in the next gallery of Peshawar museum. The collection of coins belong to Bactrian Greeks, Indo Greeks, Indo Scythian, Indo Parthian, Kushans, Indo Sasani and Muslims period, recovered from the different archaeological sites of KPK. The coins are in gold, silver, copper and Billion. These coins are found in round, square and rectangular shapes.In the other gallery of museum show the wooden facades of mosques, Arabic and Persian inscriptions, ceramics work, calligraphy, scrolls dresses and weapons, bronze and silver artifacts of Mughal period. (Sehrai: 1980; 9-31) The other section of museum mainly contain of cultural items belong to the life of the major tribes of KPK province and cultural items of the Kalish valley. Armory objects also display in this gallery. Peshawar Museum through the objects shows the history of Greeks, Scythian, Parthian, Kushan, WhiteHuns, Hindu Shahi and Islamic history of Ghaznavids, Ghaurids, Tughlaqs, Lodhi, Afghan, Mughals, Pashtunis, Durranis, Sikh and British periods. The museum is open to the visitors on all days except Wednesday and the afternoon on the first day of Eids. The museum is open to the visitors 8 A.M to 6P.M in summer and in winter 9A.M to 5P.M. but display galleries are closed for lunch break and prayer 1 to 2 P.M. The admission ticket available on counter is Rs10 for adult and 200 for foreigners. Bonafide students, teacher, soldiers in uniform are exempted from the entrance ticket and photographic charges are Rs. 20. The guide service is free in the museum.

15. City Museum Gor Khuttree Peshawar KPK

The city Museum Gor Khuttree is situated in the Gor Khuttree compound and can be approached either through Chowk Yadgar from the west or Lahori gate from northeast of the walled city of Peshawar. The compound occupies the uppermost point center of the city at the foot of the Khyber Pass has been the gateway to almost the Invaders of ancient Pakistan. The city of Peshawar is situated at the entrance of Khyber Pass. At the centre of the city there is a shrine, is known with Gor Khuttree literally means warriors graves, while there are no traces of any graves here. Possibly is the oldest citadel in the ancient city of Peshawar. The UNESCO sponsored archaeological excavation at the site has established the city historic profile which dates back to pre-Christian era of more than two millennia making Peshawar one of the world oldest living cities. It continued an impotent site for travellers for thousands of years. Buddha alms or begging bowl was displayed here at one time. The famous Chinese

pilgrims, Hiuen Tsang, who visited Gandharain the early 7th century AD, had paid great honor to the city and the great stupa of Kanishka in his account. He also mentioned a Buddhist site and historians are mention to Gor Khuttree where "Buddha huge bowl was kept". After the decline of Buddhism it became centre for Hindu worship. where Hindu Jogis exercised the yogic practice and performed Sardha ceremonies/Sardukahar ritual (shaving of heads). (Jaffer;1945:203-4) The shrine was dedicated to Shiva the great Hindu God with a smaller shrine to his bull Nandi. The Mughal kings Babar (Beveridge;1975) Akbar and Jahangir described this site and declared a Hindu pilgrim site. Mughal emperor Babar in the begging of his memories "Babarnama" recorded "On Friday the 1st Safer in the year 932(1525 A.D. November 17th) I set out my march to invade Hindustan, on reaching Peshawar, Babar with his usual curiosity visited Gor Khuttree and wrote "There are nowhere in the whole world such narrow and dark hermit cells at this place. After entering the doorway and descending one or two stairs, you must lie down, and proceed crawling along, stretch at full length. You cannot enter without a light. The quantities of hair (cut off by pilgrims as offerings) both of head and beard that are lying scattered about, and in the vicinity of the place are immense." Its present arrangement was built at the site mostly date back to Mughal, Sikh and British period. Lying at the crossroads of the old trade route, Gor Khuttree developed a major carvanseria in Mughal oeriod in 1641. This religious site converted into caravanserai named Sara-e-Jehanabad by the daughter of Mughal king Shah Jahn, Jahanara Begum. He also built a Jamia Masjidand and a Hammams.(Jaffer;1945:103-6). Queen of Mughal king Jahangir Noor Jahan built a network of cells on all sides with huge towers to the four corners and high archway two prominent gates one of the eastern side and second western side. The gates were kept locked at night to provide safety and shelter to the camel caravans laden with merchandise. She also built two well which total covered of 700 sq ft area.(Ali ;2005:2008) It is somewhat enclosed by a high surrounding wall which was once provided with an octagonal tower at each corner, with cells for travellers around the enclosure wall, some of which are currently being restored. Gor Khuttree is a typical Mughal Sarai and is situated on one of the highest points of Peshawar city. It is a fortified complex contain of an area of 160 /160 sq meters.During the early Sikh period in 1823 an Italian General Paolo de Evitable as Governor representative of Sikh Government was changed this complex. The mosque was converted into Gorakhnath Temple in the south of the courtyard and cell became the offices of Sikh government. (Durrani:1997:189) The Gorakhnath is situated in the centre and a network of cells and buildings in the southern and western side of the compound. The British Government used this site as a brigade house and barracks on the eastern and southern corners and necessary changes took place in it in 1912. Now the site is go to under the supervision of the Directorate of Archaeology and museum and crises management unit Government of Khyber Pakhtunkhwa. The site has been identified by Sir Alexander Cunningham with the great stupa of king Kanishka. Dr Dani identified this place "the tower of Buddha bowl" with Kanishka Vihara (Dani 1995).

The site first caught the attention of professor F.A. Durrani of the University of Peshawar. He was started excavation on this site in 1992-93 and 1995-96. He verified the depth of deposite 48-5 feet but could not reach to the end point. The excavation of this site was again started in 2002under the supervision of Prof Dr Ihsan Ali, Director of the Directorate of Archaeology and Museum. The excavation was continuing and reached the 49

–m-deepth, that honorary claims it is the deepest excavation of the world testified through the journal Current world Archaeology (Selkrik;2006:20) The department of Archaeology and museums, NWFP, proposed a city museum at Gor Khuttree side. The museum project completed at a price of Rs 32 million and officially the museum had been founded 23 March 2006, inaugurated by former chief Minister Akram Khan Durrani. The museum consists of three galleries to display objects from the Gor Khuttree excavations 2600 years of cultural profile of Peshawar. The archaeological gallery of this museum shows a constant profile of the Peshawar valley in the form of excavation material recovered from the site of Gor Khuttree. The second gallery is consist of ethological culture of Peshawar and display objects are traditional dresses, armaments, ornaments, household objects, musical instruments, arts and crafts antiques belong to the Achaemenid, Mauraya, Indo Greeks, Scythian, Parthian, kushan, Mughal, Sikh, British and post-independence periods. The arts and crafts of Peshawar city, its ethnological heritage and reserve collection provide a complete picture of the city history to the visitors of the museum.

16. Archaeological museum of Swat Saidu Sharif Mingora KPK

Archaeological museum of Swat established at Saidu Sharif in 1959 by the efforts of former Wali of the state of Swat. Late Major General Mian Abdul Haque Jehanzeb in order to house his private collection of antiquities. Swat museum is situated in Swat district province of KPK, in the mid-way of the Mingora and Saidu Sharif at a distance of one kilometer on the main Mingora –Saidu Sharif road and about 190 kilometer north of Peshawar. The present building of Swat museum was construction in various phases. Swat museum was constructed in the year 1959 with the contribution of the Wali Swat and the Italian mission and DOAM. The building was designed by an Italian architect named Vittonio Cardi. Later, it was taken over by the Department of Archaeology and Museums Government of Pakistan and formally inaugurated by the late Field Marshal Muhammad Ayub Khan, the then President of Pakistan on the 10th November 1963. In the earlier the museum was contained three galleries but in 1967 it was extended and six more galleries were added to it. The further massive increase in the whole range of excavated material collected in Swat by the Italian Archaeological Mission and the Department of Archaeology and Museums, Government of Pakistan was the main reason for its extension. The galleries were renovated and reorganized through the help of a cultural grant in aid given from the Government of Japan to Pakistan in 1992. The objects were classified and displayed in sequence in the well it showcase. The work was accomplished in a beautiful and attractive manner meeting all the aesthetic requirements of an exhibition thus making it a modern institution for the dissemination of education. An auditorium well equipped with audio-visual system was set up for arranging lectures, seminars, and workshops for the benefit of students and scholars. Bookshop was also added to it at entrance. After the extension and renovation, the display completes the sequence from Proto-historic period to Islamic period. The re organized galleries were inaugurated by Major General (Retd) Nasirullah Khan Babar, Federal minister of interior Government of Pakistan on 10th February 1994 (Khan 1999; 4)

The museum is considered to be a well worth visit, having a good and wide range huge collection of Gandhara sculptures mostly from the Buddhist sites in Swat like Butkara1

and Udegram. The objects in the museum are unique and exceptional. Somewhat funded by the Japanese, the excellent Swat museum in Saidu Sharif. Swat museum is one of the best andthe biggest site museums in Pakistan. The famous Swat museum consist of seven galleries including the great Gandhara sculptures, friezes depict the life of the Buddha, seals, tiny reliquaries beads, stones jewelry, terracotta sculptures, coins, weapons, embroidery, ceramics and other different artifact related to Gandharan and Buddhist period.

The museum had an entire section describing the story of Buddhism by the sculptures of Buddha and the objects they used. In this museum administration established the Buddhist complete life style. This is considered to be the admired portion of the Swat museum. In other galleries are pre Buddhist objects and an ethnographic gallery with traditional carved Swati Furniture, jewelry and some wonderful embroiders, work of folk art, objects of daily use among te various tribes of Swat are displayed in the galleries. A brief representation of the galleries is as following. At the entrance point the Swat museum has a main hall is through a verandah on the west. In the center of the main hall we see the foot print of Buddha on a massive stone with Kharoshti inscriptions discovered from the site of Tirat near Madyan. There are five showcases in this hall and display objects related to Gandhara art. A standing figure in stone of a young lady holding a bunch of lotuses with elaborate hair dress and two standing female figure (Yakshahis) in the dancing attitude, three standing Buddha in Abnaya Mudra in stone, standing Padmapani with a lotus in his left hand and standing Buddha on a low seat are display in the five showcases comes from Butkara1and other parts of Swat. Then we enter the first gallery of the museum which are called Proto-Historic Swat and display objects of this gallery come from various settlement sites and cemeteries namely Ghalegai, Aligrama, Bir-Kot, Ghundai, Leobanr 111, Katelai and Butkara 11. The recovered material of these sites include terracotta mother Goddess figurine, pottery, bone point needle, stone objects including ax, saddle and grinder, terra cotta beads, copper, iron objects, animal figurine, stone and terracotta beads, painted sherds with geometric, animal and floral designs, bowls, goblets, vases, bone implements, bowls on stand pear-shaped bottles, large and miniature vessels, copper hairpins, pear shaped bottles, funerary urns covered with a lid, bowls-on-stand and bowls for drinking and eating purposes and other grave materials. All these objects displayed in the 6 showcases of the 1st gallery of the museums. The Buddhist art of Gandharan comes from Butkara1, Saidu Sharif, Panar, Udegram, Birkot, Ghundai Nimogram, Baliram, Gumbatuna, Malam Jaba, Dadhara and Nawagi. Gallery 2-5 are called Gandhara galleries. Gandhara gallery 2 is consist on architectural elements including capitals, harmikas, pilasters and representation of monuments in Buddhist stupa and monasteries, pilasters with two worshipers, Corinthian capital, Indo-persepolitan pilasters, adoration of stupa, male holding a water pot, vihara, two Corinthian pilasters with standing figure on then, a female carrying fruit basket, bird and an amorini, a vase with acanthus leaves, frieze with decorative motifs, a garland bearer, cupid and garland, nude figure with bow and arrow, a false arch with floral pattern, lotus flower, lady with mirror under an arch, kissing female in balcony, a water carrier, a marriage scene, a love scene and vihara, male and lion head, a door jump, depicting two worshippers, four pseudo corinthian capitals depicting a seated male and female figures,

harmikas depicting four scenes of the Buddha life and Buddha in Abhaya Mudra and a Corinthian capital with quadriga elements of chatravali. The objects displayed of Gandhara gallery three relating to the life story of Buddha from his previous birth to his death, the model stupas and a reliquary in the form of a stupa. The showcase 1 of this gallery shows Dipankara jataka, Queen Maya dream, interpretation of the dream, birth of Siddhartha and seven steps, birth of Kanthaka and Chandaka, bath of the child, the Buddha return to Kapilavastu, Siddhartha horoscope, Siddhartha goes to school, a chariot with five persons, tournament wrestling and contest scene, victorious return of Buddha, first meditation of Siddhartha, the great renunciation, the great departure, Siddhartha exchange clothes with the hunter, farewell of Chandaka and Kanthaka, return of Chandaka and Kanthaka, the attack of Mara, presentation of monastic robe to Buddha, gods entreat the Buddha to preach, the descent from the Trayastrima heaven, the first, the first live disciples entreat the Buddha, barking of white dog, Buddha receiving offering, Buddha in Indra Sala cave, Buddha blessing the children, Hariti, Buddha taming the elephant, cremation of Buddha, guarding of the relics, Kasyapas going for last ceremony of Buddha, distribution of the Buddha relics, transportation of Buddha relics by two princes, transportation of relics, chariot drawn by Bactrian camels, relics are transported in the chariot drawn by three horses, he men carrying the relics mounted on elephants, cult of the stupa and worship of the three jewels are display in the 2-6 showcases and central showcase shows four stupas shaped relic casket, stupa model, crowned with gilded umbrellas, plinth graced with images of Buddha in the attitude of meditation installed in niches. The objects of Gandharan gallery four include princely figure holding a relic casket, a princely, holding a bowl in both hands, Buddha in Dhayana Mudra seated on a lotus shaped throne, Haloed Buddha is seated in Abhaya Mudra, Buddha in Dharmachakara seated on a lotus, seated Buddha in Abhaya Mudra, halo behind the head with double in circle, Haloed seated Buddha in Dhayana Mudra, wears mustaches a very rare figure of the Buddha figure, head of ascetic monks, Bodhisattva, warriors and a male, two bust of female with an elaborate headdress, female holding a bunch of lotuses in left hand, standing draped female relief figure, hair elaborately decorated holding a spear, female figure wearing tunic, hold a musical instruments, a female dancers with clasped hands wearing a pyrygian cap, a Greek goddess Athena, Bodhisattva Maitreya, a bracket depicting Buddha in Abhaya Mudra, Panchika and Harati seated on a high chair, a backet depicting Hariti with a child on her left shoulder, two standing figures of male and female, a monk presenting stura to chief monk and old Brahman sitting on a pillow of straw and a young lady on the left holds a branch of palm tree, seated Bodhisattva in Dhyana Mudra, Bodhisattva Maitreya seated on a low decorated pedestal, seated Bodhisattva, Maitreya, Bodhisattva Maitreya in Abhaya Mudra, head of Buddha with mustaches, head of the haloed Buddha, standing Buddha with two attendants, panel depicting standing Buddha in preaching pose accompanied by Vajrapani and monks, a young Vajrapani holds a thunderbolt, an Vajrapani holds a vajra, Atlas, winged genius playing double flute, male holding a flower basket, female musician playing a guitar, a female musician beating a drum, Buddha in meditation pose, two heads of lions, eleven heads of Buddha, a marble stelae represents Avalokitesvara seated on the lotus throne in lalitasna, with right leg on the seat while the left hand holding the stalk of

lotus flower, a marble stelae depicting Buddha in Dharmackakra mudra pose seated on the lotus throne supported by two lions, the Buddha flanked by a standing Padmapani and a female Bodhisattva probably Tara holding a bouquet of flower and relic caskets. Gandhara gallery five shows miscellaneous objects including the toilet trays, palette, coins, oil lamps, beads, ornaments, precious and semi-precious stones, terracotta figurines, metal objects, pottery, seals and other minor objects of daily life in Gandhara found in Udegram, Butkara 1, Bir kot, Ghundai and Saidu monastery, toilet try depecting a ritual banquet scene, toilet tray with an offering scene, toilet tray depicting a winged monster, toilet tray with two horses and a bust of male and female figures, toilet tray depicting an offering scene and musicians and pottery, ornaments of precious and semi-precious stone, necklaces, bangles, ear, pendants, finger rings, beads, mother goddess, Bodhisattva, terracotta objects, circular plaque stamped with a medallion of three deer in relief, terracotta mould of a baby and lady terracotta female and animal figurines, pottery, mould pottery, coins in gold, silver, copper ranging, arrow heads, knives, axes, daggers, bangles, vessels and stone oil lamps. The gallery 6-7 of the museum represents the folk art fron Swat, Buner and Kohistan include weapons, hunting tools, agricultural tools, musical instrument, Ornaments, furniture, embroidery, jewelry and household objects.

Due to terrorism the museum of Swat was closed in 2007. Some structure was damaged by the earthquake of 2005 and a huge damaged was done to the bomb blast in February 2009. The museum was reconstructed under a project funded by Pakistan-Italian Debt Swab agreement (FIDSA).The scheme was executed by Archaeology community- Tourism/ Field school project while the university of Engineering and Technology, Peshawar extended technical support to it. The present museum building has been designed by Italian architects Ivano Marati and Candida Vassallo and set up in collaboration with an engineer from the University of Naples Federico11 and engineers from the university Engineering and Technology Peshawar. After a gap of about seven years, the museum is re-opened after the reconstruction of the Italian architecture; Hundreds of people came to visit the newly reconstructed Swat Archaeological museum. The visitors were excited to not only see a massive collection of objects from the Gandharan civilization but also the building state of the art design. This new building is so specious and wide that one feels a great delight in walking among ancient civilizations. The Swat museum was reopened formally, for general public on Wednesday 2014 after seven years.. A great ceremony was held at the museum for its officially inauguration and Amjad Khan Afridi, advisor to chief minister on archaeology and museums and Italian ambassador to Pakistan Adriano Chiodi Cianfarani was chief guest of this ceremony. On this occasion the Italian ambassador said that Swat museum and Italy had a long standing relation that would be strengthened further after the reconstruction of the museum. Italian archaeological mission in Pakistan had been working on different archaeological sites since 1955 that started work under the guidance of Professor Giuseppe Tucci. During the last 60 years the Italian mission successfully worked on many projects to preserve the archaeological sites in Pakistan, particularly in district Swat. Mr Adriano further said that Swat had rich historical heritage, which recognized at national and international level. He added that their government had

been working since long to preserve the history of the region. Mr Afridi thanked the Italian Archaeological Mission and government of Italy for reconstruction the Swat museum. He said that it was a great achievement to see the museum open for public. Swat museum would help in promotion of tourism in the area, he said, adding that provincial government was taking steps to preserve archaeological sites in the province. He said that they believed that economy and tourism could be promoted through development of historical sites. The Director of Italian Archaeological Mission in Pakistan, Dr Luca Maria Olivieri, said that a part of the building of Swat Museum was demolished while another part was rehabilitated and included in the new construction. He said that the new building of the museum was designed according to anti-seismic principles, which made it structurally the most advanced building of its kind in Pakistan.The Swat Archaeological museum was reconstructed at an estimated cost of 700, 000 dollars. KPK archaeological Director Dr Abdul Samad said that "the museum is one of the best in the country and houses a large number of objects from the Gandharan civilization. The opening of the museum will boost economy as more and more tourists will visit Swat". Suvastu Arts and cultures association Chairman Usman Ulasyar said" It is a great attraction for locals as well as tourists. We are thankful to the Italians for reconstructing it for us." Local art associations have welcomed the restoration.

17. Dir Museum Chakdara KPK

Dir is situated in Khyber Pakhtunkhawa province as a district and drained by the Panjkora river. Historically and culturally District of Dir is very important region between the other districts of KPK. Originally the name Dir is derived from a village Dir which was a capital of the local state during the Nawabs rules. It is bounded by Swat district on the east, Bajaur on the west, Chitral on the north and Malakand Agency on the south and Dir museum of Chakdara is situated in Chakdara in the lower Dir, on the way of Dir and Chitral two kilometers from the bridge of Chakdara, situated in the north of Malakand. The History of Dir goes back to at least 2nd millennium BC which is proved by the excavations of numerous burials of Aryan at Tamatgarh and other places known as Gandahran Grave culture. The Aryans were followed by the Achaemenians, Alexander the Great, Indo Greeksand Kushans. After the Greeks and Indo Greeks the region became a great centre of Gandhara civilization. This period is signified by the presence of the monumental remains of the Buddhist stupas and monasteries, a few of which has already filled the museum at Chakdara. Dir occupied an important position as a center of Gandhara art.The archaeological activities were started by the department of the Archaeology University of Peshawar during 1966-1969 and this university excavated many sites including Andan Dheri, ChatPat, Amluk Darra, Dhamkot, Balambat, Timaragarha, Shah Dheri, Gumbatuna and Shalkandi. After the excavation a lot of material was recovered from these sites. To stock the collection from the region, then State Government of Dir built a museum in Chakdara and this museum was proposed Capt Rahatullah Khan Jaral, the political agent of Dir Agency. He allocated Rs 2, 50, 000 for the purpose of construction. After that provincial government provide an additional fund Rs 490000 for further construction of residential areas, boundary wall, guest house, storage and other

missing facilities in the museum. The building of museum was designed by Mr.Saidal Khan, consultant architect of the public works department of Khyber Pakhtunkhwa, then NWFP. The local style of architecture adopted for the building of museum and built the museum with simple stone called Malakandi stone. The architectural element is common in the area and reflecting the strength and dynamism of the locals. The building of museum looks like a fort with an outstanding facade, containing of an arched entrance, two square corner pole towers and battlements on the parapet.

The museum remained a state museum of Dir till 1969 but when the state was merged into the KPK the then NWFP, the Dir museum Chackadara was handed over to the provincial Government of KPK. The provisional Government constituted a board of governors under the KPK educational and training ordinance 1970 to run the matters of the museum. Lt General Azhar Khan Governor of KPK laid the foundation of museum on 20.9.1970. The museum was officially inaugurated on 30.5. 1979 by the Governor of NWFP named General Rtd Fazl-e-Haq.(Dar 1981;17) Yet The museum was appropriately starting its work in 1979. The purpose of the museum foundation was to protected the history and culture of the region and display it for the people. Afterward the founding museum begin to collect the material comprise Gandharan art specimens, coins, jewelry, pottery, household objects and weapons and collect the 2, 161 objects including Gandhara sculptures, coins, and living culture materials but the Gandhara art specimens are dominant among all the display objects numbered 1, 444. The Gandhara sculptures turns around the Buddha pre-birth (Jataka stories), life stories, miracles, worship of symbols, relic casket and individual seated and standing sculptures. The Jataka stories based on the Buddha pre-birth life and greatest characterized are display in the museum like Dipinkara Jataka, Maitryakanyaka, Amara, Syama and vessantara jataka. The museum shows the most important scene of the Buddha life story. The Buddha life story started from the dream of the queen Maya and next birth of Siddhartha, bath scene, seven steps, going to school, writing lesson, wrestling matches, palace life scene, marriage life, renunciation, great departure, ascetic life, first mediation, miracle of Srasvati, taming of a wild elephant, attack of Mara, Fasting Buddha, attaining enlightenment, first sermon at Sarnath, conversion of Ksyapa, monks, death scene, cremation of Buddha, distribution and guarding of relics, construction of stupas on the relics. There is also display different type of the relic caskets, different models of stupas, individual statues of Buddha and Bodhisattva along with atlantes, ichthyo, centaurs, cupids, garland bearers, Corinthian, persipoliton, Indo-Persipoliton, pilasters and decorative architectural fragments in the museum. All these Gandhara sculptures recovered from the different sites of Gandhara including Andan Dheri, Chat pat, Baghrajai, Bumbolai, Jabagai, Shalizar, Ramora, Tri Banda, Macho, AmlukDarra, Nasafa, Damkot, Bajaur, Talash, Dir, Malakand, Balambat, Timargarha, Shamlaigraves, Inayat Qila, Shah Dheri, Gumbatuna, Jandol, Matkani and Shalkandi. The region of Dir is therefore littered with the remains of the Gandhara civilization and Dir museum Chakdara offers a fine and unique collection of Gandhara art. The ethnological gallery of the museum was founded in 1977 and consist 498 cultural objects like weapons jewelry, dresses, ceramics, musical instruments, household objects, furniture, wooden architectural elements and manuscript. The museum has also unique

piece of the embroidery work. The embroidery work consist the articles made of cotton, silk, wool, gold and silver thread. The objects and their use reflect an old and proud tradition of the various Pathan tribes of this region. The household women are produced golden and silken embroidery, embroidery on black cloth with multi colored silken thread, dori work on woolen Choghas, Swati blankets, woolen shawls, hands bags, tables mats, ladies shirts, children caps and hand purse. It is a human nature, they have interested in self-ornamentation. In ancient to present time peoples desirous to wear jewelry made of silver, gold, shell, metals, bone semi-precious and precious stones. There is a good collection of jewelry in Dir museum Chakdara include rings, necklaces, wristlets, necklaces, waste bands, anklets, hair pens, pendants, bangle, buttons and short bands. The household things used by the pathns houses comprises carved wooden low chair, wooden low chair, wooden containers, milk churner, spoons, weaving operators, clay lamp, wooden spoon and glasses. The musical instruments also display in the large numbers used by the local peoples, consist of Rabab, Sitar, surney, Tablas and Tambourine. The weapon is a compulsory article of a tribal man. He used it against his enemy in the occasion of war. There are many types weapons displayed in the ethnological gallery of the museum like swords, daggers, guns, and machine guns, muzzle loaded guns and pistols.(Khan:1979;1-32) All these cultural objects represent a general picture of life of the local culture heritage.

18. Pushkalavati Museum Charsadda KPK

The Pushkalavati museum is also known as Charsada museum founded in 2006 located in Charsadda 30 km to the northeast of Peshawar Khyber Pakhtunkhwa province of Pakistan. The museum was named Pushkalavimwhich was the name of the first capital of Gandhara now identified with the name of Chasadda, situated about 30 km to the northeast Peshawar. The Greek definite of Peukelaotis or Peucelaotis or Peukelaos was immediately derived from Pukkaloit which the Pali, or Sanskrit Pushkalivati. It was called Pushkalavadi in the Parakrit language, the country denoting, par excellence, the Peshawar valley in west Pakistan. The name Pushkalavati is also mixture of two Prakrit words Pushkara/Pushlala and wati/ vati which mean lotus city. This was a city and ancient capital of Gandhara as the name of Pushkalivati. In the history of Pushkalivati alone can be traced those elements of the culture that underlie the bases of the Gandhara life. Pushkalivati, which is said to have been founded by Bharata brother of Ramachandran for his son Pushkara or Pushkala who was king this region.[23]According to Dr Dani[4]"The older city Pushkalivati identified with the ruined mounds near Charsadda and located at the old confluence the river Kabul and Swat. No wonder that the same city produced king, who also bears a significant name of Pushkalivati (Pushkala-sakti) (might of Pushkalivati) or Pushkarasarin (leader of Pushkalivati).He is known to have ventured eastwards against the refuge of Avanti (Malva) in India. What type of a ruler was he is difficult to ascertain. But obviously he must have to contend with the congeries of tribes that overlooked his capital city, or probably he was the leader of the band of tribes whose number is sometimes given as eight but without detailing their names. This region is also known with the name of Hashtnagar which is Persian word and meaning "eight villages". According to Dr

Dani this name is the corrupt form of Astes Nagar (village of Astes) after its ruler Astes who ruled over Gandhara before the onslaught of Alexander the Great. (Dani 1966)The region has full of lotus flower due to ponds. The lotus flower is the symbolic seat of Buddha in Gandhara art. The Pushklavati is also known for the birthplace of famous Hariti Devi and Panchika. They converted to Buddhism by the Buddha. Many Jataka stories have its place to Gandharan region and Siyama Jataka was also belong to this region. (Sehrai : 1982) Shaikhan Dheri is the great archaeological site associated with king Kanishka. (Wheeler : 1962) The stupa of the eye gift was built here to commemorate the generous gift of eyes by Buddha to the people of the land which was recorded by Chinese pilgrims.Prof Ihsan Ali conducted a survey in 1993 and discovered 144 different types of sites. (Ali : 1994) He discovered many Buddhist stupas and monasteries in this district. The foundation of this museum is connected with this historical background of the region.

Prof Ihsan Ali, former Director of the Directorate of Archaeology and museum, started a project for the foundation of a museum on the site of Ghani Dheri. Ghani Dheri is locted about 4 km northeast of Charsadda town. Ghani Dheri is named after the famous poet, artist, philosopher and legend of Pathan culture Khan Abdul GhaniKhan the son of Bacha Kahan (Abdul Ghafar Khan a great freedom fighter and politician). Government of KPK then NWFP built a hall and a library at the site to honor and in the memory of Khan Abdul Ghani Khan. The Mushaira Hall is decorated with the paintings and poetry of Khan Abdul Ghani Khan. The library is composed of two divisions one for the specialized books on Ghani Khan and other for the general books. The government of NWFP has initiated construction of four museums in Peshwar, Charsadda, Hund and Chitral to protected the cultural heritage of the regions and promote tourism in the historical cities in 13 April 2004 and later the Pushkalavati museum of Archaeology and Ethnology has been built in 2006, aiming to house both archaeological and ethnological material of the area excavated from sites across the district and educate the people about their rich cultural possessions. The museum was constructed adjacent to Ghani Dheri complex and a cost a little more than Rs 27 million. The museum building was finalized but due to departmental issues this museum does not open to the public view.

19. Mardan Museum Mardan KPK

The Mardan museum is situated in the heart land of Mardan city in KPK, near the town hall. The region of Mardan is rich in cultural and specially Gandharan remains are unique. The people of Mardan had the idea of a museum for a long time and they were keen to preserve the heritage. For this reason they formed national heritage preservation societies in the past. Ultimately with the interest of the local government and Sahibzada Riaz Noor, the then commissioner of Mardan proposed a museum for Mardan city on 29 December 1990.He constituted a board of governors in January 1991 to help the establishment of the museum in Mardan district. The museum started function in March 1991 and the display work in the solitary hall, measuring 50-22 ft. was completed in April 1991. The Peshawar museum donated 22 showcases for the display, while the department of Archaeology, university of Peshawar, provide technical support. In 1992 with the founding of the Directorate of

Archaeology and Museum, government of KPK then NWFP, the Mardan museum came under its administration.

The Peshawar museum provided 137 seized objects for early display work. Firstly the old building of Mardan museum had a total collection of 419 objects, including 258 Gandharan sculptures, 127 coins of Kushan later Kushan, Kushano-Sasanian and Hindu Shahi Dynasties, 6 terracotta animal figurine, 5 mercury containers, 10 household objectsand 13 agricultural tools. The theme of the Gandhara sculptures in Mardan museum of schist stone are Queen of Maya dream, birth of Siddharta, bathing scene, the great departure, the first sermon in Sarnath, the conversion of Ksyapa offering to Buddha, distribution of the relics, ; worship of the wheel of law; stupa and alm bowl; Buddha with worshippers and monks; Buddha seated in reassurance pose (Abhaya Mudra); garland bearers; Buddha seated under arches in meditation pose (Dhayana Mudra); Corinthian Persepolitan and Asokan capital; broken architectural element of pillars, pilaster, harmika, dome, yashthi, chitras or umbrellas, spacers, and floral and geometrical decorative elements from votive and large stupas; broken pedestals with Buddha and Bodhisattva feet; broken hands in different postures; figures of sheep, lion, horse, peacock and ichthyo-centaurs; and a seated figure of Ardoksho. The stucoo sculptures include a seated Buddha in meditation pose (Dhyana Mudra), heads of Buddha, Bodhisattva, and common folk. The Gandhara collections are relatively small but definitely worth visiting. The Islamic and the ethnological collections are also interesting too. The profile of the ethnic region represented by ethnological gallery include the household objects, jewelry, weapons, leather stools, boxes embroidery work, musical instruments and many other things. The manuscript of 8th to 13th century Hijri is display in the Islamic gallery. The gallery also shows some beautiful calligraphic specimens. (Ali1 & Rehman, & Ashfaq 2014) Though the initial collection of the Mardan Museum is based on the confiscated materials, later the excavated antiquities from Safiabad Mardan, and Hund Swabi, were also displayed in the museum. Confiscated antiquities from Katlang, Rustam, and Baja police stations along with the donated objects were also displayed in the old building of the museum. From 2002 onward, under the leadership of Prof. Ihsan Ali, the then Director initiated a project for the establishment of a big museum because the old building's capacity was not enough to house the objects systematically. Later in 2006 a portion of land provided by the Mardan district government on the request of provincial government and built three galleries includes archaeological gallery, ethnological gallery and Islamic gallery. So the current Mardan Museum, which is located on Mardan-Charsadda road, was inaugurated by the chief Minister Amir Haider Khan Hoti in 2009. The material displayed in the old building have been shifted here and displayed along with borrowed antiquities from the Peshawar Museum. Today this museum mainly represents the Buddhist art and architectural elements and educates the nation about the past glory of the region.

20. Hund Museum, Swabi KPK

The archaeological museum Hund situated near the bank of the Indus River above Attock in Sawabi district Khyber Pakhtunkhwa. Hund museum, with a rest house is located near the site where Alexander the Great crossed the Indus River. The Hund Museum was established upon the landscape of the oldest city of the Swabi district of the right bank of the

Indus River. The region of Hund was having very rich history and passed through different periods with different peoples, such as Gandhara civilization, Hindu Shahai period and the Muslim period. Alexander the Great in 327 B.C. passed by this city and had spent a night in a village, before entering the Indian plains. Hund which has been mentioned Hundreds of years ago by various scholars, the earliest account of which came from Sarada inscription found at Hund which describes this region as Udabhandapura, meaning "the upper town" or high-altitude landscape (Rahman 1979). Xuanzang, the chinese pilgrim, who is also known as Hiuen Tsang in historical accounts, mentioned this site in his autobiography of 644 CE as Wa-to-kia-han-cha Waihand and Ohand are also the names used for the present site of Hund (Shakur 1946; Rahman 1979; Ali 1999). Alexander Memorial in the form of a Greek Corinthian pillar to the great conqueror has been erected here which is visible from the Mi Moterway. After Peshawar and Charsadda Hund was the third capital of the Hindu Shahai period.

From Hund one can either go to Jehangira reaching the main Grand Trunk Road. On the way to Jehangira, Chota Lahore the ancient Buddhist era tower of Salathura and birth place of Sanskrit grammarian Panini is only few kilometers from Hund. The project of Hund archaeological and tourist site was approved in 1994 and excavation was started in June 1996. During the excavation beautiful houses, coins, jewelry household articles of the Indo Greeks, Kushan, Hindu Shahai and Islamic eras were found. The excavated houses, buildings and other showed the wonder engineering of the ancient peoples. Keeping in view the historical value of the site, the value of the site, the Directorate of Archaeology and museums under the leadership of Prof. Dr. Ihsan Ali initiated a project based on various activities. For the establishment of Hund Museum 33 kanals of land was acquired in 2002. In its first phase, the building for the museum rest house, cafeteria, and a monumental Corinthian pillar in the memories of Alexander the Great has been completed, while in the second phase systematic excavations, aiming to determine the complete cultural profile of the region and construction of a by-pass road are yet to be complete. The current museum was inaugurated in 2009 by Mr Syed Aqil Shah, sports, youth affairs, Tourism archaeology and museum. The museum represents both archaeological and ethnological wealth of the region.

21. Bannu Museum Bannu KPK

The Bannu museum Bannu is situated in Bannu district KPK province Pakistan. The Bannu basin is connected to the Gomal valley and surrounded by hills and mountains. It is very strategically located between the Baluchistan, plateau, Central Asia and the plains of the greater Indus valley. The area was inhabited in prehistoric times and it is no wonder that a few Neolithic settlements and prehistoric sites were record here. The site of Sheri Khan Tarakai (Khan;1986) Lewn, and Ankra were excavated jointly by the university of Peshawar and the Bannu Archealogical Mission including the British Museum, the university of Cambridge, the university College London, and Bryn Mawr college from 1984 to 2001.

Bannu having rich cultural history in the form of material evidence, the evidence of that area are found in the form of materials during excavation. Bannu museum was founded

by the ex-chief Minister Akram Khan Duranni in 2006, 2007 and completed it 2012 by the struggle of Prof Farid Khan Chairman archaeology department in Peshawar university and Ex Director, Directorate of archaeology and museum government of KPK. (Durrani 2013) The directorate of Archaeology and museum has established a museum of Archaeology and Ethnology near Allah Chowk next to the agriculture office at Bannu, inaugurated by Syed Aqil Sha, Minister for sports, Tourism Archaeology, and Youth Affairs, in 2011

22. Chitral Museum Chitral KPK

Chitral museum is a museum of archaeology and ethnology, situated in the next to the polo ground Chitral province of KPK Pakistan founded on 8 July 2010. Chitral District is one of the famous and important regions among the regions of KPK and best known its native culture and picturesque beauty. The district lies in the northwestern part of the province, between 71-120 and 73-530 loan on the longitude and between 35-130 and 36-550 latitude, bounded on the by the Badakhshn province of Afghanistan, on the east by the Northern Areas of Pakistan on the north by the Wakhan province of Afghanistan and on the south by Dir and Sawat district (Ali :2002).

The altitude of the district from sear level is about 1, 129 mat Atandu to 3, 658 mat Baroghilf (Raza1994). The Chitral region is known for its rich cultural heritage and natural beauty throughout the world.The Landscape is rocky and mountainous, deep defiles, while the valleys developed deep narrow and tortuous areas. Natural streams and flowing channels of river Chitral run through all valleys (Dicher 1967) and green valleys is the most isolated region of the KPK. The Archaeological expedition to Chitral conducted by the Peshawar University. Bradford and Leicester universities, UK, and the Directorate of Archaeology and museum of Pakistan, unearthed a number of Gandharan grave culture or proto historic cemetery sites in the, district. The Historic period sites of this district have also contributed to the establishment of cultural profile of the district Chitral with its multilayered culture, history and archaeology, led the directorate of Archaeology. The historic period sites of this district have also contributed to the establishment of cultural profile of the district Chitral, with its multilayered culture history and archaeology, led the Directorate of Archaeology and museum under the management of Prof Dr Ihsan Ali to establish a museum there. The idea of Chitral museum came into being in order to preserve and protect the rich cultural heritage to Chitral. This museum was inaugurated by late Saleh Mohammed, former Director, in 2008. The museum is consist two galleries ethnological gallery and Archaeological & Kalash gallery. The displayed material is included dresses, weapons, ornaments, wooden effigies, household objects and Gandhara Grave culture materials.

The ethnological gallery shows the cultural life of Chitral. The gallery display embroidery, jewelry, weapons, and ceramics, musical instruments, hunting tools, furniture and household objects. The embroidery comprises shirts from Kohistan regions, Swat and Nooristan, female purse, waist coats, caps, table mats and covers. The displayed jewelry

in the gallery represents the cultural trends consisting copper and silver bangles, pendants, ear rings, necklaces, bracelets, amulets, head ornaments, torques, anklets and shoulder. The museum has a variety of weapons containing guns, powder guns, pistols, canons, daggers and swords. The museum is also having a rich collection of traditional ceramics including wooden and stone cooking pots, teapots, water pitcher, bowl, spoons and trays. The museum also has an extensive collection of decorated silver, brass, bronze and copper objects. The musical instruments include traditional sitar, rabab, beegals, drums, tambourine, banjo and harmonium. An attempt has been made to represent the interior house life of Chitral in the shape of model house. The model consists of all the elements related to the routine life, chairs, bed, chamber, kitchen objects, wooden boxes are being displayed in this model. These objects expose the tradition and culture of Chitral during 12th centuries to 19th centuries. The second gallery called archaeological and Kalash gallery. The gallery shows the cultural materials and archaeological remains of Kalash valley. The gallery also expresses the deep cultural heritage of the Kalash valley. The display material consist the architectural elements, household objects, head dresses, dresses, jewelry, effigies of Kalash goddesses and wooden commemorative effigies. Archaeological objects display in museum mostly consist of Gandhara grave culture including pottery, semi-precious, tone beads, spear heads, arrow heads, bangles finger rings, pendants and other things. These objects recovered during the excavations at the site of Sangoor and Parwak. The new Chitral museum of Archaeology & Ethnology is poorly hired. It has a few local ethnographic displays. It compares poorly with the excellent Kalash museum (Kala, as, a Dur) in Bumboret.

23. Kalash Dur Museums KPK

Kalash Dur museum (house of the Kalash people) is also famous as Bomborate museum situated in Chitral District Khyber Pakhtunkhwa, Pakistan. The Kalasha Dur museum construction work started in 2001 and was finalized in 2005. The building of museum is consisting of two floors The ground floor takes the ethnological collection of the Kalasha culture and the extensive Hindu kush area and the other floor stocks a school of Kalasha culture and library of books written on the a valley and also a hall for professional training of local crafts. The members of the Greek helpers were responsible for much of the collection exhibited in the museum. Unpaid worker would visit the Kalasha valley with a opinion to buying traditional objects. The observation started the purchasing of objects clothes and other traditional items so that they no go out of the valley. Their first goal was to display all these objects in an ethnological museum, so future generations will able to see and learn about the life of their descendants. Later on when the Kalasha Dur museum was constructed the number of the collected objects started to rise. The many offerings by the Kalasha people to their museum has increased the number of ojects above those purchased. There are 1300 objects displayed which are of ethnological types related to the Kalash custom and from the traditions of the wider Hindu Kush region.

24. Abbottabad Museum, Abbottabad KPK

The Vice Chancellery of Hazara University Mansehara Prof Dr Ihsan Ali established a museum in Abbottabad Tehsil building hall, adjacent to company Bagh, which was earlier inaugurated by Federal minister Mr Nisar Muhammad Khan on 22-2-2008. The museum denotes archaeological profile of the province in general but Abbottabad and Haripur region in specific. In 2006 -2007 the staff of the museum started archaeological survey in Hazara division under the supervision of Prof Dr Ihsan Ali. It had 304 sites in which proved that the history of the areas goes back to 6th century B.C. The surface collection of the survey conducted at Abbottabad and Haripur district in the form of potsherds bones, iron and metal objects belonging to Pre Buddhist, Buddhist, Hindu Shahi and Islamic period.

The material discovered from the pre Buddhist grave site at Gankorineotek in Chitral, excavated in 2008 through INSPIRE project which was mutually run by Hazara university Mansehara, Abdul Wali Khan university Mardan, British council Islamabad and Leicester university UK are displayed in the main hall of this museum which educate the spectator about past glories (Ali 2010) It aslo highlight the Gandhara Grave Culture. For this purpose, we display the Gandhara Grave Culture Gankirini-o-Take Excavations 2008 (Chitral) material. The second aspect representing the ethnology of the area that how they live now and what they are using inside their houses. Therefore household objects armaments, ornaments, wooden furniture and dresses are the main objects representing the culture and tradition of the area. The museum requirements is to highlight the Buddha life and those political personalities who contributed to the establishment of Abbottabad town and represented them in a unique artwork "Burning Art".The representation of Buddha life story in watercolor painting and images of those political personalities who contributed directly or indirectly into the establishment of Abbottabad town in Burning Artwork in the museum is the unique idea of Dr Ihsan Ali to promote modernized arts and to pave a new way for students of other academia to contribute to archaeology. The museum contains collection of objects and artistic objects, cultural and historical importance and is accessible for public view. A beautiful cultural diorama decorated with traditional furniture, household utensils and colorful arched façade is an eye-catching element of this museum. The museum has a good quantity of highly prized archaeological items including coins dating back to the Indo Greek, Kushan and White Huns. It also comprises objects from Gandharan art and tribal customs of local tribes of Abbottabad.

25. Hazara University Museum, Mansehra KPK

The establishment of the Hazara university museum is another achievement of prof. Dr Ihsan Ali as a vice chancellor. This Musuem was family inaugurated by the then Honorable Governor of Khaber Pakhtoonkhwa, Mr. Owais Ahmad Gillani on February 13, 2008. It Houses a diverse collection of Archaeological and ethnological materials representing different occupational and cultural background of the region. The material is either region. The materials are either obtained through explorations and excavations at Gandharra grave culture sites in Chitral district and Bedadi culture sites Shinkiari Mansehra revealed a fairly large number of

antiquities which are displayed in the museum and give an authentic datser for educational and research purposes.

The material came from the archaeological survey of Mansehra district, conducted the staff and students of archaeology department under the leadership of Prof. Dr. Ihsan Ali in the form of potsherds, wooden objects, grave head stones umburials, and Gandhara stone panels that make up the collection of this museum. The museum also received a lavish donation of 114 relice and 72 coins from the governor house. Household objects, armaments, and Buddha birth a scene in watercolor painting and different poses of Buddha in work are of great interest for the audiences.

26. Museum of Archaeology and Ethnology, Abdul Wali Khan University Mardan KPK

Museum of Archaeology and Ethnology, Abdul Wali Khan University Mardan is located at the main campus of the university, situated to the north of the Kabul river between 34-320 north and 71-490 and 72-240 east in the heart of ancient Gandhara about 64 km from Peshawar. The excavations at Sanghao cave in Mardan district by Dr. A.H. Dani in 1963 pushed the history of this region back to 40, 000 years (Dani 1999). King Asoka (3rd century BCE) inscribed the creed of Buddhism on the rocks at Shehbaz Garhi in Mradan and popularized the religion of peace and tranquility. During the time of scythe-Parthians (first century BCE) and kushan (first century CE) the real expansions of Buddhism took place and a new era awas ushered in. Honduras of stupas and monastery were built for the propagation of the law of Dhamma, Chinese pilgrims recorded the existence of these sites. The site of Jamal Gari, Sahri Bahol and Shahbaz Garhi including Takhti-i-Bahi which is on UNESCO's world Heritage List is located in this district that yielded a great volume of the Gandharan art pieces that are currently on display at Peshawar, Mardan, Lahore, and Karachi museum. Keeping in view the historical and cultural wealth of the area, Prof. Dr. Ihsan Ali, as a Vice Chancellor of the Abdul Wali Khan University Mardan, laid the foundation stone of the University Museum of Archaeology and Ethnology on july 20, 2011, and formally inaugurated the museum through saved Aqil Shah, Minster for Sports, Tourism, Archaeology, and Museum and Youth Affairs on December 22, 2012.This museum has been established with the main objective to educate and engage staff and students in extramural activities of the university. The students are given an opportunity to improved and demonstrate their knowledge and communication, leadership, and management skill by designation them tasks related to different activities of the museum.

This will enable them to improve their level of understanding about past and present glories. Moreover, it will not only change their environment but they can express their aptitude which will certainly help them choose a profession of their interest in the future. The museum is equipped with ethnological materials which are systematically displayed in eight galleries. The first two galleries represent household objects, ornaments, armaments, coins of different periods, and straw-made items mostly purchased and a few donated. The third gallery is a Swat cultural, where a diorama of Swat valley has been established, embellished with wooden art pieces like engraved pillars, doors and furniture's. The fourth gallery represents Kalash culture,

where the Gandharan grave culture objects, traditional Kalash household utensils, dresses, ornaments, and armaments have been displayed. The fifth gallery represents contemporary art gallery, where pieces of wooden, marble, and straw artwork present the artistry of the region. The sixth gallery presents the color of the province in the form of photographic representation, capturing the culture, traditional games, cuisines, built heritage, and beauty of the province. The seventh gallery represents the vision of Islamic art. Calligraphic Qurans, books, objects of wooden block printings, tile work, and decorative household objects are displayed here. The eighth gallery represents traditional dresses and jewelry. The last two galleries are kept vacant for the archaeological material, and it is hoped that archaeological material will soon be arranged via departmental loan act or donation or through excavations. The digitization of the museum artifacts has also been started, and each object is recorded on a database after its physical verification. The detailed description of selected objects like jewelry, Islamic calligraphy, wood art, marble art, and henna art, from barter system to coinage and manual plow displayed in various galleries made this museum one of the best in Pakistan in terms of evolutionary descriptions. The distribution of antiquities, systematic display, lighting, and detailed authentic descriptions of objects today educate the students and allow researchers to look at the past through material evidence.

27. The McMahon Museum, Quetta

The developmental procedure of this museum was started in 1900 and the museum was officially opened to the public in 1906. Firstly the museum contained antiquities of natural history, arts, crafts, and archaeological interest that represented the culture, ethnicity, lifestyle, and traditions of Baluchistan, Afghanistan, Persia, and Arabia. These antiquities were jointly collected by Mr. Hughes Butter and Sir Aurel Stein In 1935, as a result of a devastating earthquake; most the museum building was damaged. Since then, the museum was shut down and the antiquities were dumped in municipal ware houses. Today, nobody knows anything about the precious antiquities that the museum displayed.

28. Islamabad musem Ialamabad Federal capital

Islamabd is the second capital city of Pakistan and first capital was Karachi where built a national museum named National museum of Karachi. After shifting the capital its need there is built a national museum which is represented all the region of Pakistan.Islamabad museum is the first museum built in the capital city, situated in G-5 Ata Turk road Islamabad. Khwaja Shahid Hussain, sectery ministry of culture, sports and Tourism Government of Pakistan and Ahmed Hassan Dani advisor on archaeology, Ministry of Culture, Sports and Tourism wished to create a nucleus museum and named it “Islamabad museum”.Sparing no efforts they became the moving spirit behind the establisment of this museum. They inspected many houses and finaly selected a hiring building to the museum in E. 7 sector of Islamabad and fixed the date for inaugration. Khwaja Shahid Hussain, somewhatfound the funds for the establishment of Islamabad museum, while Professor Dani not only donated his personal collection but provided practical help in designing museum display themeand even helpes in the selection of exhibition

and their documentation. Dr. M. Rafiq Mughal Director Genral of Archaeology and Museums providing any kind of help for the establishment of the museum. He was selected and borrow materials now on display in the museum. Department of Archaeology, universitiy of Peshawar, Shah Abdul Latif univesity Khairpur, Quaid-i-Azam university Islamabad and Swat Taxila Gilgit and Harappa museum given their valueable collection for Islamabad museum Mr M.A. Halim and Sarwat Baig those person who have worked day and night for getting the museum ready. Islamabad museum is a nucleus for Pakistani museum soon to built in the capital city. It is a cultural museum presented to the people.

Before we move in the museum we see in front carved wooden triple gateways from Kohistan displaying the decorative designs so popular in the museum tradation. On right we see a peppy terraced surface representing one of the terraces of Soan valley in Rawalpindi district. In the background we see some specimens of orignal rock carvings from Chilas, showing hunting scenes, horse riderwith Buddhist stupa in Tibten style. The display material in the museum galleries in a chronological order. The first human evidencethe stone tools of Rawalpidi and objects of Mehergargh are display in the first galley of the museum. Early Bronze age objects of Indus valley civilization are display in the next galley. Gallery III shows the decline of th eIndus civilization. represented by the material from Jhukar and Gandhara Grave culture. Gallery 4 representeds second phase of urbanization in Pakistan such as Pushkalavati (Charsadda) Taxila. Rohri (Sindh). From 6th century B.C. onward we find the coins of Achaemeian empire, Alexander and other Greek rulers. It is from the middle of the 3rd century B.C. That Buddhist monuments are seen in Gandhara. Gandhara art evolves a new character and we see on the walls gradual development development of Gandhara art. Towards the end of this gallery we finds Hindu Shahai ad Turki Shshi objects showing Hindu gods and terracotta figurines. On the upper floor when we enter the first gallery we see photographs of of some of the exccavated remains at Babbhore and Mansura. Here we see the photograph of the first mosuqe excavated in Banbhore. In this gallery we also find a most important first kufic inscription from Banbhoreand sealed by authorities discovered at Mansura. The second gallery of upper floor shows the map of Asia coming from Bokhara. The gallery has been arranged in two chronilogical periods the first Pre Timuried period when muslim contribute in science and philisophy and the second was Mughal period when there refinement in the production to cultural material. The earliest inscriptions of Mahmud of Ghazni, exhibted in the gallery. Most important object in this gallery belonging to pre Mughal include a manuscript, copy of the holy Quran, court calligraphist, royal Farman issued by Sultan Ghaisuddin Balban and some other objects related these peiods like Bronze oillamps, dishes, candle and Syrian glass candle stand. The Mughalperiod collection in the gallery is represented by a manuscript copy of the Holy Quran in Nastaliq script and a farman issued by Mughal emperor Jahinjir. The exhibitions in the gallery also show the trade relations of Pakistan with other Muslim world. Glazed pottery impoted from Nishapur, Ray Sultanabad, Kashan and Raqqa in Iran, blue pottery from China and Glassware from Syria.The third gallery of upper floor show the selected objjecct related to Muslim culture such as manuscript, copies of holy Quranin different script and styles of calligraphy. Other outstanding objects include miniture and ivory

paintings, coins of mulims era. The exhibits in this section of the museum depict the integrity of Islamic cultural elements in Pakistan with the purpose to highlight te cultural identity of Pakistani nation. (Halim & Baig: 1995, 1-21)Ther is another small room showing a series of Pakistani stamps and coins symbolizing authortity and sovereignty of the state of Pakistan. The museum timings are 9.30 AM to 4.30 P.M and museum closed on every Wednesday and corresponding to 9th&10th of Muharram 12th of Rabulawal. Jumatulwidha, EidulFitr and Eid-ul-Zoha. By tickets available at reception counter. Free conducted tours are available at specified hours for students and groups of visitors.

29. Lok Virsa Museum Federal capital

Lok Virsa Museum is situated near Shakarparian Hills in Islamabad, Pakistan. It is a museum of Art, History and culture of Pakiastan. The museum opened in 1974 and became an autonomous institute in 2002 following the Lok Virsa Legal Status Ordinance; 2002.The museum consists of several buildings as well as an outdoor museum which can accommodate up to 3000 visitors. The museum covers an area of 60, 000 sq. ft. featuring several exhibit halls, making it the largest museum in Pakistan. The Lok Virsa museum is also known as the Folk Heritage Museum run by the National Institute of Folk & Traditional Heritage. It represents art works preserving the living folk and traditional culture and crafts of Pakistan. The Pakistan National Museum of Ethnology (or Folk Heritage Museum) was originally established in 1982 as the "Folk Art Museum". The museum showcases Pakistan's multicultural society by displaying history and living traditions of the various ethnic groups of Pakistan from all corners of the country. The museum covers an area of 20, 000 square feet and in 2004 endured renovations and was renamed. It displays the cultural heritage of Pakistani people.

The living style of the different areas of Pakistan is exhibited here in statues, pictures, pottery, music and textile work. Lok Virsa is the finest cultural museum in Pakistan. The museum has a large display of embroidered costumes, jewelry, woodwork, metalwork; block printing, ivory and bone work. Traditional architecture facades exhibiting such skills as fresco, mirror work and marble inlay; tile, mosaic and stucco tracery are also displayed. In 2013, a Sufis and Shrines Hall was established within the Pakistan National Museum of Ethnology, popularly known as the Heritage Museum. In this hall, there are pictures of musicians standing in performing postures singing poetry of sufi saints like Lal Shahbaz Qalandar, Shah Abdul Latif Bhittai Schal Sarmast Data Ganj Baksh, Shah Rukna Alam and Bahauddin Zakariva. The museum is open from 10:00 am to 7:00 pm from Sunday to Thursday and Saturday. On Friday, the museum closes for one hour between 1:00 pm to 2:00 pm. The museum is closed on Mondays.

30. Quaid-e-Azam university Museum Islamabad

Quaid-e-Azam university museum Islamabad is located in Quaid-e-Azam university department of Taxila institute of Asian civilization. This museum was established by Dr Ahmad Hassan Dani in 1980 from his personal collection of objects.

The museum was reorganized and formally inaugurated in 2006, rearrangement according to chronological order in 2014. Regular additions through department surveys and excavations catalogue of the museum prepared by Dr Sadeed Arif (A.P, TIAC) under the supervision of Professor Dr M. Ashraf Khan. The museum was founded in order to house archaeological and ethnological materials of Pakistan. This museum contribute in the training of the students and contribute in the teaching and research activities of the department verify the theoretic teaching by offering original objects for a practical picture that supplement the understanding provide learners and researchers a space of innovative and for stimulating ideas. The museum consist of a big hall of the department and display materials are stone tools of Soan valley, pottery and coins of different periods collect from different site of the Pakistan and Gandharan sculptures.

Conclusion

The museum was the federal government subject before the 18th amendment now the department of Archaeology and museum is shifted to the provinces of Pakistan. Pakistan is a center of ancient civilization which all is there founds on all the museums of Pakistan along with local culture are also found to the related museum of the specific regions. The display objects are very valuable and unique and cannot be found in every place of the world. This studyhighlights the brief historical and archaeological background of the Pakistani region. This region has a very long chronological order of history starting from 5500BC to 20th century A.D. All of these periods have their own distinctive features in pottery, coins, living standards, communication and religious practices. According to this diversity of the culture, Pakistani region is most critical region to represent a mixture of these cultural values. In this regard, we are going to conduct our research on the area of Pakistani Museum with the focus of archaeologically sound arrangements of the material. I have described in the introduction about the background of the study area and his historical back ground through the ages in a sequence way. According to the bases of previous research reports of local and foreign missions, I decided to work in the region museum of Pakistan, I got the scope of research by making a comprehensive planned to prepare feasibility report for updating of these museum with high light the collections, technical aspects, museum's managements and their credibility, standardization of museum.

We can conclude that there are large numbers of museums are in working regarding display, design, and structure and facilitating visitors along with providing education, knowledge and representing true cultural values.Therefore we can full the loopholes and drawbacks of museums regarding least interesting and appealing point for the visitors. Many museums have been increased in different cities of Pakistan, as Lok versa Museum, re-organized museum of Swat, Islamabad Museum, Art Gallery in PNCA, Islamabad, re-established of National Museum of Pakistan, Karachi, re-organized museum of Peshawar, Pakistan Natural History Museum, Islamabad and many more. Thousands of people visit museums every year from different cities, throughout the countries. It is not the purpose of this study to discuss the advantages or disadvantages of the extraordinary upsurge of museum popularity in the last

fifty years or so. We just mean to high light where that museum is working of its standard.The increasing importance of resurgent are national, regional and local identity, where museums can serve to a place or community. In the face of immense and often painful cultural change in many countries, regions, museums can provide valuable sense of connection with the past and present, and eve as a springboard for the future. (Pl. 1 - Pl. 30)

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20

Tharu Museum (In India and Nepal)

Namrata Kumari*

Museum is a building in which historical Scientifics artistic on cultural interest are stored and exhibited.[1] The basic purpose of setting up the museum is to get acquainted with its culture. Museums are considered to be the symbol of Socio-economic and Cultural landscape of their society. The traditional role of museums is to collect objects and materials of cultural, religious and historical importance preserve them research in to them and present them to the public for the purpose of education and enjoyment. The purpose of a museum is to protect and conserve the different artifacts that represent human history throughout the world, for the sake of human knowledge, understanding and enjoyment of the beauty and wisdom of those of different cultures.

Types of Museums

There are many types of museums like-Historical Museum, Military Museum, Science and Technology Museum, War Museum, Tribal Museum, etc. The aim of setting of tribal museum is not only to help preserve tribal culture for exhibition but also to promote appreciation of a better understanding of tribal developing vis-à-vis culture.

Objectives of tribal museum

1. To conserve cultural traditions.

* Research Scholar, Net, J.R.F, (U.G.C.), Dept. of History, Patna University, Patna, Mobile No. -8092238654
E-mail Id-namrata.k@hotmail.com

2. To make ethnic individuals and group self reliant by means of ethnic handicraft training and ethnic craftsmanship.
3. To utilize resources for sustainable development and conserve nature resource.
4. To promote indigenous knowledge, skill and heritages.

To preserve the Tharu Culture, Tharu Museum is established in India and Nepal. Tharu tribes resides in Nepal and India.

Tharu Tribe : Introduction

The Tharu tribes are an indigenous people living in the boarder of Nepal and India. Tharu tribe found only two country of the world – India and Nepal.[2] The population of Nepal is 28, 287, 147 (July 2006 est.) of which the tharu people make up 6-6%.

In India tharu tribe live in Champaran district of Bihar. Kheeri Pilibhit, Gonda, Balrampur, Gorakhpur, Bahriach of Uttar Pradesh and Kumau Resign of Uttarakhand. The population of these people is approax Eight lakhs in India. The tharu are recognized as scheduled tribe by the Government of India. The constitution of India gives many social, education and economic rights to these schedule tribe because they are the primary victims of the backwardness. The Tharu are struggling for their rights and cultural protection. Tharu museum has been built to save tharu's extinct culture.

Tharu Museum in Nepal

Tharu Cultural Museum and Research Centre Chitwan

It is first Indigenous museum in Nepal, situated in the heart of Bachhauli Near Sauraha Village at the edge of Chitwan National Park. It is 17 Km. far from headquarter Bharatpur. (Pl.1)

Tharu museum is home to one of the finest collections of the heritage of Tharu in Nepal. It was established in 2005 with the intention to preserve and create awareness about the culture, heritage, art and life style of Tharu tribe.

Tharu cultural museum, Chitwan contains a wealth of Information regarding the tharu's culture and traditions. Those are depicted in painting and display materials that are showcase in the museum. Historical photographs and objects in museum related to Tharu tribe. It presents agricultural practices and various rituals performed by the community during their lifestyle accompanied by displayed antiquities, equipments, instruments etc. (Pl. 2)

Gurau Clinic

The visitor of museum have a unique opportunity to be acquainted with the traditional healing practice of the tharu community. The museum consists of Gurau clinic. A Gurau is a traditional healer in the tharu community. The clinic is managed by Gurau group under the

"Chitwan tharu traditional knowledge management group".

The tharu community is known form the diversity in healing methods and practices in their community. In the periphery of the museum a medicinal plant nursery has been established that harbors diversity in plant species that are used by the local healer for medicinal purpose.

Souvenir Shop

The other feathers of the museum include a souvenir shop that sells handicrafts made by a Tharu women group of Bachhauli. Who are particularly known for their distinctive weaved baskets and woodwork. (Pl. 3)

Interaction with local Tharu people

Museum offers to visitors a unique and unrivalled opportunity to view existent tharu people. This trip we learn about the local people culture, tradition, religion and heritage. These can visit the village by oxcant or jeep and walk through the village in the morning and evening.

The tharu culture excursion offers us insight into the daily life of tharu peope. Many tharu think they should do everything in the western way and, by doing so. They abandon their own culture. These excursion aim to make the tharu feel proud of their culture again.

Tharu Culture House and Mueum Sauraha

Tharu Culture house sauraha situated in Sauaraha village. Visitor can see here traditional tharu dance and songs. Some tharu cultural objects are also have. (Pl. 4)

Tharu Cultiural House and Museum Bardia

There are also a tharu museum in Bardia situated Bardia National park where tharu cultural heritage is preserved. Tharu Cultural Museum Bardia is one of the best places for the guest who want to explore the lifestyle of ingenious tharu tribe of Nepal Museum is just inside the Bardia National Park.

In the museum we can see different types of decorative objects, different types of agricultural equipment used for the daily life, pots used for cooking, house type they used to stay and other many more things can be explored in museum in short time period. (Pl. 5)

In the order of the madhesi movement the Tharu museum was attacked by Nepalese in 2012 AD.[3] This kind of attack on heritage and culture is really here in unfortunate.

Tharu Museum In India

India does not have a big Tharu Museum just like Nepal. The Government of India has been indifferent in this matter.

Khub Lal Mahto Smirti Tharu Sanskriti Sanrakshan Sangrahalaya, Haranatad (West Champaran) Bihar.

To protect the tharu culture the construction of the museum was done by the people of tharu society itself. In order to preserve tharu culture, Student of tharu Yuva Sangh began to crimp the heritage in small room in Haranatad. (Haranatad Known the capital of tharuhat. It is appx 50-55 km. far away from district West Champaran, Bettiah, Bihar) in November 2012. Gradually, it started forming a small museum. (Pl. 6)

In is February 2018 local MLA Rinku Singh duly inaugurated it as a museum.[4] The name of this Museum is Khub Lal Mahto Smirti Tharu Sanskriti Sangrahalaya. Khub Lal Mahto was the first Mukhia of Haranatad.

Artefacts on display are handicrafts, costumes, Idols of deities, jewellery, household articles, photographs, Weapons, farming and hunting tools and musical instruments are their. (Pl.7)

It is a small private museum which is running in collaboration with the tharu people. The museum requires Assistance from the support of Government of Bihar/ Government of India.

The tharu culture museum offers visitors a glimpse of tharu culture and traditions they perform that are fast disappearing in the tharu community. Visitor can see here famous Jhamta dance by tharu women. (Pl. 8)

Tharu museum in Uttar Pradesh and Uttarakhand

Despite having a population of meanly 3 lakhs, there is no special museum on tharu in Uttar Pradesh. Some materials of tharu culture can be seen in the Lucknow Museum. (Pl. 9)

In October 2016 despite the announcement of the tharu museum and workshop centre being constructed in Moti Kalapur (Tharu dominated village),[5] the tharu museum was not built here. May 2018 Yogi Adityanath has announced the construction of tharu museum at the cost of 110.00 crore in India in Imalaiya coder village of Balrampure.[6]

Barah Rana Meena Tharu Museum, Khatima

This museum located in Sitarganj atleast 35 K.m. far away from the Khatima District Udham Singh Nagar, Uttarakhand. It is said that Barah Rana Meena Tharu first come here and settled here. This tharu considers himself a descendant of Maharana Pratap. They say that these people come here and settled during the battle of Haldighati. Tharu women's apparels and jewelry kept in this museum look like Rajputs. Agricultural equipments and fishery items also kept here. (Pl. 10).

Tribal Research Institute and Tribal Museum, Dehradun some floats of tharu culture can be scene also.

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21

Architectural Knowledge Systems Related to use of Terracotta in Bengal

Nandini Mukhopadhyay*

Architectural knowledge system

Architectural heritage, the only physical medium of association with our glorious history is the repositories of knowledge systems which comprise a valuable resource. India is a country with rich cultural heritage, historic past, the traditional knowledge, and practices which highlight the civilization that lived in this geographic entity.

"This approach, which I shall refer to as the Architectural Knowledge Systems approach, is based on the premise that problems with our heritage today can be solved if we understand traditional knowledge systems. Building on these knowledge systems is an essential task for protecting India's cultural heritage. " (Thakur, 2002)

The traditional knowledge system is a living body of knowledge that is developed sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. The traditional knowledge systems associated with building construction is the identity of the region as it is hugely dependant on the geography and the climate. The components of traditional knowledge systems include the community based knowledge passed on from generation to generation, their customs and traditions, the oral traditions and many other aspects for the sustainable functioning of the communities. So, under the bigger umbrella of traditional knowledge systems comes the architectural knowledge

* M.Arch Conservation, School of Planning and Architecture, Bhopal.

system being an important part. The knowledge systems associated with the architectural heritage is what we can define as the Architectural knowledge system.

"Various types of cities with their many components present an undiscovered source of knowledge. Knowledge of life styles, history, people, building techniques and many other aspects that may present some lessons that we could learn There arehistoric cities and complexes, water systems, buildings and streets that need to be understood and described as an entity. It is a big challenge. The design architect is "informed" with architectural knowledge systems. This not only enables a viable conservation practice but also quality contemporary design." (Thakur, 2002)

The components of architectural knowledge systems include people, place and time and its relation to the architectural heritage. This comprises of the knowledge to understand the functioning of the structure so that it an act as a tool for carrying out future constructions, conservations and restoration works considering the aspects of authenticity and integrity related to it.

The architectural knowledge system related to terracotta rests in the built structures as they act as texts to interpret the knowledge, the craftsmanship behind the construction of these buildings, the knowledge about the material, the construction techniques associated with these structures and many other aspects to develop an understanding about the terracotta structures. The Knowledge system approach is to identify and map the built heritage structures and using them as a source of knowledge in the field of research and documentation. The significance of terracotta as a building material since ages lies in the sacredness, sustainability, its usage and its association with the layers of history. The understanding of the usage of the terracotta as a building material is an important aspect of the Knowledge system.

Terracotta

Terracotta is 'fired clay' in Latin which incorporates the five elements of nature as mentioned in Vedas earth, water, air, fire, and ether. Terracotta is usually brownish-red in colour and is hard, porous and durable in nature. It has secular as well as religious symbolism attached to it. Ancient terracotta forms of Bengal can be divided into seven categories divinities, toys and animal figurines, narrative plaques, erotic motifs, birds and plants on plaques, seals and sealings, dec orations and motifs on pottery. (Biswas, 1981) The large-scale use of terracotta dates back to the towns in Indus Valley Civilization, 2600 B.C. From the excavation of Harappa and Mohenjodaro in Pakistan, several pieces of evidence of terracotta potteries, human and animal figures have been found. In India archaeological excavations of Buddhist sites has found the evidence of terracotta objects in Rajgir in Bihar, Kaushambi in Uttar Pradesh, Paithan in Maharashtra, Chandraketugarh in West Bengal etc.

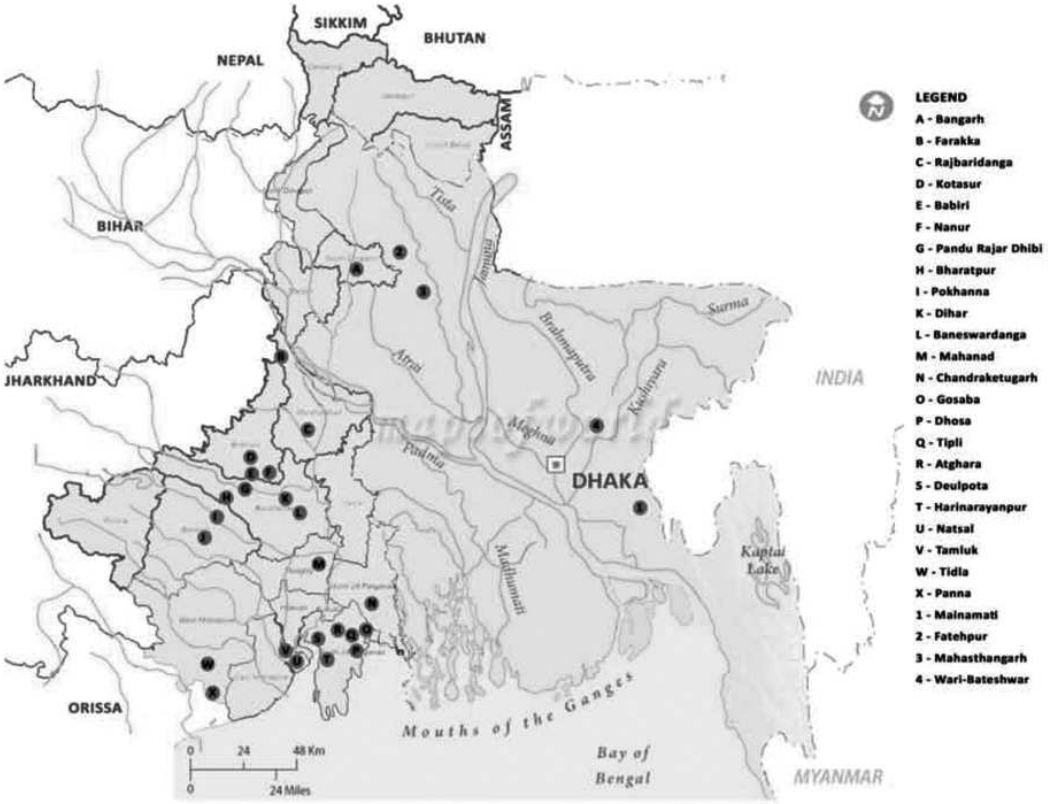
History of Terracotta in Bengal

'Bengal' signifies the region of undivided Bengal, prior to the political event of Partition of Bengal in 1947. It incorporates both West Bengal in India and the East Bengal,

present-day Bangladesh. The use of terracotta dates back to the Harappan civilization from the archaeological excavations found in several parts of Bengal. The archaeological remains of Buddhist sites, Chandraketugarh in North 24 Pgs in West Bengal and Paharpur, Mahasthangarh in present-day Bangladesh depict the usage of terracotta omate tiles.

In early 13th century AD due to Muslim invasion in Bengal, a conglomeration of indigenous and extraneous traditional knowledge systems can be seen in the architecture of that period. The architectural vocabulary of this period included the trabeated style of construction, curved cornices of buildings, terracotta surface embellishments, and hut shaped roofs inspired by the vernacular architecture of Bengal. And also the inspiration from the extraneous traditional knowledge systems included the arcuated style of construction, use of glazed tiles, and use of inscription, geometric and floral ornamentation in the built structures.

Artisans, sthapatis, kumbharkars, sutradhars played an important role in the design and development, planning, economy and various other socio-cultural aspects of the Indian towns. The community making the terracotta art works are the Kumbharkars - dealing with clay pottery and the Sutradhars - dealing with wood. The combination of art works done by these communities led to the Unique architectural style based on terracotta in the deltaic region of Bengal.



Map showing ancient terracotta yielding sites in Bengal. Source - Author. (Dutta, May, 2013), Mops of India.

The process of terracotta tile making included the carving of the well-kneaded clay with chisels by the Sutradhars in the desired shape, size, and geometry and then returned to the Kumbhakars for drying and burning in kilns to produce the finished product. For the repetitive horizontal and vertical borders, corner elements wooden moulds or hard burnt clay or terracotta moulds are used to cast the clay before drying and burning. The colour of the terracotta tiles was dependant on the degree of burning of the tiles in kilns.

Later during the fifteenth-sixteenth centuries, A.D. Bengal underwent a religious and cultural revolution which led to the revival of Hindu religion. Chaitanya Mahaprabhu, the leader of Bhakti movement in Bengal started the new religious movement, the spread of Gaudiya Vaisnavism lead to the evolution of Bengali style of temple architecture. The architectural vocabulary of Swarnlaya or Sonar Bangla is literally a golden edifice evolved from the vernacular Chala or the pavilion type of village hut. The brick temples are built in the arcuated system derived from the Islamic architecture by the zamindars or landlords and Malla rulers. This Hindu revival led to the construction of temples with brick and terracotta sculptural decorations in facades, the iconography connected with the mythological epics and philosophies of Gaudiya Vaisnavism. In the present context the districts of Hooghly, Bardhaman, West Medinipur, East Medinipur Birbhum, Bankura, Madah and North 24 PCS in West Bengal and the districts of Rajshahi, Dinajpur, Munshiganj, Barishal and Pabna districts of East Bengal, present-day Bangladesh shows the testimony of the Bengali style of temple architecture developed between the 16th century and late 19th centuries AD.

A major change happened in the monumental architecture of Bengal as it got largely influenced by the British colonial architecture during the British rule. The prominence of the terracotta structures is mostly seen in the districts of West Bengal and not in the British capital of Calcutta formed in the early 18th century AD. In the latter half of 19th Century, there was a decline in the unique terracotta architecture of Bengal.

Architectural Terracotta

Terracotta is seen as a medium of expressionism related to sacred architecture in Indian context evidently seen in the Terracotta temples and mosques of Bengal. The art of terracotta has to be viewed in terms of form, function, and use as the knowledge systems associated with it are an integral part of the culture.

Alchemy transforms fired clay into 'terra-gold' so that terracotta has ben accorded a divine status in ancient cultures." (Sengupta, 2005).

Architectural terracotta used for surface embellishment with structural framework of brick masonry is majorly seen in sacred structures of Bengal The association of 'fired clay' with the religious structures and its role in sacred architecture is mentioned in the Vedas. The building materials used in the construction of architectural marvels is largely dependent on the availability of material based on its geographical location. Brick is used as building material compared to stone as clay is abundantly available in the riverside plateau of Bengal

The evolution terracotta as a building material from cladding element to the structural element can be seen in the built structures. In the present context, terracotta is preferred because of it being an environmentally sustainable material. The terracotta hollow blocks are used as beam, column, and wall in modern construction widely in Western countries and also in few places in India. The presence of perforrations in the blocks makes them better sound and heat insulators compared to solid bricks. Terracotta tiles are used as aroofing material as well as paver blocks. Due to better manufacturing techniques compared to bricks the water absorption in terracotta is low so they effectively save clay, dry faster and even require less fire for burning. Terracotta has properties of longevity, sustainability, malleability, UV resistance; ability to withstand severe climates, and also the texture and finish it has been widely used as traditional building material.

Typology of terracotta built structures in Bengal

In the history of Bengal, the monumental sacred structures of Bengal come under the category of terracotta built structures. The non-monumental was mostly the vemacular architecture which prevailed in Bengal due to the disparity in the socio-economic condition of locals and the caste system.

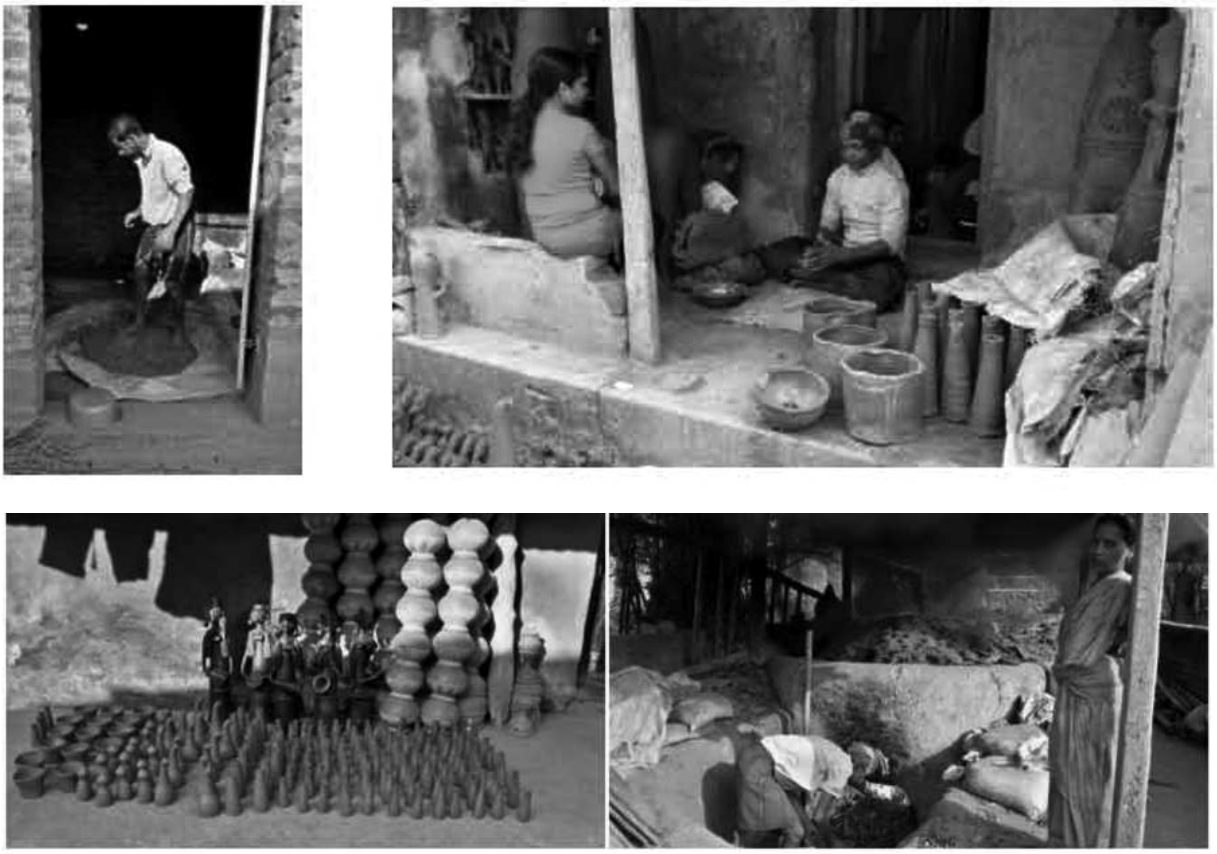
- Muslim sacred monumental terracotta structures - 13th-16th Century A.D.
- Hindu sacred monumental terracotta structures - 16th late 19th Century A.D.

The muslim sacred monumental terracotta structures built during 13th-16th Century A.D. included tye courtyard type, enclosed type, square type mosques. The Hindu sacred monumental terracotta structures built during 16th - Late 19th Century A.D. included the Chala, Bangla, later Latina/Rekha, Ratna and Dalan type of temples.

Traditional and the modern day terracotta making process

As observed and surveyed in the Panchmura village in Bishnupur the techniques of manufacturing terracotta objects depend on the nature of products and the amount of production. The manufacturing process can be divided broadly into three categories Handmade, Dice or Mould made and Wheel made. Plaster of Paris moulds is being commonly used as a replacement of traditional wooden and hard burnt terracotta moulds. The unprocessed clay which is brought from different sources has to be kneaded properly and depending on its type Entel mati or Do-aashmati sand is being added to create the required mixture. Their workplace is usually located inside the house, either the courtyard or in a separate room. The colouring process includes the addition of natural as well as artificial colouring agents in the mixtures to get the desired colour.

Terracotta tiles, plaques and crafts are decorated with the help of different tools like sticks, pointed iron rods locally known as *boki*, knives and even the caps and nibs of pen. This is done just after the shaping of the objects when the clay remains soft.



Photographs showing the various process of modern day making of terracotta objects in Panchmura village. *Source-Author.*

Use, shape, and geometry related to terracotta

"The Greek, Etruscans and Romans utilized terracotta for complex systems of roof embellishments, including cornices and even pediments, which were often painted in vibrant colours." (Scotland. 2015)

Architectural terracotta used for surface embellishment with structural framework of brick masonry is majorly seen in sacred structures of Bengal. The association of 'fired clay' with the religious structures and its role in sacred architecture is mentioned in the Vedas. The fixing detail could be understood from the dilapidated temples ornate with terracotta decorative cladding. Lime mortar or pankha plaster was used as the binding agent in the structure for fixing the terracotta tiles with the structural brick framework. The thickness of the terracotta tiles was same as that of the bricks varying from 1.5 inches to 2.5 inches. They were embedded with a thin layer of lime plaster inside the niche created by the bricks. The size and geometry of the tile and the base brick structural framework varied according to the height and the typology of the temple. Square and trapezoidal terracotta tiles in wall panels matching the geometry of the village hut, the typical Bengali architectural style with iconographic religious ornamentation. Rounded floral motifs used in the panels above arches.

The typical facade of a Terracotta temple can be divided into the following architectural components by George Michell —wall panels, cornices, corner elements, base friezes, entrance frames, columns, arches and the panel above arches. Raised vertical and horizontal bricks with terracotta clad plaques act as dividers to separately identify these components. The variations in the terracotta panels cladding the entire walls, vaults, domes archways, cupolas aremeant to glorify the Gods. Similarly, the typical facade of a Terracotta tile ornate Mosque can be divided. The variation will be in the pattern of motifs. The terracotta plaques vary in design, shape, size, and motifs in the architectural components.

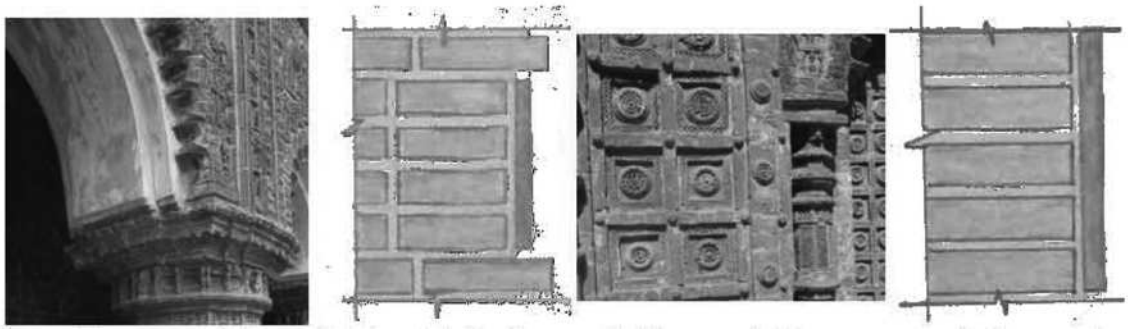
The table below analyses the shape and geometry of terracotta plaques used for surface embellishment in the various sacred monumental structures in Bengal. (Khare, 2005)

Sr. No.	Typology of Built	*Typical Example*	Inference
	Mosques • Courtyard type Adina Masjid, Pandua, West Bengal • Enclosed type	 *Source - Archnet*	Horizontal bands of Terracotta ornate tiles decorate the cornice of the exterior walls. Hindu floral motifs are majorly used in the square terracotta panels.
	• Square type Ranavijoypur Mosque, Bagheihat, Bangladesh	 *Source - Beautiful Mosque Gallery*	Square panels in shape with floral motifs, inscriptions above archway, rounded cornice, and mihrab, the rest parts are not clad like temples.
2.	Chala type temples • Char-Chala Raghunath Temple, Ghurisha, Birbhum, West Bengal	 *Source-Terracoatqr Khoje*	Square and trapezoidal terracotta tiles in wall panels matching the geometry of the village hut, the typical Bengali architectural style with iconographic religious ornamentation. Rounded floral motifs used in the panels above arches.
	• Ath-Chala Krishna chandra Temple, Guptipara, Hooghly, West Bengal.	 *Source-Author*	Square and trapezoidal terracotta tiles in wall panels with iconographic religious ornamentation in the front facade and rounded floral motifs on square panels in rear facade.

	Bangla type Temple • Eka-Bangla Char Bangla Shiv temple, Baranagar, Murshidabad, West Bengal	 *Source - Murshidabad net*	Rectangular panels used in the corner elements with secular design, religious iconography in the square shaped panels
	• Jor Bangla Keshtaraya Temple, Bishnupur, Bankuia, West Bengal	 *Source - Author*	Religious iconography in the square panels all over the facade with square jalies in the centre of the facade. Rectangular panels used in the corner elements.
4.	Later Latina/Rekha type • Rekha Sikhara Pratapesvara Temple, Kalna, Bardhaman , Wes Bengal	 *Source - Author*	Religious iconography in the square shaped panels all over the facade. Rectangular panels used in the corner elements.
5.	Ratna type temple • Ek-Ratna Lalji Temple Bishnupur, Bankura, West Bengal	 *Source-Author*	Square and trapezoidal terracotta tiles in wall panels matching the geometry of the village hut, the typical Bengali architectural style with iconographic Religious ornamentation. Rectangular panels used in the corner lements.
	• Pancha-Ratna Shyamraya Temple, Bishnupur, Bankiua, West Bengal	 *Source-Author*	Along with the wall panels, the Pancha-Ratna or Shikhar's also has square panels with iconography on terracotta tiles.

	• Nav-Ratna Radhabinod temple Kenduli Jaydev, Birbhum, West Bengal	 *Source-Author*	Square and trapezoidal terracotta tiles in wall panels with iconographic religious ornamentation. The Shikhar's also has square panels with iconography on terracotta tiles.
	• Panch- bhimsati Ratna Krishna-Chandia Temple, Kalna, Bardhaman, West Bengal	 *Source-Mala Singh, Flickr*	Rounded floral motifs on square panels in the facade in the different architectural components. Shikhar's are plain without ornamentation and cladding.

The shapes of terracotta plaques used in the temples and mosques are generally square and rectangular, trapezoidal based on the geometry of the facade evolved from the village hunts of rural Bengal with circular floral motifs.



Schematic representation of joining detail of terracotta tiles over brick masonry with lime mortar

Source-Author

The image above shows the cusped arched entrances with the fixing of terracotta panels with lime mortar above it. The wall panel elements have square recessed terracotta ornate tiles.

Common problems with historic Terracotta built structures

Terracotta is robust as a building material. Developing an understanding of the problems associated with terracotta built structures is a part of the knowledge system approach for their

protection and maintenance. It is weather resistant, durable, low water absorption capacity and can withstand sudden temperature changes without cracking. It can be glazed as well as unglazed depending on the usage. Yet like all building materials if not properly maintained terracotta structures are subjected to deterioration and damages.

The main causes of deterioration and damage can be categorised as follows

- Inherent problems
- Environmental problems
- Inappropriate treatments
- Accidental and incidental damage
- Lack of maintenance

Inherent problems

These comprise of the defects in the manufacturing process such as the degree of vitrification based on the firing temperature. According to the type of clay available in the region of Bengal, their mixing proportions, various methods of mixing and firing time the quality of terracotta objects varies. Also includes the presence of contaminants in the clay which was fired to produce terracotta, the inadequate compaction of the clay, the shrinkage due to temperature changes leading to variation in the size of units and the construction defects like the lime mortar pointing.

Environmental problems-

Moisture is the underlying cause of deterioration of terracotta as with other traditional building materials. The climate of Bengal being humid and prone to heavy rainfall and flood during rainy seson, deterioration can be seen in the terracotta structures which require maintenance. Though terracotta has low water absorption capacity due to capillary suction in open joints, it will lead loss of glazed surface. Moisture ingress in the mortar joints often leads to efflorescence and biological deterioration like the growth of algae, moss and small plants.

Sufrace soiling on terracotta occurs due to smoke, pollution and acid rain lead to the formation of black crusts, the conversion of calcium carbonate to calcium sulphate in presence of moisture and ultimately leading to exfoliation of the surface.

Loss of glazed surface, salt efflorescence, biological growth in terracotta plaques in Damodar Temple, Duttapara, Joypur, Bankura, *Source-Author*

Surface soiling in terracotta plaques in Damodar Temple, Duttapara, Joypur, Bankura and Biological growth in Routkhanda Temple, Joypur, Bankurs. *Source - Author*

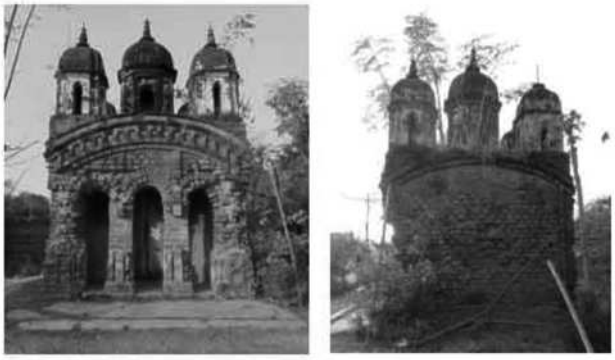
Inappropriate treatments

The use of unsuitable materials for patchrepair, usually use of cement instead of the lime, the authentic material leads to the surface damage. Paints and other coating materials used to provide a unified finish after the patch repairs done. This case is terracotta built heritage structures.

Painted terracotta clad Rashmancha- Bhadrapara, Kotulpur, Bankura Source -Author

Accidental and incidental damage

Vandalism is noted in much terracotta built structures in Bengal due to lack of protection and maintenance. Damages from scaffoldings, posters, banners, signage in the terracotta walls are a serious threat to these structures.



Vandalism noted in late 19th-century temple, Joypur, Bankura. *Source -Author*

Lack of maintenance

Identification, mapping of terracotta structures and the protection is a necessary aspect for terracotta structures in Bengal The prominence of terracotta structures is seen in the districts of Hooghly, Bardhaman, Medinipur, Birbhum, Bankura, Madah and North 24 PCS which lie unprotected in bad condition.

Unprotected terracotta temple in Joypur, Bankura. Source - Author

Maintenance and repair

Assessment is an important step to determine the process of repair works necessary to be carried on. This involves background research, survey, documentation, and other in-situ investigations and almost certainly some degree of specialist investigation. Background research includes the history of the structure; materials used so that the necessary repair works can be done considering the authenticity of the material to be used. In the case of terracotta structures of Bengal cladding of terracotta plaques is done over brick masonry in lime mortar. Assessing the surface condition of the terracotta plaque facades as well as the structure is

necessary. Mapping of the deterioration, their patterns of damage and an understanding of its process is necessary so that the conservation measures can be taken accordingly. The structural assessment would include identification of cracks, the growth of tree branches due to neglect, dislodged masonry, and certain non-destructive techniques. Neglect and unprotected is the status of many terracotta structures in the districts of Bengal.

Treatment and repair

The treatment and repair of terracotta structures should be based on the assessment of the deterioration and the identified defects that are needed to be catered to. On the basis of that, the repairs can be classified below -

• Structural repairs

• Non-structural repairs

The structural repairs include preventing water penetration, temporary stabilization, treatment of joints and pointing mortar mixes as the framework is of brick masonry. The penetration of water can be prevented by filling up the open joints of terracotta plaques. Temporary stabilization is required in the context of dislodged masonry due to neglect and being unprotected for terracotta built structures in temples. Well, functioning joints are essential in the performance of Terracotta built structures in a humid climate. So the mortar bonds based on the requisite proportion of mixes and their joinery and application is essential for protection against moisture ingress. Re-pointing should be done using pointing keys that fit into the joints so as to ensure good compaction in a mortar, without spreading the mortar into the surface of the surrounding terracotta plaques.

The non-structural repairs include repairing of cracks or fractures - injection grouting, stitching of done only after the assessment of the cracks is done depending on it being structural or non-structural. Injection grouting stitching of cracks is usually carried out for small surface cracks.

Repair works in the temple in Kendu, Bardhaman. Source- Terracottar Khoje' and Repair work in Central London. Source - *Ttie Nolans Group, Dublin*

Patch repairs in the plaques used as cladding material can be carried out to restore the integrity, prevent further deterioration and improve the overall appearance of the sacred architecture.

Conclusion

The significance of the surviving temples lies in their architectural typology, the Bengal Architectural Style which transcends beyond political borders of culture. They represent the tastes and refinement of the patrons of that period and also their love for terracotta art. The use of terracotta was concentrated majorly to religious structures and not in the settlements of the common people. Majority of terracotta temple structures in the districts of West Bengal lie in neglect and unprotected.

More focus is given to the temple twon of Bishnupur in context to protection, tourism promotion, whereas there are many other towns which have the potential to develop a tourist destination. "Right knowledge is the ultimate solution to all our problems." (Ranganathananda, 2000) In order to develop holistically, it is important to understand, develop sensitivity, document, study, and interpret the architectural knowledge systems and use them as a coherent tool for modern development.

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22

Critical Understanding of the Museum with its History, Scope and Planning

Dilip Kumar*

Introduction

The museum would play an important role as a representative of cultural centre of the country by preserving and promoting the art and for improvement of small industries, in the field of art and crafts as well.The word museum in its Greek form, mouseion, it meant "seat of the Muses" and designated a philosophical institution or a place of consideration. In the Latin origin, museum appears to have been restricted in Roman times mainly to places of philosophical discussion. Museum research has now become the most significant study for exploring new realities and facts about the historical aspects of different regions. In this concern, museums also show extractions of support for the historical findings and the following researchers can trace the facts with the available pieces or artefacts. Museums are now becoming attractions for not only the visitors but also providing imperative additions of knowledge for the archaeologists and researchers. To provide the valuable research on the study of the museums we necessitate focusing on the standards that followed in designing of the museums. Some museums are archaeological, some cultural and some regional. In this concern, the most important criteria for setting the collectibles and designing of the overall structure is related to whether the standards are meeting the International standards of a particular category of the museum or not. For this purpose, we are going to select an area of

* Assistant Professor, Dept. of Ancient Indian History & Archaeology, Patna University, Patna, Email: dilip.arch@gmail.com, Mob. 7004834098.

the museum for particular identification of the archaeological, regional and cultural museums. In the museum research we examined the museum management, its building and the historical and cultural background of the objects. It's all needed a systematic, step by step approach and be prepared the topics to create the new chapters for archaeological and the ethnological studies to put on critical range of different prehistoric cultures, human antiquities and also correspond to people lives in prehistoric periods. In the same regard, we can also find out archaeological studies in different areas like rock carvings, exploration of archaeological sites, digging procedures and archaeological techniques along with geological measures for preservations of the prehistoric cultural objects, sites and the folk art of the region as well. In this concern museum is also another key area of studies of archaeological and ethnological material in the museum. In introductory part, we need to focus on the structure of the museum and presentation of the objects categorically in the range of archaeological and cultural museum. For this part, we need to determine a sound background history of the museum in such a way that we can find the demands and requirements of the presentation of the objects with there presentation of the archaeological and historical museum. The archaeological study would focus on the examination of the collectibles and objects and its linkage with the archaeological history of the region. Choices would focus on the mixed methods like survey and archival research to explore the matter of facts. This research study would focus based on the main objectives of the research. We need to study different dimensions of the museums for the presentation of the objects along with its overall structure. For this purpose, critical review of existing literature would assist us to create the reasonable framework for the study of the museum.

In the museum research we would focus on the critical, analytical study of the museums and on the background of artefacts. We would also focus on the critical anticipation of the cultural objects displayed in the museum. The archaeological study would focus on the examination of the collectibles and objects and its linkage with the archaeological history of the region. Choices would focus on the mixed methods like survey and archival research to explore the matter of facts. We need to study different dimensions of the museums for thepresentation of the objects along with its overall structure. For this purpose, critical review of existing literature would assist us to create the reasonable framework for the study of the museum.Review of the literature and discuss with the existing studies, resources and research is very important to generate a new piece of work and also pass up the researcher to create an identical piece of work. It also facilitates us to be aware of the key area of the subject beside with different part of additional omitted points or can also help us to identify our range of the research. On the basis of the main objectives of the research we necessitate to study different dimensions of the museums for presentation of the items and collectibles along with its overall structure. For this purpose following critical re-examine of existing literature would help us to produce the logical framework for the study of the museum.

The critical analysis would be based upon the deficiencies in the museum standards like errors on display, description of the artefacts' and objects, availability of the maps and attractions for the visitors and researchers. (Murtagh: 2005) Plan of reorganization of Museum

can be designed effectively by focusing on the chronological structuring of the study on the basis of research methodology. Data collection would be very important to explore the facts and historical background of these objects. (Christensen, 2011) For this purpose, we select the objects regarding the archaeological facts and historical objects belong to chronological order and some of the cultural objects depicting or contradicting the regional culture. The overall plan of the museum research is starting from the selection of the sample of the objects from the museum. Background studies of the archaeological aspects of the objects and international standards would be derived from the existing literature, books and journals those would help us to give the detailed basis of the re-designing of the museum on aninternational standard. Then we would analyze all of the objects and collectibles of our sample with these standards and explore the new design of the museum.

We familiar with the basic area of this research are the study of the museum as an extension of the archaeological studies. Therefore we can say that study of the museum is link to the sub-study of the material items excavate from excavation and available for the observation of the community. In this regard first of all we need to decide what is meant by archaeology and how it would help us to provide reasonable links with the museums.According to Webster's International dictionary (1986) "Archaeology is the scientific study of extinct peoples or of past phases of the culture of historic peoples through skeletal remains and objects of human workmanship found in the earth". To non-archaeologists, archaeology engages three crucial elements: the past, material remains and excavation. Too several archaeologists, however, the meaning of the word and the discipline is more flexible and has shifting meaning. In museums archaeology normally provides these above three elements to the items displayed in the museums. So almost all of the objects displayed in the museum must have its' past, material capacity and excavation process to trace back its' trend or relevance. (Conn:1998;65)[3] On the basis of this definition of archaeology we need to realize how museum should be studied and what are the main mechanism of the museum should be integrated in its' presentation. So at this point we would think of toscope and nature of the museums.

History of theMuseum

A history of the museums has preserve and interprets the material confirmation of the human beings and human actions. In fact museums have a long historical background, arise from may be possible a natural human desire to collect and interpret and having visible origins in large collections built up by individuals and groups before the modern era. So the early museums start considering as the personal collections of prosperous persons, families or institutions of art and extraordinary or interested natural objects and artefacts. These were often displayed in so-called wonder rooms. Public have right of access to these museums was often possible for the "respectable", especially to private art collections, but with the permission of the authority and his staff. One way that few selectees'men during this time period gained a superior social status in the world of elites was by becoming a collector of these curious objects and displaying them. Many of the items in these collections were new finding and these collectors or naturalists, since some people stake interest in natural sciences,

were eager to get them. By putting their collections in a museum and on display they only want to establish their fantastic finds but they also used the museum as a way to sort and "manage the new explosion of materials that wider spreading of ancient texts, increased travel, expedition of discovery, and more systematic forms of communication and exchange had produced." Museums have stretched out history in the world. Thus the great Museum at Alexandria, founded by Ptolemy I Soter early in the 3rd century BC, with the scholars and its library, was more a representation university than an institution to preserve and interpret material aspects of the heritage.The up to date wisdom of museum developed in the seventeenth century. The word museum was revived in 15th-century Europe to describe the collection of Lorenzo de' Medici in Florence, but the term conveyed the concept of comprehensiveness rather than denoting a building. The term museum "firstly used in English 1682 for strange and rare things (Ambrose&Paine:2012;8). Use of the Latin derivation, museum, appears to have been restricted in Roman times mainly to places of philosophical discussion. Thus the great Museum at Alexandria, founded by Ptolemy I Soter early in the 3rd century BC, with its college of scholars and its library, was more a prototype university than an institution to preserve and interpret material aspects of the heritage. The word museum was revived in 15th-century Europe to describe the collection of Lorenzo de' Medici in Florence, but the term conveyed the concept of comprehensiveness rather than denoting a building.1677 the collection, having become the property of Elias Ashmole, was transferred to the University of Oxford. A building was constructed to receive it, and this, soon after being opened to the public in 1683, became known as the Ashmolean Museum. By the 17th century museum was being used in Europe to describe collections of inquisitiveness. Although there is some conflict in the use of museum in the legislation, drafted in 1753, founding the British Museum, nevertheless the idea of an institution called a museum and established to preserve and display a collection to the public was well established in the 18th century. In the eighteenth and nineteenth century museum developed thewhole world with modern technique. Use of the word museum during the 19th and most of the 20th century indicate a building housing cultural material to which the public had right to use. Later, as museums continued to respond to the societies that created them, the emphasis on the building itself became less dominant. Now museum culture flourished crossways the landscape. The Seaman explain to about museum and said "A museum is a permanent instauration service of society and of its development, open to the public, which acquires, conserves, researches, communicates and exhibits, purpose of study, education, enjoyment the tangible and intangible evidence of people and their environment." (Seaman: 2008; 1) Museums make sure their unique contribution to the peoples by collecting, preserving and interpreting the things of this world. The United Kingdom museum association said about the museum that "Museum enables people to explore collection for inspiration, Learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society." (Ambrose & Paine 2006; 11) International Council of Museums (ICOM) updated this definition in accordance with the realities of the worldwide museum community. The "ICOM" set a definition for museums. "A museum is a non-profit, permanent institution in the service of society and its development, open to public,

which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study, enjoyment". (Ambrose & Paine: 2006; 11)

On the basis of this definition we have tosettle on how museum should be studied and what components of the museum should be included in its' presentation. The Museum preserves, interprets and promotes the natural and cultural inheritance of humanity. Museums are responsible for the tangible and intangible, natural and cultural heritage. (Macdonald: 2003; 9).

Governing bodies and those concerned with the strategic direction and oversight of museum have a primary responsibility to promote and protect this heritage as well as the human, physical and financial resources made available for this purpose. (Ambrose & Paine: 2006; 20) Mostly every one large museumsof the world situated in major cities and local museum survive in towns, little cities and the rural area. Many museums have limited resources and some expert person's. ICOM doing greatest effort to maintain the museum performance. The museum is the outstanding institution which workout for social transformation. In these perspective museums createsa new sense of purposes. The collections of antiques are the basic purpose of the museum. Collection is just one thing to attract the visitors inside the museum. So the modern museum is carry on to the greatest profile objects on display and the displays are as interactive and consumer friendly as possible. (Genoways & Lynne, 2003; 3). The second purpose of museum is to preserve the national heritage. The heritage strongly associated to national pride and identity. The regional heritage is also necessary among the national heritage. (Cuno: 2013; 35.37) The third purpose of a museum is to focus on education. The education is a modern concept and now education is the primary purpose of a museum. (Salter and Lobel: 1954, 48). The modern museums trough their collections and programmers make an effort to attain this purpose.The museums also attempt to obtain the ability to work directly among members of the community to acquire a better idea of how to gather their needs, some practical knowledge gained about collaborating productively with other community organizations, generate understanding of how to use collections, exhibits, and programs effectively for knowledge and understanding of their audience. Museums arranged education programme regularly and similarly for everyone member of society. The fact actuality that the terminology 'creating knowledge' was constantly changed to 'sharing knowledge' emphasis on the perception of this basic part of museums. (Dar:1981; 27-39) it's consider that Museums helpful developed a 'civilized' society. They were also means by which a nation could remind its own past and shape its own national account. A important identity change by the end of the 20th century, that followed taken to their logical conclusion, promise to make the museums of the 21st century quite different from anything yet seen. At the core of the traditional museum have always the object, the skill, the stuffed specimen and the stone tool. The museums have many varietiesand established in the world like Archaeological museum, Art museum, History museum, General museum, Natural History museum, Science museum, Ethological museum, Geological museum, Industrial museum and Military museum. Another

factor is very important in this concern that how body run the system of museums. The further classification and categories of the museums bring into existence according to this point. The museums divided according to their categories and called Government museum, Municipal museum, University museum,Commercial museum, Private museum and Army museum. The governing body of every museum is different to each other and depend on their area. The important thing is to define area of the museum; they may be called National museum, Regional museumand Local museum and City museum. (Ambrose& Paine: 2006; 10) The term general museums is apply for many regional and local museums. This type museum established from the collection of private benefactors and societies. In United Kingdom, Municipal museums were seen as a means of providing instructions and entertainments to the increasingly urbanized population and developed in the context of reforms to overcome social problems resulting from industrialization. (Cuno:1998;65) Some museum contains very little objects and not has required things but they called themselves museums. The local and regional museum performs a role in promoting to public pridebut they have just some artefacts. (Sten:2007; 165). Museums are very important for a nation. Museum is a universal need of the whole world societies. The organization of the Museums arranged for collection of artefacts and other objects. The significance of these objects are scientific, artistic, cultural, historical and all itsaccessible for the public through exhibits, should be permanently and temporary. (James: 2013; 54-56) The museum separately and in a group form care of these unique resources and their collections which represent a significant part of the world heritage." (Ambrose & Paine: 2006; 3) Museums have different aims, serving to researchers, specialists and common peoples. The further are increasing quick information, together with digital information storage and extend ofvirtual exhibits and high-resolution images of their collections for examination study, and exploration with Internet. Museum played a vital role in cultural development, international tourism, and providing an identity of a nation. A museum has important contribution to the cultural, social, and economic life of the peoples. There exists a wide spread sense that museums are under threat, due to lack of turnout, shortage of funds and advance technological matters. There is a strong feeling that museums should concern themselves with what they are good at first and foremost. Recently a stem idea is strongly encourage that museums undermine the essential purposeswhich presently working in museum neither than additional purposes. (Tony: 1995:18)

Planning of museum

The design of museums has evolved throughout history; however, museum planning actual mission of the museum along with planning of space that the collection of the museum will be in housed. According to the intentional museum planning, the potential founders of museums should form a committee first, and reach out to the community for input as to what the museum should supply or do for the community. Museums should be planned according to community's needs. (Dar.1981; 34) "The new museum does not build on an educational superstition. It examines its community's life first, and then straightway bends its energies to supplying some of the material which that community needs, and to making that material's

presence widely known, and to presenting it in such a way as to secure it for the maximum use and the maximum efficiency of that use". (Nigham:1985; 127-39) This is fact that museums have planned and designed be different according to their collections, but on the whole, they adhere to planning a space that without difficulty public accessed to the objects and easily look at displays. In terms of modern museums, interpretive museums, as opposed to art museums, have missions reflecting curatorial guidance through the subject matter which now include content in the form of images, audio and visual effects, and interactive exhibits. (Sud:1981,48-55) Museum formation start on with a museum plan, produced a complete procedure. The procedures connect identifying the museum's vision and the resources, organization and experiences needed to understand this vision. A feasibility study, analysis of comparable facilities, and an interpretive plan are all developed as part of the museum planning process. Museum planning would also provide us the starting point of chronological order of displayed items along with other operational responsibilities in arrangements and maintenance of the standardized museum. (Dar:1981;127) Dr Dar has described all the parameters to run a museum, he provide the guidelines that, how to prepare the plan for a new museum, what is the role of a curator and a director during establishing a new museum. Studying collection, sort out the collection, cataloguing the objects, how to display the objects, lighting system, and how to prepare the informative descriptions and mount them to understand the objects. In the end he provided a proper and up standardized guide lines how to run a museum under the curator and curatorial staff, what are the responsibilities of the staff for care and maintenance and to provide the security measures. On the basis of above planning process we would also determine our own planning process for consideration of the re-organization of museum.

Conclusion

Museum has a long history going back to the 3rd century B.C., when the first museum identifiedthat was opened in the University of Alexandria in Egypt. However, the museum culture has spread to almost the entire world. A museum is a great institution for the permanent service of the society. The story of the museum history and its developments arise gradually in history.

This infers that the concept of the museum has become a worldwide concept that has survived in the 20th century. Museum is the most important criteria for setting the collectibles and designing of the overall structure. Museum planning providethe starting point of chronological order of displayed items along with other operational responsibilities in arrangements and maintenance of the standardized museum.

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23

The Critical Survey and Analysis of the Display Objectsin the Bahawalpur Museum Stone Age to Hindu Period

Nighat Aslam[1] and Mastoor Fatima Bukhari[2]

Introduction

Museum research has now become the most significant study for exploring new realities and facts about the historical aspects of different regions. In this concern, museums also show extractions of support for the historical findings and the following researchers can trace the facts with the available pieces or artifacts. Museums are now becoming attractions for not only the visitors, but also providing imperative additions of knowledge for the archaeologists and researchers. To provide the valuable research on the study of the museums we necessitate focusing on the standards that followed in designing of the museums. Some museums are archaeological, some cultural and some regional. In this concern, the most important criteria for setting the collectibles and designing of the overall structure is related to whether the standards are meeting the international standards of a particular category of the museum or not. For this purpose, we are going to select an area of the Bahawalpur museum for particular identification of the archaeological, regional and cultural museums.To provide the valuable research on the study of the museums we necessitate focusing on the standards that followed in designing of the museums. Some museums are archaeological, some cultural and some

1. Assistant professor in History Government Degree College for women Satellite town, Bahawalpur.
2. Professor in Dept of Archaeology Shah Abdul Latif University Khairpur Sindh.

regional. In this concern, the most important criteria for setting the collectibles and designing of the overall structure is related to whether the standards are meeting the international standards of a particular category of the museum or not. For this purpose, we are going to select an area of the Bahawalpur museum for particular identification of the archaeological, regional and cultural museums. In my research I observe the museum objects and its display. I examined the museum management, its building and the historical and cultural background of the objects. It's all needed a systematic, step by step approach and be prepared the topics to create the new chapters for archaeologists and the ethnological studies to put on a critical range of different prehistoric cultures, human antiquities and also correspond to people's lives in prehistoric periods. In the same regard, we can also find out archaeological studies in different areas like rock carvings, exploration of archaeological sites, digging procedures and archaeological techniques along with geological measures for the preservations of the prehistoric cultural objects, sites and the folk art of the region as well. In this concern museum is also another key area of studies of archaeological and ethnological material in the museum. In the introductory part, we need to focus on the structure of the museum and presentation of the objects categorically in the range of archaeological and cultural museum. For this we need to determine a sound background history of the Bahawalpur region in such a way that we can find the demands and requirements of the presentation of the objects with the representation of the archaeological museum.

This research would focus on the critical, analytical study of the Bahawalpur museum and on the background of each piece in the era of Stone Age to modern history. We would also focus on the critical anticipation of the displayedcultural objects in the Bahawalpur museum and find out its link with the historical facts of the existing and present history of this region. The archaeological study would focus on the examination of the collectibles and objects and its linkage with the archaeological history of the region. Choices would focus on the mixed methods like survey and archival research to explore the matter of facts. This research study would focus based on the main objectives of the research. We need to study different dimensions of the museums for the presentation of the objects along with its overall structure. For this purpose, critical review of existing literature would assist us to create the reasonable framework for the study of the museum.

I have emphasized in my study to highlight the main technical issue for the reorganization of the new museum. The existing Bahawalpur museum is an average museum due to mismanagement, unplanned display, insufficient and unarranged objects. The exhibits put on display in a random style so. The complete history or chronology of civilization is not there. Unfortunately, the collections of exhibits in Bahawalpur museum are not in chronological orders or according to the standard of any presentable manners. It's all phases of the civilization as Pre -Harappa, Indus valley, Gandhara, Hindu, Islamic and regional should be re-studied and must be re displayed and the missing link could be completed with replicas and supplementary printed materials. Manuscripts, numismatics, postal stamps, the Nawabs belongings, armors,

masterpieces of art and crafts, memoirs connected to the movement of Pakistan, not depicted to comprehensively. The museum could not gratify the visitors and students during the visit, so they never intend to revisit the museum.

The purpose of re-design and include the new findings in the display is to bring this museum in the series of out class museums in Pakistan. After the re-designing, the museum would play an important role as a representative of the cultural centre of the region by preserving and promoting the art and for improvement of small industries, in the field of art and crafts as well. The overall plan of this research will begin with a selection of a sample of the objects from the Bahawalpur museum.The case study of Bahawalpur museum is to hi-light the loops and gaps. The research increases the interest of the visitors by providing the solutions to the lacking gaps and error in all the sections of museum accordingly. First, it will be tried to hi-light the main reasons why it could not be updated. The existing museum of Bahawalpur does not represent the south Punjab region. This region had a glorious past. The region had participated in establishing the flourishing civilization since the early phase of a Neolithic period of Mehergarh dating back to 7000 B.C down to 2500 B.C, (Dani:2007; 27) Pre-Harappa and mature Harappa (Mughal:1970;2)[2] phase. HakaraRiver played a vital role to generate skilful culture. In this part, we need to select a sound background of the history of the Bahawalpur region in such a way that we can discover the demands and requirements of the presentation of the objects with the representation of the archaeological and cultural museum.Geographically Bahawalpur is situated in south Punjab region. South Punjab covered the whole area of three divisions Bahawalpur, Multan and Dera Gazi Khan. (Dani and Mohan: 1996; 246.65) Bahawalpur divisions consist of three districts Bahawalpur, Bahawalnagurand Rahim Yar Khan. It is lying in the south west of the Punjab province. The total area of the Bahawalpur is 15.918 square miles. (Province gazetteer of India: 1908; 338) The region has an ancient history and very long chronological orders determine the cultural backgrounds of the region In this apprehension chronological order is associated with the Stone Age to thenative state of Bahawalpur. All of these periods represented and practiced their own cultural values and showed the diversity of the structure of buildings, living standards, and others.The earliest archaeological findings are identified with the name of Hakra culture in the region. (Sten; 1942; 263) The earliest reference of this region occurs in the Rig-Veda the oldest sacred literature of Aryan composed in roundabout from 1500-1000 BCE (Basham;2004: 38) Sarasvati River (10.75) in the Rig-Veda that was flowing by this region but the river dried up in the time of Mahabharata and now identified with Gagger Hakra River. In historic periods, it was annexed by the Achaemenid Empire under Darious 1. The Achaemenid Empire establishes here an administrative system that carries on after their disappearance (Gupta; 2004: 64). The short period's dynasties Indo Greek, Scythian, Pathian, Kushan, Sasanian, Kidar Kushan, also left their influence on culture and tradition.The long history of the region can be traced from the Hakra river culture to (3800-1500 BCE) till the present day. (Stein,1942, 173) Bahawalpur has an immeasurable variety of cultural assets. The existing culture of the communities carries influences of the hereditary earliest civilizations and historical past which

flourished in this region and has permeated their present day culture and its expressions. Cultural zones surrounded by these districts are discernable which have infused the living culture of communities, influencing their standard of living, value system and world vision, giving the regional distinct cultural (Deshpande:1999;101-103) characteristics reinforced through their sharedSaraiki language. The impact ofmaterial culture of the earliest common of the Hakra Valley Civilization can still be found in the pottery making traditions and in the motifs and designs which carry on to be used. (Mughal :1977,90) The other identifiable cultural ethos permeating the living culture of the region is that engendered by the advent of the Sufi saints in the 10th century onwards. The Sufi philosophical and material culture emanated from the ancient cities of Multan and Uch Sharif, the central dwelling of mystical Islam in the region, which had broad impact on the entire of South Punjab and further promote into Sind and Northern India.

The Museum of Bahawalpur

Bahawalpur Museum is established in 1974 located in Bahawalpur under the control of Bahawalpur District Government. There are readily availablenine galleries in Bahawalpur museum, consisting ofvaried Subjects as Archaeology, Islamic art, Cultural Heritage of Bahawalpur region. They displayed a number ofobjects linked to the Neolithic period; Harappa cultural pottery Gandhara art and some tinny sacred objects are displayed in the showcases. Some objects belong to the Hindu period. Islamic cultural objects are consisting of Holy Quran, pottery belongs to the Islamic period dating 13th century to 21st century A.D. Coins, postage stamps and some blow-ups of tombs and fort of drawer, arms and armours, cannons, and an old railway engineare display belongs to the period of Nawabs of Bahawalpur of the native stateof Bahawalpur. Some ethnological objects related to the southern Punjab culture, some picture showing Cholistani women at work. The Bahawalpur gallery represents the activities of the Nawabs and their people. In the regional art section some embroidery related to the Bahawalpur is displayed. The Bahawalpur Museum is the central museum of the region of South Punjab is required to be re-organized in a modern way, in a chronological order, according to the charter of ICOM, UNESCO.

The division of galleries object

Bahawalpur museum comprised nine galleries and all these objects are discussed in findings sections. Now in the analytic part the collection of the objects are divided in four groups according to their nature.

1. The archaeological objects
2. The Islamic objects
3. The cultural objects
4. The native state period objects
5. Miscellaneous objects

The objects stone age to Hindu periods

In this paper included the archaeological objects. All the material acquires throughout excavation is able topart of archaeology. The pre-Harappa period, Indus valley, Gandhara art and Hindu art eras linked objects be converted into the archaeology gallery. So the archaeological gallery objects, coins and carved stones pillars are integrated into this group.

The survey of the display objects

In this part we discuss all thedisplay objects in the museum related to these periods who display in the thirdgallery and miscellaneous sections. The third gallery of this museum called Archaeological gallery. This gallery is one the most attractive part of Bahawalpur museum. The gallery is subdivided into five categories like Proto history, Pre-Harappa period objects, Harappa period objects, and Ghandara Art and Hindu art objects. The archaeological gallery representative pre and proto history, Gandhara art and Hindu art. The proto history object in the museum related to Palaeolithic age is hand axes, cleavers, scrapers and choppers belonged to Soan valley sites. Chert stone flakes, cores trimming flakes and blades come from Rohri hills related to Palaeolithic periods. The Neolithic culturedoes not display on the museum. The objects related to Amri are terracotta type plain and painted pottery, lamps, net sinker, bull figurines cones and some Chert blades. The Kot Diji material comes from Khairpur district (Sind). In the showcase miniature pots, painted potsherds, perforated pot, dish on stand, terracotta cake, whistling bird, terracotta bull figurine, Chert blades and core. All these objects belonged to the Pre-Harappa period. Plain and painted pottery, pottery jars, terracottacakes, perforatedpotsherds and burnt brick with animal foot mark items belongedtothe Cholistan Drawer fort site. The Harappa object consists of miniature pots, large and medium size pottery jars, tumblers, dish in potsherds painted, perforated jar, jar with conical base, slings balls, terracotta cakes, grinding stones etc. The Mohenjo-Daro objects are terracotta figurines of bulls, male and female beings, birds, terracotta sling balls, toy cart driven by two bulls, seals, terracotta cones, balls, bronze chisel and spearhead etc. In the Bahawalpur museum there are some collections of Gandhara art pieces. These are images of standing Bodhisattva Miteraya, stone and stucco heads of Buddha and Bodhisattva, panels of depicting various scenes of Buddha life as Miracle of Sravasti, Mara attack, Mahaparinirvana, statute of Bodhisattva, stone lamp, circular toilet trays, Persepolitan columns, weight lifting stones, door jamb with three scenes and a garland bearers panel. The Hindu art is also presented in the museum. At the entrance gate of the museum there are fixed of two carved pillars of yellow stone, pedestal of sculpture all belonged to Marot fort, marble statue of Parvati, marble Nandi bull, bronze statues, three–tiered brass lamp, marble, slab with foot print, round and square carved pillars, an inscribed pedestal from Marot, brass cart driven by two elephants and carved wooden ventilators from Kaladhari temple. (Dar :1983;5-15)

The detailed of display in the Archaeological Gallery

Showcase No: X

In showcase X display stone objects of Palaeolithic age.

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Hand axes	2	Soan valley	Palaeolithic period	
2	Leaf shaped scrapers	2	Soan valley	Palaeolithic period	
3	Stone implement scraper type	3	Soan valley	Palaeolithic period	
4	Stone implement	1	Soan valley	Palaeolithic period	
5	Stone scraper	5	Soan valley	Palaeolithic period	
6	Scraper type	1	Soan valley	Palaeolithic period	
7	Chopper chapping flake	6	Soan valley	Palaeolithic period	
8	Chest trimming flake:	15	Rohri hills(Sind)	Palaeolithic period	
9	Core for chest blade	7	Soan valley	Palaeolithic period	

Showcase No: X1

The objects showcase X1 related to Amri Pre –Harappa period.

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Terracotta painted pot	4	Amri	Harappa period	Mentioned period wrong
2	Terracotta miniature pot	4	Amri	Harappa period	Mentioned period wrong
3	Terracotta miniature bulls	4	Amri	Harappa period	Mentioned period wrong
4	Parallel sides blade of chest	7	Rorhi hills:	Harappa period	Mentioned period wrong
5	Terracotta net sinker	3	Amri	Harappa period	Mentioned period wrong
6	Tessa cotta lamp	1	Amri	Harappa period	Mentioned period wrong
7	Terracotta painted potsherd	1	Cot Diji	Harappa period	Mentioned period wrong
8	Terracotta whistling bird	2	Amri	Harappa period	Mentioned period wrong

Showcase No: X11

The showcaseX11 related to KotDiji Pre-Harappa period

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Core for chest blades	1	KotDiji	Nil	
2	Terracotta bull	1	KotDiji	Nil	
3	Terracotta whistling bird	2	KotDiji	Nil	
4	Terracotta bull and cart	1	KotDiji	Nil	
5	Terracotta cake	1	KotDiji	Nil	
6	Core for chest blades	6	KotDiji	Nil	
7	Terracotta miniature pots	7	KotDiji	Nil	
8	Terracotta tiny vase	1	KotDiji	Nil	
9	Terracotta miniature pot	2	Amri	Nil	
10	Terracotta neck piece of a vase	1	KotDiji	Nil	
11	Terracotta Offering spend pot	1	KotDiji	Nil	

Showcase No: X111

The showcase X111 are consist of plain and painted pottery

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Terracotta goblets	1	Drawer	Harrapa period	
2	Terracotta potsherds	3	Drawer	Harrapa period	
3	Terracotta belong to perforated jar	1	Drawer	Harrapa period	
4	Terracotta sling balls	8	Drawer	Harrapa period	
5	Terracotta burnt bricks with animal foot print	1	Drawer	Harrapa period	
6	Terracotta goblets	4	Drawer	Harrapa period	
7	Terracotta big pots	2	Drawer	Harrapa period	

Showcase No X1V

The next showcase XIV consists on the Harappa objects:

S.No	*Name of objects*	*Number*	*Origin of Objects*	*Related period*	*Remarks*
1	Terracotta gridding stone	1	Harappa	Harappa period	
2	Terracotta neck of pot	2	Harappa	Harappa period	
3	Terracotta miniature pot	4	Harappa	Harappa period	
4	Terracotta big pot	1	Harappa	Harappa period	
5	Pieces of Alabaster	16	Harappa	Harappa period	
6	Terracotta miniature pots of various shapes	10	Harappa	Harappa period	
7	Terracotta vase	10	Harappa	Harappa period	
8	Terracotta painted potsherd	21	Harappa	Harappa period	
9	Terracotta big jars	4	Harappa	Harappa period	
10	Terracotta pots	8	Harappa	Harappa period	
11	Terracotta bowls	1			No label
12	Terracotta lid	1			No label
13	Terracotta perforated pots	2	Harappa	Harappa period	
14	Terracotta, deya	1			No label
15	Terracotta bowl	1			No label

Showcase No XV

The showcase XV related to Mohenjo-Daro objects

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Terracotta bull figurine	5	Mohenjo-Daro	Nil	
2	Terracotta Animal figures	7	Mohenjo-Daro	Nil	
3	Chest blade	16	Mohenjo-Daro	Nil	
4	Terracotta figures of mother Goddess	20	Mohenjo-Daro	Nil	
5	Plaster of pairs model of king priest	1		Nil	
6	Terracotta bangles and ears rings	37	Mohenjo-Daro	Nil	
7	Weight and measures	22	Mohenjo-Daro	Nil	
8	Seashells pieces	8	Mohenjo-Daro	Nil	
9	Terracotta seals	9	Mohenjo-Daro	Nil	
10	Shell stone and terracotta jewellery	24	Mohenjo-Daro	Nil	
11	Bull cart with two bulls	1	Mohenjo-Daro	Nil	
12	Slings balls	18	Mohenjo-Daro	Nil	
13	Iron objects: 2,	2			No label
14	Terracotta birds	6	Mohenjo-Daro	Nil	
15	Terracotta animals figures	6	Mohenjo-Daro	Nil	

Showcase No: XV1

The showcase xvi display

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Head of Buddha schist stone	1	Gandhara	Nil	
2	Head of Bodhisattva schist stone	1	Gandhara	Nil	
3	Garland bears schist stone	1	Gandhara	Nil	
4	Bodhisattva Mitriyia without head schist stone	1	Gandhara	Nil	
5	Stone casket schist stone	1	Gandhara	Nil	
6	Architectural fragment of a Corinth capital schist stone	1	Gandhara	Nil	
7	Fragment of capitals schist Stone	2	Gandhara	Nil	
8	Circular stone of a stupa	1	Gandhara	Nil	
9	Stucco heads of Buddha	1	Gandhara	Nil	
10	Stucco head of Buddha	7	Nil	5th century	
11	panels of depicting various scenes of Buddha life, schist stone	8	Gandhara	Nil	

Showcase No: XV11

In the showcase xvii there are display six Gandhara art pieces

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Head of Buddha schist stone	3	Gandhara	Nil	The label changed
2	Bodhisattva Mitriyia schist stone	2	Gandhara	Nil	The label changed
3	Head of bodhisattva schist stone	1	Gandhara	Nil	The label changed

Showcase No: XV111

In the showcase xviii also display six figures

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Head of Buddha schist stone	2	Gandhara	Nil	
2	Panels of depicting various scenes of Buddha life	4	Gandhara	Nil	

Showcase No: XIX

In the showcase xix consist of six panels of depicting various scenes of Buddha Life

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Panels depicting various scenes of Buddha life schist stone	6	Gandhara	Nil	

Showcase No: xx

The showcase xx also consist of six panels of depicting various scenes of Buddha life

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	panels of depicting various scenes of Buddha life schist stone	4	Gandhara	Nil	
2	Circular toilet trays	1			no label
3	A door jamb with three scenes schist stone	1	Gandhara		

Showcase No: XX1

The showcase xxi consist donation objects:

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Smiling Buddha Donation SadiqTahir	1	Sui Vahar	5th century	

Showcase No: XX11

In the showcase xxii present these objects

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Carved stone	2	Nil	Nil	No label
2	Nanada bull, vichle of Shiva: made of marble	1	Nil	Nil	
3	Standing figure of bodhisattva with metal	1	Nil	Nil	
4	Metal lamp stand	1	Nil	Nil	
5	Brass lamp stand	1	Nil	Nil	
6	Engraved brass temple with two elephant	1	Nil	Nil	
7	Weight lifting stone depicting a figure between a horse and a four headed deity	1	Gandhara	Nil	
8	Brass statues of goddess Tara	1			
9	carved stone pillar	1	Mirrot fort	Nil	
10	Marble statues of Parvati	1	Nil	Nil	

Showcase No: XX111

The showcase xxiii consist on these objects

S.No	*Name of objects*	*Number*	*Origin of objects*	*Related period*	*Remarks*
1	Carved stone pillar showing dancing female figure	1	Marot fort	Nil	
2	Sacred footprint stone tiles carved with sacred foot impression	1	Marot fort	Nil	
3	figure of male and female: carved in marble figures male and female on yellow stone Donation Sadiq-Tahir,	1	Islam GarhCholistan	Nil	
4	Carved wooden door	1	Bahawalpur	Nil	
5	Sacred footprint of Jane Trithankers donated Punjab arts council Lahore	1	Nil	Nil	
6	carved stone pillar showing dancing figure with floral design	1	Marot fort	Nil	
7	The decorated wooden pieces: 2	2			no label

Miscellaneous sections

After the archaeological gallery we see a narrow passage without name leading to the Ethnological galleries. There is display some miscellaneous object as postage stamps, coins, medal display in the four showcases. The second showcase of this corridor shows coins display and 267 coins present there. The coins related to different period.

The detailed of coins are to related period .

S.NO	*Name of King*	*Date*	*Number*	*Remarks*
1	The coins of Kushan	232-252 B.C	5	Date wrong
2	The coins of Kushans and Indo Greeks	350-395 B.C.	4	Date wrong
3	The coins of Indo Greek	225-230 B.C	3	Date wrong
4	The coin of Indo Greeks	225-230B.C.	6	Date wrong

Bahawalpur management is waiting a grant by the government in future. After receipt of grant from the government this gallery will be equipped with the objects reflecting the true culture and lifestyle of nomadic people of Cholistan. Therefore it is necessary to rearrange this museum with representation of the historical and archaeological facts.

Analytic study of galleries:

The archaeological material is interconnected Pre-history to history. The entirematerial was connected with past and put on show to archaeological gallery. In the archaeological gallery, mostly display objects related Stone Age to earlier 20thcentury. The Bahawalpur museum archaeological gallery represent Pre-history to present history artefact. Aryan civilization Alexander, Mauryan, Scythian, Parthian period related objects do not display in the gallery.

The museum neglected its own regional archaeology. Only twenty seven objects present in showcases linked with regional archaeology between 453 objects. Sui Vihar was a great centre of Buddhism in south Punjab. Infarct a bundle of material is underlying this ancient site and search out it through excavation but unfortunately not useful and practical action bring about to dig out it. The exhibited items in the gallery representative just only national history buthave not relation with regional archaeology. The museum also fully mistreated with wider spread Hakra civilization. The total display artefacts in this gallery are 453. The donated objects of 20th century and wooden panels cannot be real part of this gallery. The conclusion comments concerning to the archaeological gallery that each collectibles have their own historical backgrounds with incredibly diminutive and concise descriptions of the displayed item in Bahawalpur museum. However the problem in this concern is not describing the true picture of the regional history but due to link with the past civilizations we may claim that these collectibles are not relevant to this region. To cover this problem some terracotta object and smiling Buddha display in the museum. The result of this gallery as it is equivalent above described galleries like improper display, traditional lighting system, with no background, and incomplete informative labels .The colour scheme do not survive in any gallery of the museum including archaeological gallery. The central display is not suitable for this gallery. Bahawalpur museum have about 1968 objects .However, its authenticity is doubtful which is to be required re identification. After a care full study the following data has been collected from the Bahawalpur Museum.

The finding data of the Stone Age toHindu period

S.No	*Material of object*	*Number*
1	Stone tools	71
2	Terracotta objects	267
3	Alabaster	16
4	Seashells	20
5	Schist stone	42
6	Stucco	7
7	Metal	2
8	Marble	2
9	Red stone	9
10	Plaster of Paris	8
11	Wood	6
12	Brass	3
13	Total	453

The age of objects

S, No	*The age of objects*	*Number*	*The regional history link*
1	Palaeolithic age	42	Nil
2	Pre-Harappa	50	Nil
3	Harappa period	285	20
4	Gandhara art	49	1
5	Hindu art	21	6

The finding Problems in display

S.No	*The finding Problems in display*	*Numbers and flaws*
1	Label not mention on objects	8
2	Label change	8
3	Objects origin not mention on Label	9
4	The date of objects not on label	57
5	Wrong label	8
6	Total display label	97

According to the above data there isa lot of deficiencies we can observe, which are entirely different from the other cities museums? There are many weak points and non-professionalism can observed which comes in blunders and negligence, which needed the highlight the said weak points and provide the proper guideline for the future. Like other Museums the management of Bahawalpur Museum has to follow the techniques, methods and systems of running and managing in a modern ways, they must changes in the display, cleaning and conservation the display exhibits time to time. The descriptive labels and general information label have to be changed as and when required before appearing faded and illegible. The supplementary material, like general and descriptive information and its presentation is also not up to the standard,the story of Bahawalpur State are little bit of relevant but do not fulfil the criteria of a modern museum which could be satisfied to the visitors. There is no any sequence or in chronological orders in display objects.

The existing museum display is not up to the standard and showing an impression of poor state of display, which is now required to be designed according to the sequence of history of Bahawalpur and the southern Punjab which goes back to the 5000 years to the Harappa period and down to the native state. It is quite obvious that this museum is not fulfil the standard of any smallest museum of modern world, the reason is that, the presentation of

the objects its display methods and its supplementary information is not properly prepared nor provided the fully information in educational ways. In conclusion remarks we can say that museum objects not have any relation with regional history and there is lot of flaws and deficiencies in this gallery

Conclusion

This paper highlights the brief historical and archaeological background of the Bahawalpur region. This region has a very long chronological order of history starting from 5500B.C to 20th century A.D. All of these periods have their own distinctive features in pottery, coins, living standards, communication and religious practices. According to this diversity of the culture, Bahawalpur region is most critical region to represent a mixture of these cultural values. However, Bahawalpur museum is represented very limited and poor scope of the archaeological backgrounds of the region. In this regard, we are going to conduct our research on the area of Bahawalpur Museum with the focus of archaeologically sound arrangements of the material along with a critical discussion on each item. Over all plan of this research is starting from the selection of the sample of the objects from the Bahawalpur museum. We would analyse all of the objects and collectibles of our sample with these standards and explore the new design of the museum. Critical analysis would be based upon the deficiencies in the museum standards like errors on display, description of the artefacts and objects, availability of the maps and attractions for the visitors and researchers. It is quite obvious that this museum is not fulfil the standard of any smallest museum of modern world, the reason is that, the presentation of the objects, its display methods and it supplementary information are not properly prepared nor provided the fully information in an educational ways. The studies of museums, I sort out the available collected data, methods of exhibition purpose of museum, deficiencies in all the sections as management and technical expertise.

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24

Tracing out Acheulian Phase in Odisha with Special Reference to Recent Field Investigations in the Middle Baitarani River Valley

Nishikanta Dwibedi*

Introduction

The state of Odisha, located in the south-eastern part of India, holds an important position in the story of early hominin behaviour and dispersals. A large number of sites have been discovered in different parts of the state with the highest concentrations in the western highlands and Mayurbhanj plateau. However, central Odisha has also yielded a large number of Acheulian sites, particularly in the Brahmani river valley. In total the state has recorded 153 Acheulian sites. The assemblages consist of variable numbers of handaxes, cleavers, flakes, retouched flakes, cores, choppers, hammer stones and modified cobble pieces. The typological composition of the assemblages varies in different areas of Odisha as does the raw material used to manufacture the tools. Local raw material sources dominate in all the assemblages.

The data for the present paper has been acquired both from published as well as unpublished sources, in the form of books, research articles, theses or reports, Fieldwork and from personal communication from other scholars. It discusses the character of lithic assemblages and the general sedimentary contexts and seeks to bring out the importance of these features from a broader perspective. It also incorporates the results of recent field investigations in the Middle Baitarani river valley. No Acheulian site in Odisha has been

* Ph.D. Research Scholar, Dept. of History, Ravenshaw University, Cuttack, Odisha.

dated so far in absolute terms; only relative dating on the basis of stratigraphy and regional geology has been attempted.

Odisha and its Geological Background

The state covers an area of 155,707 km^2 between 17°49' and 22°34'N latitude and between 81°29' and 87° E longitude. A long coastline running to 482 km forms the eastern boundary of the state along the Bay of Bengal, while the high hills and mountains of Eastern Ghats constitute the western border. The geography of the state consists of five zones - coastal plains, central mountainous country, rolling uplands, river valleys and subdued plateau[1]. The major portion of Odisha is covered by meta-sediments and granites of the Archaean age followed by the Cuddaphs and then Gondwanas. A major part of north Odisha is covered with Proterozoic met sediments. Coal-bearing Gondwana formations are found in central Odisha. High grade granulites, migmatites and gneiss occur in south Odisha and extensive granites and Vindhyan sedimentary rocks are distributed in western Odisha. The coastal region is covered with younger laterites and Quaternary sediments forming pen plains and plains in coastal Odisha[2].

The rivers of Odisha originate from three divides. These are formed by the Chotta Nagpur plateau in Jharkhand, the Amarkantak plateau in Chhattisgarh and the Eastern Ghats within Odisha. The Brahmani, the Mahanadi and the Vamsadhara are major rivers. The coastal plains of Odisha stretch along the eastern coast of India from the Subarnarekha in the north to the Rushikulya in the south and are regarded as a land of six deltas - the Subarnarekha, the Budhabalanga, the Baitarani, the Brahmani, the Mahanadi and the Rushikulya. The rolling mountains, which vary in altitude from 153m to 305 m ASL, are higher than the plateaus. The subdued plateaus (305-610 m ASL) have the peculiarities of peninsular tablelands. The vegetation in Odisha primarily belongs to the tropical-deciduous type. Hot summers with heavy monsoon downpours and cool and pleasant winters generally mark Odisha climate. Rainfall is the main source of water in Odisha and it ranges from 1200 to 1700 millimetres across the state.

Tracing out Acheulian phase in Odisha

Some reviews on the prehistoric archaeology of Odisha are available but no exhaustive review of the Acheulian phase has been made so far. In the present review, an attempt has been made to incorporate the new discoveries. In the late 19th century, Valentine Ball was the first to initiate prehistoric research in Odisha in a systematic manner and is credited with being the first discoverer of hand axes in the region. He collected a few artefacts from Bhursapali in the Kuchinda subdivision of Sambalpur district, Kaliakata and Harichandanpur near Talcher in Angul district of Odisha in 1875 and published a small description of the same in *Proceedings of the Asiatic Society of Bengal* [3]. Acharya and Worman discovered the site of Kuliana in Mayurbhanj district in 1939 and subsequently Bose and Sen of Calcutta University started investigations there, which were published in a monograph entitled, *Excavations in Mayurbhanj*[4]. The excavation at Kuliana was followed by a number of explorations by Calcutta University in the 1950s. These surveys brought to light a number of Acheulian

sites in Mayurbhanj district and the surrounding areas of the Burahabalang River valley. These sites are found in a similar geological context as at Kuliana. Ghosh and Basu (1969) observed five layers in the sections[5]. Mohapatra (1962) made systematic surveys in the districts of Mayurbhanj, Keonjhar, Sundargarh, Sambalpur and Dhenkanal and brought to light 22 Palaeolithic sites from the Budhabalanga, Baitarani, Brahmani and Mahanadi valleys[6]. Tripathy (1980) carried out intensive explorations in the Tel basin forming part of southwestern Odisha and reported the occurrence of three sites belonging to the pebble-tool industry and flake industry. Thus, the result of his study showed correlations with the research carried out by Mohapatra (1962)[7]. Investigations by Ota in the Bagh and Khadag valleys (tributaries of the Mahanadi and Tel respectively) in the Phulbani district resulted in the discovery of a few Acheulian sites[8]. Singh (1988) carried out intensive field surveys in Dhenkanal district and found 53 Lower Palaeolithic sites[9]. Ratha and Bhattacharya (1988) discovered a Lower Palaeolithic site along the river Kharala near Kuchinda in Sambalpur district[10]. Chakrabarti (1990) discovered four Lower Palaeolithic sites in the Bhandan and Khairi rivers around Khiching village in Mayurbhanj district[11]. Sharma (1994) reported Palaeolithic finds in and around Burla and attempted to study the area's Palaeolithic assemblages which are located on the Sambalpur University campus and its adjoining areas. Sharma's explorations in the Burla area were carried forward by Behera *et al.* (1996) in and around the Mahanadi, Burla and Dari- dungri regions of Sambalpur[12] Ray *et al.* (1997) carried out systematic explorations in and around Malayagiri Hills in Dhenkanal district and took a trial trench at Jamsara[13].The work of Mohanty *et el*. (1997) in the Kharua river valley in Mayurbhanj district also brought to light four Lower Palaeolithic sites[14]. Field investigations under the direction of L.S. Rao of the Archaeological Survey of India, Bhubaneswar Circle, resulted in the discovery of 22 Acheulian sites in secondary context from the Bramhani river basin[15]. Kar (2008) carried out investigations for his doctoral research in the Singida valley. He has reported 25 sites and collected 155 Acheulian artefacts from the foothills and river cliff gravels[16].

Recent field investigations in the Bargarh upland by Dr. P.K. Behera in Sambalpur University have resulted in the discovery of a large number of sites and collection of several thousand artefacts from the Barpahar region of Bargarh uplands in western Odisha[17]. Field investigations in the Kakharua river valley by Rajendra Dehuri has resulted the discovery of 12 achullian sites in the Keonjhar and Angul district, which is situated in the north-central part of Odisha[18].Recent field investigations by Tosabanta Pradhan in the Jonk river basin of Odisha and Chhattisgarh has resulted in the discovery of 15 achullian sites in the borderline lands of both Odisha and Chhattisgarh[19].

General Observations

From the foregoing review it is clear that Stone Age studies concentrated in the western highland, Mayurbhanj plateau and central Orissa. Nothing is known from the eastern and southern districts of Koraput, Kalahandi, Gajapati, Raigada and Nawarangpur, Puro, Ganjam, Khurda, Jajpur, Khurdha, Cuttack, Kendrapada and Baleswar districts because there has been very little exploration. Barring a few coastal districts, these areas have suitable Quaternary geological exposures and hence the occurrence of Acheulian sites cannot be

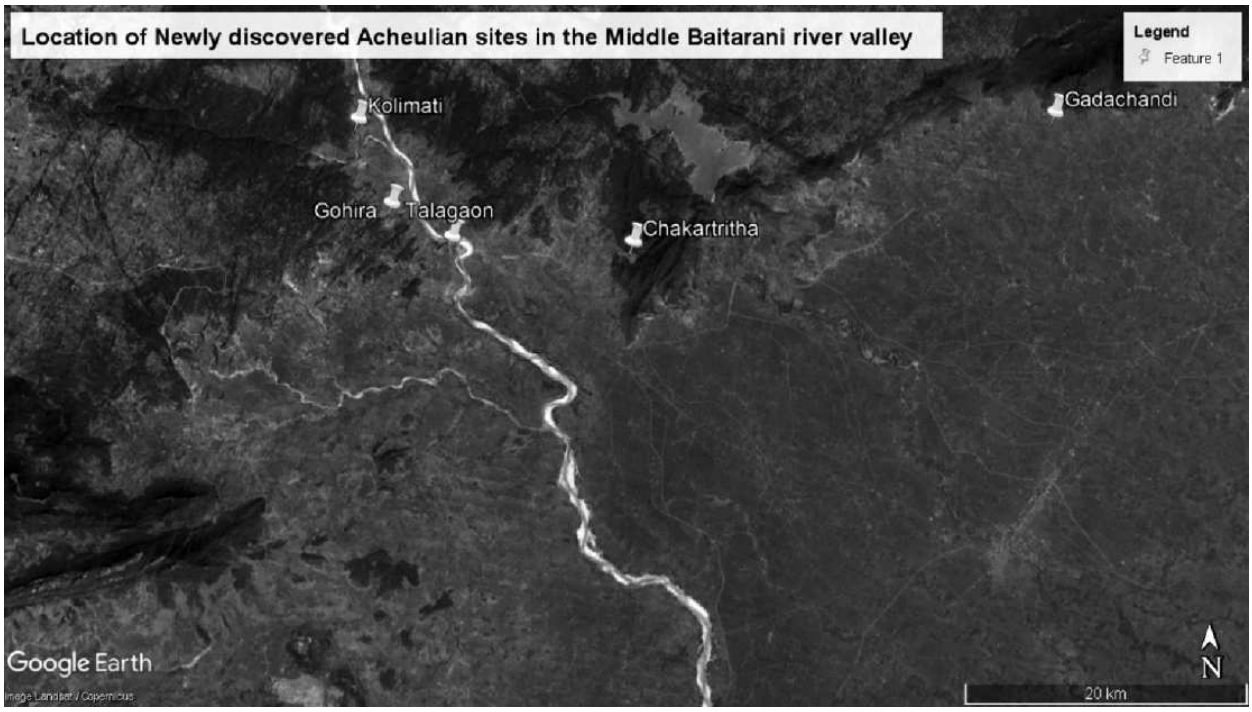
denied. The existing studies of the region's Acheulian techno-chronological phase are based on the surface assemblages and available in the form of small research articles, unpublished dissertations, and so forth. These are again limited to basic reporting of sites and are devoid of any systematic sampling and detailed studies of the collected artefacts. Very few of these publications contain site distribution maps and provide adequate information about metrical details of stone tools, associated technological processes and sedimentary context of the lithic assemblages, raw material used and such other aspects that could be used for reconstructing human behaviour.

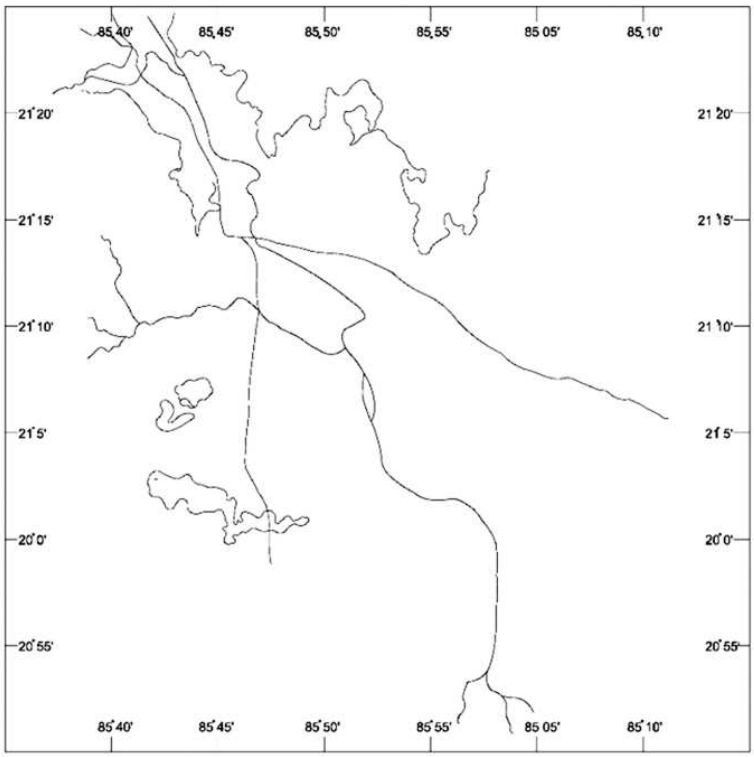
Acheulian sites in Odisha are mostly found in three contexts: hillslope, slope-pedimented erosional surface and river section deposits. The stratigraphic context of this tradition is ubiquitously observed within the fluvial river section; sandy-cobbly, sandy-pebbly, and pebbly-cobble gravels, or cemented gravel layer overlies the weathered Achaean bedrock and occasionally on mottled clay. However, Acheulian sites have also been reported from forests and slopes of the hills and in secondary laterite gravel quarries.

The majority of Acheulian sites in Northern part of Odisha have been reported from foothills, older surfaces, river bank sections and hill slopes, all actively undergoing erosion. The contexts for sedimentary burial are the river alluvium or locally transported regolith. In the hill slope contexts, artefacts are found overlying untransported weathered bedrock and form part of an erosional lag deposit. This was covered by transported weathered material, which is currently being stripped off through natural processes. Most of the artefacts have been exposed to weathering over a long time and are poorly preserved although they may be lying close to the original locations used by the early hominins. The artefacts from the alluvial context on the other hand appear to have been rapidly buried after discard and are generally in a better condition than the ones in regolith context.

Recent Field Investigations in Middle Baitarani River Valley

The Middle Baitarani river Basin situated on the eastern slopes of the northern hill ranges, comprising the Mayurbhanja-Keonjhar platue in the north-eastern part of Odisha. My Recent field investigations during last 1 year (2017 to 2018) and covering more than 90 km area of the river basin has brought to light 5 new Acheulian sites in the Ghasipura and Anandapur block of Keonjhar district, which is situated in the Northern part of Odisha. A total of 24Acheulian stone artefacts were collected from 5 different localities, these are namely Kolimati, Gohira, Talagaon, Chakartritha and Gadachandi area (Fig-1). Prime importance was given to the reconstruction of Various technological aspects and other information such as tool types, Technology and their function, role of raw materials, and morphological variability within the assemblage in general were studied. Detailed typological analysis shows that large size cores and core fragments, side flakes, handaxes of both finished and unfinished, picks, clevers, single sided scrapers and leaf shaped knifes are found during the field investigation (Fig-2).





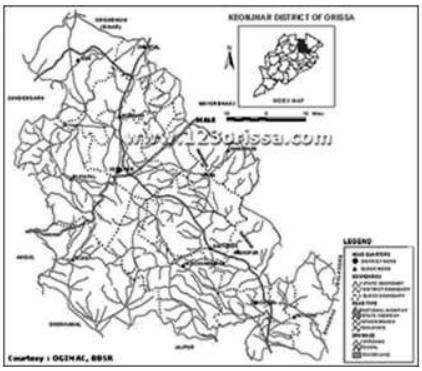


Fig.1: Location of Newly discovered Achulian sites on theMiddle Baitarani valley, Keonjhar district, Odisha.

Approximately majority of the artefacts are made from cores and the rest from flakes. Debitage is not very common and only a few core fragments are noted. Even evidence of bifacial-thinning flakes is absent at the sites. Bifacial elements are smaller than 8 cm are absent in the lithic assemblages. Most of the Acheulian artefacts in the assemblage represent finished tools such as well-shaped handaxes, cleavers and flake tools.

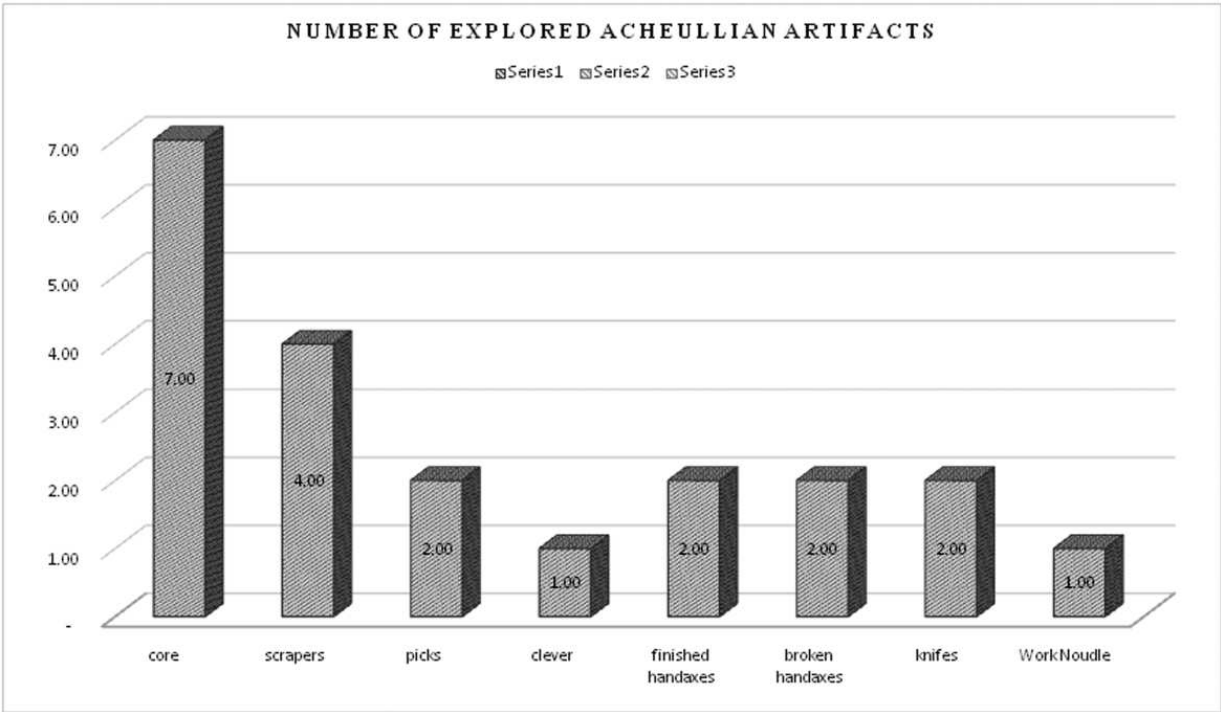


Fig.2. Number of Explored Achullian Artefacts

Cores

During my field investigation I have discovered a total number of 24 Palaeolithic artefacts, among them 7 are core tools (Fig-3). For the preparation of cores both basically two types of raw materials are used i.e. dolomite and quartzite. The minimum length and breadth of cores is 10.1 cm and 7.4 cm respectively, the maximum length and breadth is raised up to 21.6 cm and 10.4 cm. apart from the length the weights of the cores are also vary from site to site, the minimum wait is 600 grams and the maximum weight is raised up to the 4.5 kg. The length, breadth and thickness of the cores are varying from the one side to the other. The cores are prepared both on the direct percussion and indirection percussion technique, both the heard hammer and soft hammer technique is use for the preparation of these cores. A huge number of flake scares are removed from the cores. For the counting the number of flake scares are removed from the cores the minimum number is 3 and on the some of the cores we found that maximum 8 number of flake scares are removed. The cortex is present on both ventral and

dorsal side of all the core tools on both the angles. On many of these cores abrasion marks are found. Many of the cores are looks like very crude and irregular in shape. The cores are highly abbreded due to the weathering condition of nature. Due to its large shape, crude and irregular size and the technology used for the preparation of these cores we can say that it is belongs to the lower Palaeolithic achullian phase.

Fig. 3. Core tools recovered during the Exploration.

Scrapers

There are four scrapers are recovered during my field investigations (Fig-4). They are basically made by the dolomite and quartzite as a raw material. The minimum length, breadth and weight of a scraper is 10.4 cm, 9.9 cm and thickness are 5.3 cm respectively. And the maximum length, breadth and thickness of the scrapers are raised up to 18.6 cm, 14.1 cm and the thickness is 6.9cm. All are Basically single sided scrapers, because only one side flaking and utilization marks are found. The actual shape of the scrapers is basically round and ovate. The flake scares are found on the ventral side of the scrapers, the dorsal side is plain or simple. The used marks are found on the end of the lateral side of the scraper which is slightly retouched. The scrapers are slightly abbreded and the cortex is present on the ventral side of the tools. These are prepared on the soft hammer technique. The surface of the tools is very crude and only two are in well condition. For this type of typo-technological features, along with other associated stone artefacts we can assumed that these are belongs to the lower Palaeolithic period.

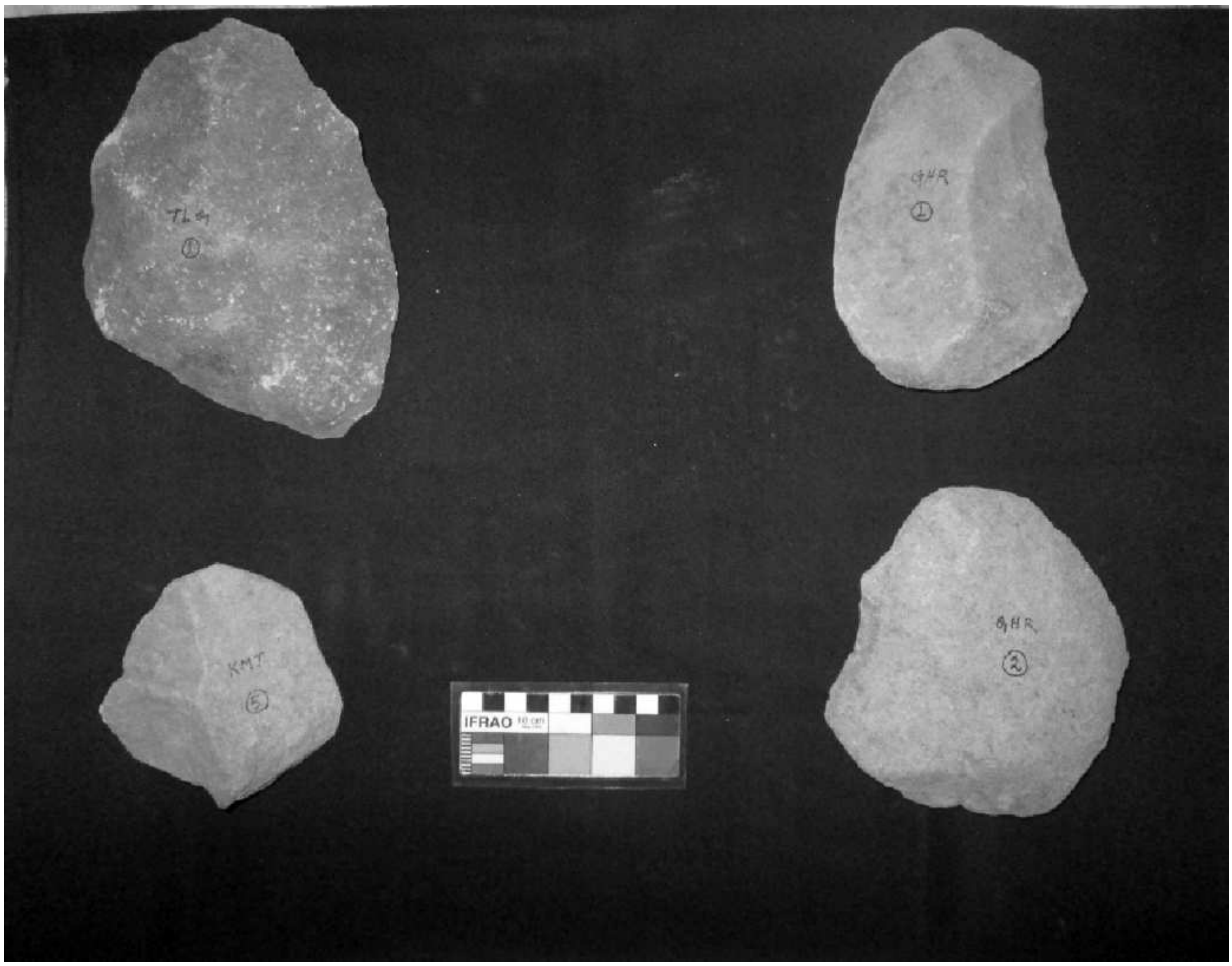


Fig. 4. Different types of scrapers from the site at Gohira

Picks

During the time of my exploration only picks are recovered in the two newly discovered prehistoric sites, one is from Kolimati and another is from Gohira (Fig-5). The pick which is recovered from the Kolimati is made up quartzite and another is made up dolomite. The shape of the picks is basically triangular, the tip portion of one of the pick is slightly broken but it pointed at the end and also the tip portion of another pick is square in shape. Due to the shape of the tool and the cross section of the tip portion both are triangular and square in shape that's why we say that it picks not Handaxe. In the handaxe the cross section of the tips is basically lenticular in shape, it not like tringle or square. The pick which is recovered from the Kolimati the length is 14.4 cm, the breadth is 9.8 cm and the thickness is 4.4 cm and also the weight is 700 grams.The length, breadth and thickness of the pick which is recovered from the Gohira is 17.1 cm, 7.9 cm and the thickness is 6.1 cm respectively. Both the dorsal and ventral side we found flakes are removed and the surface of the picks are very smooth. Both are prepared in the soft hammer technique. In Odisha there are huge number of picks are found from the different regions in the lower Palaeolithic achullian context[20].

Fig. 5. Picks from Gohira and Kolimati

Clever:

There is only one cleaver is found from the site at Kolimati. Which is made up the dolomite stone as a raw material. The clever is basically in U shape it has thick cutting edges and the central portion of the cleaveris quite thick just likehandaxes (Fig-6). The maximum length, breadth and thickness is 10.1 cm, 7.4 cm and 4.7 cm respectively. The clever is basically made by the combewa flake technique, where large flaking's are done in the tip portion of the cleavers. This type of tools is also recovered from the upper Baitarani river valley and also the Jonk river basin in the Odisha and Chhattisgarh in a large amount[21].

Fig. 6. Clever found from the site at Kolimati

Handaxes

There are four handaxes are recovered during the exploration. Among the four handaxes one is found from Gohira, one is from Talagaon and the other two are found from the Gadachandi are all are in the Keonjhar district (Fig-7). The raw material which is used for the making of these tools are basically quartz and quartzite. Out of the four handaxes, two are totally broken from the top only the butt end is present and among the other two one is unfinished which is recovered from Gohira. A finished handaxe only the bottom portion is slightly broken is recovered from the site at Talagaon. The actual shape of the already broken two handaxes are basically tapering on the top portion. The unfinished handaxes which is found from Gohira is in ovate shape and the handaxe from Talagaon is basically triangular in shape but it is slightly convex. The techniques which is used for the making of these handaxes are basically Levalloisian or prepared core technique, and sometimes combewa flake technique is used. These are heavier and thicker than those made on flakes. Most of the ovate handaxes are made on flakes and there is absence of cortex on them. Striking platforms of bifacial artefacts are modified, but in some cases not much importance has been given to removing the butt and bulbar parts. Even in the case of bifacial artefacts, thinning was not extensively done as observed at Bhimbetka in Central India[22].

Fig.7. Both finished and unfinished handaxes from Gohira and Gadachandi

Knifes

There are two knifes are discovered during my field investigation from Chakartirtha hills on the left bank of the Baitarani river valley. The shape of one knife is looks like the leaf of a tree and the shape of another knife is like V (Fig-8). The length, breadth and thickness of one of the leaf shaped knife is 23.9 cm, 7.4 cm and 4.6 cm and also the dimension of the small knife is 15.9 cm in length, 5.7 cm in breadth and 4.3 cm in thickness. For the making of this pressure flaking or fluted core technique is used. Here first the core is prepared for the making of tool, then small flaking's are done over the prepared core for giving its actual shape. The large size leaf shapes knife having two-sided point on both the ends. Among the

both lateral side one side is intact and one side is retouched with sharp cutting. The intact portion is used for the holding purpose for the better control over the tool and another side working edge is found from the top to the bottom. The small knife has also sharp cutting edge and 2 which pointed at the top portion, working edges are also seen on the lateral side. The surface of the tools is very smoot, abrasion marks are also found on that. Cortex is also present in the on the flaking areas. This type of knifes are found in the many achullian sites in India i.e. from recently excavated prehistoric achullian site at Tikoda in Madhya Pradesh and also Attirampakam in Tamil Nadu[23].

Apart from this one worked noodle is also found from the exploration. Here we did not get any flake scares or detachments. Its highly eroded by the weathering so it's not clearly visible.

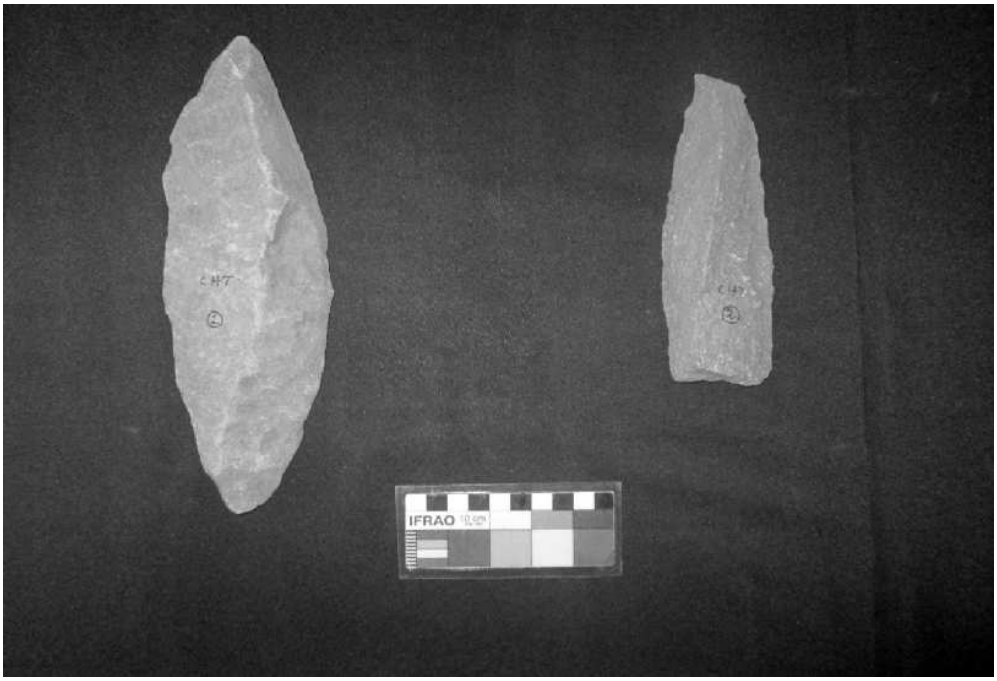


Fig. 8. Leaf shaped Knife recovered from the site at Chakartritha

Other Technological Features

Most of the flakes which were converted into tools do not have any uniformity in size and working and retouching is also varied. Large flakes were removed from giant cores by heavy hard hammer or anvil or 'Clactonian' techniques. For the production of cleavers and handaxes, large end-stuck or side-struck flakes were preferred. Desired shaped tools were obtained by using medium to small sized hammer stones. The Levallois or prepared core technique is rare, but the Kombewa technique is more common. Five different type of rocks have been used for manufacturing of Acheulian tools in the study area: quartzite, pegmatite, sandstone, dolomite and lime stones. Most of the Acheulian sites show a preference for locally available materials. In the absence of absolute dates at this stage of the work, it is difficult

to assign any exact date to the Acheulian assemblages of the middle Baitarani River valley. However, on typo-technological grounds, it can be suggested that the assemblages belong to the large flake Acheulian (LFA) tradition as they are mostly larger than 10 cm. The assemblages do not appear to be Early Acheulian but are closer to the Late Acheulian phase, as supported by general size and refinement attributes. In terms of Quaternary chronology of the middle Baitarani Valley, Acheulian assemblages may date to the closing part of Middle Pleistocene or Late Pleistocene.

General Observations on the Technology of Acheulian in Odisha

The assemblages from sites found near major and minor rivers are characterized by the use of pebbles and cobbles for the production of Acheulian artefacts, while the sites away from rivers show dominance of tools based on the use of large flakes. Hard-hammer technique is the most commonly used method for flaking, as shown by the occurrence of a variety of quartzite hammer stones and the presence of deep flake scars on the artefacts. Soft hammer technique is observed on a limited number of bifacial artefacts. River pebbles were initially used as hammer stones, but later on some of these pebbles served as cores for flake removal.

Conclusion

Investigations into the Acheulian of Odisha are still in the beginning stage. Initial work was done from the 1940s to 1960s and then only sporadic reporting of sites has taken place. So far, no pre-Acheulian sites have been discovered in the region. However, choppers are very often found associated with bifacial tools. No primary occurrence and factory sites are known; and most of the reported sites have yielded finished tools. Typo-technologically, both Early and Late Acheulian bifacial elements occur together as mixed assemblages and no developmental phases can be distinguished at any of the reported sites. However, in some of the of the Baitarani and Budha balanga river Valley, Early and Late Acheulian types can be identified on the basis of size, shape and morphology of artefacts, as well as on the basis of technological variability and amount of secondary working and retouching found on the bifaces.

The distribution of Acheulian sites illustrates successful occupation of a wide range of ecological zones across the state except the coastal regions, where the absence of site may be due to deposition of recent alluvium or else due to lack of planned and comprehensive field investigations (Fig. 8). The dominance of cores and handaxes over cleavers is a noteworthy feature of the bifacial assemblage of eastern India. All the artefacts those are recovered from this region which have been clearly shows very close similarity with the Acheulian phase of Singh hum region of Jharkhand and Bihar. In spite of the historical significance of discovery of the site of Kuliana and its excavation no large-scale excavation of a Stone Age sites has been carried out in any part of the state since then. Identification and excavation of the primary and *in situ* Stone Age sites, represented by multidisciplinary investigations and absolute dating, are clearly needed.

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Importance of Visual Literacy and its Standards to Promote User Education Programs in a Museum: A Concept Paper

Chammika Mallawaarachchi[1], Sanjeewani Widyarathne[2] K.L.S.S Sujeewani[3]

Background

People at the present society spend their time by consuming knowledge rich media contents. This societal and cultural change incur due to the robust development in the knowledge economy. Similarly, competitive communication platforms as a result of advancement in information and communication technology influences in many ways to develop knowledge economy. However, one of the critical issues in the knowledge economy is that though most of the people consume knowledge rich media contents are not literate enough in visual media and visual literacy. Further, knowledge economy creates competitive advantage in the society while technology assists to mass productions especially in visual media. Therefore, it has seen that technology and competitive society bridge the gap in between knowledge and media while advancing opportunities for people to consume mass media knowledge further. But, due to lack of skills and knowledge in visual literacy, knowledge consumers are not fully engaging with visual and media.

Museums as an institute provides resources for education and research have potentials to use visual media to promote theiruser education programs. Museums user education programs

1. Principal author, communicate viachammika@vpa.ac.lk, Senior Assistant Librarian, University of the Visual and Performing Arts.
2. Sanjeewani Widyarathne, Education Promoting Officer, Colombo National Museum.
3. K.L.S.S Sujeewani, Education Promoting Officer, Colombo National Museum.

let interact with its intellectual artefacts for the users to gain knowledge and experience. There is one important fact in most museums are that they useadvance and sophisticate media tools to promote user education programs. Sometime, such programs solely depend only with visual resources. Therefore, museums have a responsibility to educate their users on visual literacy because users can gain required experience if they only equipped with that knowledge and skills. So, the failure of this attribute may lead to ignore museum's user educational programs because they do not know how to engage and react. Therefore, to minimize the negative impact on that failure, one of the essential steps is to take without further delay to enhance skills of museum's users withvisual literacy through specific educational programs.

However, user education programs in museums use visual materials to prove cultural and historical changes that taken place in given the time because especially visual materials are givenmore information and knowledge. But, users have the required skills to understand the relationship in between images and text is questionable. Importantly, the behavioral relationship in visual images is very important. Therefore, museums have to consider improve museums users' visual literacy skills because expected competencies are not always aligned with museums and user expectation. These obstacles Brumberger (2011) described as not only showing the lack of technical skills for producing visual communications, but also difficulties in using technology to manipulate productive and fruitful images and videos. As a result, museum's users tend to exhibit less comfort about museum's user education programs due to lack of skills in visually observing, interpreting, analysing, and discussing instead they happy to engage with text content because inspire tounderstand. Therefore, in the process of enhancing knowledge of museum's users with active participation towards to education programs; it is necessary to educate users about the core values of visual literacy.

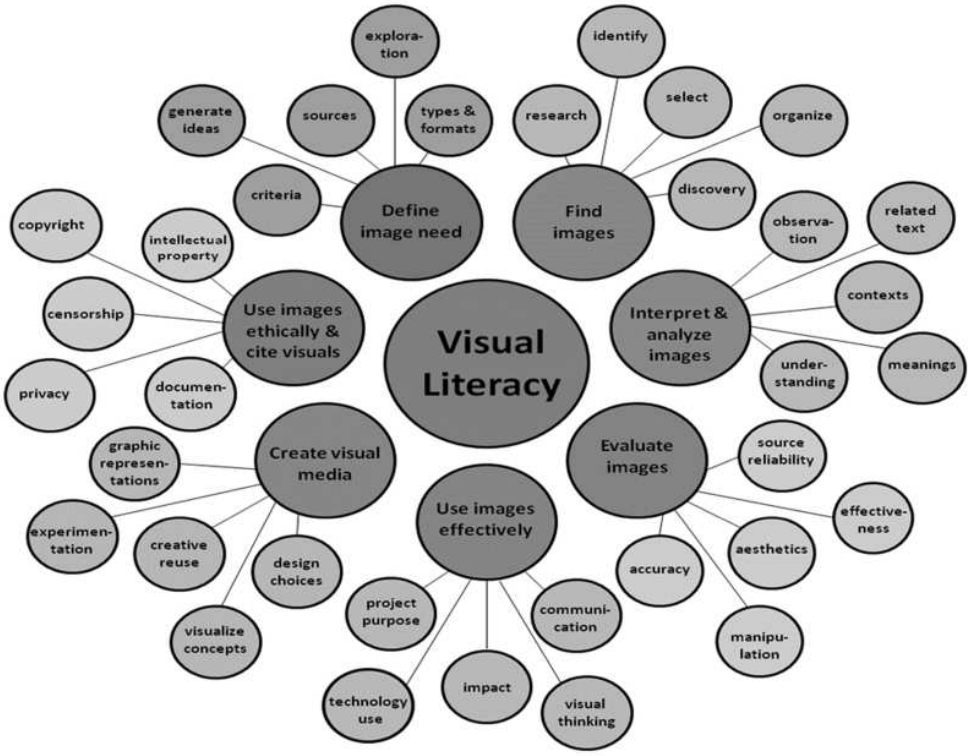
Therefore, the aim of this concept paper is to discuss ways in which how to use the theory of visual literacy and its identified standards fordeveloped museum's user education programs. The main reason to propose the theory of visual literacy is that the concept used many educational institutions in the world and achieved remarkable results in user education programs thus museums can introduce the concept as anexperimental to promote educational programs.

Means of Visual Literacy

The Association of College and Research Libraries (2015) described visual literacy as *"a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media. Visual literacy skills equip a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials. A visually literate individual is both a critical consumer of visual media and a competent contributor to a body of shared knowledge and culture".* So, it is understood that the concept of visual literacyhas a broader expanse of knowledge. Therefore, Susan (2008) mentioned that a personhas the skills and knowledge to visualize internally, communicate visually,and read and interpret visual images that indicate outfitted

with visual literacy skills. Further, Brumberger (2011) elaborated that visual literacy better to include both an interpretive and a productive component. However, at present knowledge savvy and competitive economy that visual literacy may lead to as North Central Regional Educational Laboratory (2016) pointed out that "the ability to interpret, use, appreciate,and create images and video using both conventional and 21st century media in advance thinking, decisionmaking, communication, and learning." However, as Bridges and Edmunson-Morton (2007) mentioned that, visual literacy has traditionally been understood in terms ofinformation literacy, with a focus on locating images, evaluating and selecting imageresources, and using and citing images.But, Michael Eisenberg, Carrie A. Lowe, and Kathleen L. Spitzer (2004) urged that Images as "visual information".

So, momentarily reflect the concept of visual literacy, it is breadth many subjects' areas therefore, looking it in narrow approach cannot use its values with advantage. Of that, viewing visual literacy as an integrate approach not only for enhance knowledge, but also for knowledge creation and knowledge transfer may enrich various benefits in many perspectives. In that view, visual literacy can introduce and use in a broader manner to achieve tremendous opportunities,even in user education programs in museums. At the same time, the immeasurable collection of subject areas in visual literacy, it indicated the ways in which how to intertwine with knowledge competitive advantage which anyone has to move with the knowledge economy.



Source: ACRL web portal, 2015

So, available opportunities in this concept can illustrate as follows way, then intellectual may reflect how value add to engage with competitive knowledge.

Visual Literacy Standards for museums

The visual literacy standards provide a comprehensive framework for how to enhance visual literacy skills because as Deandraet.al. (2015) documented that images are different from the texts,and developing visual literacy requires deliberate and reiterative practice, not merelya glance at the occasional multimedia source. Further, Visual Resources Association (2015) introduced that visual literacy includes identifying reliable image sources, judging the quality of images and associateddescriptive data, accurate identification of historical content, and understandingintellectual property and how to cite images. Therefore, following standards in visual literacy may support tremendously the ways in which to integrate user education programs and user learning interactions activities ventures in numerous ways. At the same time, these standards importantly highlight seven main skill areas in visual such as: defining theneed, finding and accessing, interpreting and analyzing, evaluating, using, creating, andunderstanding ethical and legal issues. Having said that, upon the requirements it is democratically can use and select some standards or entire standards to enhance skills of visual literacy.

Identified by ACRL (2015) key seven standards of visual literacy are and the visually literate person;

a. determines the nature and extent of the visual materials needed;
b. finds and accesses needed images and visual media effectively and efficiently;
c. interprets and analyzes the meanings of images and visual media;
d. evaluates images and their sources;
e. uses images and visual media effectively;
f. designs and creates meaningful images and visual media and;
g. understand many of the ethical, legal, social, and economic issues surrounding the creation and use of images and visual media, and accesses and uses visualmaterials ethically.

Of that, while documenting visual literacy standards, it can strongly mention that these identified areas are already being tested in the higher education sector in research and development consequently communicated that have gigantic results. Therefore, these identified and tested standards can use to promote user education programs in museums to achieve educational aims effectively and efficiently. The important reason behind is that user education programs in museums is focusing in to enhance knowledge of museum's user through collaborative learning environment like in other educational institutes, therefore, while marketing museums to cope with knowledge competitive advantage, why museums far behind in incorporate their programs in advance visual literacy is a dilemma because, visual

literacy leveraging museums spaces, digital cultural collections, instruction, collaboration, and onlineresources.

Conclusion

Knowledge competitive advantage is transforming society into a knowledge economy. Knowledge economy in particular asymmetry knowledge hinders importance of collaborative efforts in knowledge gaining and knowledge sharing. This scenario, especially thrives in visual media and visual communication. At this juncture, most in the knowledge marketing arena wants to identify new mechanism to face competencies while are be able toparticipate in a democratic way to produce and share knowledge contents that visually enrich. One of the debate concerns is that the traditional approaches to engage very positively with the visual and media knowledge are not creating the needed learning environment that is required work for the knowledge economy. As a result of that having skills and knowledge in visual literacy bridge the gap is one of the key concerned because visual literacy enriches prosperous expedition in the knowledge economy to work with knowledge workers and visual media assets. Therefore, critically, visual literacy helpsfrom individuals to mass institutions to develop their talents and take part in various formsof knowledge assets to work with competitive advantage.

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26

Interpreting and Understanding the Ahraura Minor Rock Edict: A Landscape Cultural Approach

Shikha Rai*

Several people must have walked over the hill, on which the minor rock edict of Asoka (269-236 BCE) and a modern shrine of Bhandar devi is located, but none might have ever thought that about its importance and the secret message of a royal king, known as Asoka. Although some portion of this edict has disappeared with time, several question arise like the intention of the king to write his message on the hill floor, a seemingly inappropriate location. Why the inscription was not inscribed on the eye level, but on the floor? What was the original purpose of this hill? It is Ahraura Minor Rock Edict of Maurya king Asoka. There are several literature and research papers discussing about the Asoka, what did make Asoka a great king,what was his strategy for ruling diverse landscapes, culture and people? Did his inscriptions tell us true story of his life or it is only superimposition? Whatever the original intention of Asokamay be, but one thing is certain that his glorious inscriptions are very helpful to understand the contemporary environment and the king's approch to co-operate with diversity. An attempt has been made in this paper to understand Ahraura Minor Rock Edict with its surrounding landscape, thereby connecting it with the ancient environs and settings, trade routes, purpose of rock inscriptions..

* Research Scholar. Department of AIHC & Archaeology, Gurukul Kangri Vishwavidyalaya, Haridwar, Uttarakhand Email: shikhaasi88@gmail.com

Introduction

Ahraura (25^0 2' 11.3" N; 83^0 2' 13.54" E) is located at a distance of around 60 km from Varanasi on the Varanasi – Robertsganj road in the district Mirzapur of Uttar Pradesh. The location of Ahruara indicates its strategic importance on a major trade route from Magadha to the west coast. There are two localities, viz., Ahraura Khas and Ahraura D, the rock-edict is located on a small hillock to the east of the highway near Ahraura Khas. The surroundings of Ahraura are abundant with numerous water sources, many of which are active during the monsoon season, the famous ones being Lakhaniya Dari, Whyndam Falls, Deo Dari, Raj Dari. The evidence of human occupation from this region is attested from the several finds of rock-shelters with prehistoric paintings. In particular, in the Sonebhadra and Chopan region, several rock-shelters and settlements have been explored. The entire Mirzapur district is also credited with the presence of numerous prehistoric rock-shelters with paintings in various shades of red.

The district Mirzapur can be broadly classified into three physical divisions, viz., (i) towards the north of the district is the alluvial plain, which borders the River Ganga on the north, and stretches up to the scarp of low lying flat topped hills of the Vindhyas, (ii) a tableland that forms between the Vindhyan scarp and stretches up to Kaimur range and vally of River Son and (iii) a region known as Sonpar, consisting of several hills and small valleys, intermingled with several alluvial basins, consisting of southern Mirzapur. Even recently, Ahraura was also a major civil and military station in the past and also a centre for products like silk, cotton, carpets and iron works.[1]

Mineral Resources in the nearby area

The region is also rich in mineral resources of various kinds like limestone, feldspar, mica, iron, clay, magnetite, hematite, sulphate of rron, kankar, cale tufa, calcite, dolomite, marble. The Bijwara formation is famous for the presence of varying degrees of haematite in the stratified rocks of chalcedonic quartz. The concentration of haematite varies and according to this, the colour of the formation also varies, and wherever it is of exceedingly higher percentage, it becomes a good source of iron ore. The presence of copper mines in the Robertsganj and adjoining region is also attested by the recent work of Prabhakar Upadhyaya (reference?).

Flora and Fauna

This area is also diverse in flora and fauna, which were obviously exploited for subsistence, medicinal and other livelihood purposes of the population. The floral species commonly found are of asna (*Termmalia tomentosa*), dhao (*Anogeissus pendula*), khair (*Acacia catechu*), Salai (*Bosewellia serrate*), siddha (Larger *Stroemia parvi* flora), tendu (*Diosphyros tomentosa*), jigna (*Lannea caramandolica*), piar (*Buchanian lazzon*), mahua (*Madhuca longifolia*), aonla (*Ennblica afticinalis*), sal (*Shorea robusta*), Khardai (*Anogeissus*

pendula), Boswellia Serreta and dry bamboo breaks. The faunal species found are Chinkara (*Gazella gazelle*), black buck (*Antilope curvicapra*), chausingha (*Tetraeenus quadrecornis*), and spotted deer (*Axis axis*). The aquatic species are also in abundance due to the presence of large number of streams, water bodies, and lakes.

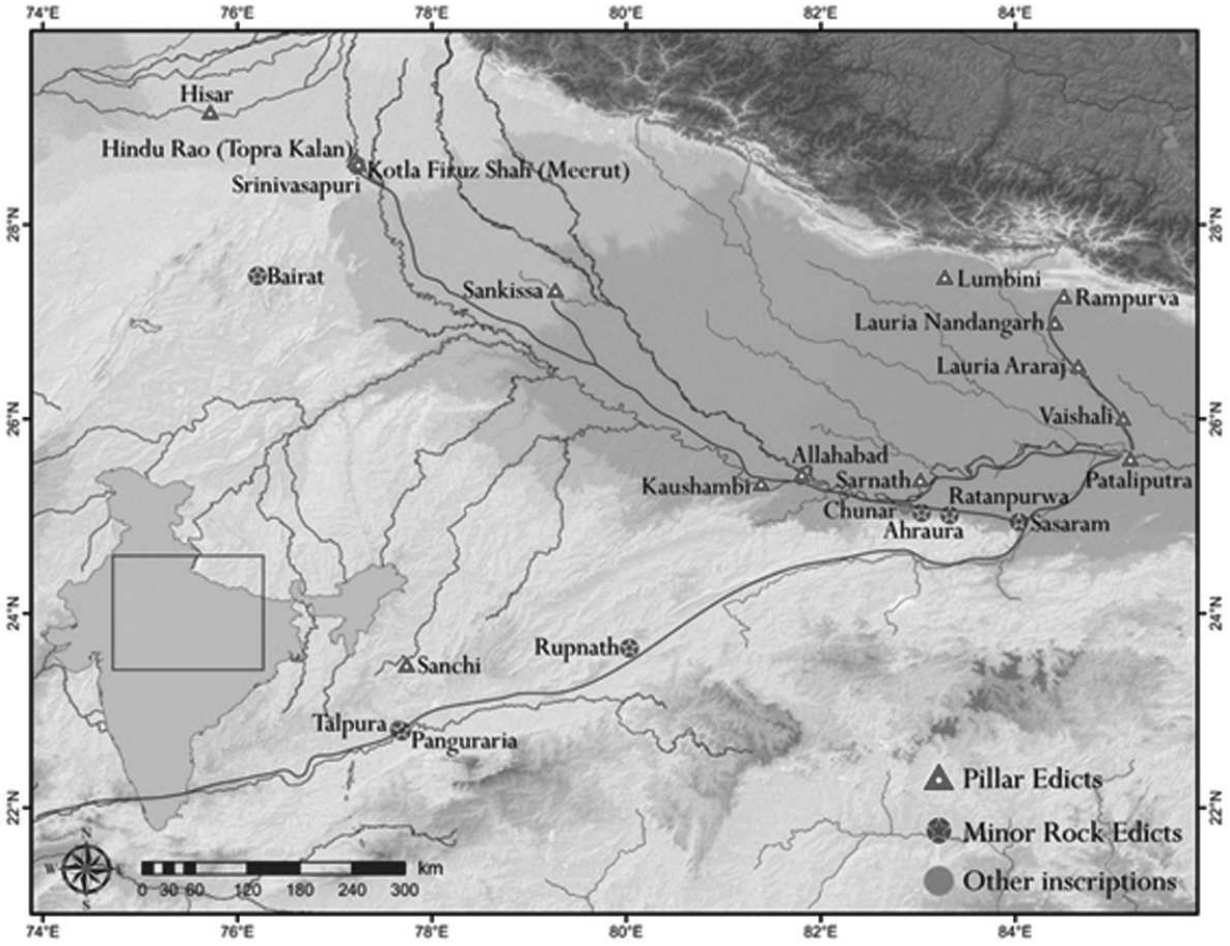

Fig. 1: Map showing the pillar and minor rock edicts of Asoka and the probable route connecting the settlements and edict sites

Location of the Rock Edict

The Bhandari Devi temple is located at a distance of about4 km north of Ahraura, to the left of Varanasi – Robertsganj road,. The minor rock-edict is situated to the north of Bhandari Devi temple on a hillock. The hill measures 987 m in length on the longest axis and 426 in width at the widest place while 166 m width at the least wide location. The hill, is thus peculiar in shape when viewed in Google Earth. The minor rock edict is at present housed in a small enclosure constructed of sandstone blocks from the nearby area and therefore secured from any kind of vandalism. Drains cut on the bedrock all around the enclosure gives a secure drainage during the monsoon period.

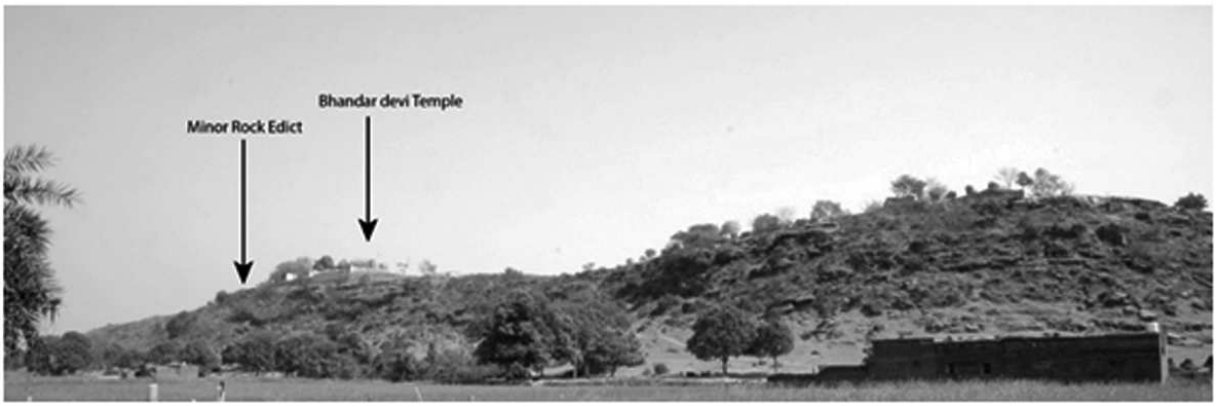

Fig. 2: Relative locations of Bhandari devi Temple and Minor Rock Edict of Asoka on Ahraura Hill

Fig. 3: Enclosure housing the minor rock-edict (left) and details (right)

The immediate vicinity of Ahraura hinter land has been divided into two distinct ecological zones and an intervening transitional area between the two. The nucleus of this ecological zone comprises of the fertile alluvium of the Rivers Ganga and Karmnasa, which in turn is richly fed by numerous streams and minor rivers like Garai, that emanate from the hills and plateaus that surround them, the latter forming the second ecological zone. The second ecological zone comprises of rocky uplands intermingled with dry forests and presence of iron ore and other minerals. A third ecological zone also exists, which is the transitional ecological zone, which houses exuberant wild vegetation, including bamboo and other fibrous plants. The entire region is filled with luxuriant wild vegetation during the monsoon season, and every drain emanating from the hills, slopes and escarpment is active with water flow.

A large number of communities occupy the various ecological zones and their culture, lifestyles, food habits, dressing pattern, all depends upon the local climate and environments. The communities, which coexist in this divergent ecological zones are Kols, Gonds, Majhwars, Kharwars, Bayars, Binds, Dharkars, Cheros, Panikars, Baiswars, Bhuiyas, Dhangars, Bhuinyars, Agarias, Korwas, Patharis, Ghasias, Parahiyas. Several occupational specializations may be noticed among these communities, among them a few are rope making, blacksmith, iron smelting, leather working, honey collection, fishing, hunting, herb collection etc. The Majhwars

community still worships Buddha who is the supreme god for them. The worship of Buddha is mandatory before the startof any festival. However, in addition to the worship of Buddha, they worship several spirit gods also.

Legend behind Bhandari Devi Temple

Historical records attesting the origin and growth of the Bhandar Devi temple is lacking. However, based on the prevailing fold history and traditions, it is understood that the sister of King Karanpal Singh, later to be known as Bhandari Devi, established here abode on this hill after the demise of her brother, the king. She established a kitchen (Bhandara) on this hill for the poor and needy and hence attained the name of Bhandari Devi. Another legend attests this hill as the abode of a demon named Bhandari Devi. The present traditions include a ritual in which the deity, Bhandari Devi visits 'Shiv Pahar', the abode of her parents every third year in a procession, wherein she travels in a palanquin. The devotees make a wish through an offering of one or five stone pieces in the temple on the hill. The stones are removed once the wish is granted. An interesting legend associated with the deity and temple is that whenever drought or any natural calamity induces famine, local communities approach the temple and obtain grains for their consumption. Once they are able to cultivate their lands and obtain better produce, they return in double the quantity they obtained from the temple. Therefore, it may be presumed that there is a long tradition of associating this hill and shrine therein with a granary associated with a deity.

Another legend attributes the presence of an underground cave located within the present temple premises and below the *garbhagriha* of the main shrine. It is also assumed that this underground cave is older than the present temple. The local communities venerate the deity as their 'clan deity' or 'kuldevi'. The festivities start during the month of *sravana* and on the 9th day of Navaratri, during which thousands of devotees throng the shrine and offer their prayers.

Fig. 4: Present landscape to the west of Ahraura hill

The surrounding plains form the Ahraura hills present picturesque and highly fertile agricultural grounds, wherein several products are cultivated even today. The hills located

immediately to the south of Ahraura are the origin of several streams and small rivers, which ultimately drain into River Ganga. These streams and rivers carry loads of fertile silt from the hills and thus the region is a good agricultural productivity zone. The scenario might not be different during the third century BCE and the communities engaged in agricultural activities could have supported the Buddhist establishment on this hill.

The presence of a broken circular monolithic sandstone pillar, now at a relocated place near the village of Belkhara and with an inscription dated to 1196 CE is also noteworthy to mention here. The village Belkhara is located at a distance of only 6 km south-southeast of Ahruara hill. The pillar was removed from its original location in 1954 CE due to the construction of Garra dam. Cunningham visited the pillar location in 1880 C and mentions that it was 11 feet 7 inches long and 15 inches in diameter. Cunningham also mentions the content of the inscription as the mason Jaluna in 1196 CE erected that it. D K Chakrabarty however opinesthat it is a known fact that these types of polished pillars were not made after the Mauryan period in ancient India[2]. The pillar has a broken Ganesha image at the lower portion and devoid of the typical Muryan polish and different from the Chunar sandstone variety also. However, it may be concluded that the tradition of erecting monolithic pillars, which started from the times of Asoka, continued even during the 12th century CE, for various purpose of administrative, political and economic purposes.

Content of Ashokan Minor Rock Edict

The ancient sites comprising pottery and other remains on the surface located mainly in the fertile alluvial area of the Upper Belan Valley between the Raja Nala ka Tila in the east and Satdvari in the west provide some evidence regarding the cultural history of the district. Amongst the Upadhi, Nai Dih, Bhagwas, Koidiha and Raipura are important to be mentioned. The earliest pottery assemblage from these sites includes pre-NBPW deposit represented by black slipped, black-and-red and corded wares. These deposits may be compared with the Chalcolithic phases marked at Kakoria in district Chandauli and Koldihawa in district Allahabad. The quality of black slipped, black and red and NBP wares, particularly found at Raja Nala ka Tila, suggest that this area was in closer contact with Ganga Plain region during the early half of the first millennium BCE. Probably, the ancient sites of this region were established for trade and political purposes. It appears that, as of today, by this time there were two sets of cultures prevailing in this region side by side. First of them was largely based on hunter gatherer way of life continuing from the earliest times, while agriculture and cattle raising was the main source of subsistence of the later. If the present distribution of tribal settlements provides any indication in this regard the hunter-gatherer communities would have been occupying mostly the region of the Son, Kaimur hills and their northern slopes. The concentration of farming communities seems to be in the Upper Belan Valley.

According to the tradition and ancient literature, Puranas and Epics, the area under discussion known as Karusha desh (a troubled area) consisting of autonomous people. According to *Padma Purana,* Dantavakra of the Chedi lineage was the first ruler of thisarea. The *Bhagwat*

Purana mentions Karushas as various fighters and firmdefenders of their faith. It has been strongly believed that this area was inhabited by a set of people who were pronouncedly anti-Vedic in the beginning and who were gradually brought under the Aryan fold. As per ancient tradition Vasu the fourth son of Sudhanvan of the lunar dynasty conquered the Chedi kingdom from the Yadavas and founded a dynasty there. He divided his territory among five sons, in which Yadu got the Karusha. Subsequently it came under Magadha around 4th Century BCE. A minor rock edict of emperor Ashoka also mentions the Karushas. It is considered to be locatedin the Ativika area mentioned inthe rock edict XIII of Asoka and in forest country mentioned in the Prayag *Prasasti* of Samudragupta. Towards the beginning of third century CE,this area supposed to have come under the Naga rulers.

There are several Asokan inscriptions in Indian subcontinent, which are divided into three categories, viz. Major, Minor and Pillar Rock Edict. The main focus of this paper is the Ahraura minor rock edict and hence the details regarding the other edicts are not discussed here. In this particular inscription, Asoka, discusses about the dwellers located on the outskirts. The mentions of 'outskirts' may indicate the outlying locality of his kingdom in this area. However, there are several questions, which maybe raised on the basis of this inscription, which are as follows:

1. What was the need of preaching forest dwellers about Buddha? Did they not hear about Buddha and his teachings previously during the intervening period of Buddha's demise and Asoka?
2. Who were these unfavorable gods of Jamudipa, who were not close to men?
3. Why did Ashok mention about his religious work here at this place about the enshrinement of the relic of Buddha?
4. What was the significance of this hill before Asoka?

Before searching answers for these questions, it may be pertinent to understand the content of this rock edict. As deciphered by Narain[3] the inscription reads as follows:

TEXT

1. ……*ya \ja] ta*
2. ……..*dhika . . .*
3. …….. *[na] cha badham palakamte*
4. ……*cha palakamte* [1] *etena*
5. *arhtala…….. misam deva kata* [1]
6. *palakama [sa] . . . . tvana va sakya papotave khudakena pi*
7. *palakamaminena vipule pi svg [sa] kye aladhetave* [I]

   etaye athdye

8. *iyam savane* [I] *khudaka cha* [or *ya] udala cha palakamamtu*
   [I] *arhta pi cha janarhtu* [I]
9. *chila thitike cha palakame hotu* [I] *iyam cha athe vadhisati*
   vipulam pi cha
10. *vadhisati* [I] *diyadhiyam* [a] *valadhiya vadhisati* [I] *esa*
    savane vivuthena [I]
    ll.duve sapamna lati sati ammam (mham) [? *cha] Budhasa*
    salile alodhe [ti]

TRANSLATION

1. (Thus says the king, the Beloved of Gods—
2. For more than two and a half years I have been a lay disciple ;)(But I have not indeed) made any exertion greatly (i.e. have not led the religious life vigorously).
3. (It is only for about more than a year that I have entered the order and) have led the religious life vigorously.
4. During this period (in Jambudipa the gods, who were unfavorable to men) have been made favorable.
5. (This is indeed the result) of leading a truly vigorous religious life. Nor is this to be attained only by great (or rich) men but even by the humble (or lowly).
6. The great heaven can be obtained by leading a truly vigorous religious life. For this purpose
7. Is this proclamation. May (therefore) both the humble and the great (or rich) lead a truly vigorous religious life. Let those dwelling on the outskirts also know this.
8. And may the truly vigorous religious life be enduring. (I am sure) this object will grow, will indeed immensely
9. Grow (and, what is more) the initiative energy will grow one and a half fold. (Now) this proclamation (is made) publicly (or openly).
10. Two (hundred and) fifty-six nights (days) after having enshrined the relics of our Buddha or Two hundred and fifty-six nights (i.e. days) are over since the relics of our Buddha were enshrined (by me).

After a conscious reading of this edict, the following points emerge, which needs further research and explanations.

Even during the remote past, communities from the prehistoric times might have inhabited the diverse ecological and transitional zones of this region onwards, as reflected from

the archaeological evidences. Through the passage of time and emergence of belief systems, customs and traditions, that might have been consolidated once humans started sedentary lifestyles in this region. Accordingly, there could have been an emergence of several belief systems and local deities for worship by the local communities as per their beliefs. Due to the diverse ecological zones of this region, it may be surmised that there were different cultures as well and also individual belief system in the form of totem, animism, nature worship etc.

The presence of rock-edict on the hill may also indicate the importance of this region, as it is located on the major trade route connecting Pataliputra with the western coast. On an analysis of the presence of various minor rock-edicts at places like Sasaram, Ratanpurwa to the east of Ahraura and Rupnath, Panguraria, Sanchi, on the south-southwest of Ahraura, it is clearly understood that Ahraura is at the crossroads of east-west and north-south trade routh. The north-south trade route connects Ahraura with Varanasi, the latter also falling on the major east-west trade route connecting Pataliputra to the east and Allahabad, Kaushabi, Sankissa and other centres on the west. Further to the south of Ahraura, is the presence of a territory that might have inhabited several communities who were close to the nature, and also aware of the innumerable raw materials of this region. As mentioned elsewhere, the region is also rich in iron ore, which was a major resource material during the early Historic period. The mention of religious life and the essentials of attaining a correct path is seen in this minor rock-edict, which may indirectly refer to the prevailing traditions and customs and their alignments on the path of Buddhism by Asoka. The selection of this particular hill is also crucial as it was located at the crossroads of the major trade route.

The inscription on this hill also indicates that it might have been an important centre even before the arrival of Asoka and thus connecting the local communities with the emerging Buddhist philosophy, thereby indicating its importance for all communities, irrespective of caste and creed, rich and poor.

Fig. 5: Details of stone alignment to the south of Bhandari Devi temple

The purpose of mentioning about the enshrinement of the relics of Buddha and the time that have passed, i.e. 256 days, is also intriguing. This mention of time period as well the importance of the enshrinement of the relics to the communities may very much to emphasize the preaching of Buddha, and the efforts that have been put forth for connecting it with all sections of the prevailing society. It was also important that the local communities understand this importance and connect themselves well with this emerging Buddhist philosophy and also to gain confidence over them. Asoka and his agents might have chosen Ahraura in order to convince the local communities that if they were to worship any idol of image as their representative deity, they may very well worship the relics of Buddha also.

The presence of other settlements contemporary to the rock-edict on the Ahraura hill cannot be denied as indicated by stone alignments to the south of Bhandari Devi temple. Further, to the north-northeast of the location of rock-edict, flat topped area with platform like feature clearly indicates possibility of large-scale congregation.

Further, from the economic point of view also, theforest products, crops and other minerals from this region was important for the nearby big Nigama and Nagar Kashi. In the Jataka stories, there are frequent references about famous textiles of Kashi. The regions around Ahraura also produces Tussar silk, which might have been traded with Varanasi for weaving. Another product, Kurari wood is famous for making toys of wood. Shellac production is also famous in the region, which have certain different categories. The production of various crops including paddy might have established this region as an important centre formarketing of rice, other food grains and cotton fabrics.

Buddhist Literary Evidence of Hill Festival

An analysis of the location of minor rock-edicts indicates a clear pattern of location on the small hillocks overlooking the trade routes and fertile tracts of agricultural lands. The tradition of the congregation of local communities once in a year for festivities even today might be a reminder of the long traditions associated with this hillock and the settlements therein.. Asoka might have obviously desiredto use these gatherings connected with popular deities to offer his way of devoted living as an alternative kind of worship. This style also included the observation of major points of the Siksapada of the Buddhist laity and required "effort", Prakrama or Parakrama whoever tried to give his best this way would please the gods much more than by simply visiting a mela.

The *Rgveda*, the *Yajurveda* and the *Atharvaveda*also refer to several festivities as 'Samana'. In the age of the 'Sutras' the 'Mahavrata' was an important festival. There were also many festivals gathering called Samajas or Samavayas where the people used to assemble together to celebrate those festivals. The *Vinayapitaka* gives a description of festival called 'Giraggasamaj' observed on an elevated place at Rajagaha. The *Nikaya* literature refers to the word 'Samajja' which denotes a festive gathering. The *Singhlovada Suttanta* mentions that 'Samajjas' were celebrated with dances, music and acrobatic shows. The *Digha-Nikayas* also informs us that the festivals were celebrated with music, dance, fairs, ballad recitation,

hand music, chanting of bards, tam tam playing, fairy scene, acrobatic feats. Besides there were also combats of elephants, horses, buffaloes, bulls, goats, rams, cocks, and quails, bout at quarter staff, boxing, wrestling, sham fights, roll-calls.

Such festivals were usually held at the top of the hills and people not only enjoyed those festivals but also used to come to spend their time there. Those festivals were held in various times throughout the year. The most important and popular festivals were the Karttika festival, which was held during the time of Karttika Purnima. The Catumasi Komudi is another event held during the full moon day of the month of Asvina. The SaradaPurnima and Suranakkhata were also important festivals in ancient India. The people from neighboring villages not only took important part in the ceremonies but also celebrated those festival very rejoin. From the *Avadanasataka*, it is learnt that Salabhanjika festival was celebrated with great pomp and splendourand large number of people assembled in the *sala* groves on that day. The interpretation finds corroborating evidence onthe festive atop hills while the Buddhist monks were forbidden to attend such festivities, which seem to have offered all sorts of vulgar distractions, as do their present day equivalents. It is certainly not by chance that Asoka deals disapprovingly of such festivals in the first rock-edict stating that Samajjas are not praise worthy, generally speaking.

Conclusion

An attempt has been made in this paper to understand the context of rock-edict of Ahraura hill in the overall setting of landscape, trade route and other edicts of Asoka. The content of the rock-edict and its importance in the establishment of edict is also understood, which reveals the mentioning of prevailing religious rites and rituals and highlighting the importance of Buddhist traditions and enshrinement of relics by Asoka. The location of Ahraura also implies its strategic location on an ancient trade route, the east-west connecting the urban centres of contemporary period with the coastal town and other Buddhist settlements, while the north-south route connects the settlements to the forest area and mineral rich localities to the south. It may be concluded that the hill was an important place of gathering before the times of Asoka. The investigation into the purpose of shelter, which is locatedbelow the*garbhagriha* of Bhandari Devi temple is necessary to understand the various traditions associated with the deity.

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Object ID: A Scientific Documentation System for Safeguarding Museum Collections

Shilpi Roy*

Introduction

Museums are one of the enduring legacies of our society which interpret and safeguard collective memory of humanity and creative miscellany of environment through their collection, depending upon the size and scope. The collection of museums belongs to everyone and need to be documented in suitable ways to make human history visible and accessible in a responsible manner, using a scientific procedure. The illegitimate trade in cultural objects is now considered as one of challenging international issues faced by the museums and other organizations charged with the management, interpretation, and protection of cultural objects as well as those bodies accountable for their recovery in the event of theft. The proceeds of thefts, forgery, ransoms and smuggling activities relating cultural objects are often used to support other criminal operations, the objects themselves serving as both a medium of exchange between criminals as well as a means of laundering the profits of crime.

Inventories have a momentous place in all the major international conventions relating to the protection of cultural heritage. For instance, article 5 of the 1970 UNESCO Convention on the 'Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property' emphasizes the establishment and maintenance of national inventories

* Research Officer (Conservation) Programme Director I /C (Kaladarshana) IGNCA, Ministry of Culture New Delhi - 110001

of cultural property. The 1972 UNESCO Convention Concerning the 'Protection of the World Cultural and Natural Heritage' integrated the provision that a World Heritage Committee be established, to which each state party would submit an inventory of its national heritage. Again, the 1995 UNIDROIT Convention on the 'International Return of Stolen or Illegally Exported Cultural Objects' aimed to create a unified code for claiming the return of stolen or illegally exported cultural objects. Article 4 of the said convention connotes that the possessor of a stolen cultural object shall be entitled to fair compensation only if it can be proved that the possessor consulted any reasonably accessible register of stolen cultural objects and any other relevant information and documentation which it could reasonably have obtained. It is important, therefore, that efforts should be made to increase awareness among the museum professionals throughout the world to make scientific documentation of objects as a security measure and to develop effective means of circulating this documentation to organizations that can substantially assist in their recovery in the event of theft. Scientific documentation is a potent tool for the protection of cultural objects, firstly as because a stolen object cannot be returned to its legal owner unless it has been adequately documented; secondly, in case of theft, the information about the object needs to pass through faster than the object itself. Both premises necessitate agreement on what information constitutes an adequate documentation for identifying a cultural object. Fig1 shows a schematic diagram which describes how a scientific documentation system works as a potent tool for security of museum objects.

Object ID: Origin and development of a scientific documentation system

The Object ID documentation standard was initiated by the J. Paul Getty Trust, California in 1993 and it was launched in 1997. Object ID is an international standard for describing cultural objects which is the result of years of research in collaboration with the museum fraternity, international police and customs agencies, the art trade, insurance industry, and valuers of art objects. The Object ID is a scientific procedure that establishes the minimum level of information needed to identify a cultural object by creating a broad consensus across these varied communities for a universally applicable standard by understanding and responding to the specific needs of those communities.

A number of organizations used to collect and disseminate information about stolen art objects which include United Nations Educational, Scientific and Cultural Organization (UNESCO), International Council of Museums (ICOM), International Foundation for Art Research (IFAR), Trace, and International Art and Antique Loss Register (London and New York). Collaboration with UNESCO, ICOM has organized the first workshops for museum professionals, police, and customs officers on illicit traffic held in four countries (Tanzania, 1993; Mali, 1994, Ecuador, 1995, and Zaire 1996) of Africa. Getty Information Institute convened a meeting in Paris, 1993 to obtain an understanding of the role played by documentation in the protection of cultural objects. The meeting was attended by representatives of the Conference for Security and Co-operation in Europe (now the Organization for Security and Co-operation in Europe), the Council of Europe, ICOM, Interpol, UNESCO, and the U.S. Information Agency. As a result of these consultations, the Object ID project was defined and

initiated. From the outset, the project has recognized the need to work collaboratively with organizations in six key communities: Cultural heritage organizations including museums, national inventories and archaeological organizations; Law-enforcement agencies; Customs agencies; the art trade; Appraisers; the insurance industry. Building a broad consensus across these communities on the categories of information needed to identify cultural objects was considered as the crucial precondition to a successful outcome for this project. To fulfill this precondition a combination of background research, interviews, and, most significantly, major international questionnaire surveys were carried out.

The findings of the questionnaire surveys were used to inform a series of roundtable meetings of experts drawn from the communities involved. These began with a meeting of conservation specialists which was held in Washington, D.C., in August 1994 and was organized jointly by the Getty Information Institute and the Getty Conservation Institute. A key recommendation of this meeting was that the Object ID standard should include a category called *Distinguishing Features*, the purpose of which would be to record information about an object's physical characteristics that could help to identify it for instances damage, repairs, or manufacturing defects and so on.

The second consultative meeting convened by the Object ID project was a roundtable of museum documentation experts which was held in Edinburgh on 5th -6th November, 1995. The participants reviewed the findings of the 1994 survey in the context of existing documentation standards and standards making initiatives from within the museum community, including the CIDOC Data Model and Guidelines for Minimum Information Categories, the Museum Documentation Association's SPECTRUM standard, the Canadian Heritage Information Network's Data Dictionary, and the Art Information Task Force's Categories for the Description of Works of Art. Besides museum specialists, the meeting brought together two specialists in the recovery of stolen art (representing the Art Loss Register and the Thesaurus Group), and an attorney specializing in cultural property law.

The third meeting was held at Lloyd's of London, in March 1996 with art-insurance specialists. The fourth meeting was held at the Winterthur Museum in Delaware which brought together organizations representing dealers and appraisers of cultural objects. The final meeting was held in Prague in November 1996 with the representatives of law-enforcement agencies and commercial organizations that operate computerized art theft databases. The surveys and consultations established that there is strong agreement on the following core information categories which should constitute the Object ID standard such as Photograph, Type of Object, Measurements, Materials & Techniques, Inscriptions & Markings, Date or Period, Maker, Subject, Title, Distinguishing Feature and Description.

Implementation of Object ID standard in Indian museums

Museums of India are characterized by variety of types containing rich collection which reflects the development of the Indian culture over a period of time. But, in most of the Indian museums, status of documentation is not up to the mark and details of antiquities available there

are only in physical form in the Accession Registers. It has also been observed that in some cases information which is available in the Accession Registers is not comprehensive at all and lack of authentic identification. Thefts from Indian museums have increased significantly in the last twenty years. Most of the museums of national importance in our country do not follow any standard or guidelines produced by recognized Documentation agencies of the museum world. There are areas such as core information categories, terminology control; object's condition documentation, insurance and evaluation report, etc., where our museums require proper consultations with the related guidelines. Therefore, very often the activities of our museums are lack of objectivity, uniformity and transparency. This is more promptly revealed in the 'Buddha Head' (Sarnath, 5th century AD) theft incident in the Indian Museum, Kolkata in December, 2004. The area where the theft occurred not yet covered by the CCTV and the value of the stolen antiquity could not assessed as there was lack of adequate documentation. The theft of Rabindranath Tagore's Nobel Prize from the Rabindra Bhawan , Santiniketan in 2004 is another this type of evidence. Recently in 2013, damage of the Rampurva lion Capital in the Indian Museum, Kolkata during its relocation in the building for renovation, also points out the poor status of documentation in the museum. Unfortunately, in our country, very few cultural objects have been documented to a level that can materially assist in their recovery in the event of theft. Even for objects that have been so documented, the information collected is extremely variable. Therefore, with a view to standardize the documentation system of our museums it is imperative that they should resort to a scientific documentation procedure.

The Object ID standard is very useful to adopt by museums of our country in present context as it can easily be incorporated into existing systems and nested within existing documentation standards of our museums. Documentation system of our museums must have following core information categories for authentic identification of each museum collection:

1. Photographs: Photographs are of vital importance in identifying and recovering stolen museum objects. In addition to overall views of a museum object, close-ups of inscriptions, markings, damage, and repairs of that object should also be taken. Photographs should include a scale and colour reference card of appropriate size for authentic identification of an object. (Fig 2)

2. Type of Object: It describes a museum object such as painting, sculpture, mask and so on. For implementation of the Object ID standard on an automated system it is advisable to be able to retrieve this information at a minimum of two levels. For example: Level 1: Furniture, Level 2: Chair. The best known of these thesauri is the Art & Architecture Thesaurus (AAT); a controlled vocabulary which provides terms for documentation of the cultural objects. The AAT aids retrieval of information in digitized databases, by providing paths composed of synonyms, broader and narrower terms and related concepts which in turn enable users to refine, expand, and enhance searches and achieve more comprehensive and precise results.

3. Measurements: The size and/or weight of a museum object including the unit of measurement and to which dimension the measurement refers (e.g., height, width, depth). For instance the measurements of a jewellery box are 31 cm high x 37 cm deep x 80 cm long. (Fig 3).
4. Materials & Techniques: This category should record the materials, manufacturing techniques, processes or methods used to create a museum object. For example, an object can be made of brass, wood; oil on canvas etc., and it can be made by carved, cast, etched and so on.
5. Inscriptions & Markings: This category should include the identifying markings or inscriptions found on the museum object for examples signature, dedication, title, maker's marks, purity marks, property marks and so on. It should also include the location(s) of inscriptions and markings, for instance, maker's mark on the backside of a doormat etc.
6. Date or Period: An indication of the age of the museum object. This can be a date or date range for example 1856, 1670-1680 etc., or dynastic periods such as Gupta dynasty etc., or a cultural period for example Late Bronze Age and so on.
7. Maker: The name of the maker of a museum object. This may be a known individual (such as Rabindranath Tagore), or a cultural group (such as Patua Gosthi, Kalighat). The maker may also be recorded as the tribe or people to whom an anonymous maker belonged such as Santal tribe, Purulia. A more flexible approach is to use the on-line, structured vocabulary tool Union List of Artist Names (ULAN). It is a database of biographical and bibliographical information on artists and architects, including variant names, pseudonyms, and language variants. It can be used as an authority file as well as a searching tool that enhances retrieval of multiple versions of names.
8. Subject: This category includes a description of any subject depicted or represented by a museum object such as landscape, battle, farmers working in the field, baby in mother's arm etc. Subject matter can be recorded in two ways: It can take the form of a textual description which enables others to visualize the object, especially useful if there is no photograph of the object. Or it can be recorded as a series of keywords, useful when searching for the object in a retrieval system.
9. Title: This category includes the title assigned to an object, either at the time of its creation or at a later date such as incense burner, Siva Parvati and so on.
10. Distinguishing Features: Any features on the object which could uniquely identify it (e.g., damage, repairs, or defects introduced in the manufacturing process). A combination of a narrative description, photograph(s), and sketches along with the proper mention of the location of the distinguishing feature selected provides the best record of identifying features of a museum object. For example it is reported in the lion capital breakage case in Indian Museum, Kolkata that the object was originally found in two broken

pieces which were jointed together but there is lack of detail documentation of this distinguishing feature. (Fig4).

11. Description: A short textual description of the object should be maintained using information from the above categories. It can include any additional information that helps to identify the object such as colour and shape of the object, where the object was made etc.

Besides above mentioned categories, it is recommended that a scientific documentation system should include the following categories.

1. Object ID Number: A unique numeric or alphanumeric identifier for each museum object.
2. Related Written Material: References, including citations, to other written material related to museum objects for example, published catalogues, articles, condition reports etc.
3. Place of Origin/Discovery: The place from which museum object originated and/or the location at which it was discovered such as the place it was made, or the archaeological site at which it was discovered.
4. Cross Reference to Related Objects: An indication that the museum object is related to a number of others such as famous 'Bharat Mata' painting by Abanindranath Tagore in Victoria Memorial Hall, Kolkata may be compared with a similar piece in National Gallery of Modern Art, New Delhi.
5. Date Documented: The date on which the description of the museum object was made.

Conclusion

The importance of documentation, both textual and visual in preventing the illicit trade in cultural objects has long been envisaged. One of the aims of documentation is to ensure the security of objects from unexpected losses caused by crime, negligence, fire, or other catastrophic events by an inventory of all the collections which include minimal information permitting the identification of each object. Having established a core documentation standard, the Object ID through its implementation has reinforced the role of documentation as a potent tool for security of the cultural object. Development of effective means of circulating such authentic documentation to organizations that can materially assist in their recovery in the event of theft is an urgent need so as to travel the concerned information faster than the object itself. Information technology blesses us the opportunity to erase the boundaries of time and place which can be achieved only through strategic Co-operations and innovative collaborations in the many communities that are involved in combating the illicit trade in cultural objects. Museums and institutions of advanced countries have already started such collaborative work, but the developing and under developed nations including India are lagging behind as due to lack of scientific documentation. Thus, there lies great potential for undertaking activities in this area.

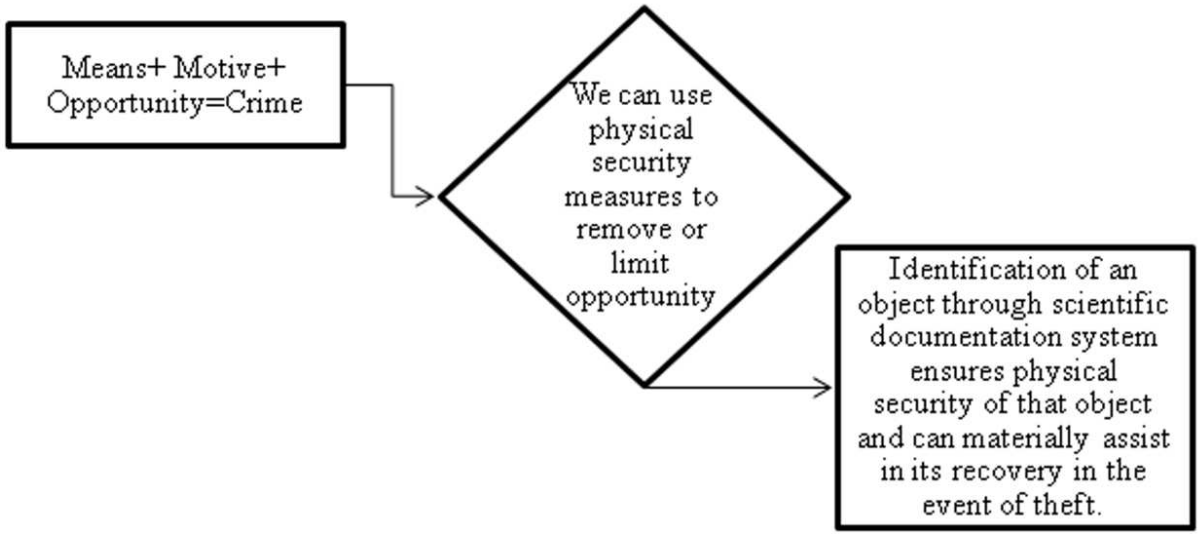

Fig1: The schematic diagram showing scientific documentation system as potent tool for security of museum objects.

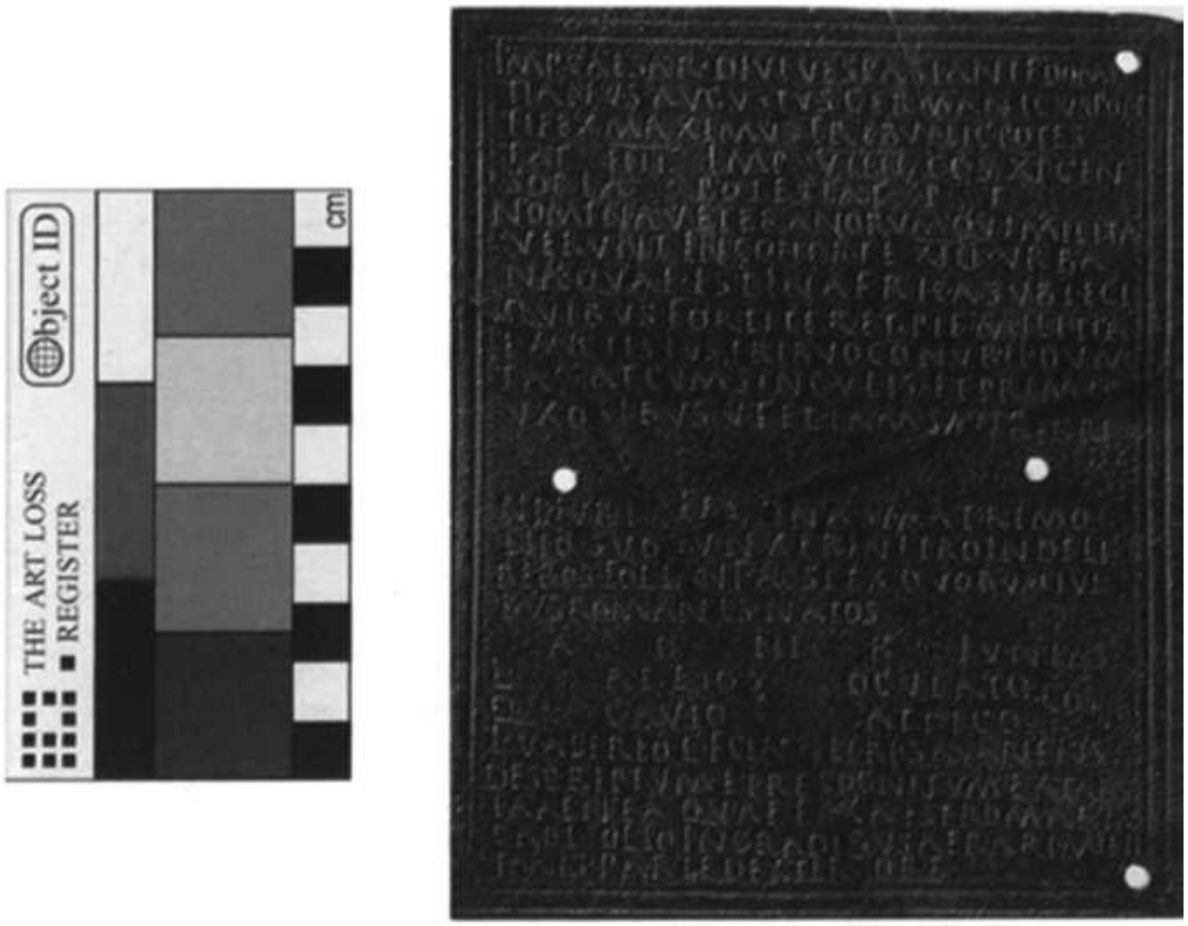

Fig 2: Photographs should include a scale and colour reference card of appropriate size for authentic identification of an object. (Object ID standard: 1999)

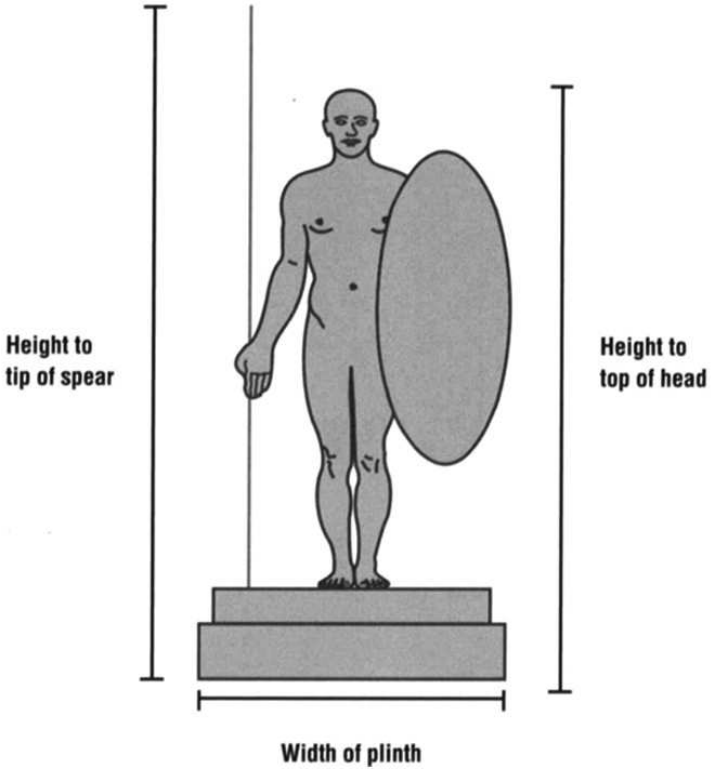

Fig 3: Example of measurements of an object of irregular shape.

Fig 4: A priceless statue of a lion has been broken while it was being relocated in the Indian Museum, Kolkata for renovation.

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28

Major Challenge for the Discovery of Pre Historical Sites in Kerala

Saravanan R*

Introduction

Prehistory is defined as span of human existence before the availability of the written records. It refers to the lives of our first hunter gathers ancestors and designates a vast span of time. Prehistoric archaeology is a field of study involving an extensive battery of techniques which used to evaluate the material remains of the human past (Renfrew, 2007: vii-viii). The present physiographic configuration of South Asia was brought by the plate tectonic uplift of the Neogene and Quaternary periods. Indian plate is being sub ducted under the larger Eurian plate as result of the collision of Indian plate with the Eurasian plate. Since then the organic belt of the Himalaya has been thrust upward. The Himalayas and the associated sub-Himalayan plateaus constitute the extra peninsula which representing the major physiographic zone. The Peninsular region is an ancient continental cratonic landscape with the surrounding seaboards. This physiographic configuration and the thermal contrast between the land and sea has controlled the climate within the diverse physiographic region of South Asian landmass (Korisettar, 2002:35,36). In India, the birth of archaeology has roots in European Orientalism of the seventeenth and eighteenth centuries. Documentation of the Lower Palaeolithic culture began with the discovery of a hand axe in the lateritic gravel at Pallavaram near Madras by R. B. Foote on 30th May 1863. He completed an extensive survey of the major part of the Madras

* Research Scholar, University of Hyderabad

Presidency and southern parts of the Bombay Presidency (Korisettar, 2002:1,3). Since then many eminent scholars have extensively explored and excavated number of prehistoric sites in India.

Physiography is very important factors which has direct bearing on its environment. Nature has been playing its own part to mould physical and cultural character of the man. Therefore, one cannot set aside the importance of natural physiography in which they lived. Kerala is the smallest state in south India. It is elongated in shape and is flanked on the east by Western Ghats. In eastern side, Western Ghats is standing almost continuous mount except for the Palakkad gap which is one of the major entrance to Kerala region. Western side is bounded by the Arabian Sea and it forms coast line exceeding over 564 km from Manjeshwar in the north to Poovar in the south. The region has divided into low lands, middle lands and high lands on the basis of physiographical elevation of the region (Rajendran, 1989:12). The Sangam literature given the earliest indigenous reference about the geographical description of the region. The landscape has classified into five physiographic division like Mullai (pastoral land), Palai (parched area), Naital (coastal area), Marutam (wet land) and Kurinji (hilly region). Each division is presided over by a deity and named for a flower or tree or characteristics of the region (Nair, 1986:39,44). Kurinji, Marutam and Naital regions are closely connected with the land of Kerala.

The condition of the Kerala region is entirely different with the certain environmental condition as well as academic fallacy among the scholars. Firstly, Robert Bruce Foote put forward a hypothesis that heavy rainfall, impenetrable forest, segmented terrain and absence of quartzite are the major factors of the early man kept away from this region. This inhospitable environment conditions might have made the region less attractive. Later, this hypothesis discouraged the archaeologist from surveying from the south west coast of India. This paved way for the thesis of isolation that Kerala is protected and insulated by Western Ghats and Arabian Seas due to this early man not inhabited here. Later, it is proved false with the discovery of microlith hoards at Chevayur in Kozhikode, undertaken by Todd. In 1973, Padmanabhan Thambi brought the evidences of Late Stone Age culture with presence of Mesolithic cave at Marayur. However, the existence of Palaeolithic culture had not been proved until the discovery of stone implements from Kanhirapuzha in Palakkad by Rajendran who disproved the hypothesis of uninviting environment and inaccessibility due to the natural barriers in Kerala (Gurukkal and Raghava Varier, 1999:59,60).

Major Discovery of Prehistoric Sites in Kerala

Palaeolithic implements are mostly made of river worn quartz pebbles, stray gneiss pebbles and flakes in Kerala. Tools are represented by chopper-scraper-flake assemblage made of quartz. They were collected from Valluvasseri, Karimpulakkal and Kunnathubalu near Nilambur in Beypore river basin in Malappuram district; Tenkara and Kanhirapuzha in the Bharathapuzha basin and Mukkali in the Bhavani basin of Palakkad district; Kunnonni in south Poonjar in Meenachil basin of the Kottayam district; and Abhayagiri in the Kollam

district. These tools are made of quartzite in other parts of India but quartzite is absent in Kerala (Gurukkal, 2010:96,97). Number of Mesolithic sites has been discovered from various physiographic zones in Kerala. The main sites are Niramalagiri in the Kannur district; Walayar, Malampuzha, Podippara, Mankara, Kulappalli, Chirakkadavu, Cherakkalppadi, Ayannur, Agali and Nerasimokkai in Palakkad district; Chellur and Pandikkad in the Malappuram district; Chempara and Kuppakkolli in the Wynad district; Tenmala and Odanavattom in the Kollam district; and Ankode and Neyyar in Thiruvanthapuram district (Gurukkal, 1999:67). Among them, majority of the mesolithic sites are falling into Palakkad district.

Philip Lake has discovered first Neolithic axes from the foot of Kanyakad hills in Kerala. Logan and Fawcett had collected a few quartz flakes, a fragment of a Neolithic Celt and a couple of beads from Wynad district. Polished stone axes and beads were reported from Kalpatta and Pulppalli in the Wynad district and the riverbeds of the Periyar in the Ernakulam district. Some stray finds of hand axes were collected from Thamarassery, Puthady, Parambikulam, Kundurmedu and Mantrothuruth (Gurukkal, 1999:74,75). The significance of ancient Rock Art is the most vital source of the Prehistoric culture of a region is enormous. Fawcett discovered a Prehistoric Rock Art sites in 1894 during a game-hunting trip to Wayanad region. However, Kerala secured a place in the map with the discovery of Marayur petro graphs by Padmanabhan Thambi in 1973. Koodakkad, Pallanad, Cempakkad from the painted rock shelters of Marayur, Edakkal and Tovari rock engraving from Wayanad district, engravings at Ankode in Thiruvanthapuram and Carvings of Tenmala rock shelter from Quilion district (Gurukkal, 1999:77,78).

Major Archaeological Research Challenge

The study of the prehistory turns out to be a difficult task particularly field work for the material collection. The task of interpretation is more difficult to do after the data collection. The interpretation do not come easily due to the various changes have taken place in the human past over the tens and hundreds of millennia of human existence. The voyage of discovery that take us back into the remote periods of human development soon. It brings us back to the realities of human existence today i.e. the discovery of prehistory is a challenging. Not only that our perception of prehistoric times is always changing ((Renfrew, 2007:viii). In the beginning, it was considered that Kerala was not supported for the early man particularly in the context of ecological background. The prehistory has not been completely reconstructed in Kerala due to the lack of material evidence. There is no adequate raw material available in Kerala for the prehistoric settlement apart from granite. In northern part of Kerala, the occurrence of quartz gave scope for further archaeological explorations in this region (Satyamurty, 1992:1). The area around a site is most important for the understanding of the site. Defining such an area is more difficulties. Generally, ethnographic data help us to find that hunters and gathers utilized an area some 10 km in radius from their home-base, while farmers worked closer to home, rarely travelling more than 5 km to work the landscape (Drewett, 1999:163).

The dating of the Palaeolithic culture of Kerala is a vexed issue because of the paucity of relics amenable to scientific dating. There is only available a tentative dating based

on comparative archaeology (Gurukkal, 2010:97). Palaeolithic industry is devoid of any standardized tool types such as hand axes and cleavers. For example, one could witness an evolution of the hand axe industry from Vadamadurai in Chingalpet district of Tamilnadu. In fact, the majority of the Stone Age sites are found between 30 m and 180 m in the lateritic midlands region. There are no prehistoric sites found below 30 m altitude in the low lying coastal region. (Rajendran, 1989:6,66). There is very difficult to understand about the ethnic, organisational, institutional, customary and ritual aspects of the Neolithic material culture without the habitations sites (Gurukkal and Raghava Varier, 1999:74,76).

Discussion

Major challenges for the discovery of the prehistoric sites are mainly due to the absence of habitation sites, lack of systematic survey and rigorous and extensive land use (Gurukkal and Raghava Varier, 1999:129). The occurrence of tools both in the gravel beds as well as lateritic zones with river worn quartz pebbles suggest that their sphere of activities was wider in Kerala. The strength of the populations must have been extremely low though the extent of distribution to be relatively wider (Gurukkal, 2010: 97). But the material evidences of Palaeolithic, Mesolithic, Neolithic, Megalithic and the existence of Megalithism indicates the region was inhabited by the prehistoric man through ages (Rajendran, 1989:90). Large-scale environmental changes can dramatically change whole landscapes. And also very small scale changes through human or natural agencies can change local landscapes (Drewett, 1999:162). Archaeological research has not been taken place much in this region than the neighbouring state. However, certain archaeological explorations and excavations have been going on in Kerala. The discipline of archaeology is now on the budding stage with the trained archaeologist and other academic expert in Kerala. They have to be tackling the existing issues and challenges for the development of archaeological studies in Kerala. There are very few sites explored and studied and remaining a number of sites need to be explored for the strengthening of archaeological research in Kerala.

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29

Role of Merchants in Precolonial India : A Study

Sima Yadav*

The merchants and traders played pivotal role in understanding the various aspects of trade and commerce over the centuries. They have occupied the attention of historians of Indian society and culture over the long period of cultural evolution. In the classical Hindu Indian tradition, merchants occupied the third place in a four class division of society, subordinate to Brahmans and rulers. Traditionally they were performing hereditary occupation of agriculture, crafts, trade and commerce, money lending, merchandizing over the centuries. They performed the commercial activities separately from ruler ship, military power and administration. But the brisk commercial activities in India over the centuries led to the emergence of a professional, prosperous and powerful class of merchants which on account of its opulence, tended to dominate the political, social and economic fabrics of the region. These merchants attain a status as high as that of Bahamans in learning, and that of Kshatriyas in war and politics, and figured as the main subjects in the literary traditions of India.Large number of merchant princes such as Sajjana, Udayana, Ambada, Vastupala and Tejahpala, etc.occupied administrative positions under the kings of Chaulukya and Vaghela dynasty. They played an important role in administrative, military and financial affairs of the state. They also promoted art, literature and architecture which had so far been the preserve of the ruling class.

Trade was the chief vocation of vaisyas, but it was certainly not their monopoly. The pressure of economic circumstances and the urge for economic gains had compelled people from all sections and strata of society to take the trade from earlier times. In fact, the concept

* Faculty, DIHRM

of apaddharma, which allowed the people of higher as well as lower Varnas to take up trade in times of distress, made mercantile community a class in which the cult of wealth cut across the concept of caste. The statement of the Madhavacharya (1300-80), the commentator of the *Parasara Smriti*, that the duties in distress became regular duties in kali age, reflects the change in trend in post Gupta period when trade was being pursued by all and sundry, not as *apaddharma* but as a regular means of livelihood.[1]. In the inscriptions and literature of the period, merchants are generally identified by their profession or regions, rather than by caste. The mercantile development provided a new base for class differentiation and stratification. Commercial activity required the procurement and disbursement of a large number of commodities, and necessitated the involvement of different types of traders, small as well as big. Those who had no land could turn to trade or other activities connected with it and, by dint of wealth earned through professional and personal efforts, they, irrespective of their caste and class, could command respect in society. In the seventh century Huien Tsang distinctly mentions vaisyas as a class of traders and sudras as a class of cultivators.[2] This tendency became more marked in western India where the Jains, who formed the bulk of merchant community, tended to avoid agricultural and artisanal activities because of their belief in the principle of ahimsa and the fear of causing injury to living beings. Jinasena, a Jain author of the ninth century, tries to distinguished vaisyas from the rest, and uses the term '*vanijah*' (trader) for them.[3] The *Kathakosaprakarna* of Jinesvarasuri (1051 AD) described and placed big merchants on a pedestal higher than peasants and artisans.[4] From seven to seventeenth century nature of India's internal and external trade and commerce changes so also the role of merchants and their strategies and their relationship with the state.

Colonial historians who sought to explain India's economics backwardness in terms of other world liness and life negating ideologies thus portrayed states as essentially anti commerce and anti-merchants. In the light of the gathering body of evidence on pre-colonial commerce, this negative view could not be sustained. It was replaced by a more sophisticated explanation of a compartmentalization between politics, ruler ship and armed power, and commerce and mercantile activity.[5] In this view the Indian states had evolved a system to accommodate the predominance of political power in the hands of elite with the pragmatic necessity to foster commerce. Thus the activity of commerce is carried on independently of ruler ship by a separate group of specialists drawn from traditional merchant groups. The rulers seldomnot interfered with commerce, just as the merchants did not concerned themselves with administration. With this segmentation, commerce is said to have expanded. This is also held to explain the unconcern of rulers with the maritime part of their territories, and even with the ports and their administration. This is also held to explain the absence in the development of naval power in an Indian state. Sovereignty and ruler ship is held to confine to the territorial limits of a state. Merchants who traded on the seas operated in a separate neutral domain and were not the concern of the state. Thus, unlike the Chinese imperial state, Indian rulers did not seek, at any time, to impose regulations on the places to which merchants could not sail, nor could even curtail in any way the freedom to depart from and enter the state's territories.[6]

The policy and attitude of the local kings towards the foreign and Indian traders was one of peace and toleration. The question, however, is why Indians who had the will and skill and enterprise in foreign trade allowed the Arabs, their political, religious and commercial rivals, to settle in western India.[7] The answer to it has been given by the Arab historians and travelers. The Arabic text *Tuhfatual Mujahidin* tells usthat, the Hindu rajas are kind and just to the Muslims because they know that the prosperity of their country depends on them. The text further says that as a result of the growth of trade with the Muslims countries, new cities sprang up in India and there was an increase in the population and in the number of houses.[8] Referring to the Hindu states in the Malabar region, Ibn Battuta points out that the local kings treated the foreigners kindly because they wished to drive profit from trading with them.[9] Sulaiman in ninth century also suggests that the prosperity of the Balhara (Rashtrakuta) king and his kingdom was because of the favors shown to the Arabs.[10] Al Idrisi tells us that the Chaulukya kings of Anahilvada used to welcome Muslim travelers and protect their property.[11] The accounts of Jewish traveler Benjamin in twelfth century too make a significant reference to the economic facilities provided to the foreign merchants in Quilon (Kerla).[12] The act of toleration were not limited to kings and nobles, for we learn from the *Jagaducarita* that Jagadu, a rich Jain merchant, had a mosque built for the use of his Muslim brethren.[13] Indian traders also maintain their commercial contact with outside world. Abu Zaid (916 AD) tells us that Hindu merchants visited Siraf in large numbers and maintained very cordial relations with the Muslim merchants of that region.[14] The sea caption Buzurg (tenth Century) refers to banias, the Hindu merchants of western India, visiting the ports of the Persian Gulf during his time.[15] In the *Jagaducarita,* we read a Hindu merchant Jagadu who, through his Indian agents at Hormuz, maintained regular trade with Persia, and transported goods in his ships.[16] Ufi mentions one was Abhir, a Hindu merchant of Anahilvada, who carried on a flourishing trade with Ghazni with the help of his agents.[17] Benjamin of Tudela (1170 AD) refers to Indian merchants bringing their goods to the islands of Kish.[18] Ibn Battuta informs us that Indian ships from Thana, Quilon, etc. called at the port of Aden which contained permeant colony of Indian merchants.[19] Marco Polo mentions that Indian ships visited Fu Chau in China and Hormuz in the Persian Gulf.

Besides the individual merchants who carried their trade independently through their agents and contacts with foreign merchants, much of the trade was done by corporatized merchant's guilds. Such organizations created under contract, are called Samaya in inscriptions. One of the largest guilds, called 'The Five hundred', was established in Aihole, Karnataka and soon became a multinational corporation. Another guild, called Manigramam, was from Tamil country and is mentioned in Nandi Varman's inscription in Thailand.These guilds participated for several centuries in the trade with South East Asia. A code of conduct called 'banajo-dharma' governed such organizations. Membershipswas based on economic interest and often cut across caste divisions- for instance, The Five Hundred was founded by Karnataka Brahmins but would later be dominated by Tamil Chettiars. Moreover supply chain depended on contracts between different guilds. Thus, the weaver's guild would contract with the merchants' guild to supply a certain amount of cloth for export. While these corporations have links to

the ruling dynasties, they were capable of making independent arrangements for themselves. Thus, we find that business carried on irrespective of changing rulers, wars and geo-political balance. Some of the larger guilds had companies of mercenaries that protected their interest from pirates, rivals and even avaricious rulers. In this way, the Manigramam guild survived several centuries till around 1300 AD.[20]

The networks of temples played an important role in financing this economic model. In medieval south India temples became the centers of social and cultural life. The early medieval period saw a sharp increase in temple building. Much of Indian classical music, dance, drama, sculpture, paintings and other art forms evolved in the temples rather than at the royal court. What is less appreciated is that the temples were to the financing of trade, industry and infrastructure building. It is well known that medieval temples were very wealthy but the common impression is that this wealth was mostly due to royal grants. In reality, the network of large and small temples had a close relationship with merchant and artisan communities as well as the village/ town councils; this is quite clear from an examination of various donations and contracts. Moreover, the reason that the temples accumulated so much wealth is that they acted as bankers and financiers. A study of temple records shows that temple lending was mostly directed to corporatize bodies like guilds and village councils rather than individual merchants.[21] The temples lent money to village/town councils for infrastructure investment and to merchant and artisan guilds for business. Interest rates usually ranged from 12.5 to 15 per cent annum. An eleventh century inscription clearly shows that there was an active credit market. Thus, by the Chola period Indian Ocean trade was no longer about individual merchants and small money lenders, but was a sophisticated network of multinational guilds financed by large temple banks. Like globalized business of today, they too had to navigate betweenlocal political rivalries and those of major geopolitical powers.[22]

According to, S. Arasaratnam,in the precolonial Indian states, the place of merchants in society has been taken a step further, with less emphasis on the compartmentalization of political and economics functions. The evidence of sophisticated economic activity in a number of states has compelled analysts to attribute a more central role to merchants. Instead of being segregated and distinct, political and economics functions are seen to overlap at many points and cut across each other. The political world did not operate independent of, and oblivious to, the economic, nor could the economics world exist and prosper without reference to the political. Thus, recent studies of pre-modern commerce in the subcontinent become investigations of political economy, giving as much emphasis to the political world in which that commerce was undertaken. The former assumptions of confrontation or separation between politics and commerce are replaced by a search for co-operation and interaction as well as what each sector brought into, and gained from such interaction.[23]

The merchant is held to be comfortable in his political world, not alien to it or unconcerned by it. The modus operandi of merchants differed widely in the various parts of India, depending on the diverse political and administrative situations in which they operated. In almost all regions, they are found to have had access to political power, sometimes at the highest level,

often at the intermediary regional level of the coast, and hinterland. The Chaulukya kings appointed the merchants to look after the administrative, military and financial interest of the state. During Gupta period merchants also played an important role in administration.[24] During Gupta periods, we find merchants occupying the high ministerial offices of Mahamatyas and Dandadhipati. It reflects the general social and economic environment of the region where merchants were reckoned as a great force. We are told by Arisimha that, for rejuvenating the sick empire, Lavanaprasada, the vaghela chief, asked Bhima II for a minister who might be proficient in the use of the treatise as well as the arms, and also adept in the art of replenishing treasury and fighting battles. The king pondered for a while and lent him the services of his two minister-merchants, Vastupala and Tejahpala. It may indicate that merchants of the period excelled both in trade and administration.[25] The *Neminathacarita* and *Candraprabhasvamicarita* works written by Haribhadra Suri recounts the history of an illustrious family of the Pragvatas, the merchant family who played an important role in the history of Gujarat from the time of Vanaraja to that of Kumarapala. The members of the family were appointed as Mahamatyaand Dandadhipati.[26] The data reveal that the family of Vastupala and Tejahpala played an important role in the administrative affairs of Gujarat in the first half of the thirteenth century. They were placed as the governor of the Cambay, where they put an end to piracy, and created congenial atmosphere for the honest people to carry on their business safely.[27]

In the Mughal empire merchants enjoyed influence at the various levels of administration from the emperor downwards. At the provincial level, more relevant to their activities they peddled influence and played politics with the various organs of administration. Provincial governors had to work closely with major merchant figures of their areas. Merchants had access to the highest provincial officials to diffuse an impending crisis or sort out a problem before it got out of hand. Merchants employed vakils and retainers in the court of emperors and powerful princes, through whom representations were made to, redress grievances or make complaints.

In the smaller states outside the Mughal Empire, merchants enjoyed an even more favorable environment for influence peddling and even exercising power. In the two substantial Islamic states of Golconda and Bijapur, the situation was rather like that in the Mughal Empire. Merchants moved through various levels of administration from center to periphery, looking after their interests. The shorter distance involved made this easier than in the Mughal Empire. The courts at Golconda and Bijapur were subjects to the influence of merchants through their agents. In these states their influence could extend to the appointment of provincial and port officials which they frequently utilized to secure appointees favorable to their interests. These features were even more prevalent in the yet smaller kingdoms of the far south- the Nayakdoms of Ikkeri, Thanjavur, Gingee and Madura, the Malabar kingdoms and the Thevar of Ramnand. These smaller territorial entities were very susceptible to the influence of merchants who were vital to their prosperity and even their survival. In some of these kingdoms, merchants in the pre-colonial period are known to have actively participated in political squabbles and factionalism, and attempted to play the role of king makers. Some of the Malabar kingdoms

were a case apart. Being port states, solely dependent on trade, merchants and rulers operated a duumvirate of power.[28]

The crisscrossing of functions between political and economic is also epitomized by an increasing tendency of rulers and administrators to operate at the commercial levels. This is a remarkable characteristic feature of the period of our study. One can only speculate on the reasons for this. The undoubted expansion of India's oceanic trade that went on from the ninth century appears to have increased the wealth gained by the state from commerce. This gave visibility to merchants and attracted ruling groups in the state to attempt to secure for them a personal share in this wealth. Bottomry loans, similar to the respondentia loans in Europe, were a widespread practice in maritime India. A wide range of investors including officials and noblemen, would lend money to overseas merchants on high interest rates of 16 to 24 percent for risk at sea. The participation of rulers and administrative officials in commerce, both by direct investment in their own names and through proxies and merchants already engaged in trade, gave the start a direct stake in commerce and brought commercial matters to the forefront of state policy in a way unknown previously.[29]

In as much as the ruling elites began to participate in commerce, it provided merchants with further access to them and to the organs of state power. Rulers required the expertise of merchants to manage their investment for them and to take day to day operational decisions on this investment. In this way merchants became the instruments of state power, and the more the state depended on the returns of commerce the more was the dependence on merchants. As states like the Mughal Empire went deeper into commercial enterprise, imperial officials came to rely more and more on merchants as the major agents of commercial exchange, both within the country and in overseas markets. When the imperial family entered shipbuilding and the freight traffic between Surat and Mokha, it needed merchant's clients to participate by shipping their goods in these ships. Though there is no evidence of the emergence of an institutional position of royal merchants who conducted (saudagarraya) as there was in the Malay states of South East Asia, there definitely were state favored merchants who conducted their own business, together with that of royal investors. In the smaller states of Malabar and the far south, there were often individuals who operated in this manner and were recognized as the most powerful among the merchants of states. [30]

During these centuries, merchants acquired further layers of political influence as economic activity expanded and as merchants were called upon to assist the state in other ways. Changes in the collection and defraying of tax revenues along the coast and inland increasingly brought merchants into this activity. The conversion of tax revenues collected in kind into cash required merchant's collaboration and investments. The farming out of the revenues by auction to maximize their worth again brought the merchants in as revenue farmers and speculators. This was an activity of great value to merchants, not only in the economic rewards it brought but also through the political influence that came in its wake. A merchant tax farmer became tied to the beneficiary of the revenue, who was generally an influential military lord or administrator, through a bond of mutual self –interest. The merchants as tax

farmer secured some administrative and judicial authority over parts of the land, which he could use to his commercial advantage. Thus, especially in the south, merchants farmed the taxes of coastal lands, ports and hinterland, agricultural and manufacturing districts. This gave them a position of precedence over their competitors in the markets of these areas and in the acquisition of goods produced there. Tax farming spread widely throughout the subcontinent in the seventeenth century and expanded further in the eighteenth century and further increased the powers of merchants.[31]

Another activity with a political dimension that enhanced the position of the merchants was the transfer of money and the growth of money market in the seventeenth century. This was particularly current in the Mughal Empire, with its vast territories in the Indo- Gangetic plains, Gujarat, Maharashtra and north Deccan. Revenue grantees needed to transfer large sums of money from outlying areas granted to them, to cities where they lived. These transfers were managed by merchant's financiers on whom the grantees depended to draw their incomes. This also brought the merchants financiers on whom the grantees depended to draw their incomes. This also brought the merchants in touch with powerful Jagirdars and Mansabdars of the realm, a nexus which merchants could utilize in times of need to secure political influence with Mughal administrators to smooth the path of trade and investment. This money transfer was not very widespread in the south, where the scale of operation was smaller but even there the two larger kingdoms of Bijapur and Golconda developed these facilities and provided opportunities for merchants.[32]

By these various means, in the course of the seventeenth century merchants and the state were brought into closer interaction with each other. It was an interaction that could, on the face of it, be beneficial to both parties. There is no doubt that it gave merchants a visibility and a profile sharper than they had before. It also gave the ruling elites of a state new dimension of activity and an enhancement of their power, of which they did not fail to take advantage. The merchants-state[33] collaboration could also leave the merchants vulnerable. The state had ultimately the instruments of coercion of the state. Overall, during the seventeenth century both parties were able to work out this relationship to mutual benefits. The great growth of commerce in the subcontinent in this period is attributable to the evolution of a workable relationship.

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30

"*Jarano Pata*" – The Unique Scroll Painting of Bengal

Soumoni De*

India had always been known as the land that portrayed cultural and traditional vibrancy through its conventional arts and crafts. The rural folk paintings of India bear distinctive religious and mystical motifs, traditional and cultural element of country's rich heritage. It provides an aesthetic continuum that extends from the early civilization to the present day. Particularly in the case of *Patachitra* (*Jarano Pata* – Scroll Painting) we may observe that this type of folk-art is ethnic in nature and in form it is very colorful, and also bears traditional and cultural element of the country's rich heritage.

Patachitra belongs to a folk art tradition dating back to thousands of years. *Patuas Patuas* (*Patachitra* artists) and *Chitrakars* have been referred to in literary works dating back to more than two thousand five hundred years. *Patachitra* (scroll painting) comes from the eastern part of India mainly from the state of West Bengal and Bihar. Some researchers opinion that *Patashilpa* was originally an art form of the *Santhals* (tribal community). The *Patua* are found mainly in the districts of Midnapore, Birbhum, Bankura, 24 Parganas, Howrah, Hooghly and Purulia (Pal, 2009).

The word '*Patachitra*' may be divided into two parts or two sub-words, which are '*Pata*' and '*Chitra*'. The word '*Pata*' derived from the Sanskrit word '*Patta*', which means

* UGC-SRF, Department of Museology, Rabindra Bharati University, Kolkata, Institutional Address: Jorasanko Campus, 6/4, Dwarakanath Tagore Lane, Kolkata-700007. e-mail id. de.soumoni@gmail.com Mobile: 9748603312 ; 7980080981. Address: 10 Swami Vivekananda Road, Howrah-711101

'Cloth' or 'Dress'. But in the sense of drama it means scene. And the word '*Chitra*' means 'Picture' or 'Image'. In the context of Bengal tradition '*Patachitra*' means those Paintings, which are made by *Patuas* by natural colors (Chakraborty, 2005). According to its shape and size, *Patachitras* can be classified into two types - Square *Pata* or *Chouko Pata* and Rolling *Pata* (Scroll) or *Jarano Pata*. Square *Pata* or *Chouko Pata* is a card shaped *Pata*, made on the basis of single impression, which and has no rolling portion (Bayen, 2013). The '*Jarano*' or '*Gutano*' *pata* means a scroll depicting a story serially in picture frames. It is about one to three feet wide and ten to twenty feet long according to the length of the story, and the two ends are attached to two bamboo sticks. The scrolls are almost always unmounted. The scroll is divided into vertical panels, again not always of equal length, and each panel narrates an episode of the story.

The *Jarano Pata* or Rolling *Pata* is also known in various names, such as *Dighal Pata*, *Latai Pata* etc. These types of *Patachitra* are the result of the hard work and devotion of the *Patua*. In length one Rolling *Pata* may vary from within 10 to 40 feet. These types of *Pata* are based on dramatic story, which are described by the *Patua* in his song and in the making of such images the *Patua* use a great variety of colours.

The '*Patua*' (scroll painters) - a tribal community, of West Midnapore district of West Bengal, India, are heritage artists of 'Patachitra' – Scroll Painting accompanied by songs (*pater gaan*) which narrate stories from history and mythology to the current day scenario. These types of songs are generally known as '*Pater Gaan*', which are played without any modern instruments (Figure 1). Some times Patuas played their song by free voice like '*Panchali Pata*.' In language style they generally use 'Verse' and in the metre which is formed by the concept of '*Payara*', which has been a very popular style of verse to the poets of old civilization (Maiti, 2010). They use natural colors which they extract from local flowers, leaves and vegetables. The paintings are traditionally done on long scrolls of paper pasted on cloth and may be viewed as an early precursor to modern day animation. Painting and singing a story told in scrolls *(patas* in Bengali) goes back to ancient times in India. For generations hereditary painter-singers (*Patuas* or *Chitrakars*) have been practicing their craft.

The most intriguing part about *Patachitra* is that the songs (*pater gaan*) are composed prior to the execution of the *pata* (painting) which gives us the idea that the songs precede the picture. The paintings are only an illustrious reference to the song (Subramanyan, 1985). What interested me more was a unique blend of forms and lines both geometric and organic as well as a free flowing and bold line quality. Most interestingly, each *Patachitra* carries the individual drawing quality of the *patua*. The carelessness evident in the *patachitras* is perhaps the most appealing visual quality. *Patachitra* contextualises historic, traditional, mythological as well as contemporary element and subjects.

As an art figure or in respect of folk-art, *Patachitra* painting is closely related to our society. It has a deep connection with many branches of knowledge or subject like literature, song, humanity, anthropology, sociology, environment, history, culture etc (Pathak, 1994). The

Chitrakars traditionally painted stories from historical facts or human culture or mythological gods and goddesses On the other hand now-a-days *Patuas* are very sensitive towards modern trends of civilization or social problems and they have also integrated contemporary social issues to their art form. In general context of view *Patachitra* may be divided into six classes such as, general, political, historical, religious, social and environmental.

Table 1. Types of Jarano Patas According to Subjects

***Jarano Pata*'s Types**	**Characteristics**
General	All type of image of man or woman or any kind of general art figures (Figure 2).
Tribal	Tribal *Pata* has generally formed on the life and art thinking of Tribal people. They live close to nature and they have no artificiality of life style and also have no negative approach to the civilization. In the song of Tribal *Pata* we may find their simplicity of life. Their life circle, their tradition and beliefs were manifested through the Tribal *Pata* (Figure 3).
Mythological	Scrolls based on Rama, Krishna, Siva, Durga, Lakshmi and Saraswati. The Ramayana, Mahabharata, Puranas and other mythological tales. Patachitra is an extensive repertoire of travails of Ram-Sita, Kauravas and Pandavas, Krishna-Radha, stories of devout Behula sailing to Manasa's abode to reclaim her husband's life and others. Popular stories of mythological *Pata* are as *Setu Bandhan*, Rama, Laxman and Sita's exile, Abduction of Sita, Killing of Ravana, King Harishchandra, Satyavan & Savitri, Karna, Krishna Leela, Chandi Mangal, Manasa Mangal, Satya Pir, Durga, Wedding of fish (Figure 4) etc. these literatures have always been quite popular amongst the general people of Bengal.
Historical	Stories based on Second World War, Azaad Hind Fauj and Netaji Subhas Chandra Bose, Atom bomb in Hirosima and Nagasaki, Destruction of Babri Masjid, Terrorist attack on the World Trade Centre (U.S.A.), *Saheb Pata*, Life of Vidyasagar, Life of Rabindranath Tagore, Life of Vivekananda etc.
Religious	*Gaji Pata, Satyapirer Pata, Jama Pata, Shakti Pata, Vaishnab Pata, Chaitanyaleela*.
Social and Environmental	The popular subjects are Pulse Polio Avijan, eradication of Malaria, Communal harmony, Terrible Sunami, explosion in Mumbai, Tree Plantation, AIDS Awareness, Awareness on Human Rights, persecution of women, earthquake, protest to intoxication etc

Steps of Making *Jarano Pata*:

The process of creating a *Jarano Pata* involves following steps:

First the canvas of the scroll is made by sewing multiple sheets of commercial poster paper or on recycled paper. In early days paintings had been largely executed on cheap hand-made paper even on news papers also to cutoff the production cost. The canvas is rolled up many times to give it a proper shape.

↓

Next the outlines of the images are done using kerosene lamps black soot, vermillion paste and more recently simply using a pencil. This follows with demarcation of the individual frames by outlining the borders with black. (Figure 5,6,7)

↓

The Primary colors used in the paintings are white, yellow, black, red, blue and green. Mineral or Plant based colors are being used with sap of wood apple tree (*bel*) as a binder.

Black is a very important colour in *Patachitra* as it is used to draw almost all the out lines and borders (Figure 8).

After finishing the painting, a thin cotton cloth is glued on the back as a support and to provide longevity (Figure 9).

Finally, the completed scrolls are kept in the sun to dry (Figure 10).

Most of the plants required for preparing the paints are grown locally and materials like turmeric for yellow, indigo for blue are available in the local market. Some *Patuas* forego this laborious process especially when they are painting on other medium like tin doors or plastics. Senior *Patuas* insist on using of natural paints. Often natural paints are prepared in advance in coconut shells and stored in plastic jars for year round use. Now-a-day for the commercial purpose *Patuas* use the synthetic fabric colour also.

Since the last few decades, *Patachitra* has drawn the attention and interest of artists, art connoisseurs and researchers and has been nationally and internationally acclaimed as an interesting style of painting. But in a world more interested in the razzle-dazzle of electronic media, listening to *Pater Gaan* is no longer considered recreation. Competition from other media eroded this way of life and nowadays the *Patuas* are trying to adapt to changing conditions. A large number of *Patuas* have thus given up the art form and have become daily wage earners or van rickshaw pullers. The oral tradition of *Pater Gaan* is also on the brink of extinction.

In recent years investment in culture has resulted in revitalizing and reviving this traditional skill as means of livelihood bringing in real change in the lives of *Patuas* who have gained identity as artists. The skill building of the artists was done under exponents of the art form as well as contemporary artists. *Patuas* were trained in sketching and coloring. Mythological songs on which their paintings were based were taught to the young artists. They were also trained on conceptualizing new themes and writing their own songs. As drawing and coloring skills improved, the artists were trained to paint on acrylic, clay pots, apparel, silk, wrought iron, leather and canvas. The *Patuas* took the initiative to learn spoken English and are now better equipped to communicate their stories to buyers. Workshops were organized to facilitate exposure to contemporary art trends.

Naya is an important place of *Patachtra* Painting. It is a small village of under Pingla Panchayet Samiti of the district of Paschim Medinipur, West Bengal, India. Naya is popularly known as '*Pater Gram*'. In every year in the month of November there is an international 3 days festival, named '*Patamaya*' arranged here (Figure 11.1-5). The fair was organized with

the support of the *Patuas* of Pingla to expose the outside world into the inner world of the process of *Patachitra* making in its natural surroundings. The aim was to develop a bonding between the *Patuas* and the general people to share their success and achievements and also make the visitors realise the immense potential of the traditional art forms which when revived not only makes one revert back to one's roots but also open new vistas to showcase to the world at large about the immense potential of tradition.

In *Patua* societies an advance sociological pattern and valuable cultural significance have been observed, which they try to maintain in their family structure from old age to modern age. They believe in peaceful simple living. There is no gender bias in their society. They followed some Hindu customs and as well as some Islam customs in their family tradition, where most of them are Muslims by cast but as artist they don't believe in caste or race, they believe in human religion. They have no narrow attitude towards life and culture. This ancient folk art form of Bengal, is appreciated by art lovers all over the world for its effortless style of drawings, colors, lines and space usage. *Jarano Pata*, the unique scrolls of Bengal are now universalised having a beautiful inseparable combination of tangible and intangible cultural heritage along with a great example of community brotherhood and a media to educate and make aware people of remote areas about their civil rights and heath issues. *Patuas* have been protecting world humanity by their artistic nature and creativity. In this way their *Patachitra* painting has a remarkable contribution to our civilization.

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31

Lithic Technological Strategies and Mobility: Premitive Distiction in Stone Tool Mechanism in Odisha, India

Soumya Ranjan Sahoo*

Introduction

Geo-morphology of Odisha

The hand-axe shaped eastern Indian coastal state Odisha (Fig. 1), which covers an area of 60,136sq. miles or 155845 sq. kilometres and is bounded with north latitudes $17^0 49'$N. and $22^0 34'$N. and east longitudes $81^0 23'$E. and $87^0 29'$ E. extending from Midnapur district of West Bengal in north to Srikakulam district in Andhra Pradesh on the south and from Chhotnagpur plateau in Jharkhand on the west to Bay of Bengal on the eastern direction. The geomorphological features of Odisha are the result of 3500 million years of geological history that has affected the rock types and the land forms here. It consists of rocks of granite and few other types, Iron formations, Volcanic sediments, protozoic meta sediments in north Odisha; coal bearing Gondwanas in central Odisha, high grade granulites, magmatites and gneisses in south Odisha; extensive granites, least distributed Vindhyan sedimentary rocks in west Odisha and the laterites and Quaternary sediments forming the much younger and present plains in the coastal Odisha (Mahalik 2000:2). By numerous tectonic movements resulting in folding, faulting and vertical movements of rock masses the Precambrian formations have been

* Addl. Tahasildar, Kotagarh, Kandhamal, Odisha, Email: soumrjn@gmail.com

affected (Chauley 2008: 14). The present landform of Odisha is the result of the weathering agents which have been working to cut-out, erode and feel the elevations and depressions in the land (Sinha 1971:82).

As its ancient formation the state having old and quite rich heritage and culture. Though there is no scientific date retrieved from any of the Palaeolithic sites, but from relative dating it seems to be contemporaneous to other prehistoric cultures of rest part of Indian sub-continent.

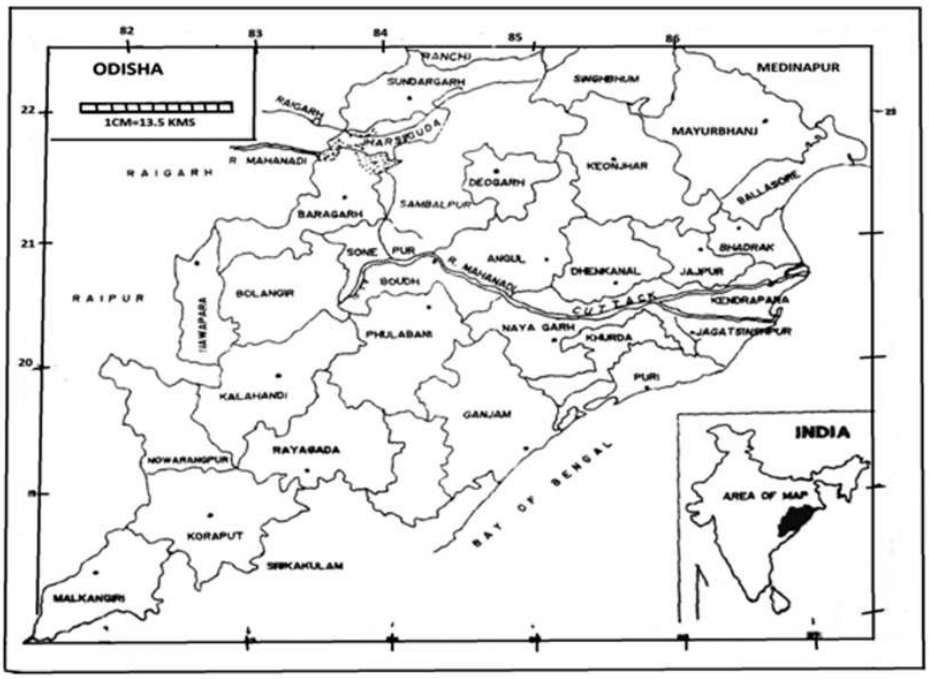

Fig. 1: Geographical Map of Odisha

Prehistoric researches in Odisha:

In 1875 Valentine Ball had picked up the first stone implements from four different places in Odisha are Dhenkanal, Kudabaga (Sambalpur), Harichandanpur and Kaliakata (Chauley 2008). From there after the prehistoric studies started as a new Horizon in Odisha. As far as India is concerned the raw materials used to manufacture the stone artefacts during lower Palaeolithic were basically quartzite, and duly primitive man of this period is named as the quartzite man. But later on that has been changed to semi-precious stones during Mesolithic period, dolerite, diorite, basalt and bones in Neolithic phase and lastly copper along with dolerite like stones during Chalcolithic phase.

After the interesting discovery of V. Ball, a dozen of scholars have undertaken serious attempt to define, classify and highlight the Stone Age cultures of Odisha; as R.D. Banerjee, P. Acharya, Worman, N.K. Bose, D. Sen, G.C. Mohapatra, B.K. Thapar, K.C. Tripathy, R.N. Dash etc. Now a day K.K. Basa, P.K. Behera, D. Sahoo, M. Chaule, T. Pradhan and few others are working in this field. Their explorations, field surveys and excavations yielded tremendous

archaeological materials and are quite helpful in reconstructing the activities of prehistoric man in Odisha.

The results drawn out of the study of Prehistoric tools permit some general conclusion about the regularity of their development through ages. This is an attempt to work out the fundamental tendencies of the observation of the stone implements, fabrication and the evolution of mechanism during the early stages of human history.

Phase Wise Modification of Tools

With special attention to the stone tool industry it can be noticed that gradual development of the tools took place from the simple but heavy core tools to flake and blade tools during the Palaeolithic period (Basa 2000: 80). In Mesolithic period further development had taken place which was one step forward in application of technology as well as selection of new kind of raw materials. The changes in the choice of raw materials took place due to the nature of fracturing and durability of different kind of stones, which often depended upon the mineral structures. As a result the microlithic industry, the characteristic feature of Mesolithic period, developed with the utilisation of the crypto-crystalline rocks due to its conchoidal nature of fracturing (Andrefsky 2005:24). But again during Neolithic phase further development took place which can be detected easily by the use of ground and polished implements. Again one group of tools of a particular phase further divided into some sub-groups according to their size and applied technologies, as in lower Palaeolithic period handaxes are divided into many types as Abbevellian, Acheulian, Micoquian, Almond shaped, Ovoloid etc, during the middle Palaeolithic period the scrappers divided at least 21 types as side scraper, end scraper, keel scraper, thumbnail scraper etc. and so on (Bhattacharya 2011: 49). And in all these cases different technological skills were applied to make out the tools used for different working purposes.

With a new technological application always man discards the older one, but in the case of primitive man it was never taken place suddenly. The older variety of tool and technology were in use for a longer period. As even during the Mesolithic period, which is characterised by the small tool industry, in Odisha the heavy tools also reported along with them from various sites (Ota 1986:47-56). The earlier belief about the sudden change of culture is actually in vague. The theory provided by Gorden Childe is not always appropriate. When we notice in Odisha there are so many Neolithic sites which reveal the polished tools along with the heavy pebbles. Human being always used the technology to facilitate himself in various works within a small time span. Perhaps during Neolithic phase the tool trading has been already started for which the tools and technologies were being transported and expanded one place to another in a certain time limit.

The working with different kinds of tools made of various semiprecious stones passed through a number of stages of development. From the original pebble or nodule with shattering stroked by different objects to get a sharp edge. Finally the strokes on specific stones made human able to prepare a finer variety of tool like handaxe or similar like tool. The number of

blows in making these tools increased which gives a typical shape like Acheulian variety found all over the world. The transition stage in this case means the number of blows increases day by day, but the manner is smaller than the earlier flakes. It was essential to make such fine shaped tools by providing light and frequent blows in a regular way to remove small parts of the surface of the tool being made (Reddy 1987: 77). Consequently percussion retouch is one of the methods of secondary working of stone with a striker stone, a more developed kind of dressing. Flake retouch only can be applied to the fine quality of stones like agate, chert etc and on only one edge, while pecking the advanced one was employed predominantly for secondary work on granular rocks. The pecking also differs in the direction of the blows which fall at right-angles to the worked surface. In the case of flake retouch the striker stone will fall on the designed stone at different angles ranging from 0^0 to 90^0, but always on the lateral edge of the stone.

The retouch mechanism is very early and can be traced back to lower Palaeolithic phase. During Acheulian times this retouching has reached its mature stage by removing very minute and beautifully arranged flakes from the surface to make the tool more efficient. Retouching method on stone tools was extensively used in the later phases of the Stone Age, as it was the simple way to treat the rough surface of the stone before grinding or blunting the sharp edge. But in later period retouching was not done with single striker but with an intermediary as stone, though sometimes might have been utilised the bone like organic material too. It neither has one advantage over the simple retouching as a blow over the desired stone is not even always nor can be controlled easily. Sometimes large flakes were removing out of the raw material which was not desired at all. An intermediary object (either stone or any hard organic material) with a narrow point reduced this possibility of removal of large flakes rather than a small one. But this method must not be widely distributed, because by using the organic intermediary to remove a flake from the stones is not so easy. One direct percussion on the raw material or pebble/nodule can do work with the stone compatibly, whereas the organic material cannot do the same. It needs lots of mastery over the mechanism and it is also time consuming.

The most important thing in prehistoric technology is that all over the world as far as stone tool is concerned technologies applied behind it are almost same (Chouley 2008: 46). No much variation is there. The type of tool technology that has been reported from Europe, Africa is also found from Asia, though the time phase sometimes makes the difference. So the given nomenclature should not be changed in any stage of research work. The basic observation regarding the suitable techniques employed by the primitive man throughout Odisha is quite interesting and the fundamental principles are going to be discussed as below;

Distinctive Palaeolithic Character:

During lower Palaeolithic period it has been evidenced that the transformation of raw material from one material to another took place due to the repeated experiment on stones by the primitive man. Though earlier primitive man was trying with the quartzite stones

but later shifted and experimented with the chert variety of stones. Use of meta-quartzite was very common in all the cases in Odisha. It is very important to note that during lower Palaeolithic period in Odisha we are getting the evidences of **ortho-quartzite** used prominently in Mayurbhanj-Keonjhar-Jajpur belt only (Fig. 2). In other part of Odisha though both meta-quartzite and ortho-quartzite were being utilised to prepare the stone tools but the earlier outnumbered the later. In Mayurbhanj-Keonjhar-Jajpur belt the availability of **meta-quartzite** is not less, but primitive man used to prepare his tools out of this is very rare.

Fig. 2: Ortho-quartzite tools from Keonjhar, Mayurbhanj and Jajpur

During the middle Palaeolithic period the flake tools became prominent. The angle of the sharp edge changed from a thick and relatively undulated edge to a sharper and regular working end. The angle reduced up to 25^0 in few cases during middle Palaeolithic stage. Retouching mechanism came into existence. In this phase as far as the raw material is concerned nowhere the evidence regarding the use of the ortho-quartzite to prepare the flake tool has been found. Most probably the knowledge of the primitive man regarding the stone quality had been improved. Therefore the use of ortho-quartzite is seen no more in this middle Palaeolithic period whereas meta-quartzite took the place instead of the earlier variety.

Though upper Palaeolithic tools are very scanty in Odisha, but not absent at all. Sometimes from surface finding it is very difficult to denote the character of the upper Palaeolithic tools. From no site in Odisha upper Palaeolithic tools have been reported in stratigraphical context, which has to be established yet by archaeologists. This period is marked with a great technological achievement. The new technique adopted in this period is marked by the prismatic core. The removed fine elongated blade flakes are much sharper than the earlier tool varieties. The angle of the edge reduced below 20^0 whereas the dimension varies from 5 cms to 12 cms and this made the technological revolution during primitive stage.

In general the Acheulian tool industry in Odisha comprises handaxes, cleavers, scrapers, cores, giant cores, polyhedrons, pointed flakes, irregularly flaked pebbles, and a variety of hammer stones. Handaxes repeatedly outnumbered the tools types in the collections made by the investigations by various scholars. Juxtaposing to this the cleaver variety is strikingly few and scrapers are mainly found profusely but in miniature forms.

The lithic assemblages from different sites found near major and minor water resources as rivers and rivulets are characterized by the use of pebbles and cobbles for the production

of Acheulian artefacts, while the sites away from rivers show dominance of tools based on the use of large flakes. Hard-hammer technique is the most commonly used method for flaking, as shown by the occurrence of a variety of meta-quartzite hammer stones and the presence of deep flake scars on the artefacts. Soft hammer technique is observed on a limited number of bifacial artefacts. River pebbles were initially used as hammer stones, but later on some of these pebbles served as cores for flake removal.

Distinctive Mesolithic Character

A well-developed blade technology is the characteristic feature of the microlithic assemblages all over world. This microlith industry is evident in blades, flakes, and nodules of various sizes. The flakes and blades of different shapes and sizes have been struck off from a variety of cores. A few cores, especially the prismatic ones, indicate that the blades have been removed in several ways i.e; in one direction, in two directions either from proximal end and side or from both proximal and distal ends, in three directions, or sometimes in multiple directions. The fluted cores and removed flakes generally show irregular scars on it. The blades and flakes have been removed by a soft hammer of bone or wood, by the punch, or by pressure technique. Mostly the microliths below 2cms with a shallow flake scar are the byproducts of pressure flaking mechanism. The punching mechanism evidenced with the deep scar on the striking platform and ribbed undulations on the flake and the core both (Fig. 3). The size of these tools varies from 1 cm to 4 cms mostly. A few small cores are roughly round in shape and have centrally directed scars as an indication that they were probably prepared before removing the flakes.

Fig. 3: Marks on Mesolithic tool surface (with a zoom of 60 X) due to punching mechanism (left) and Pressure flaking mechanism (right) found from Naliajhar, Jajpur

It is evident that during the Mesolithic period most of the used tools did not produce by the pressure flaking mechanism. The tool head (proximal end) mostly bears the proof of it. Both the surface exploration conducted by myself and the observation at Odisha State Museum the conclusion is that the microlithics were mostly produced by using the punching mechanism. Though the use of pressure flaking mechanism is found in few specimens but the number is very less. In pressure flaking mechanism the pressure being found constantly in touch with the core, the bulb of percussion never been pronounced. Usually this positive bulb of percussion is as tiny as a pin-head. The platforms in these blades are not thick as the point of impact and direction of the force is under control. Finally the blades found in Museum and other places produced out of pressure flaking is characterized by the numerous ripples and fissures along the scar of detachment.

The most important is the use of quartz materials along with other cryptocrystalline rocks to produce the microliths in Odisha, which was believed as the typically confined to the peninsular India. Technologically no difference could be noticed in Odishan microliths from the rest part of the Mesolithic India.

Special Neolithic Character

Odisha is divided into two distinct Neolithic cultural distinct units by the river Mahanadi. The northern part of Odisha is rich with the evidences of bigger and flatter axes, and chisels of both smaller and elongated varieties, whereas the southern part of Mahanadi yielded more of smaller tools. In this period the most important technology were employed to produce the chopping tools as the axes, adzes, chisels had a large sharp edge with large angle between 45^0-50^0. Further variation in distribution pattern of the Neolithic implement can be noticed at micro level. Mayurbhanj region is dominated by the heavier axes with broad cutting edges along with a small amount of smaller celts. In Dhenkanal district and parts of Keonjhar bar-chisels along with smaller chisels reported are different from the main tool type. But to the south of the river Mahanadi the tools are mostly small and lighter. In the districts of Koraput, Rayagada and Ganjam along with smaller tools, cylindrical heavy axes have been reported, which is believed to be south Indian influence on Odisha. Even ring-stones are found in large number from the southern districts of Mahanadi as Sonpur, Bolangir, Kalahandi, Rayagada etc.

As far as Neolithic ring stones are concerned, southern Odisha reveals the large variety, whereas in northern Odisha its finding is seldom. This feature is indicating two separate cultural units prevailed during Neolithic stage in Odisha. But the availability of ring stones from Naliajhar region in Jajpur district, which is located on the northern part of Odisha, indicates the special place of the site in the Neolithic history of Odisha as well as in eastern part of India. Because ring stone appears along with a special category of celts in a region, earlier no such combination ever been reported all over Odisha.

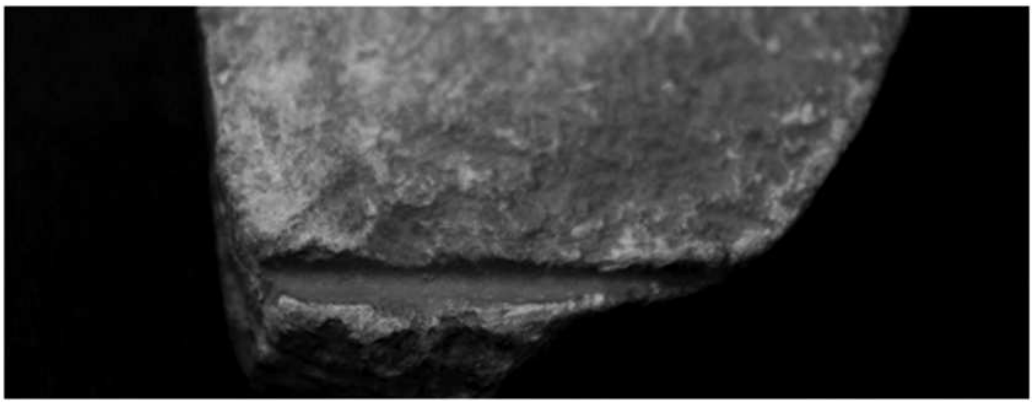

Fig. 4: Grooving line on the tool to make it detached easily

As far as the applied technology is concerned the Neolithic implements are varied from each other. There were four steps followed to prepare the Neolithic tools in Odisha. They are flaking, chipping, grinding and polishing. But in Odisha another technique has been appeared, that is the **grooving mechanism** (Fig. 4). In this context the most important site is Naliajhar, in Jajpur district, from where we can notice the Neolithic technology differs from rest part of Odisha (Sahoo 2013). Here the grooving technique has been implied to make out the Neolithic tools whereas at other places we are getting the evidence of chipping with hard hammer.

From various places in Mayurbhanj and Keonjhar, the same grooved Neolithic implements have been come to our notice, but not from the context nor in a successive order too. But the typical linear grooving pattern is peculiar to the adjoining regions of Dhenkanal, Mayurbhanj and Jajpur districts (Fig. 5). After choosing the suitable block of dolerite stone the manufacturer make linear grooves by envisaging the suitable size and shape of the tool with the help of a sharp chert or quartz flake.

Fig. 5: Linear grooving marks on the tools from Mayurbhanj (first two), Keonjhar.

This new mechanism helped the primitive man to obtain the fine shaped tool without doing much harm to the raw material. It is such a site where we can get the evidences of both traditional and advanced technology applied for Neolithic implements. This site also challenges the view of T.C. Sharma and A. H. Dani (1960). Though both of them made their view regarding the shoulder celt making process but here the grooving found on plain celts without any projection.

Neolithic stone tool available in Odisha can be classified into 12 (twelve) types as far as **tool typology** is concerned, what is against the earlier believed 14 types (Dash 1987:88). They are axes, chisels, adzes, shouldered axes, bar celts, ring stones, muller, hammer, flakes, corn crusher, point and rejects. Axe is the most dominant type of Neolithic tool in Odisha, roughly followed by chisels. The shouldered celt is perhaps the later addition to the Neolithic culture in Odisha.

Conclusion

The typical features noticed during the research work actually providing a special place for the pre-historic Odisha. Though most of the technologies were being utilised here are same with the other regions but still it having few mechanical contributions to the prehistoric cultures of South-Asia. At some places due to the ***cul di sac*** (seclusion) the cultural progress got stagnant and as a result it could not interact with other the then societies. As a result technological progress hampered. The Mayurbhanj district reveals a huge amount of Palaeolithic implements and due to seclusion, the technological aspect was neglected. It has been evidenced from the crude variety of handaxes that the use of **ortho-quartzite** as raw material during lower Palaeolithic period was prominent in this part of Odisha. But later on the primitive man interacted with other communities and as a result the evidences from middle to upper Palaeolithic we get no regional specification. But during Mesolithic period the technological advancement could not reach as **pressure flaking** mechanism played a vital role to produce microliths. In Odisha this pressure flaking could not get popularity and as a result the earlier punching mechanism was in continuation to produce bladelets. Again during Neolithic stage the confined interaction come to our notice when the evidence of **grooved mechanism** have been reported from parts of northern Odisha (Mayurbhanj-Keonjhar-Jajpur belt) to prepare celts, is quite different from the shoulder celt mechanism followed in Eastern-India. Hence the conclusion can be drawn that the due to the geographical location a few places in prehistoric Odisha during particular time phase were quite different from rest part of the region as well as of India.

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32

The Terracotta Horse of Bankura: Exploring the Cultural Roots of this Icon of Indian Folk Art in the Popular Religion of the Rarh Region of Bengal

Shreyashi Chaudhuri*

Introduction

Animals both real and fantastic, occupies an important place since early times in art and thought. Artists readily employed animal motifs, along with foliate designs as a part of their decorative vocabulary. Animal statues and images were used both as a focus for rituals and as physical manifestations of deities. For a few gods, cults developed where living animals became the focus of worship, fulfilling the same function as artistic representations. Of all the animals held in worship the horse is very significant. The most important domesticated animal in the history of man, the horse has been the keystone, at various points, of agriculture, military might and sport. The horse's size and form and its unparalleled speed and grace — first captured man's imagination thousands of years ago, and they continue to do so today because of their beauty, character, their spirit and their relationship to man.

The terracotta as a material is considered to be the first ingenious expression of civilization. Terracotta art occupies a consequential place in Indian life and culture. It has broken the principles of *śilpa śāstras* and gives itself enormous freedom in terms of imagination and conception allowing the potter to translate his thoughts and emotions into a work of art.

* Lecturer, Department of History, Calcutta Girls' College, Kolkata, India

Terracotta being the oldest art forms have witnessed the test of many civilizations. This paper attempts to analyse the depiction of horses portrayed in the terracotta art of Bankura and tries to establish their association with ancient fertility symbols and how the artists using ordinary material have transformed the horses into objects of extraordinary expressive power.

Rarh region (Bengali: রাঢ়) of West Bengal is the region that lies between the Western plateau and high lands (bordering Chhotanagpur plateau) and the Ganges Delta. Parts of the districts Murshidabad, Birbhum, Bankura, Bardhaman, Medinipur and Nadia constitutes this region. The vibrant tradition of folk art in West Bengal's Bankura district includes a variety of clay handicrafts. The district's most famous product is the Bankura Horse, a very stylised figure with a long neck and elongated ears, in warm terracotta colours. Although the idols of horses and elephants are produced in different places of West Bengal the horses made by the artisans of Panchmura, a village, about 8 Km. south-east of Taldangra Block Headquarters have gained the highest recognition (Santra 2011:127). There was a time when the clay horses were used only for offerings before the deities but in course of the last few decades the fame of the commonly known 'Bankura Horse' has reached many parts of the globe. The 'Bankura Horse' has now come to be regarded as a symbol of the artistic excellence of Indian rural handicrafts - a fact which finds confirmation in its use as the official crest-motif of the All lndia Handicrafts Board.

Evolution of the Narrative of Bankura horse

There is a very interesting story associated with the evolution of the horse. There was a tradition that outside the house of the zamindar, a person was made to stand on guard. His position had to be erect so that he was alert to do any work on being commanded. Inspiration for the terracotta horse was taken from the guard and the horse was made in a stylized form with an erect neck symbolizing duty and alertness. Another story relates its religious significance. lt was believed that in earlier days, when a child was sick, the parents asked the potters to make a horse of the size of their child so that they could present it in front of the deity for their child's fast recovery. Since the horse in its normal shape could not be modified in different sizes, this led to the stylization of the horse. Later on, the potters diversified into making different objects.

Process of Creation of the Bankura Horse

The tradition of offering horses and elephants as sacrifices to the deities at holy places has been prevailing since a long time, not just in West Bengal but rest of India (Santra 2011:127). Over the years the shapes and forms of these horses have undergone various changes at the hands of the potters of different regions. The procedure of producing these horses and elephants are almost identical everywhere. The style adopted by potters belonging to a particular centre is different from those chosen by artisans of other localities. Thus the shape, form and style are the distinctive features in determining the origin of the figures of the horses.

The preparation of the materials starts with removing the dust particles – small stones from the terracotta clay to make it pure and refine for the wheel work. The clay is generally impure and need to be refined, this is done by breaking the lump of clay and making it into more finer and powder grains, and also refining it by removing the sand particles either by hand or by using some fine nets. After the clay has been refined, the next step is to add the other raw materials such as sand, khar (dried paddy plants) and water. Generally the other raw materials apart from terracotta clay is available locally, and the kumbhkars (artists) does not have to go far to get these materials. The mixing of the clay, after adding the other raw materials is an important step in the process of making the horse; the better is the mixing of clay with other ingredients, better is the outcome of the final product. Generally the mixing is done by hands if the quantity of the clay is less, but if the quantity is more than kumbhkars prefers using their legs. The mixing of clay is followed by the wheel work, which is mainly to make the basic shapes such as cone, cylinder, etc., which acts as the main body parts of the horse or the elephant, for example, the four legs are conical, the belly is a cylinder and also the jaw of the horses is a cone, with a shape of inverted onion on it. The clay for the wheel work is much more refined and pure. The wheel work is done by the male person of the family, and its been done 2-3 times a week depending upon the demand of the products in the peak season (Shaw 2011). Next step is the drying of the product which has been made on the wheel. Although the drying is mainly a natural drying, and it takes around a day or 2 for the product become a bit tough, so that it is ready for the next step. Care is being taken to put the put the products in sunlight and also to protect it from rain. Sometimes the drying process is carried out on the corridor and not directly in front of bright sunlight, also care is taken that only the products are being dried just a bit and not become very hardened. Also small products are also covered with clothes to protect from excess drying during hot and humid day. After the wheeled products are dried a bit, the hand work is done, which is mainly the joining of the different parts made on the wheel and to assemble it together to give a basic structure and shape to the product. This step is primarily done by the male person of the family.

The detailed motifs work is done after the horse have taken a basic shape, and have dried a bit to carry the designing work, also before this step, the surfaces are scraped to make it even and smoother using the small piece of semi-circular bamboo (chiari), also additional clay are put where ever needed to bring the horse into a perfect shape. The Motifs work is generally carried by the female member of the family, and is done by bare hand only, and the motifs/decoration can be simple or can be more elaborate, depending upon the demand from the client. After final drying they are brought out of the room and heated in the sun. On the figures thus heated the colour coats are given and the main work of colouring is done before firing in the kiln. The whole work of colouring is done by women from natural colours prepared from clay. Firing is done after colouring. Generally the firing takes about 10-15 days, or even a month sometimes depending upon the size of the kiln. Generally the terracotta horses and elephants of Bankura are turned out in two different colours. The normal terracotta red colour is obtained by letting out the smoke through the vents of the kiln after firing, and the black

colour, by sealing the vents and not letting out the smoke. The red colour horses are more known and famous owing to the natural terracotta colour.

After the firing work is completed, the sorting and testing of the product is carried out, the damaged pieces are separated from the good ones, and are kept together, also there are few pieces which does not burn properly in the kiln and the outer colours does not comes good, so, those products are also removed. Finally the good ones are kept together for display and the damaged ones are either repaired or sold at a lesser price otherwise thrown (Shaw 2011).

Association with the Cult of Dharma Thakur

The original function of these terracotta horses was a ritualistic one. People offered them to Dharma Thakur , is village deity who is also known as Dharma Raj or Dharma Rai. Unlike Manasa, Dharma Thakur is associated with the sun, and brings rain and fertility. Such offerings are also made on the tombs of Muslim Saints whose worshippers do not necessarily belong to the Muslim community alone. The structure of' Bankura Horse' has been so fashioned as to symbolize a mark of devotion. Sukumar Sen says that Dharmathkur has come down with the so-called marginal castes (Sen 1945: 255). They formed a majority at one point of time and had no right to Brahmanical learning. Brahmins who started migrating to Bengal in large numbers during the Gupta period were mostly not the original inhabitants of Bengal and as such had no links with Dharmathakur (Sen 1945: 256). He was not a personal-god but a community-god worshipped by many at a time. He was worshipped by large groups of non-Brahmins such as Haris, Doms and Chandalas. Dharmathakur is represented by a shapeless stone daubed with vermillion and is normally placed under a tree or placed in the open, but sometimes enshrined in a temple. Dharmathakur is worshipped mainly by castes Bauri, Bagdi, Hari, Dom etc (Mitra 1972:52) Dharmathakur has been linked with many gods such as Sun-god Surya, Varuna, Vishnu, Yama, Shiva and even with Buddhism. Fundamentally, it all started with the magical beliefs related to harvesting in the primitive days and thereafter layers of Aryan, Hindu and Buddhist beliefs transformed it in many ways at different places and has now become too complex to trace its roots properly. (Mitra 1972:60)

Horse is the *Vāhana* or vehicle of Dharmathakur. However, in some cases the elephant is also used as a *Vāhana*. In the Rarh region where Dharmathakur is worshipped there is no end to the symbolic use of terracotta and wooden horses. Symbolic sacrifice of horses for fulfilment of wishes is common for many village gods and goddesses, but an assembly of terracotta horses of various shapes and sizes representing sacrifice on wish fulfillment is perhaps peculiar to Dharmathakur. It is a possibility that the horse symbolises links with the Sun-god. The festival associated with Dharmathakur is called Dharmer gajan or Dharma's gajan. Shiva's gajan and Dharmer gajan are similar. The horse is essential in Dharma's gajan but it is not so in Shiva's gajan. The sannyasis (hermits) of gajan are called *bhakta* of *bhaktia*. They observe certain rituals which are similar to those observed on a person's death. There is certain amount of confusion regarding the interpretation of the rituals as gajan is supposed to celebrate the marriage of Dharmathakur with Mukti. The skull dance is part of Gajan.

This is believed to be of non-Aryan origin (Ghosh 1959). Thus the horse attains a new and a different dimension. The external contour becomes the vehicle of internal reality, interpreter of essence. Its ritual significance is its strength holding out the prospect of human fulfilment. The reciprocal relationships have worked well for both the worshippers and the worshipped. Unlike prayers and sacrifice which does not show in the archaeological sources the votive horses can stay as material remains.

Symbolic Use as Votive Objects

Panchmura Horse stands on its four legs with long neck held high and the ears and the tail erect and straight. These clay horses are offered to all the village gods fierce or benign, male or female, though particularly to Dharmathakur the sun God. At Kenduli in Birbhum, clay horses are also offered on the grave of a Tantric saint named Kangal Kshepa, and Bengali parents even offer horses when a child first crawls steadily, on its hands and feet like a horse. Terracotta horses are also used as offerings to sacred groves like, Manasa than, gramadevata than, Jaher than etc. Thus a simple clay horse offered in advance of a vow and is worshipped as sites of deity's power. The devotees expect that the healing, fertilizing power of the deities is embodied in the horse. The clay represents the horse for a certain time: as it slowly disintegrates and goes back to Mother Earth, it is time for the creation of a new figure. The figurines can only be worshipped for a limited period of time. In fact, the new figure is often made from a handful of clay from the old figure to which more clay is added. The votive offerings - the horses, elephants and ram - are always made of clay and left in the open to go back to the mud they came from. It is interesting to note that only working animals are given as votive offerings. Animals such as leopards or peacocks, are rarely given as votive offerings. In Tamilnadu it is believed that if a vow of gifting a horse is made to the Mother Goddess and not kept, she will come to the person in a dream, sit on his chest and ask why he did not give her the promised horse. The sacred groves are intimately connected with the terracotta tradition in Tamil Nadu. The clay figures of the animals are an inseparable part of the sacred grove. Their worship includes wine, fire walk and visitations by spirits. The votive offerings the horses, bulls, elephants and ram made of clay is a momentous occasion on one auspicious day. The opening of the horses' eyes and its installation is a festive day for the village, with offerings of pongal for bountiful harvest. Finally, the terracotta tradition is linked to Mother Earth as a symbol of fertility, and the many offerings to her are in fulfilment of vows for good health, a bountiful harvest and for the gift of life. The wealth of the grove, the richness of the plant life within and the life- and health-giving properties of these plants (which are generally medicinal) are all gifts of the earth, who is thus venerated as the Mother Goddess, the Great Earth Mother. Many tribals, such as those in Gujarat or Karnataka, may only dedicate clay pots as votive offerings. But it is interesting to note that what is, today, a village tradition, has deep roots in ancient past which continue to be respected by the tribes.

Conclusion

There are a scant handful of materials that successfully renew their relevance decade on decade, while maintaining the authenticity and sincerity that rendered them key to building

our ancient worlds. What makes the end result unique from region to region is the difference in clay type and colour as well as the sensibilities of the artist, not to mention the varied culture, religious practices, and traditions. The horses have a beautiful grace, spirit and freedom. The terracotta horses rise to fame as a medium for timeless creative production symbolism and cultural reflections goes far beyond. It has both ritual use and aesthetic use which makes it unique. The terracotta horses of Bankura offers a blend of symbolism, history and neutrality with enough strength to carry its own tale. Its singed orange and red hues sets it apart from other colours of the moment is the inherent intensity of the material as a source of context, allowing terracotta to transcend cultural expiration for decades and even centuries to come. The terracotta horses are an integral part of Indian culture and heritage. What's more, the art form has not been lost as many others have; rather it is flourishing and getting richer even now with artisans uninhibited in their imagination and creativity. Today, India exports these exquisite terracotta horses making the art form a rewarding one for the artisans. However the younger generation moving into the cities in the wake of globalisation, makes this hereditary pottery tradition under threat.

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Idea and Status about Conservation for Organic Cultural Relics in Sri Lanka
(Palm Leaf Manuscripts)

P.R. Asanka Buddikasiri[1]

Introduction

Palm leaf, also known as Ola leaf, has been the principal career of knowledge in Sri Lanka from early Anuradhapura period to 20th century, for more than 2300 years. Although no original manuscripts written by the ancient authors are not available at present, copies of such manuscripts made in later periods, especially from 17th –early 20th century are scattered throughout the country in Buddhist temples and sometimes with individuals. Certain concerted efforts made during the colonial period as well as after the independence resulted in collecting and preserving some of the manuscript copies in a few. It is to be noted here considerable number of palm leaf manuscripts are collected and preserved in foreign soils also. The present study is an attempt to assess the efforts taken in Sri Lanka in the sphere of collection, preserving and provision of access to such manuscripts. Ultimate objective of any document is to divulge its contents to interested users. In order to this two pre-requisites are to be completed. They are the collection of documents and preserving them for future users. This applies to palm leaf manuscripts also. Transition from an old medium of recording to newer medium; always leave behind a certain amount of documents produced in the old medium untouched. When printing

1. Former demonstrator, social science research center, university of Kelaniya-Sri lanka Former Archaeological Excavation research Officer-Central Cultural Fund-Sri lanka Archaeology (sp) kelaniya-srilanka….. Archaeology(MSC)Sichuan university-china(on going) Email.asanka.buddikasiri8@gmail.com

was introduced into Sri Lanka not all palm leaf manuscripts found their way to printing. Only selected manuscripts were put into print and the rest was left behind. This makes it necessary to collect those forgotten manuscripts as well as the base manuscripts of printed works if we really need to benefit from the intellectual heritage of the country. Collection demands organization and preservation. Provision of access to manuscripts can be made successfully once collection and preservation is completed. In Sri Lanka collection and preservation of palm leaf manuscripts are still in a poor stage. Except those collected in libraries no concerted efforts have been taken by the government or private sector for the purpose. It was found that at present only the Faculty of Social Sciences, University of Kelaniya is engaged in the collection and preservation of palm leaf manuscripts in digital form. The collection is around 500,000 leaves. However, the provision of access to manuscripts collected in certain libraries has been done successfully through extensive bibliographies. Catalogues to the collection of manuscripts in Colombo Museum Library is an example. **Somadasa's** catalogue of Palm leaf manuscripts in Ceylon is just a title list of manuscripts found in Buddhist temples in the country and the list has little use at present as some of the temples are not in existence and the listed works are not found by now in most of the temples. As most of the palm leaf manuscripts are on the brink of extinction it should be a national priority to collect, preserve and provide access to them using modern technology. Libraries have a big role to play in the process.

Preserving Ola leaf Manuscripts.

The inimitable knowledge on medicine, science, technology and etc. contained in the ancient Ola leaf manuscripts of Sri Lanka might be lost to the world forever if a comprehensive program for preserving Ola leaf manuscripts in not commenced soon. The National Library is planning the preservation process to achieve the two goals; they understand the value of the Ola leaf manuscripts preserved in their original form, and make arrangement to preserve them using chemical and traditional treatment.Two traditional herbal extractions were tested to preserve the Ola leaf manuscripts in its original form.

- Experimental Method

  This study investigated microbial and insecticidal activation against the two herbal extractions named as NL and DNA believed to have been used by our ancestors.

- Extracted samples

  NL and DNA herbal emulsions were extracted.

- Strains and insects

  The fungi strains1 (mould) Cladosporium cladosporioides (H1), Aspergillus sydowii (H2), Penicillum citreonigrum (H3), Penicillum toxicarium (H4), penicillum corylophilu (H5) and Alternaria spp (H7) commonly found in paper materials were obtained from the micro lab of the National Research Institute of Cultural Heritage (NIRCH) in South Korea. Bacteria strains that were isolated from the ancient Ola leaf and fresh untreated

Ola leaf used this experiment. For the analysis of insecticidal activities, Lasioderma serricorne (Cigarette beetles), which were bred in NIRCH bio-lab, was obtained. Lasioderma serricorne is the most dangerous library pest found in Sri Lanka.

- ❖ Procedure step
  - ➢ Procedure 1 - Assessment of Antifungal Activation

Pasteurized paper discs were placed on the cultured plates. The two types of herbal extracts were made to be absorbed in Pasteurized paper disc by 50µL by using paper disc susceptibility measuring method. Prepared PDA and cultured the mould species (H1,H2,H3,H4,H5,H7) in same concentration (3x106 CFU) using spared plate methods. Petri dishes were sealed up with sealing tape. Samples were incubated at 28°C for 4 days. Control samples were established adding the same amount of mould species without herbal extracts. Prepared batches of two samples. Antifungal activities were observed and obtained the inhibition zone diameter (GZD).

- ➢ Procedure 2 - Assessment of Antibacterial Activation

Six bacteria species were isolated from ancient Ola leaves and fresh untreated Ola leaves. The top of each colony is touched with a loop, and the growth is transferred and spared in medium of Luria bertani in the aseptic condition. The two types of herbal extracts were made to be impregnated in Pasteurized paper disc by 50µL by using paper disc susceptibility measuring method. Petri dishes were sealed up with sealing tape. Control samples were established adding same amount of bacteria species without herbal extracts. Samples were incubated the in 28°C for 2 days. Prepared batches of two samples. Antibacterial activities were observed and obtained the inhibition zone diameter (GZD).

- ➢ Procedure 3 - Assessment of Ant insecticidal Activation

Pasteurized filter papers were fed with 200 µL of herbal extracts in three concentrations. (0.3gml-1, 0.1gml-1, 0.05gml-1). 20 species of Lasioderma serricorne were positioned in each Petri dish. The filter papers were installed indirectly with test insects at Petri dishes. Control samples were established feeding 70% Ethanol to the filter paper. Bred in incubator at 28°C and 60% RH for three days. Number of dead insects was examined every 24 hour, for three days.

- ❖ Results

Anti-Fungal Effect of Herbal Extracts

Herbal extractions of DNA and NL controlled growth of three species of fungi in PDA media which were incubated strains of (H1), Aspergillus sydowii (H2), (H5) and H7)and DNA formed growth inhibition zone of 14mm, 14mm, 13mm,13mm and NL formed growth inhibition zone of 13mm,12mm,13mm,12mm.

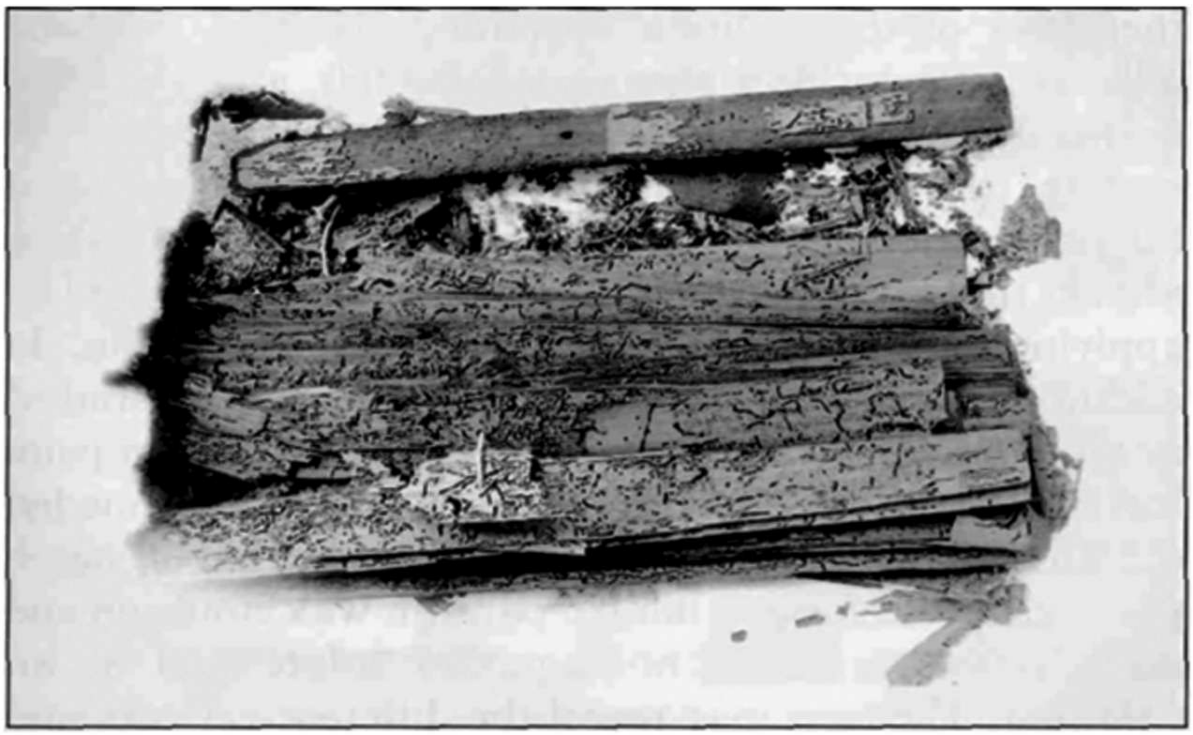
Anti-Bacterial Effects of Herbal Extracts

Herbal extractions of DNA and NL controlled the growth of species of bacteria, which were obtained from the surface of new untreated as well as ancient Ola leaves. Growth inhibition zone of three bacteria species (E6), (E3) and (E4) obtained from new untreated Ola leaves and two bacteria species (E2) and (E5) isolated from ancient Ola leaves were measured to confirm the antibacterial activity of DNA and NL herbal extracts.

Insecticidal Effect of Herbal Extracts

Both DNA and NL didn't show any insecticidal effects against Lasioderma serricorne. On the third day of the experiment several dead insects were found. It could have been a natural death. However, insects gathered at one direction in the Petri dish had tried to avoid areas of the filter paper, which were fed by the herbal extraction.

Both herbal extractions of DNA and NL showed mild antifungal and antibacterial activities. Results confirmed DNA is more active than NL. NL contains several ingredients rather than DNA. Results confirmed that both herbal extracts are not highly effective against the insect Lasioderma serricorne, but it was observed that most of the insects had gathered in one direction of the Petri dishes, which were the extraction free areas. They may have tried to avoid getting or contacting the herbal extractions. These extractions have some effects against insects. These are not insecticide effects but it would be an insect repellent effect. The herbal extraction of DNA was selected to use in traditional conservation before digitization.



Various factors of deterioration reduce manuscripts to such a state.

Insect attack

Insect attack is by far the most widely reported problem with palm leaf manuscripts and it has been observed that Palmyra leaves are more prone to it. The insects identified are *Gastrallusindicus,*termites, silverfish, bookworms and cockroaches. While insects migrate from one infested collection to another, or from surrounding areas, at times the wooden cover boards themselves could be the source of insect infestation. The symptoms of insect attack on palm leaves are the presence of neat, pinhead-sized holes, irregularly eaten edges, the presenceof larvae which eat the leafy matter forming channels in such a way that a paper thin surface remains intact on one side of the folio.

There have been a number of traditional measures used to avoid insect attack. For instance, manuscripts were often stored in kitchen lofts where smoke kept insects away; and the boards between which the folios were stored were often made of a hardwood with insect resistant properties, such as that of the Neem tree.

Natural insect repellents

It has been common practice to keep a variety of insect repellent oils and herbs with the manuscripts. The bark, leaves, seeds and wood of Margosa, the Neem tree (*Azadirachtaindica)* have been used in India for millennia for their medicinal and insecticidal properties which are attributed to phenolic compounds and to the active ingredient azadirachtin. One report mentions that the slightly sticky greenish yellow oil - produced by pressing the Neem seeds - loses its insecticidal and medicinal properties if refined. In Sri Lanka, from *dummela*, the fossilised resin of the Hal tree, a black liquid known as 'resin oil' is distilled and used as an insect repellent.A number of oils like citronella, *lemon grass, clove, sandalwood, black pepper, palmarosa, gingili, dudu*and artemisia [26] have been used in various regions.

The applications of many more natural biocides have been touched upon in the literature. A combination of sweet flag, Acorns calamus, cumin, cloves, pepper, cinnamon, and camphor is considered to be an effective insect repellent for a period of six months. What role each ingredient and their proportions play has not been defined, however. Similar is the case with another observation in **Wickramsinghe** that mentions the use of *dummela*oil with a small quantity of *gorakamaliang,*a resin, and divullatu, a gum. With the help of such profusion of seed information, these indigenous herbs and oils of Asia could be thoroughly researched for their application as insect repellents. Such research would contribute to the non-invasive methods of protection for the millions of manuscripts in the world's collections. Studies like this could be collaborative, involving entomologists, botanists, chemists and art conservators.

Cleaning

Because the leaves exhibit relatively little water absorbency, it has been suggested that incised leaves be cleaned with distilled warm or cold water, applied with a cotton ball wrapped in fine cloth to prevent the cotton fibers from 'catching' the irregular edges. Additives like a

non-ionic detergent, glycerine in water (1:10) or 0.2% sodium salts of ortho-phenylphenate (COONa-O-OH) have been proposed. Once done, the leaves can be rubbed dry with a cloth. There is, however, the accompanying possibility of residues depositing in the leaf fibers.

Cleaning and imparting flexibility to palm leaves using oils, moisture and solvents carry inherent risks.

For cleaning surface written or illuminated folios, an ethanol bath has been recommended, with the addition of glycerine in equal proportion, as has been the use of 5% isopropanol (C_3H_7OH) and 1% magnesium bicarbonate ($Mg(HCO_3)_2$) applied by swabbing or soaking. Suggestions like the use of 1,1,1-trichloroethane, followed by boiling with 5% camphor oil in alcohol, or the useof carbon tetrachloride ($CC1_4$), acetone (CH_3COCH_3) and benzene (C_6H_6), do not mention the possible effects on the leaves after cleaning is completed. Other than further research, there is an obvious need to be sensitive and conscious of the implications of conservation interventions.

Re-inking

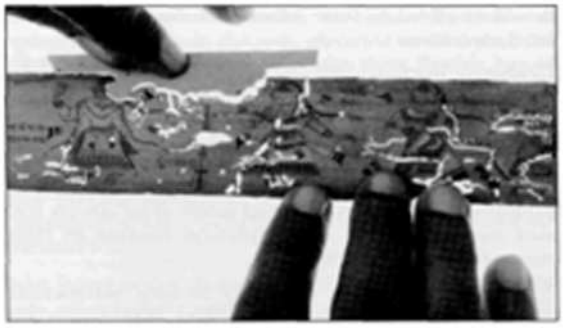
When the binders in the inks weaken and pigment particles fall away, especially if the incisions are shallow or when dye inks fade, the incised text becomes difficult to read. The term 'fading of ink' is commonly used to refer to this loss of legibility of the incised writing. During re-inking, a process discussed earlier, it would be worthwhile to use the particular gums, or plant juices, which also have insecticidal and anti-fungal properties. As the inking process requires the ink solution to be applied over the entire surface of the leaf, antibiotic properties would envelope the entire surface.

Inks have been consolidated with a 5% solution of cellulose acetate (CA) in acetone and with a 5-10% solution of Bedacryl in benzene or acetone. One need to weigh the risks

and benefits of introducing consolidates as compared to simply applying fresh ink. After all, is the purpose only to render the incisions visible or is it also to preserve the 'original' ink particles?

Tear repair and treatment of leaf edges

Due to the sessile venation of the palm leaf, tears develop horizontally more easily than vertically. In fact, it is not possible to have a clean vertical tear on a palm leaf folio unless it is cut with a blade. Longitudinal and transverse cracks can be repaired using silk gauze, chiffon or tissue paper, along with acrylic rubber adhesive, acrylic emulsion adhesive or starch paste. Edges of folios that are brittle and perforated by insects are broken and lost, often due to careless flipping of the leaves. Edges are alsodamaged when the covers are smaller than the dimensions of the folios.



Traditionally if the lacquer is too thick it may harden the edge, and therefore perhaps plant gum could be considered as an alternative. In Sri Lanka, a small flame is used to singe the frayed edges. To protect edges and facilitate easy handling, inlaying is also done using handmade paper.

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Idea and Status about Conservation for Organic Cultural Relics in Sri Lanka
(Palm Leaf Manuscripts by Digitization)

Rangika Madhumali*

Sri Lanka is a country with glorious history and enriched with precious documentary heritage. Since the museum and National Library a guardian of the rich documentary heritage of the country, it has a keen responsibility to protect them as in original format as well as disseminate knowledge inscribed in the documentary heritage among the younger generations in the country. Palm leaf manuscripts are one of the native writing medium that our ancestors had used to communicate their thoughts and keep records in Sri Lanka's ancientsociety. These are basically prepared by pre-treating leaves of the *Coryphaumbraculifera* tree, which was commonly found in Sri Lanka at that time. Palm leaf manuscripts have been a very popular writing medium since the 12th century A.D. It continued to be the main medium till paper was introduced by the Dutch Colonialists during the 17th Century.

The 3rd century B.C. to 12 century A.D. was the golden period of Sri Lankan history, according the historians. Our ancestors constructed huge pagodas, irrigation systems, storied buildings, reservoirs as big as the seas, etc. especially during that period. Modern technology

* Former Assistant lecturer, Department of Archaeology, University of Kelaniya - Sri Lanka. Former Archaeological Excavation research Officer- Central Cultural Fund - Sri Lanka Archaeology (sp) Kelaniya University Sri Lanka, Archaeology (MSC) Sichuan University China (on going) Rangika thilakarthna8@gmail.com

couldn't complete such constructions even today. Not only in the field of construction, but various other fields such as medicine, religious philosophy, etc. were in a highly developed stage at that time.

Palm leaf manuscripts had been the only writing medium at that time. Hence, knowledge on science, technology, religion, philosophy, astrology, medicine and other areas of knowledge had been inscribed on Palm leaf manuscripts by our ancestors. Ancient temples became the guardians of these documents when foreign invaders attacked our country on several occasions. Our ancient society had a close connection with temples. They were also education centers. These temples generated, disseminated and deposited the knowledge. These were one of key duties of the temples, in addition to religious activities. Scholars gathered around the temples and these temples automatically became knowledge depository centers.

Palm leaves had been the only writing medium that had been passing indigenous knowledge from generation to generation. Considerable numbers of Palm leaf manuscripts have been protected in ancient temples until now. Palm leaf manuscripts contain invaluable information. Some Palm leaf manuscripts, especially on Buddhist religious teachings and practices, have been printed as books, but there are many manuscripts locked in almirahs at ancient temples that have not been read by anybody. Since monks believe these manuscripts reveal the route to treasures hidden by past kings, nobody gets permission to unlock the almirahs to read manuscripts for any purpose.

Sri Lanka is a tropical island located in the Indian Ocean just below the Indian peninsula. Its situation has created the high humidity and temperature climatic conditions in the country throughout the year. Palm leaf manuscripts deposited in the temples and libraries have been affected by these climatic conditions. Environmental parameters and unsuitable storage conditions have created conservation problems and accelerated the deterioration process of the Palm leaf manuscripts. It is obvious that almost all the Palm leaf manuscripts, which are considered as treasures of the documentary heritage of this country are in danger, unless the National Library takes comprehensive steps, immediately, to rectify this problem.

The following conservation problems have been identified in the Palm leaf Manuscripts Collection Program, in substance.

Leaves sticking together

Some leaves of the Palm books tend to stick together. Excess oil on the leave is one reason of this. In addition, the oil, at high temperature conditions, results in this sticky condition. Fading letters - The writings inscribed on Palm leaf manuscripts became faded due to environmental conditions

Loss of flexibility

This is due to loss of oil on the Palm leaves. At the very low RH levels and the high humidity conditions, the leaves dry and become hard. Such dry leaves can easily be broken

into pieces. Pest attacks - Palm leaves are easily damaged by insects. They make holes through the leaves and make them unreadable as well as deteriorate.

Microbial attacks –

Fungi and bacteria have been found and isolated on the manuscripts. Favorable humidity and temperature for the microbes and nutrias substrate provided by the Palm leaf itself create this condition.

Discoloration –

Palm leaves have a tendency to get stained because of bio-deterioration.

Several collections of Palm leaf manuscripts are deposited at Depository Libraries in the country.

The National Library, as the major depository library in Sri Lanka, has a huge collection of ancient Palm leaves. The Conservation and Preservation Division of NLDSB focuses its attention on preserving them, as it is a valuable collection of the library.

Preserving Manuscripts by Digitization

Digitization is a practical solution, which is able to satisfy readers who are interesting in Palm leaf manuscripts. The concept of digitization of library material as a preservation method is a new idea for our library. Actually it is still a conceiving idea in library sector in the country. Lack of knowledge about this modern trend of digitization and budgetary restraints for buying instruments are main problems confronting us. Palm leaves manuscripts are available in different sizes. Normally, its width is 4 to 5 inches, but its length varies from ½ foot to 3 feet. A manuscript normally consists of 10 – 250 leaves. Even large size scanners available in the country cannot accommodate some of these manuscripts. On the other, hand scanners are very expensive. The A0 size scanner, which is named the face-up scanner in the market, abounded in libraries for digitizing books. These are really suitable for the digitization process.

Scanning is an easy and convenient technology that could be used for the digitization of books. In this particular occasion, such scanning technology is not important due to several reasons. Sizes of the manuscripts vary from ½ foot to 3½ feet. Sometimes, scanning the surfaces alone is not enough. The nature of the Palm leaf manuscripts is completely different to that of books. For instance, in books printed letters are found on the surface of the paper, but in the case of Palm leaf manuscripts, the letters are engraved on the surface of the leaf. Each letter has a depth. The Palm leaf surface is not smooth like paper, and not clear and even as, is paper. Some Palm leaf manuscripts are very fragile and difficult to handle as they are large sized documents. The A0 type face-up scanner, attached to two digital cameras is suitable for this purpose. But several disadvantages are encountered in this instrument. As described earlier, most of the Palm leaf manuscripts are still found deposited in ancient temples in various part

of the country. Digitization should be carried out at the respective temple premises. Handling a face-up scanner in a temple, which has limited facilities, is a very tiresome job. Several workers are required to perform this task. Transportation is also a difficult problem. Scanning Palm leaf manuscripts using face-up scanners is a very costly job. We cannot be sure that the final picture received after scanning would trace all the characteristics of the manuscripts in advance. It might not provide / indicate depth of the letters as a three dimensional picture of the Palm leaves. Readers prefer to actually see the real Palm leaf manuscripts. So, three-dimensional pictures are very important to fulfil the readers' desires.

Digitized by camera is the best and most important method. The cameras are not heavy; one worker can arrange the instruments. In addition, a vehicle for transportation is not necessary. The working area is illuminated by two lights. Normal daylight can also be used.

The National Library of Sri Lanka was able to develop this economically easy, user-friendly method for digitizing oversized Palm leaf manuscripts, after investigating issues regarding digitization of Palm leaf manuscripts and available technologies in the country. This method is the result of a combination of three fields - traditional conservation treatment methods, photography and computer literacy. This economically easy, user-friendly conservation and preservation method could be described in three steps.

Step 1 –

Brittle Palm leaf manuscripts are treated according to traditional treatment methods.

Step 2 –

Digitization of treated palm leaf manuscripts bya digital camera.

Step 3 –

Editing and feeding the data thus obtained into the database.

Step 1

Brittle and deteriorated Palm leaves manuscripts are selected from the library for digitization. Letters on the Palm leaves fade when they get aged. It is very difficult to recognize the letters with normal sight or through digital camera, which is unable to capture the clear picture without blacking of the letters. A Conservator has to blacken the letters using finely powdered charcoal derived from Tremaorientales. The National Library of Sri Lanka was able to invent a mixture of herbal extractions, which is similar to the extracts used by our ancestors from earliest time for protecting these manuscripts (DNA extraction). This solution reacts on the Palm leaf and protects it in various ways. Herbal extractions give high flexibility to brittle leaves. In addition, applying charcoal powder mixed with herbal extractions gives bright colour to faded letters. Some ingredients of the extract react as fungicides and bactericides. It prevents

the growth of micro-organism on Palm leaves due to high atmospheric moisture conditions in tropical climates. The smell of the extract reacts as an insect repellent and protects it from library pests. The adherence property of this extraction is made to good use and preserves Palm leaf manuscripts for a long time.

Step 2

At the second stage Palm leaves are photographed by digital camera. Suitable technical devices and necessary technical support are essential at this stage. Over size images taken by camera are not evenly clear and sharp at the edges, especially when the leaf is very long. Sometimes, the image hasn't enough brightness to be read easily as well. Sometimes the image is not like in the original leaf, most probably because its colour is differing from the original one.

Selecting a suitable camera is a very important factor in this process. Several technical aspects of camera were tested. For example, different lens, apertures, shutters speeds and film speeds were investigated. However, more than 20 mega pixels, full frame sensor 36X24 camera, which can accommodate 50mm lens, gives clear sharp image at the digitization process. Even long leaf (1m) can be captured as a clear picture by this camera. The Copy stand is an important device, which is essential for this process. It provides support to the Palm leaf which place on it and parallel to the camera lens hang at the upper level. Camera should always level to the supports where the Palm leaf is accommodated and whole the document be care to level its floor during the whole process. For the best results, the working area should be lighted with two flash bulbs, of at least 300W. For the best results lights could be softened by umbrellas for each light or by using soft boxes. Diffused light in this direction strengthens can be controlled remotely and more effectively by using radio slave flash trigger. Verify the colour profile of the computer ensures that the colour displayed on the screen are as smaller as possible to colour recorded by the camera. The colour should be adjusted for the largest resolution made on the computer. This is very important.

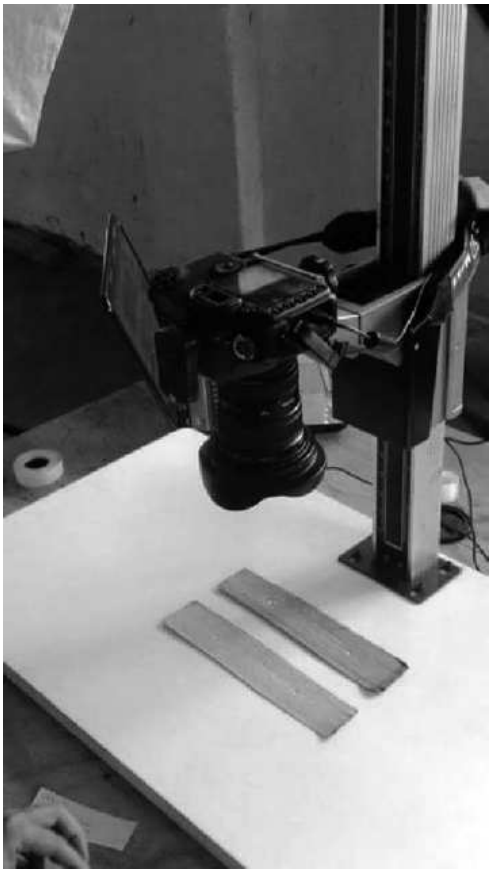
A particular book of Palm leaf manuscripts consists of a bundle of leaves. Each bundle is photographed and the record is digitally stored as < name of manuscripts cropped > JPEG files.

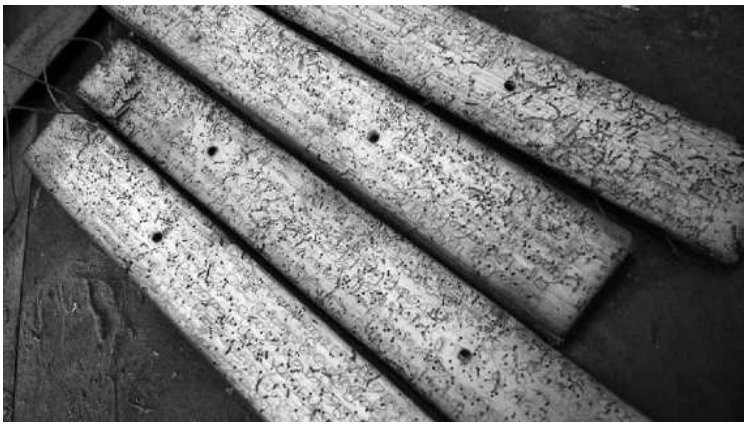
Step 3

The computer operator edits the files using Adobe Photoshop and converts the files to pdf format. At the final Meta data is feed to computer database created by Information technology division of the library (Figure 3). Digitization Palm leaf manuscripts by camera is very cheap and practical method. This method might be very important for libraries in the country which having traditional library materials as Palm leaf manuscripts. It would be clear solution for the institutions which getting limited annual budgets and are able to start a digitization project at the minimal level. Not only a digital camera, but also even cheap manual cameras can be used instead of digital camera. Less budgetary requirement and less

human resources are needed to carry out this digitization process. Hence, it is a practical and realistic method for developing countries. The tropical climate as well as high humidity and temperature badly affect the manuscripts. Therefore, all the digitized manuscripts can be stored in a room equipped with a climate control system. It would help to preserve the original manuscripts from harmful environmental parameters as well as the damages caused by physical handling by the readers.

Readers can access the database (Figure 4) and obtain the desired information in a very short time. It would save the valuable time of readers and researches. Researchers can even retrieve manuscripts on their desktop at home via the internet instead of loitering in the library. However, at this stage the National Library wouldn't link the database as an online resource due to laws and ordinances related to intellectual property issues. In the near future, the National Library would be able to provide online searching and retrieval facilities, with some restraints.





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Impact of Collections and Visitor Research on Inclusive Museums Today

Sudakshina Mukherjee*

The various international government systems make discrepancies in legislations between countries inevitable. There are several laws relating to cultural heritage which have an impact in the operation of museums. the movement to protect art and culture property gained new momentum after the 2nd world war during which unprecedented amount of art work and cultural property were confiscated from individuals as well as institutions, thereafter a number of conventions were drafted and created to establish guidelines for the protection of cultural heritage during war.

Illicit trafficking caused UNESCO to develop the 1970 convention on prohibiting and preventing the illicit import and export and transfer of ownership of cultural property. with the development of online and growing importance of the role of museums in today's society there is every possibility of increasing new laws about museum collections.museum collections can involve social inclusions in the form of exhibitions and living heritage.

Inclusive society encompasses of different individuals having varying identities and personalities, like, aptitudes, perceptions, beliefs, customs, traditions, and several other factors pertaining to their existence. Some social groups which are under represented in such museums are differently-abled, minority groups, groups based on gender discrimination, youth

* Rabindrabharati University

groups, educationally deprived groups, groups based on different economic background and educational background.

Some impediments to activities for inclusive museums encompass the physical accessibility of the museum for all types of visitors, opening and closing hours of the museum, proximity to a public transport centre, easy landmarks to locate the museum, ramps and railings, wheelchairs, lift, drive in facility, parking facility canteen etc.the visually or hearing impaired and different-abled must have sensory facilities in inclusive museums.interpreation of museum display is essential for all types of visitors in inclusive museums such as children, visitors with learning disabilities, senior citizens, unlettered visitors etc.

At times some museum entry tickets are too high priced for visitors of the middle income and lower income group which may hinder group visits or heritage tours. Walk in dioramas, touch screen kiosks, guide o phone, audio guides, digital storytelling along with live interpreters, visual aids, audiovisual aids, models two dimensional museum aids can help to create a communication channel between visitors and collections in museums. Museum collections include various types of objects ranging from archaeological objects, anthropological objects, dolls, toys, sculptures, painting, coins, flok art objects, zoological collections botanical specimens, geological specimens, terracotta objects, ceramics, metals, arms and armour, furniture, jewellery, wax models, books, manuscripts, art objects etc and each and every type of objects needs to be presented and interpreted in an appealing manner to arouse curiosity among museum visitors.

Besides these, multipurpose museums, heritage centers, eco-museums, open air museums, children's museums, maritime museums, philatelic, railway, air force, police museum. Military museums and some of the new types of collections can prove to be attractive and informative to the present generation. The question regarding what kind of objects are to be collected and the process of collection they are under constant transition. If there are duplicate or triplicate objects of the same type in the same museum, the question about their display, storage, and exchange becomes debatable. The process of acquisition has become stringent in recent years particularly in relation to objects which belong to the colonial period. The question of return and restitution of museum object is also implicit in these cases.

At times there were some discrepancies in legislation of different countries which affect the functioning of museums on a day toady basis. After the Second World War the movement to protect art and culture property took a new dimension during which a large number of art work and cultural property were confiscated from individuals and institutions. This led to the creation of Hague convention in 1954. As a result of illegal art trafficking the convention on the prohibition and prevention of illicit import, export and transfer of ownership of cultural property was developed in1960. The UNIDROIT convention on stolen or illegally exported cultural objects is complementary to UNESCO convention. Similarly new laws are now being framed regularly keeping in mind the growth of online role of museums in the present context. at present visitors form the backbone of museums and museum's collection are of little use

unless they are utilized by visitors. Museum are visitor-centric and the concept of museum management today.

Museum audience actually describes all people who come into contact with heritage and museum collections as well as people in the local community and wider community which the museum serves; audience development plays a crucial role in community development, outreach educational activities as well as museum marketing. Audience development encourages participation in museum activites.it ensures the enrichment of experience of visitors by helping them to learn more deepending their enjoyment.

Visitors development includes the following criteria to convert non visitors to visitors and visitors to repeat visitors, to enhance museum access, to offer multiple experiences, to engage visitors in hands on and brain-eye- hand co-ordination activities. Visitors are the best evaluators of museum collections and exhibitions.vissitors and deepen visitors' engagement in museums. Repeat participation of visitors in museums is a meaningful step in measuring the impact of museum on visitors through this increased meaningful visitors research. Diverse evaluation tools can be used which help to understand the preferences actions and curiosities of its audiences. Museums gain valuable insight for nurturing relationship between visitors and museums through this increased knowledge. This knowledge also leads to increased mission impact in the communities museums serve.

Research survey can be carried out at museums and analysis of the survey may result into audience clusters such as participants, observers, enthusiasts as well as independents. Some museums can be kept open during late nights or until midnight on specific days in a month to attract museum visitors; e.g the Dallas museum of arts remains open till midnight on special days in a month. Programs for visitor's engagement with museums may be designed to create and increase the potential for relevant and engaging visitor's experiences. Popular talks, lectures, demonstrations, discovery activities are active dynamic interpretative features of a museum. A barrier free museum environment with welcoming docents and informal learning situations can motivate visitors. Every museum can form its own" friends of museum" group to enhance individual or group participation in museums. The friends group is a tool of the digital engagement or onsite or online activity of a museum which creates incentives for visitor's participation. It is also a tool of visitor research providing staff with data that enhances the better understanding of visitors and their participation patterns, depending on their concentration, diversity or repetition.

Data collected from visitors research can monitor the relative success of educational programmes and experiences that emerge from continued visitor interaction at the museum. Museums are at their best when they create awe, surprise and delight. The museum becomes a creative space and provides real life experiences which are overwhelming and transcendent. Museums have to be clear regarding their purpose and the unique value they bring to their visitors. Museums must employ best practices from different sectors to help visitors access museums and feel important. Museums have to be made inclusive and accessible for all types

of visitors. It is imperative for museums today to know their visitors and to understand how they process or seek information from museums. Now a days museums provide tools that allow visitors to uncover a deeper understanding of their collections, helping them to see connections and context that is neither didactic nor overwhelming.

Museums in India are experimenting with digital technology to cater to the younger generation of today. Some museums like Brooklyn museum in the US use smart phones multimedia and an app to help to answer to visitors questions in museum galleries as they move through them. In some museums a website can play an important role in enhancing and extending the overall visitor experience. The online community interacts with museums by enabling artists to design and recreate their website. Museum also recognize the desire and expectation of visitors to engage with museums beyond physical space. Museums have to work out situations to find out what their visitors are on the lookout for in the outside world. Museums must innovate by identifying their unique value and find ways to augment it or provide better access to it.

Folk art museum, ethnological museums, historical museums, needs to assert their desire to participate in museum activities such as public discussion and engaging with cultural diversity and contributing to social dialogue. Visitors can be engage on relevant themes of the museum and its collections, its exhibition practice and its relationship with the public. Direct museum communication between staff and visitors enables the visitors to feel comfortable and contented. Proper museum signage is a valuable addition to visitors satisfaction. Hands on activities and exhibitions in museums attract visitors of different age groups adults, student and children. A sense of self discovery can be achieved through museum activities. The concept of the importance of museums as learning institutions and their role in effective engagement of visitors has to be emphasized. Involvement of the visitors in challenging situations help in making museums more open and accessible developing a dynamic relationship between programmes, activities and audience of a museum. Engaging visitors in museums is an interactive experience and yields a positive result making visitors return to the museum in the near future. Museums have transformed themselves into civic spaces. Spaces for social interaction and communication. In India museums are usually funded by the public hence visitor expectations are always on the rise.

A well planned strategy has to be formulated to transform most museums to inclusive museums where engagement of visitors in museums is the key area of museum education and enjoyment. Museums have to become dynamic centres of learning, creativity and participation, strengthening communities and enhancing culture. Museums by nature are socially responsible institutions which are related to assembling, researching, and caring for collections, thus benefitting society. in the present situation museums have to understand their audience they are no longer satisfied to throw open their doors and hope that someone will pay them a visit. They research their audiences and try to find out what interests and motivate them. They even try to identify those who tend to use museums and work to attract them based on principle that

everyone in the society should benefit from museums. Museums thus become more democratic less elistist.more open, less insular, more relevant, and less peripheral.

Museums are increasingly involved in contemporary social issues. And are changing into institutions where public can find opinions about the present day and where human stories predominate. The changing role is altering the relationship between the museums and the public. According to the declaration of the international committee for museum management in mexico.museum should be positive forces for change and progress in the field of human rights.museum can promote greater inclusion and social harmony by being socially responsible institutions.

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Origin and Growth of Archaeological Site Museums in India

Vinay Kumar[1] and Sulekha Banerjee[2]

Introduction

The Indian subcontinent is known for its plural cultural heritage. India in the past has contributed to the enrichment of Indian culture and has a rich cultural legacy. The sources of the inherited culture or cultural heritage as it is often coined are usually through oral or literary sources or archaeological evidences. It is thus very important and necessary to preserve, protect and maintain the conceived heritage. To preserve our heritage, many effective measures had been accredited. The earliest museums had no such predilections in their early years when collections pertaining to geology and natural history took the place of honour. However, the museums in India have a marked bias in favour of archaeological material. The awareness of the Indian people of their proud in cultural heritage is itself a historical phenomenon born out of the endeavours of a few European servants in the late eighteenth and nineteenth centuries. The disintegration of Indian monuments as well as detached archaeological remains had been collected and organized for the purpose of preservation and study by the researchers of respective subject.

What is archaeological site museum?

The concept of museums in India may be traced back to the historic times, in which references to the *chitrasala* (picture gallery) do occur. However, in India, the museum

1. Assistant Professor, Department of AIHC & Archaeology, Banaras Hindu University, Varanasi, U.P, Mobile: +919811473663, email: vinaykumar166@yahoo.com.
2. Independent Research Scholar, C2C/2/141, Janakpuri, New Delhi-58, email: suban13@gmail.com

movement post-dates the similar developments that occurred in Europe. The earliest necessity to house objects of antiquarian remains dates back to late 1796 CE when the Asiatic Society of Bengal felt the need to house the enormous collection of archaeological, ethnological, geological, zoological pursuits. However, the first museum by them was started in 1814. The nucleus of this Asiatic Society Museum later provided the Indian Museum, Calcutta. In Archaeological Survey of India (ASI) also, due to the various explorative investigations that was initiated since the times of its first Director-General, Alexander Cunningham, vast quantity of antiquarian remains were collected. The idea of archaeological site museums was further initiated by the then Director-General Sir John Marshall who conceptualized the establishment of archaeological site museums under the Archaeological Survey of India in 1905 to display excavated antiquities in the close vicinity of their provenance to empower visitors with comprehensive vision of the site, its context and treasures so that the site as well as the artefacts can be evaluated holistically.

International Council of Museum (ICOM) has defined museum during the 21st General Conference in Vienna, Austria, in 2007 as 'a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment. This definition is pertinent for museums of any classification. One such classified museum is Archaeological site museum which play an important role in the protection of the world's cultural heritage. In 1982 ICOM defined (archaeological)'site museum' as a "museum conceived and set up in order to protect natural or cultural property, movable or immovable, on its original site, that is, preserved at the place where such property has been created or discovered".

India is a country which is rich with traces of important civilization, has archaeological site museums primarily maintained by Archaeological Survey of India and other state departments. The site museums are well justified if there are numerous finds from the site or adjacent sites, excavations or loose architectural or sculptural members; impressive archaeological or structural remains at the adjacent sites, and accessibility of the site and museum to the visitors. The overall objective of site museum is to preserve recovered antiquities found from a site, *in situ*. But due to technical problems, the site museums are organized at monumental sites/ sites with monuments; museums at non-monumental sites i.e. in the vicinity of explored or excavated area. Thus site museum also has, like any other museum, the functions of conservation, documentation, research and interpretation.

Hargreaves, one of the former Directors General of ASI, explained the concept of site museums in the report published in 1936 by the Museums Associations, London. He mentioned that *'it has been the policy of the Government of India to keep the small and movable antiquities, recovered from the ancient sites, in close association with the remains to which they belong, so that they may be studied amid their natural surroundings and not lose focus by being transported'(*Markham S.F and H.Hargreaves 1936: p.10). A separate Museums

Branch in ASI was created in 1946 by Sir Mortimer Wheeler. After the independence, there was a spurt in the growth of site museums in ASI.

Development of Archaeological Site Museums

The concept of museum i.e. housing collections in a four wall building started in 1814 with Asiatic Society museum. The collections for museums were chiefly minerals and other natural history specimens. In India, *'Archaeology came to the fore as a result of the formation in 1862 of the Archaeological Survey and the activities of Sir Alexander Cunningham, whose researches awakened widespread interest in Indian archaeology… But the greatest activity resulted from the re-organization by Lord Curzon's Government of the Archaeological Survey in 1902… The history of the archaeological museums in India is largely the record of the labours of the then appointed Director General, Sir John Marshall… The discoveries of the Archaeological Survey, by adding so substantially to the history of India and awakening world-wide interest in its art and antiquities, have stimulated in no small measure feelings of nationalism and directed the attention of Indians to the need for preserving their archaeological treasures.*' (S.F. Markham and H. Hargreaves 1936: pp.33-34)

Archaeological Survey of India has played a very important role in conserving, preserving and disseminating knowledge on the cultural repositories of India. Without the efforts and work of this august organization, the beautiful cultural heritage may not have been discovered and studied. Probably most museums all over India would not have been there or may have been empty. It helped in reinforcing sensibility among people to study and analyze the past while conserving it with full care.

The report by Markham and Hargreaves, published in 1936 by the Museums Associations, London, clearly brought out the unsatisfactory picture of the museum-movement in India, the main reasons being ascribed to mass illiteracy, inadequate funds and lack of proper awakening on the part of the rich and the influential intelligentsia. So far the activity of the ASI is concerned, the report stated: This emphasizes the intimate connection between the museums of India and her Archaeological Survey. The policy of the Survey has been to maintain small museums in the vicinity of sites subjected to extensive excavations to enable the serious student and the visitor alike to study the antiquities in their proper context. It has not only set up several such site-museums to be cared for by its own officers, but has also acted on behalf of and helped several States in exploring ancient sites within their territories and building up suitable museums near them in accordance with its own policy.

As postulated, Markham and Hargreaves were mainly responsible for the rise of museums dominated by archaeological material. Local museums came into existence. These museums were essentially research-museums that emphasized generally on geology and other natural sciences and archaeology formed only a part of their collection. Amongst the museums of this era, the Mathura Museum (1874) is most notable and trendsetter. It was the first museum to house archaeological collection derived from a particular site thus called as the forerunner of 'local museums'. (H.Sarkar 1996: p.333). The credit was given to F.S. Growse,

and this museum stands as a landmark in the history of the archaeological museums in India. This was the period when the new interest and development in the archaeological research and investigations took place. At present, there are forty-six (46) Archaeological museums spreading over the length and breadth of India i.e. Kangra (Himachal Pradesh) in the north to Mattancherry Palace (Kerala) in the south and Sri Surya Pahar (Goalpara, Assam) in the east to Dholavira (Kachchh, Gujarat) in the west. Some of these museums are as follows:

Sl.No.	Name of the Archaeological Site Museum
1.	Archaeological Museum, Aihole
2.	Archaeological Museum, Amaravati
3.	Archaeological Museum, Badami
4.	Archaeological Musuem, Bijapur
5.	Archaeological Museum, Bodhgaya
6.	Archaeological Museum, Chanderi
7.	Archaeological Museum, Chandragiri
8.	Deeg Place Museum Bharatpur
9.	Fort St. George Museum Chennai
10.	Archaeological Museum, Gwalior
11.	Archaeological Museum, Halebidu
12.	Archaeological Museum, Hampi
13.	Indian War Memorial Museum, Red Fort
14.	Archaeolgical Museum, Jageshwar
15.	Archaeological Museum, Kangra
16.	Archaeological Museum, Kalibangan
17.	The Archaeological Museum, Khajuraho
18.	Koch Bihar Palace Museum, Koch Bihar
19.	Archaeological Museum, Konarak
20.	Archaeological Museum, Kondapur
21.	Archaeological Museum, Lothal
22.	Mattancherry Palace Museum, Mattancherry
23.	Archaeological Museum, Murshidabad
24.	Archaeological Museum, Nagarjunakonda
25.	Archaeological Museum, Nalanda
26.	Mumtaz Mahal Museum
27.	Archaeological Museum, Purana Qila
28.	Archaeological Museum, Ratnagiri
29.	1857 Residency Museum, Lucknow
30.	Archaeological Museum, Ropar
31.	Archaeological Museum, Sanchi

32.	Archaeological Museum, Sarnath
33.	Archaeological Museum, Sri Surya pahar
34.	Swatantrata Sangram Sanghralaya, Red Fort
35.	Swatantrata Senani Museum
36.	Taj Museum, Agra
37.	Archaeological Museum, Tamluk
38.	Tipu Sultan place Museum, Srirangapattanam
39.	Archaeological Museum, Thanesar
40.	Archaeological Museum, Vaishali
41.	Archaeological Museum, Velha Goa
42.	Archaeological Museum, Vikramshila

Significance of Archaeological Site Museums

Wider significance of these museums has social and cultural implication and effects. They play an important role in the protection of our cultural heritage. Archaeological Site Museums are specialized type of local museums and the aim is to concentrate on the archaeological history of a particular site. Therefore, the site museums are an important addition to archaeological sites, which enhance special interest among the visitors. The idea behind site museum is to give significance to the site in question. For example museums at Sarnath, Nalanda, Sanchi, Khjuraho, etc. Antiquity of a particular site, if studied in its proper perspective, can impart larger amount of information than its study in a secluded and far removed exhibited in totally different surroundings. A museum is the best device our culture has developed for the transmission of ideas to large number of people through the exhibition of genuine objects. Archaeological Site museums are examined not only as a centre of art and heritage but have stimulated feelings of nationalism as remarked by Markham and Hargreeves.

Scope of Archaeological Site Museums

Archaeological Site Museums are conglomeration of broadly two branches of study, i.e. Archaeology and the site associated with and Museology. Archaeology as we understand is study of human past through its material remains with aim of ordering and describing the events of past and explaining the meaning of those events. Whereas Museology is the branch of knowledge concerned with the study of the theories, procedures, concept and organization of museums. Equal supervision for them is a pre-requisite. For presenting the material remains of a particular site in order so as to make a person understand at a glance the past background of that site through the displayed materials, needs archaeological and historical information of the site, the knowledge of display techniques and other issues related to museology i.e. scientific management of a museum. There are forty five museums which are directly managed and administered by Archaeological Survey of India. Other state departments are also maintaining the same. Such as site museum at Sanghol (Punjab), at Mathura (Uttar Pradesh), etc. are

being maintained by the state departments. In order to understand what skill is required in site museums, a comprehensive study has been done on the description of museum itself as found in the definition given by the ICOM. Certain shortcomings have been observed which are required to concentrate for the betterment of such cultural repository. Most of these museums, however, require sustainable and effective management plans in order to realize properly on-site preservation, documentation, research, exhibition and interpretation, as well as to raise public awareness and to provide an economic income for the locals. In broad aspect it underlines that there are no permanent conservator remains at the site museum but the services are requisitioned as per requirement; there are no separate space for research due to scarcity of space within the museum premises; inadequate/improper signage, insufficient literature, and absence of guide; basic visitors facilities, pleasant surroundings are some of the few lacunas that have been underlined.

Besides attributing the components of a museum definition; scientific management of archaeological site museum have also defined as the action of ensuring the running of the museum's administration and more generally all the activities which are not directly attached to the specific fields of museum work (preservation, research and communication). In this regard, museum management essentially encompass tasks relating to financial (accounting, management control, finances) and legal responsibilities, to security and upkeep to staff management and to marketing as well as to strategic procedures and the general planning to museum activities.

Implication on Archaeological Site Museums

As we know that these site museums are the mirror of our vast cultural traditions and hence in order to create a sense of belongingness amongst the common people about their past management of these museums is the need of the hour. Management is a process of designing and maintaining an environment in which individuals working together in groups efficiently accomplish selected aims. Thus management of a site museum is the management of all its resources with management principals and techniques, which aims towards best preservation for its prolongation. The management principles need to be used while preparing and implementing management plans for the antiquities of a site. Site Museums, in one of their primary functions, display the objects and provide information about the past. The display pattern reveals some of the truths about the objects through written, visual or verbal information. There are eight basic motives to preserve the objects of the past - curiosity, understanding, control, belief, aesthetic value, memories, and veneration of age.

In order to have better management of the site museums, all site museums should have a perfect coordination between the internal requirements of curating the collection and meeting the requirements of its users. Both these aspects are the two faces of a single coin. If a museum is only concerned with its internal functioning such as management of collection, research of the reserve collections and documentation and doesn't take into account the visitors then the main purpose of these site museums is lost. Dissemination of information about the

collection, and the management of that information is very important for these museums. There are four modes of handling information - text, data, voice and image; and all these are necessary means of interpretation of information in a museum. Hence information management for these site museums is essentially required. Information management means planning and coordination of the use of information skills, technology, and sources. Information management also means maintaining an awareness of new developments. It calls for particular attention to means of keeping up-to-date, especially in the areas of information technology, and for externally available information sources. Information management requires an understanding of information flow. Without proper information management the main purpose of these site museums cannot be achieved. Hence the management aspects of the site museum need to be reworked that will entail the development of an understanding of the relationship between museums and their audiences.

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Sultanate of Delhi

Vivek Kumar*

The Northern portion mainly Delhi was ruled by local dynasties like Tomara from 736 to 1152 and then Chauhan (Cahamana) from c. 1150 to 1192. Silver Drachm coins are known from Tomara and Chauhan dynasties. Muhammad Shahab ud-Din [or simply Muhammad Ghori] of **Ghurid Empire** (capital at Ghazna, Afghanistan) attacked the north-western regions of the Indian subcontinent many times. The first time he was defeated in the First Battle of Tarain in present-day Haryana, India by Prithviraj III Chauhan. Later under his command, Qutb-ud-din Aibeg sacked Delhi in 1192. Muhammad Ghori established the first real Muslim state in North India. Upon Sultan Muhammad Ghori's death in 1206, Qutb-ud-din Aibeg, after a brief power struggle, succeeded in establishing himself as ruler of the empire in Afghanistan, Pakistan, and northern India; Ghori's Central Asian possessions had been captured by none other than the Mongol warlord, Genghis Khan. Thus Ghauri's prediction proved true. After his assassination, his Empire was divided amongst his slaves. Most notably: Qutb-ud-din Aibak became ruler of Delhi in 1206, establishing the Sultanate of Delhi, which marked the start of the Slave dynasty of India. Nasir-ud-Din Qabacha became ruler of Multan. Taj-ud-Din Yildiz became ruler of Ghazni. Ikhtiyar Uddin Muhammad bin Bakhtiyar Khilji became ruler of Bengal.

* H. NO 220 Chiranjiv colony, B.T.M Road Bhiwani, Pin code-127021 (Haryana), email- v.vivekarora@gmail.com

Mamluk Dynasty (Delhi)

The Mamluk Dynasty (sometimes referred as Slave Dynasty or Ghulam Dynasty) was directed into NorthernIndia by Qutb-ud-din Aybak, a Turkic general from Central Asia. It was the first of five unrelated dynasties to rule India's Delhi Sultanate from 1206 to 1290.[2] [3] Aybak's tenure as a Ghurid dynasty administrator ranged between 1192 to 1206, a period during which he led invasions into the Gangetic heartland of India and established control over some of the new areas.

Architecture

The architectural legacy of the dynasty includes the Qutb Minar by Qutb-ud-din Aybak in Mehrauli, the Mausoleum of Prince Nasiru'd-Din Mahmud, eldest son of Iltumish, known as *Sultan Ghari* near Vasant Kunj, the first Islamic Mausoleum (tomb) built in 1231, and Balban's tomb, also in Mehrauli Archaeological Park.

The Qutub Minar, an example of the Mamluk dynasty's works

The Delhi Mamluk Dynasry	
Capital	Delhi
Languages	Persian (official)[1]
Religion	Sunni Islam
Gogernment Sultan -1206-1210 -1287-1290	Sultanate Qutb-ud-din Aibuk Muiz ud din Qaiqabad
History - Established - disestablished	 1206 1290

Sultans

1. Qutbuddin Aibak (1206–1210)
2. Aram Shah (1210–1211)
3. Shams ud din Iltutmish (1211–1236)
4. Rukn ud din Firuz (1236)
5. Raziyat ud din Sultana (1236–1240)
6. Muiz ud din Bahram (1240–1242)
7. Ala ud din Masud (1242–1246)
8. Nasir ud din Mahmud (1246–1266)
9. Ghiyas ud din Balban (1266–1286)
10. Muiz ud din Qaiqabad (1286–1290)
11. Kayumars (1290)

The first Sultan was Qutb ud-Din Aibeg ibn Mu'izz.....1206 – 1210

Who had the titular name of *Sultan* and reigned from 1206 to 1210. He temporarily quelled the rebellions of Nasir-ud-DinQabacha of Multan and Tajuddin Yildoz of Ghazni. Making Lahore his capital, he consolidated his control over North India through an administrative hold over Delhi. He also initiated the construction of Delhi's earliest Muslim monuments, the Quwwat-ul-Islam mosque and the Qutub Minar. In 1210 he died accidentally while he was playing a game of polo in Lahore on horseback: his horse fell and he was impaled on the pommel of his saddle. He was buried near the Anarkali bazaar in Lahore.

The second Sultan was Aram Shah S/o Qutb ud-Din.....1210 - 1211

Who had the titular name of *Sultan* and reigned from 1210 to 1211. An elite group of forty nobles named *Chihalgani* ("the Forty") conspired against Aram Shah and invited Shams-ud-din Iltutmish, then Governor of Badaun, to replace Aram. Iltutmish defeated Aram in the plain of Jud near Delhi in 1211. It is not quite certain what became of Aram.

	Coin of Shams-Ud-Din Iltutmish, circa 1210-35. Obv. Rider bearing lance on caparisoned horse facing right. Devnagari Legends: Sri/ hamirah'. Rev: Arabic Legends; 'Shams al-dunya wa'l din Abu'l Muzaffar Iltutmish al-Sultan'.

	Coin of Shams-Ud-Din Iltutmish, circa 1210-35. Obv. Crude figure of Rider bearing lance on caparisoned horse facing right. Devnagari Legends: Sri/hamirah'. Star above horse. Rev: Arabic Legends; 'Shams al-dunya wa'l din Iltutmish al-Sultan'.

The third Sultan was Shams ud-Din Iltutmish al-Qutbi ibn Yalam Khan.....
1211 - 29 Apr 1236,

Who had the titular name of ***NasirAmir-ul-Mu'minin***and reigned from 1211 to 1236. He shifted the capital from Lahore to Delhi and trebled the exchequer. He defeated Nasir-ud-Din Qabacha of Multan and Tajuddin Yildoz of Ghazni, who had declared themselves contenders of Delhi. Mongols invaded India in pursuit of Jalal-ud-din Mangabarni who was defeated at the Battle of Indus by Genghis Khan in 1221. After Genghis Khan's death, Iltutmish consolidated his hold on northern India by retaking many of the lost territories. In 1230, he built the Hauz-i-Shamsi reservoir in Mehrauli, and in 1231 he built Sultan Ghari, which was the first Islamic mausoleum in Delhi.

Coins were struck first time by this dynasty in the name of Iltutmish in gold, silver, billion and copper. In Bengal, the issues were mostly in silver, with a few special gold coins. On his various coins, Iltutmish's name is spelt in four different ways. His usual titles on the Tankas struck outside Bengal are: ***alsultanal-azam sham al-dunya wa'l din abu'l muzaffar Iltutmish al-sultan***. Caliph al-Mustansir are alsocited on some coins.

The fourth Sultan was Rukn ud-Din Firuz Shah S/o Shams ud-Din Iltutmish...
May 1236 - 20 Nov 1236,

Who had the titular name of *Sultan* Mamluk Dynasty (Delhi) and reigned from April 1236 to November 1236. He ruled for only seven months and his mother, Shah Turkan, for all practical purposes was running the government. He abandoned himself to the pursuit of personal pleasure and debauchery, to the considerable outrage of the citizenry. On November 9, 1236, both Rukn-ud-din Feroze and his mother Shah Turkan were assassinated by the Chihalgani.

No gold coins of this ruler are as yet known. The silver Tankas from Delhi are rare while Lakhnauti silver Tankas are very rare. Billion jitals were struck in Delhi andBudaun. No copper coins are known for this ruler. The ruler's title on most of the silver Tankas is**:** ***alsultanal-azam rukn al-dunya wa'l din abu'l muzaffar firuz shah bin sultan*.**

The fifth Sultana was Jalalat al-Din Radiyya (fem) D/o Shams ud-Din Iltutmish.
1236 - 15 Oct 1240,

Who had the titular name of ***Jalâlat-ud-dîn Raziyâ Sultana***and reigned from 1236 to 1240. As the first female Muslim rulerin Inda, she initial managed to impress the nobles and administratively handled the Sultanate well. However, she began associating with the African Jamal-ud-Din Yaqut, provoking racial antagonism amongst the nobles and clergy, who were primarily Central Asian Turkic and already resented the rule of a female monarch. She was defeated by the powerful nobleman Malik Altunia whom she agreed to marry. Her brother Muiz-ud-din Bahram, however, usurped the throne with the help of the Chihalgani and defeated the combined forces of the Sultana and her husband. The couple fled and reached Kaithal, where their remaining forces abandoned them. They both fell into the hands of Jats and were robbed and killed on October 14, 1240.

Only one gold coin of Radiyya has so far been published in Bengal style. Her title on Delhi silver Tankas is *radiyyat al-Din* which are considered rare while the Lakhnauti silver Tankas with title: *jalalat al-din* are extremely rare. Caliph al-Mustansir are also cited on her coins. Billion jitals continued to be struck in bothDelhi and Budaun, but later bull and horseman type were discontinued.

	Goron D105/R873/NW 162-163/T393/D329 Billion Jital. **Year:** ND (1236-1240). **Weight:** 3.77g (3.60g). **Metal:** Billion. **Diameter:** 15.00mm. **Edge:** Plain. **Alignment:** Coin. Mint: Delhi. **Obverse:** al-sultan al-mu'azzam radiyya al-din bint al-sultan. **Reverse:** Horseman to righ. **Mintage:** N/A. **Ruler:** Jalalat al-Din Radiyya (Raziyya) bint Shams al-Din Iltutmish. **Note:** Scarce.

The sixth Sultan was Mu'izz ad-Din Bahram Shah S/o Shams ud-Din Iltutmish....
1240 - 15 May 1242,

Who had the titular name of *Sultan* and reigned from 1240 to May 15, 1242. During his reign, the Chihalgani became disorderly and constantly bickered among each other. It was during this period of unrest that the Mongols invaded the Punjab and sacked Lahore. Muiz-ud-din Bahram was too weak to take any action against them, and the Chihalgani besiged him in the White Fort of Delhi and put him to death in 1242.

Tankas are known for this ruler in gold from Delhi as extremely rare and in silver from Delhi and Lakhnauti as rare to very rare. Caliph al-Mustansir are also cited on his coins.

Billion jitals continued to be struck in both Delhi and Budaun. The bull and horseman type was struck again at Delhi and other Delhi types are notable for having the ruler's name above the horseman. The ruler's title on most of the Tankas is:

al-sultan al-azam mu'izz al-dunya wa'l din abu'l muzaffar bahram shah bin al-sultan.

The seventh Sultan was Ala ud-Din Masud Shah S/o Rukn ud-Din Firuz.....1242 - 11 Jun 1246,

Who had the titular name of *Sultan* and reigned from 1242 to 1246. He was effectively a puppet for the Chihalgani and did not actually havemuch power or influence in the government. Instead, he became infamous for his fondness of entertainment and wine. By 1246, the chiefs had become upset with Ala-ud-din Masud's increasing hunger for more power and replaced him with Nasir-ud-din Mahmud, who was another son of Iltutmish.

Gold Tankas are rare for this ruler from Lakhnauti in Bengal and Delhi. Caliph al-Mustansir are also cited on his early coins and later Caliph Mustasim from AH 641 (1243). Billion jitals continued to be struck in both Delhi and Budaun as well as at another mint in northern India, possibly Uch. Some of the bull and horseman type coins have date in Samvat era. No copper coins are known. The ruler's title on most of the Tankas is: ***al-sultan al-azam ala al-dunya wa'l din abu'l muzaffar masud shah ibn al-sultan*.** He was deposed.

	Delhi Sultanate. Ala-ud-Din Masud, Delhi **Mint.** Billon Jital, **Obv:** Persian Legend, **Rev:** house rider. 3.24g, 14.23 MM. about very line.

The eighth Sultan was Nasir ud-Din Mahmud S/o Shams ud-Din Iltutmish.....1246 - 19 Feb 1266,

Who had the titular name of *Nasir-ud-din Feroze Shah* and reigned from 1246 to 1266. As a ruler, Mahmud was known to be very religious, spending most of his time in prayer and was renowned for aiding the poor and the distressed. It was his Deputy Sultan, Ghiyath-ud-din Balban, who primarily dealt with state affairs.

Coins were struck in his name in gold, silver, billion and copper in same mints as above. In Bengal, Tankas were struck in the name of caliph al-Mustansir (at Delhi and Lakhnauti) and later caliph Mustasim (at Delhi only). A single half Tanka in silver is known as well as several one-tweth Tankas (mashas). In billion bull and horseman type coins was discontinued. Copper coins are very scarce. consisting mainly of small adlis. Some heavier copper coins are known but is not certain whether they are to be attributed to this ruler or to Nasir al-Din

Mahmud Damghan of Madura. The ruler's title on most of the Tankas is**:** ***al-sultan al-azam nasir al-dunya wa'l din abu'l muzaffar mahmud shah bin (or ibn) alsultan.***

The ninth Sultan was Ghiyath ud-Din Mahmud (Balban) Ulugh Khan.....1266 - 1286,

Who had the titular name of *Sultan* and reigned from 1266 to 1287. Balban ruled with an iron fist and broke up the Chihalgani group of noblemen. He tried to establish peace and order in India and built many outposts with garrisons of soldiers in areas where there had been disorder. Balban wanted to make sure everyone was loyal to the crown, so he established an efficient espionage system.

Balban struck coins in gold, silver, billion and copper. The gold and silver tankas are usually well struck. The silver Tankas were also struck in Alwar, Sultanur and at a hitherto unidentified mint that has provisionally been read as Nimur. A few silver one-twelfth tankas are known. Balban was the last Sultan to use the horseman design on billion issue. Such coins are very rare and were soon replaced by a new, bilingual type, containing around 0.3 grams of silver. These coins may have been intended as 2 jitals (dugani) pieces, going 24 to the silver Tanka. In copper, he revived the 40-rati piece (paika) 4.6g with its rare half 2.3g. He also issued a large number of small adlis ranging in weight from 0.65 to around 2.3 grams. The ruler's title on most of the Tankas is: ***al-sultan al-azam ghiyath al-dunya wa'l din abu'l muzaffar balban shah al-sultan.***

The tenth and final Sultanwas Mu'izz ud-Din Kai-Kubad S/o Bugra Khan.....1286 - 14 Oct 1290.

Who had the titular name of *Sultan* and reigned from 1287 to 1290. Being still young at the time, he ignored all state affairs. After four years, he suffered a paralytic stroke and was later murdered in 1290 by a Khilji chief. His three year old son Kayumars nominally succeeded him, but the Slave dynasty had ended with the rise of the Khiljis.

During Kai-Kubad's reign, gold and silver Tankas of usual type were struck in Delhi. In addition, there are some extremely rare one-third, one-sixth and one-twelfth Tankas. In billion, the only issue was a 3-gani bilingual coin. Copper paikas and adlis were also struck. The ruler's title on most of the Tankas is: ***alsultanal-azam mu'izz al-dunya wa'l din abu'l muzaffar kaiqubad al-sultan.***

	Delhi Sultanate, Muizz-ud-Din Kaiqubad, Silver Tanka, **Obv:** ruler's name & titles. **Rev:** al-imam legend with caliph al-must'asim, 10.89g, 30.66mm, about very fine

Shams ad-Din Kaiumarth S/o Mu'izz ud-Din Kai-Kubad.....1290

Kayumars' guardian, Jalal ud din Firuz Khilji, eventually dethrone Kaiumarth and declared himself king,thus bringing an end to the Mamluk dynasty of Delhi. The coins of this ephemeral pretender are very rare.

Several silver Tankas of the standard type are known and a few copper coin. No gold or billion coins yet came to light. The ruler's title on most of the Tankas is:

al-sultan al-azam shams al-dunya wa'l din abu'lmuzaffar kayumarth.

	Goron D157/NW241 Silver Tanka. **Year:** AH 664-675, 678, 684-685 (1266-1286). **Weight:** 10.82g. **Metal:** Silver. **Diameter:** 27.00mm. **Edge:** Plain. **Alignment:** Coin, but resverse side 20% rotated. **Mint:** Hadrat Delhi. **Obverse:** al-sultan al-a'zam ghiyath al-dunya wa'l din abu'l muzzafar balban al-sultan. **Reverse:** al-imam al-must'asim amir al-mu'minin. **Mintage:** N/A. **Ruler:** Ghiyas-ud-Din Balban. **Note:** Common. Obverse legend within single square in circle. Mint and date in margin. Usually two dots exists on each side but varieties exist with one or more dots in left and right segments.

KHILZI DYANSTY (GHARZAI DYNASTY)

The Delhi Mamluk Dynasry	
Capital	Delhi
Languages	Persian (official)[1]
Religion	Sunni Islam
Gogernment Sultan -1290-1296 -1296-1316 -1316 1316-1320	Sultanate Jalal ud din Firuz Khilji Alauddin Khilji Shihab ad-Din Umar Qutb ad-Din Mubarak
History - Established - disestablished	 1290 1320

KhilZi dynasty

1. Jalal ud din Firuz Khilji (1290–1296)
2. Rukn ud-Din Ibrahim Shah (Jul 1296 - Nov 1296)
3. Alauddin Khilji (1296–1316)
4. Shihab ud-Din Umar (1316)
5. Qutb ud din Mubarak Shah (1316–1320)
6. Shams al-Din Mahmud (pretender) 1318
7. Nasir-ud-Din Khusrau Khan Barwari (usurper) Jun 1320 -Oct 1320

The First ruler was Jalal ud-Din Firuz Shah Khalji S/o Qaim Shah....
13 Jul 1290 - 21 Jul 1296.

He built his capital at Kilughari, a few miles from the city of Delhi. Ala-ud-din was also responsible for asuccessful raid in to Deccan as Governor of Kara under his uncle. While Ala ud-Din was returning fromthere with the spoils of victory, Jalal-ud-Din Firuz hurried to Kara to meet him. Eventually Jalal-ud-DinFiruz was murdered by his nephew, Ala ud-Din. Gold and silver Tankas of standard type continued to bestruck at Delhi during the reign of this ruler, and they continued to quote the caliph al-Mustasim. A few one-twelfth tankas in silver are also known. In billion, a bilingual jital was struck. A few light-weight specimens of this type are known, but they may well be contemporary forgeries. Copper paikas were struck at usual weight, and NW lists a coin at round half that weight that may have been intended as a half paika. Copper adlis were also struck. Ruler's title on most of the Tankas is: al-sultan al-azam jalal aldunya wa'l din abu'l muzaffar firuz shah al-sultan.

The Secound ruler was Rukn ud-Din Ibrahim Shah S/o Jalal ud-Din Firuz....
Jul 1296 - Nov 1296.

Malika Jahan, the widow of Jalal-ud-Din Firuz, put her younger son Rukn ud-Din Khilji on the throne. Ala -ud-Din quickly marched on Delhi from Kara. He entered Delhi with his uncle's head on a pike and proclaimed himself the King of Delhi. The short reign of Ibrahim produced coins in all four metal. He was deposed. His coins are all scarce to extremely rare. Only one gold Tanka has so far been published. The Tankas are notable fir including the name of the ruler's father, Firuz, on the reverse, with a short religious formula but no caliph. A single billion type of 32 rati is known, which may have been intended as a jital. In copper there are paikas of 40 rati and adlis. The metrology is thus as for preceding reigns. Ruler's title: alsultan al-azam rukn al-dunya wa'l din abu'l muzaffar ibrahim shah al-sultan bin al-sultan al-azam jalal aldunya wa'l din abu'l firuz shah nasir amir al-muminin.

The Third ruler was Ala ud-Din Muhammad Shah I S/o Masud.....

03 Oct 1296 - 03 Jan 1316 .Ala ud-Din Sikandar Sani Muhammad Shah is also noted in history for being one of the few rulers to repeatedly defeat the warring Mongols and thereby saving India from plundering raids and attacks. He was the nephew and son in law of Jalal-ud-Din Firuz Shah. His father Masud was the brother of Firuz Shah. The last Mongol invasion took place in 1307-1308 under Iqbalmand. He had just about managed to cross the Indus when Ala ud-Din Khilji's armies overtook them and put them all to the sword. But he did not stop there, Ala-ud-Din Khilji had to be sure that the Mongols would never come back. The only way to do that was to attack them, he sent plundering armies under the veteran general Ghazi Malik to Kandahar, Ghazni and Kabul. The Mongols were already so much in awe of him that they did not even bother to defend their own territories against him. These offensives effectively crippled the Mongol line of control leading to India until the arrival of Timur Lane. About the close of his reign Ala ud-Din Khilji had prepared an expedition of 10,000 men under Ghazi Malik (later Ghiyath ud-Din Tughluq) to go to Debalpur to fight with the Chagatai Khanate Mongols. Ghazi Malik was thus enabled to go and secure Multan, Uch and Sindh for himself, especially as Ala ud-Dín's sons proved incapable and caused confusion in the affairs of the kingdom. The coinage of Muhammad Khalji is the most copious of the whole Delhi series. His campaigns into the Deccan enabled him to bring back vast quantities of booty. Gold and silver Tankas were struck in large numbers from three named mints: Delhi, Dar al-Islam (possibly the old Delhi college had the mint set up or Ranthambhor, which was captured in AH 700 and apparently called by this name) and Deogir (started in AH 714 and later renamed as Daulatbad). There are also some square Tankas in both metals which do not show a mint-name but might be struck somewhere in the south. Ala ud-Din Muhammad moved his capital to new Delhi at Siri, a few miles north of the old city .Some new legend appears on the reverse of his coin with Ala ud-Din Muhammad calling himself sikandar al-thani (Alexander the second), yamin al-khilafa (the right hand of the Caliphate) and nasir amir almuminin (helper of the Commander of the Faithful). Ruler's title on most of the Tankas is: al-sultan alazam ala al-dunya wa'l din abu'l muzaffar muhammad shah al-sultan.

The Fourth ruler was Shihab ud-Din Umar S/o Ala ud-Din.....

Jan 1316 - Apr 1316.The coin of this ephemeral ruler are rare to extremely rare. Tankas in gold and silver are known with the ruler's titles on the obverse and the sikandar al-thani legend on the reverse, somewhat inappropriate for a child of five or six! After Alauddin died, his army commander Malik Kafur, attempted to install Shihab al-Din Umar, as sultan with himself as the child's step-father and regent. However, Alauddin's third son, Mubarak Khan, managed to have Malik Khafur murdered, deposed Umar and installed himself as Sultan Qutb

al-Din Mubarak. In billion only the 6-gani type is known, dated both AH 715 and 716. No copper coins are known for this ruler. Ruler's title: al-sultan al-azam shihab al-dunya wa'l din abu'l muzaffar umar shah al-sultan.

The Fifth ruler was Qutb ud-Din Mubarak Shah I S/o Ala ud-Din.....

Qutub-ud-din-Mubarak, Silver Rupee, 10.74g. Hazrat Delhi Mint, (G&G#D 256). Very fine+, scarce.

Apr 1316 - Jun 1320 .Qutb ud-Din, at the age of 18, was originally appointed regent to his younger six-year old brother, Shihab ud-Din Umar. Within two months, Qutb ud-Din blinded his brother and ascended the throne. Qutb ud-Din was murdered by Khusrau Khan in 1320, this effectively ended the Khilji dynasty. Khusrau Khan was a Hindu slave of the Makwana sect in Gujarat who resented his forcible conversion to Islam. The coins of Mubarak were struck in all four metals and is noted for its variety and for the titles he gave himself. According to his mint-master, Pheru, he created 44 different denominations, comprising more than 70 types during his four year reign. The largest of these is said to have been a gold 200 tola piece and the smallest a copper coin weighting less than a gram. Many of these types are not known to have survived. For the first couple of years of the reign the coinage was round but from AH 718, it was struck on square planchets. Ruler's title: al-sultan al-azam qutb al-dunya wa'l din abu'l muzaffar mubarak shah al-sultan bin al-sultan (sikandar al-zaman yamin al-khilafat nasir amir al-muminin as sultan ledend or al-wathiq billah amir al-muminin as imam legend). Mubarak, however, was not an able ruler. He reigned for four short years, the sultanate was left in disarray, and a few short-lived sultans later, it was ripe for takeover byGhazi Malik Tughluq.

The Sixth ruler was Shams al-Din Mahmud (pretender).....1318

Only a few coins of this ephemeral pretender are known. They comprise a single gold Tanka and some billion coins. While it is though that Mahmud was proclaimed king in Delhi when Mubarak was in Deccan. The histories also state that the plot was to assassinate Mubarak in Deccan. The leader of the conspiracy was Asad al-Din (Adad al-Din?) an uncle of Muhammad Khalji. It is uncertain whether Asad al-Din intended to seize the throne himself or put someone else on the throne with the name of Shams al- Din Mahmud. From the ruler's title: al-sultan al-azam shams al-dunya wa'l din abu'l muzaffar Mahmud shah al-sultan sikandar

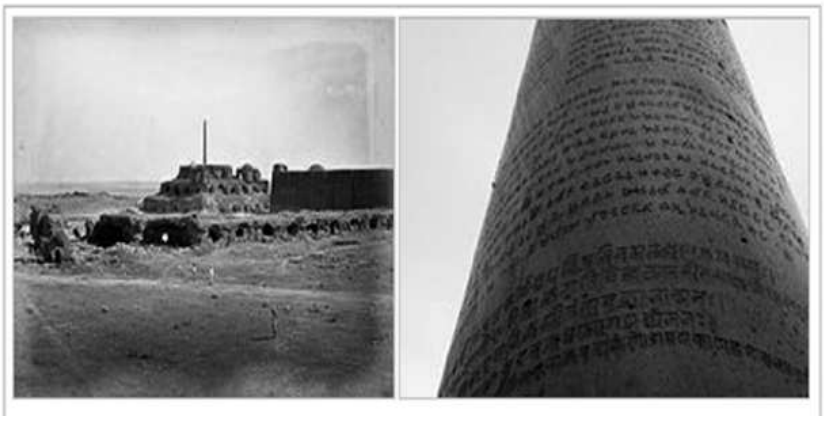
al-zaman adad al-khilafa nasir amir al-muminin, it clearly indicates that Asad (Adad ?) may have intended himself as the next ruler.

The Seventh ruler wasNasir-ud-Din Khusrau Khan Barwari (usurper) Jun 1320 -Oct 1320.

He began to bestow undue favors on mischievous people and wasted public money. The Hindus began to join him in large number. Seeing this state of things, Ghazi Malik's son Fakhr Malik left Multan secretly and joined his father, informing him of what was happening at Delhi. Then, father and son, being both brave soldiers, collected the forces from Sindh and Multan and hastened to Delhi to help the Muslims Sultanate of Delhi Coins and Rulers . against the Hindus. Arriving near Delhi with 3,000 veteran soldiers, they engaged in battle with the army of Khusrau Khan, and defeated them. Then making their way into Delhi they again defeated Khusrau Khan in battle and he fled away. Gold and silver Tankas are known for this ruler from Delhi and Deogir, with silver being rarer than gold. Three types of billion coins are also known as 12, 6 and 2 gani values. Copper coins are very scarce and come in at least two weights. The ruler's title: al-sultan al-azam nasir al-dunya wa'l din khusru shah al-sultan al-wathiq bi-nasir al-rahman wali amir al-muminin (he who trusts in the assistance of the Merciful, trustee of the Commander of the Faithful).

TUGHLUQ DYNASTY

The Tughlaq dynasty lasted from 1320 to nearly the end of 14th century. The first ruler Ghazi Malik rechristened himself as Ghiyasuddin Tughlaq and is also referred in scholarly works as Tughlak Shah. He was of Turko-Indian origins, with a Turkic father and a Hindu mother. Ghiyasuddin Tughlaq ruled for 5 years and launched a town near Delhi named Tughlakabad. [35] According to some historians such as Vincent Smith,[36] he was killed by his son Juna Khan, who then assumed power in 1325 AD. Juna Khan rechristened himself as Muhammad bin Tughlaq, and ruled for 26 years.[37] During his rule, Delhi Sultanate reached its peak in terms of geographical reach, covering most of Indian subcontinent



Tughlaq dynasty is remembered for its architectural patronage, particularly for ancient *lats* (pillars, left image).[43] Dated to be from 3rd century BC, and of Buddhist and Hindu

origins, the Sultanate initially wanted to use the pillars to make Mosque minarets. The Meaning of Brahmi script of the pillar (right) was unknown in Firoz Shah's time.[44] The inscription was deciphered by James Prinsep about 480 years later, in 1837; the pillar script of Emperor Ashoka asked people of his and future generations to seek a dharmic (virtuous) life, use persuasion in religion, grant freedom from religious perscution, stop all killing. and be compassionate to all living beings.[45]

Tughlay Dynasty of Delhi	
Capital	Delhi
Languages	Persian (official)[1]
Religion	Sunni Islam
Gogernment Sultan -1321-1325 -1393-1394	Sultanate Ghiyath-al-Din Tughluq Nasiruddin Mahmud Shah
History - Established - disestablished	 1320 1414
Area	3,200,000 km^2 (1,235,527 Sq. mi)
Today part of	India Nepal

Sultans

1. Ghiyath al-Din Tughluq Shah I [Ghazi Malik](08 Sep 1320 - Feb 1325)
2. Muhammad Shah II [Fakhr al-Din Malik](1325 - 20 Mar 1351)
3. Ghiyath al-Din Mahmud ibn Muhammad (a few days in Mar. 1351)
4. Firuz Shah **(**1351 - 20 Sep 1388)
5. Fath Khan S/o Firuz Shah (1360)
6. Muhammad Shah **(**1387 – 1388)
7. Ghiyath al-Din Tughluq Shah II **(**1388 - 14 Mar 1389)
8. Firuz Shah Zafar Khan **(**1389)
9. Abu Bakr Shah (1389 - 31 Aug 1390)
10. Nasir ud-Din Muhammad Shah III (31 Aug 1390 - 20 Jan 1394)
11. Ala al-Din Sikandar Shah I **(**22 Jan 1394 - 08 Mar 1394)

12. Nasir al-Din Mahmud Shah II (08 Mar 1394 - Feb 1413)
13. Nusrat Shah (Jan 1395 – 1399)
14. Mulla Iqbal Khan (1399 – 1414)

Ghiyath al-Din Tughluq Shah I [Ghazi Malik].....08 Sep 1320 - Feb 1325

Towards the end of his reign Alauddin Khilji had prepared an expedition of 10,000 men under Ghazi Malik to go to Debalpur to fight against the Chagatai Khanate Mongols. Ghazi Malik was thus enabled to go and secure Multan, Uch and Sindh for himself, especially as Alauddín Khilji's sons proved incapable and caused confusion in the affairs of the kingdom, which ultimately took away the kingdom from the possession of the house of Khiljí. Alauddin Khilji's son Qutb ud din Mubarak Shah, allegedly, a mad man, was removed from the throne of Delhi by Khusrau Khan. In 1320, the nobles, the troops, the learned men, the Syeds and other subjects united in selecting Ghazi Malik for the vacant post as Tughluq Shah, ruler of Delhi. Ghiyath al-Din Tughluq proceeded from Multan to Delhi, the tribe of Soomro revolted and took possession of Thatta. Ghiyath al-Din Tughluq appointed Tajuddin Malik as governor of Multan and Khwájah Khatír as governor of Bhakkar and he left 'Malik Ali Sher in charge of Sehwan. In 1323 he appointed his son Muhammad Shah his heir and successor and took a written promise or agreement to the arrangement from the ministers and nobles of the state. In AH 720 he died of heat apoplexy. He was the Turkic slave of Balban. Tughluq Shah has produced coins in gold, silver, billion and copper.

	Goron D306/R1083/NW 434-439 Silver Tanka. **Year:** AH 723(1323). **Weight:** 10.97. **Metal:** Silver. **Diameter:** 26.50 mm. **Edge:** Plain. **Alignment:** Coin. Mint: Hazrat Delhi. **Obverse:** al-sultan al-ghazi ghiyath al-dunya wa'l din abu'l muzaffar. **Reverse:** Tughluq shah al-sultan nasir amir al-mu'minin (in center). **Mintage:** N/A. Mintage Year: AH 720-725. **Ruler:** Ghiyath-ud-Din Tughlug Shah. **Note:** Common.

Muhammad Shah II [Fakhr al-Din Malik] S/o Tughluq.....1325 - 20 Mar 1351.

He is also known as Prince Fakhr Malik, Jauna Khan and Ulugh Khan. Muhammad Tughlug was a scholarversed in logic, philosophy, mathematics, astronomy and physical sciences. He had knowledge ofmedicine and was skillful in dialectics. He was also a calligrapher. Muhammad bin Tughluq is known for his active interest in experimenting with coinage. He memorialized himself and his activities through his coinage and produced more gold coins than had his predecessors. The coins boasted fine calligraphy. He issued a number of fractional denominations. The large influx of gold from his plundering of south Indian campaign led

him to increase coinage weights. He enlarged the gold dinar from 172 grains to 202 grains. He introduced a silver coin, the adlis, which was discontinued after seven years due to lack of popularity and acceptance among his subjects. All his coins reflect a staunch religiosity, with such inscriptions as "The warrior in the cause of God", "The trustier in support of the four Khalifs - Abubakkar, Umar, Usman and Ali". The kalimah appeared in most of his coinage. Both at Delhi and at Daulatabad coins were minted in memory of his late father and also on Abbasid caliphs al-Mustakfi I and al-Hakim II. There were also mints at Lakhnauti, Salgaun, Darul-I-Islam, Sultanpur (Warrangal), Tughlaqpur (Tirhut), and Mulk-ITilang. More than thirty varieties of billion coins are known so far, and the types show his numismatic interests. Tughluq had two scalable versions, issued in Delhi and Daulatabad. The currency obeyed two different standards, probably to satisfy the local standard which preexisted in the North and in the South respectively. Tughluq's skill in forcing the two standards of currency is remarkable. He engraved "He who obeys the Sultan obeys the compassionate" to fascinate people in accepting the new coinage. Inscriptions were even engraved in the Nagari legend, but owing to the alloy used, the coinage underwent deterioration. As well, the copper and brass coins could easily be forged, turning every house into a mint. Tughluq subsequently withdrew the forged currency by exchanging it with bulls and gold. He issued complex and innovative coins of the whole Delhi series. His coins were struck at various number of mints, reflecting the extent of his conquests.

Ghiyath al-Din Mahmud ibn Muhammad.....a few days in Mar. 1351

On the death of Muhammad bin Tughluq, Firuz Tughluq was accepted as the next ruler by the army in Sind. In Delhi, Khawaja-i-Jahan, unware of this, raised to the throne, a would-be son of the late king, with the name Mahmud. When Firuz returned to Delhi, Mahmud was set aside. During this brief period, coins were struck in Mahmud's name in gold, silver and billion. The gold Tankas turn up surprisingly often but other coins are extremely rare. Ruler's title: yamin amir al-muminin ghiyath al-dunya wa'l din abu'lmuzaffar mahmud shah bin muhamad shah bin tughluq shah al-sultan.

Firuz Shah S/o Rajab Sipah Salar.....1351 - 20 Sep 1388

His father's name was Razzab (the younger brother of Ghazi Malik). Firuz Shah Tughlaq succeeded his cousin Muhammad bin Tughluq following the later's death from a fatal illness, but due to widespread unrest Firuz's realm was much smaller than Muhammed's. Firuz Shah Tughlaq was forced by rebellions to concede virtual independence to Bengal and other provinces. He was known as an iconoclast. In the 1350s, he established the city of Firozabad at the site of the Feroz Shah Kotla (Literally fortress or citadel of FirozShah). Most of the city was destroyed as subsequent rulers dismantled its buildings and reused the spolia as building materials. Firuz's billion and copper coins were so popular that they continued to be struck long after his death with posthumous date especially from Delhi (Hadrat and Dar al-Mulk). There is also a rare billion issue with the mint name Sahat-i-Sind as Firuz made two expeditions to Sind.

Fath Khan S/o Firuz Shah (at Jaunpur).....1360

In AH760, Fath Khan was invested with the insignia of royalty by his father Firuz Shah and allowed to strike coins in his own name. His domain was the eastern province of the sultanate, the iqlim al-sharq, which later became the independent sultanate of Jaunpur.

	Goron D511/NW 750 Tanka. **Year:** AH 760(1360). **Weight:** 8.61 [9.3g]. **Metal:** Billion. **Diameter:** 19.00mm. **Edge:** Plain. **Alignment:** Coin, but 15% rotated. Mint: N/A. **Obverse:** fathkhan firuz shah jall allah zillahahu jalalahu (Fath Khan Firuz Shah, May Allah glorify the shadows of his glory). **Reverse:** fi-zaman al-imam amir al-muminin abi abd allah khulidat khilafatuhu. **Mintage:** N/A. **Ruler:** Fath Khan S/o Firuz Shah. **Note:** Given royalty by his father Firuz to produce coins in iqlim al-Sharq [Jaunpur]. Citing Caliph Abu Abdullah.

Muhammad Shah S/o Firuz Shah (regent).....1387 – 1388

Because of his increasing infirmity, Firuz made his son, Muhammad as regent in AH 789 and evidently allowed him to issue coins bearing both names. When Firuz died in the following year, the succession went to Tughluq Shah, the son of his eldest son Fath Khan. Muhammad bin Firuz retired to Nagarkot. Billion and copper coins were issued in joint names as Firuz shah and Muhammad Shah during 1387- 1388..

Ghiyath al-Din Tughluq Shah II S/o Fath Khan.....1388 - 14 Mar 1389

He succeeded Firuz Shah Tughluq, immediately after his death. However, Ghiyas ud-Din Tughluq II was not a capable ruler, and failed to successfully manage and control his empire. He was eventually murdered on March 14, 1389 and succeeded by Abu Baker. Even so, none of the successors were strong leaders, and the Tughlaq Dynasty eventually came to its end in 1398. Despite his short reign, the coinage of Tughluq II is quite diverse. None of his coins are common. A few gold coins are known, the remainder being billion and copper.

Firuz Shah Zafar Khan S/o Firuz Shah.....1389Ruled in AH 791.

As with the pervious ruler coinage, it consists of rare gold issue, various billion issues(mostly rare) and copper coins.

Abu Bakr Shah S/o Firuz Shah Zafar Khan.....1389 - 31 Aug 1390

However, Nasir ud din Muhammad Shah III S/o Firuz Shah, also desired to be ruler as he had been serving as regent in 1387-1388. He struggled against Abu Baker over the control

of the throne. Eventually Abu Baker was defeated, and Nasir ud din Muhammad Shah III succeeded him as king. Gold, billion and copper coins are known on his name. During his reign coins in the name of Abu Bakar were also issued in AH 792 (1389).

Nasirud-Din Muhammad Shah III S/o Firuz Shah..31 Aug 1390 - 20 Jan 1394

Gold, billion and copper coins are known under his reign as sole ruler. He also issued coins as regent for his father from 1387 to 1388 as well.

Ala al-Din Sikandar Shah I S/o Muhammad III....22 Jan 1394 - 08 Mar 1394

He was known as Humayun Khan and took the name Ala al-Din Sikandar Shah after becoming in power. Only billion and copper coins are known for this ephemeral ruler.

Nasir al-Din Mahmud Shah II S/o Muhammad III...08 Mar 1394 - Feb 1413 with.

The reign of Mahmud bin Muhammad was a very stormy one. In the year AH 797, a rival sultan wasestablished in the form of Nusrat Shah. In AH 801 Delhi was sacked by Timur. Between AH 804 and 808,the effective ruler was Mulla Iqbal Khan. Mahmud struck coins in gold, silver, billion and copper. Billioncoins on his name are reported from AH 797 (1394). During the reign there was also various posthumousissues of coins in the name of Firuz Tughluq, Muhammad bin Firuz and Mahmud bin Muhammad. Hecontrolled the eastern part of the sultanate from Delhi.

Nusrat Shah S/o Fath Khan.....Jan 1395 – 1399

Grandson of Firuz Shah Tughluq, controlled the west part from Firozabad. Nusrat was a son of Fath Khanand was put forward as claimant to the throne for a period during the reign of Muhmud Shah II. This wasthe lowest point of the Delhi sultanate, as the two rivals watched each other from different parts of the city.Nusrat's coinage is mostly in copper with double, single and half falus. There are some gold and silverTankas known. Ruler's title: al-wathiq bi-ta'yid al-rahmani nusrat shah al-sultan khulidat mamlakatuhu

(confiding in divine support, Nusrat Shah the sultan, may his kingdom endure).

Sack of Delhi by Timur; interregnum.....1399 - 1414

Mulla Iqbal Khan.....1399 – 1414

When Timur invaded India and sacked Delhi, Mahmud Shah II made a good escape and returning until the year AH 804. During his absence and indeed after his return, the shrunken sultanate was effectively governed by Mulla Iqbal Khan. Only a single gold Tanka dated AH 802 is known on his name. Ruler's

title: al-sultan al-azam abu'l mansur iqbal shah al-sultan

SAYYID DYNASTY

Then came the Saiyyid dynasty founded by Khizr Khan. The Sayyids ruled from about 1414 AD to 1450 AD. At a time when the provinces were declaring themselves independent the first task of Khizr Khan was the suppression of the revolts. Last in Saiyyid dynasty was Muhammad-bin-Farid. During his reign there was confusion and revolts. The empire came to an end in 1451 AD with his death.

Sayyid Khizr Khan.....28 May 1414 - 20 May 1421

He founded the Sayyid dynasty. But he did not take up the title of king and nominally, continued to be a Rayat-i-Ala (vassal) of the Timurids, initially of Timur and after his death, his successor Shah Rukh, grandson of Timur. No coins are known on Khidr Khan's name but posthumous dated AH 817 to AH823 coins exists. Silver Tankas on Muhammad Firuz, billion and copper coins on Firuz Tughluq.

Mu'izz ud-Din Mubarak Shah II S/o Khidr Khan....20 May 1421 - 20 Jan 1434

After Mubarak Khan was killed, his nephew Muhammad Khan ascended the throne and styled himself as Sultan Muhammad Shah. During the first seven years of his reign, Mubarak did not issue any coins in his name, preferring to continue with the posthumous types of Firuz Tughluq and Muhammad bin Firuz. It is interesting to note that both the posthumous gold and silver Tankas of Muhammad bin Firuz use the title abu'l mahamid (father of laudable qualities), a title not used on his coins issued while he was still alive. Mubarak's own gold and silver Tankas are very rare. He issued no billion coins. In copper, he replaced the 40 rati falus with one of 48 rati, together with its double and half.

Title on his coins: ***fi 'ahd al-sultan alghazi al-mutawakkil ala'l rahman mubarak shah sultan.*** The reverse of the gold Tanka has a quotation from the Qur'an: *Verily we have won for thee a manifest victory* (18.1).

Muhammed Shah IV S/o Farid S/o Khizr Khan.....1434 – 1445

Coins were struck on his name in gold, silver, billon and copper. The standard weight for all four metals were increased slightly during his reign. At the same time there also exist falus and double falus at the old 40 rati standard, possibly for use in a particular part of the empire where the new standard was not in force. One type of falus in the name of Mubarak Shah Sayyid dated AH 838 (1435) in the beginning of Muhammad's reign is known.

Title on his coins: *al-sultan al-azam abu'l muhamid muhammad shah bin*

farid shah hadrat shah al-sultan.

Just before his death, he called his son Ala-ud-Din from Badaun and nominated him as his successor.

Ala ud-Din Alam Shah S/o Muhammad Shah.....1445 - 19 Apr 1451

He moved his capital from Delhi to Budaun. No gold Tankas are known on his name. A single silver Tanka, 80 and 32 rati billion coins and in copper double and single falus on 40 rati standard are known. Title on his coins: *sultan ala' al-dunya wa'l din alamshah bin muhammad shah bin farid shah*. Posthumous copper coins on Mubarak Shah Sayyid were struck at Dar al-Mulk Delhi dated AH 854-855 (1450-1451). At this time Alam Shah was in Budaun and had little, if any, authority in Delhi, which was under the control of two bobles, Hisham Khan and Hamid Khan. These two in due course offered the throne of Delhi to Bahlul Khan, who readily accepted and seated upon the throne. These posthumous Mubarak Shah coins were therefore probably struck in the months prior to Bahlul's accession. In some account it is noted that Ala ud-Din Alam Shah voluntarily abdicated the throne of the Delhi sultanate in favour of Bahlul Khan Lodi on April 19, 1451 and continued to live in Badaun till his death in 1478.

LODI DYNASTY

Bahlul Shah Lodi.....19 Apr 1451 - Jul 1489

He was the nephew and son-in-law of Islam Khan (Malik Sultan Shah Lodi), the governor of Sirhind(Punjab) in India and succeeded him as the governor of Sirhind during the reign of Sayyid dynasty rulerMuhammad Shah (Muhammad-bin-Farid). Muhammad Shah raised him to the status of an Amir. In 1479,Sultan Bahlul Khan Lodi defeated and annexed Sharqi dynasty based at Jaunpur. Bahlul Khan did much tostop rebellions and uprisings in his territories, and extended his holdings over Gwalior, Jaunpur and upperUttar Pradesh. In 1486, he appointed his son, Babrak Shah as viceroy of Jaunpur. In time, this proved to be problematic, as his second son, Nizam Khan (Sikandar Lodi) was named successor, and a power struggle ensued upon his death in 1489. Only billion and copper coins were produced in his reign. An analysis of some billion tankas revealed a silver content of a round 16% and were known as bahlulis. Title on his billion coins: *al-mutawakkil 'ala'l rahman bahlul shah sultan*. He is also know to produce a copper coin in Jaunpur dated AH 888-894. Bahlul Shah captured Jaunpur and appointed his son Barbak Shah as governor of Jaunpur. Barbak Shah produced Double falus and single falus coins dated AH 894-896 (1489-1491).

Nizam Khan Sikandar (Sikandar Lodi) S/o Bahlul.....17 Jul 1489 - 21 Nov 1517

The second son of Bahlul, succeeded him after his death on July 17, 1489. He was nominated by his father to succeed him and was crowned as king on July 15, 1489. He refounded Agra in 1504 and constructed mosques. He abolished corn duties and patronized trade and commerce. He was a poet of repute. He composed under the pen-name of Gulruk. He was also patron of learning and ordered Sanskrit work in medicine to be translated into Persian. Sikandar Lodi tried to conquer the Gwalior Fort, and he attacked 5 times, but was failed all the five times by the king of Gwalior Maharaja Mansingh. He developed Agra as his second capital (after Delhi), as it took a lot of time to travel from Delhi to Gwalior. Finally he attacked a small region, near Gwalior named Narwar, and he had to wait 11 months at the

gates of the Narwar fort, after 11 months when the people found that nothing had left to eat, they surrendered to Sikandar lodi. Once again he attacked on Gwalior, and was defeated by Maharaja Mansingh and his wife Mrignayani. A part from a couple of extremely rare gold and silver coins, all his coinage is of very debased billion, with a silver content of about 5%. Many coins have the appearance of copper and there may have been a good deal of contemporary forgery. Title on his coins: *al-mutawakkil 'ala'l rahman sikandar shah bahlul shahsultan*.

Ibrahim Khan Lodhi S/o Sikandar.....1517 - 21 Apr 1526

He was the the youngest son of Sikandar. He was a fearless military leader and kept out the opposition foralmost a decade. He was engaged in warfare with the Afghans and the Mughals for most of his reign and died trying to keep the Lodi Dynasty from annihilation. He faced a number of rebellions. The Mewar ruler Rana Sanga extended his empire right up to western Uttar Pradesh and threatened to attack Agra. Daulat Khan Lodi, governor of Lahore and Alam Khan, an uncle of Sultan Ibrahim Lodhi, invited Babur, the ruler of Kabul, to invade India. Ibrahim Lodi was defeated and killed by Babur in the first Battle of Panipat on April 21, 1526. Babar made his intentions of staying here by establishing Mughal Empire and deserted both Daulat Khan and Alam Khan. Ibrahim Shah Lodi in his Delhi realms struck only billion coins of half and quarter Tankas apparently based on a 96 rati tanka standard. The quality of the coinage are however poor. Elsewhere in Malwa on the conquest of Chanderi, he struck copper and silver coins on his name in Malwa style during AH 927-932 (1521-1525). There are also two strange pieces of two grams each having Ibrahim's name on one side and Kangra rulers Prayaga Chandra and Rama Chandra on the other side. Both Kangra rulers, ruled during 1517-1527.

Title on his coins: *al-mutawakkil 'ala'l rahman ibrahim shahsikandar shah sultan*.

Mahmud S/o Sikandar (at Bihar).....1528

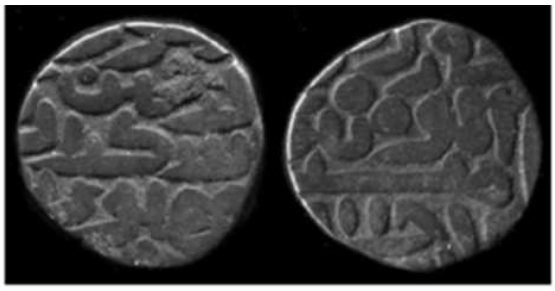
Mahmud was a younger brother of Ibrahim and after the battle of Panipat in AH 932 (1526), was adopted by the remnants of Lodi faction as their leader. He was proclaimed king in Bihar in AH 935 (1528). A single extremely rare billion tanka of 80 rati (9.1g) on his name is known.

Title on his coin: *mahmud shahbin sikandar shah bin bahlul....*

Fall of the empire

By the time Ibrahim ascended the throne, the political structure in the Lodi Dynasty had dissolved due to abandoned trade routes and the depleted treasury. The Deccan was a coastal trade route, but in the late fifteenth century the supply lines had collapsed. The decline and eventual failure of this specific trade route resulted in cutting off supplies from the coast to the interior, where the Lodi empire resided. The Lodi Dynasty was not able to protect itself

if warfare were to break out on the trade route roads; therefore, they didn't use those trade routes, thus their trade declined and so did their treasury leaving them vulnerable to internal political problems.

	Goron 705/R1518/NW 975 Tanka of 80 rati. **Year:** AH 901(1496). **Weight:** 9.09 [9.4g]. **Metal:** Billion. **Diameter:** 18.00mm. **Edge:** Plain. **Alignment:** Coin, but 75% rotated. Mint: Hadrat Delhi. **Obverse:** al-mutawakkil'ala'l rahman sikandar shah bahlul shah sultan. **Reverse:** fi-zaman al-amir al-muminin khulidat khilafatuhu.mint: bi-hadrat delhi and date at the bottom. **Mintage:** N/A. Mintage Years: AH 894-909. **Ruler:** Sikhandar Lodi S/o Bahlul (1489-1517). **Note:** Very Common. Goron D706/R1519/ NW984-1003 has angular style and no mint name (also Very Common type).
	Same as above coin, but has different legend style **Year:** AH 903(1498). **Weight:** 8.37 [9.4g]. **Diameter:** 19.00mm. **Alignment:** Coin, but 25% rotated.

	Same as above coin, but has different legend style **Year:** AH 906(1501). **Weight:** 8.79 [9.4g]. **Diameter:** 18.00mm. **Alignment:** Medal, but 5% rotated.

	Goron D713/R1547/NW 1020-1027 Quarter Tanka. **Year:** AH 925-928 (1519-1522). **Weight:** 279[2.5 2.8g]. **Metal:** Billion. **Diameter:** 12.30mm. **Edge:** Plain. **Alignment:** Coin, Mint: Hadrat Delhi. **Obverse:** al-mutawakkil'ala'l rahman ibrahim shah sikander shah sultan. **Reverse:** fi-zaman amir al-muminin khulidat khilafatuhu. Date at the bottom. **Mintage:** N/A. Mintage Years: AH 925-928 (1519-1522). **Ruler:** Ibrahim Shah Lodi S/o Sikandar (1517-1526) **Note:** Common.

38

Museum as a Centres of Recreations: New Dimensions

Vivek Shukla* and Manoj Dwivedi**

Introduction

The importance of a museum are mainly educational and cultural and not merely housing collections of curious objects just as the old Hindi word. Ajayabghar might suggest. Thus the importances of a museum in two-fold.

1. A place of work for the scholars.
2. A place of instruction for the general public.

The museum is a veritable treasure house for everybody who think beyond the everyday matters of human life. The expenditure of the world stored up there, no thoughtful person should leave its door without gaining something from a visit.

Cultural contents of a museum could be most effective media to impart cultural education as well as to promote nation building and national integration. It is so because cultural ethos of human beings comes from very innerself and thus are the roots of any social set up. Cultural spectrum of a society gives birth to many creative initiatives. Cultural synthesis of

* Junior Research Fellow, Department of Ancient History, Culture & Archaeology, University of Allahabad, Allahabad, Email-vivekmailbox4u@gmail.com, Mob.-9415644173.

** ASA, Jaipur Circle, Archaeological Survey of India, Email-mkdwivedi1969@gmail.com.

diverse faiths and beliefs are the roots of national integration and nation building. With great aspirations that society at large expects from a museum, the role of museums become more and more challenging. It is particularly so because some of our museums are still lacking basic requirements of a well organised documentation, a basic conservation unit and so on.

In the changing scenario of increasing visitors aspirations and social obligation, there seems to be an urgent needs for art and cultural museums to adopt a change in their approach. It has to change from an object oriented approach to a communication or education oriented approach.[1] By this change the role of nation building and national integration could be fulfilled in a most appropriate manner. In the changing world with rapid technological advancements in communication, information retrieval, dissemination, exhibition techniques and public education. It is, therefore, a time to take stock, review the past and consider the future.

Cultural Education

The rich cultural contents of any collection has tremendous scope of imparting cultural education, by various means and in a very effective manner, through specialized and thematic exhibitions.[2] It has to be meticulously planned in which a particular aspect is highlighted through a well communicative exhibition media. For example the theme of nation building and national integration is to be exhibited and communicated will require.

1. A well defined objective to be communication through the exhibits.
2. Careful selection of appropriate exhibits to communicate the theme effectively.
3. Careful selection of interactive elements, use of graphics, data, dioramic effects, use of audio-visual or electronic devices etc. to make the theme effective.

In this process, the set of exhibits throwing light on cultural unification or cultural synthesis need very careful selection. Their role historically or culturally, as unifying factor promoting unification of diverse faiths, communities and regional elements needs to be stressed upon.[3] To make it successful, we need to work on following lines :-

1. The subject has to be made lively.
2. The purpose to be communicated, i.e. national integration is to be made quickly.
3. The contents of the exhibition so arranged are to be made interesting to all age group and it should keep the taste of diverse group of visitors alive.
4. The sequences of events shown to promote the theme being communicated should be symmetrical and systematically planned.
5. The technique of learning the these of interactive communication should be made simplest possible.

Such an integrated approach is a creative process in itself to develop the exhibits to communicate the theme of the exhibition in an effective way. It is a team work requiring

passion, intuition, knowledge, skill and above all zeal to bring out the appropriate result collectively.

The curator (subject matter expert) will select art objects (creative materials) form diverse groups, faiths and communities showing cultural events, costumes, traditions etc.[4] collectively promoting a constructive approach in the social life of the community at large. Such exhibits (artifacts) are to be discussed with the designer (display experts) to present them in an effective manner. The designer also needs to understand the spirit behind the theme to use different media and accessories to bring about the desired effects. Then comes the role of educator or communicator to propagate the theme of the show. It has to be done by various means such as write ups, audio-visual means, multimedia effects and so on. In a way creating an exhibition on national integration is reflected in the integration of the team working on the project itself to make it a success.

Yet the most effective examples of nation building to be appropriately presented are the contributions of individuals and families who built up cultural institutions, who by virtue of their zeal to collect art objects and were the spirit behind our many national and otherwise important institutions. The contribution of illustreous family of Salar Jungs of Hyderabad is the Salar Jung Museum, the contribution of late Shri Rai Krishna Dasji is Bharat Kala Bhavan, Varanasi.

Problems and Prospects

The changing scenario of ever increasing role of museums to function as centres of education and as dynamic institutions to fulfill the social objectives is very challenging. In Indian context, it is particularly challenging because most of our institutions are still striving hard to get even the basic minimum infrastructural facilities like a properly organised documentation system, a design team, a conservation unit and so on. At the same time they have to fulfill needs of every increasing requirement of visitors.[5] It will need to consider the following points.

1. Creation of data base of visitors requirements, based on market research.
2. Preparing data base information system to suit diverse needs of different strata of visitors.
3. Project appraisal of these requirements with different class of visitors.
4. Use of modern technique of information technology liek multimedia programms on computers, interact etc.
5. Take care of state of preservation of actual/original objects during the interactive programmes with the visitors.
6. To set a dynamic mechanism of getting constant feed back from public, its analysis in the museum and passing it on to be programme makers or museum managers for their best possible use.[6]

While formulating programmes for the public museums ought to set following questions before its agenda.

1. Who are the users of data base and who are the potential users?
2. What information are they seeking or what questions do they want to ask?
3. What information can museum offer?
4. What is the role of the museum in assisting users to find the desired information?

In order to accelerate the role of museums towards education in general and promoting thematic aspects in particular, it needs revolutionary change both in terms of policy and the objectives. The ever increasing public expectations are infact challenges for the 21st century and it needs to concentrate on these guidelines.

1. To assert the museum place education, in the broadest sense of term, at the centre of their role.
2. To formulate programes so as to reflect the diverse needs of a heterogeneous society by maintaining the broadest possible public dimension for the museum.
3. To constantly understand, develop, expand and use the learning opportunities that museums offer their audien.
4. To constantly enrich our knowledge about diverse cultures that reflect in our collections and promote coherent ideas they represent and evoke.
5. To ensure that the interpretive process manifests a variety of cultural and intellectual perspectives and reflects and appreciation for the diversity of the museum's public dimension.
6. To engage in a regular and ongoing collaborative efforts with wide spectrum of organizations and individuals who can contribute to the museum's public relation.[7]
7. To constantly assess the decision making processes in museums and develop new dynamic mechanism that enable broad public interaction and a commitment to excellence.
8. To achieve diversity among the trustees, management, staff and voluntary organization etc. to constantly get new and innovative perspective to the museum's public interaction.
9. To constantly explore possibility or commitment from the leadership and financial resources.[8]
11. To consolidate basic infrastructural resources like updated documentation, a well organized communication net work, a well equipped conservation unit and a dynamic design team.
12. To strive for updating and excellence in its programs and public commitments.

Conclusion

Museums have a significant role to play in preserving the cultural records. Today museums must become agents of change and development. They must mirror events in society. The museums must become institutions that can foster peace.

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39

An Aesthetical Study of Kalyansundar Images

Abha Mishra Pathak*

The marriage of Shiva and Parvati is known as 'Kalyansundar'. There is no textual reference of Kalyansundar image in literature. After the creation of Kumar Sambhavam by Kalidas during Gupta period artists had taken interest to narrate the story of Shivaparvati marriage. Kalidas has narrated beautifully the story of Shivaparvati marriage in ***Kumarsambhavam***. Alongwith ***Kumarsambhavam*** we have found the reference of this marriage in ***Matsyapurana. Brahmapurana, Vamanpurana, Kalikapurana, Shivapurana, Mayamatam, Anshumadibhedagam*** etc. There are a large number of narrative images of Shivaparvati marriage found from northern and southern India. We have found early examples of this image from Ellora and Elephanta. One of the earliest examples of this image is now displayed in National Museum, New Delhi [Account No. 559].

There were so many images created in different art sites after Gupta period during medieval India. In which some art centres are very famous like Ellora, Elephanta, Eta, Kannouj, Osian, Khajuraho, Bharatpur, Padyavali, Bhuwaneswar, Shankarbandh, Tanjor, Gandeyakondacholpuram etc. In southern India, Kalyansundar images have been shown in symbolic style while in northern India artists had taken interest in narrating the whole story of their marriage.

Gopinath Rao called these images as Kalyansundar[1] because in southern India – ***Kalyan*** means marriage while ***Sundar*** is used for attraction so, after all **the meaning of Kalyansundar is an attractive marriage**. The image of Kalyansundar is incomparable on the basis of act

* Associate Professor, History of Art, Mahila Mahavidyalaya, Banaras Hindu University, Varanasi-221 005

and emotion. These are **great depiction according to form, movement, rhythm, proportion and perspective** which are the basic elements of aesthetics. In these sculptures we can see the traditional 'Brahma marriage' of brahmin religion and not only a fashionable attractive brahma marriage of brahmin society has been shown in these sculpture but, of course, a great saga of love and affection can also be visualized as stage show in these sculptures. These are very good examples of still photography as well as narrated story of the matrimonial ceremony.

First specialization of these images is ***Talman*.** These are very good sculptures on the basis of *talman*. Where the figure of Shiva has been depicted bigger than that of Parvati. Every part of both figures is in good proportion. These images have been carved in ***Abhanga, Dwibhamga*** or ***Tribhanga*** Mudra in which ***Ayat*** and ***Swastik*** padbhedas have been exhibited.

When we talk about marriage of brahmin Custom, we see that the narrative sculpture of Kalyansundar is very **authentic narration of brahmin marriage**. In these sculpture brahma vivah of brahmin tradition has been shown with its full grace. In which different steps of marriage us visualized like barat, saptapadi panigrahan, kanyadan, begging of daybhag etc.

Vamanpurana has mentioned the marriage of immortal couple in very attractive way. The beautiful narration of this marriage can easily be seen in the sculpture of Gurjar Pratihar dynasty found from Eta (Fig. 1).

Fig. 1 : Kalyansundar, Cave No. 29 Ellora 8th C.

Three different rituals of marriage have been depicted here. In first scene barat has been shown on the upper side of parikar where the two dancers are dancing before barat. Shiva has been seated on Nandi with Sahwala. In the next scene Brahma has been shown

as priest while Agni as Yajnakunda. Shiva and Parvati have been shown taking round about Agni. According to ***Matsyapurana***[2] and ***Vamanpurana*** Brahma has played the role of Priest in the marriage of Shiva and Parvati Agni was present as Agni (Yajna Kunda) in the occasion of this auspicious marriage.[3]

The whole auspicious features of marriage such like-Banana tree, Kalash, Bhandanwar are quite visible here. After showing the marriage the Gurjar Pratihar artist has depicted the character of Malini, the friend of Parvati. Who is touching Shiva's feet for '**Daybhag**'. According to **Vamanpurana[4].** Malini had begged Daybhag from Shiva. She had requested Shiva to give his clan to her best friend Parvati.

Taton Haragin Dhanimalinya Grihito Daykarnat|
Ki Yachasi cha Dasyami Manchsweti Haroabravit||

Vamanpurana 27/51

At present time, too, in brahmin marriage the sisters and friends of bride steal, the shoes of groom and when they get some neg (Daybhag) they return the shoes of groom. This particular specific rituals can be visualized in the sculptures found from Ellora, Elephanta, Eta etc.

Actually, the narration of Kalyansundar sculpture is a saga of passion. In these sculptures the affection between bride and groom can be seen where they have been depicted to see each other or Shiva has been shown looking at Parvati while Parvati looking downwards with shy. But in some sculptures Parvati has been shown looking at Shiva too. In these sculptures the newly married couple is looking in happy lovely mood. The facial expression of these sculptures can be compared to any newly happy married couple.

In the sculptures of Manikpur (10th C) (Fig. 2) Shiva twists his body to have a glimpse at Parvati while Parvati is feeling shy and bends her body backwards.

In another image found from Madhyapradesh (10th C) and now displayed in Birla museum, Bhopal (Pl. 3). Parvati has been shown looking at Shiva face and Shiva also seeing in the eyes of Parvati just like a fully melodious song of a romantic poet. Kalidas has narrated very beautifully this context in **Kumarsambhavam[5].**

Fig. 2 : Kalyansundar, Eta 10th c AD.

Fig. 3: Kalyansundar, Manikpur, 10th c AD

Fig. 4 : Kalyansundar, Birla Musum, Bhopal 10th c AD

The most important feature of Kalyansundar images is narration of **an epic just like a drama on the stage**. While taking auspicious rounds the bride groom awaits for the opportunity to look back at bride. Where a well decorated stage is shown in background. The auspicious symbols are also seen here such as Bandanwar, Banana tree, Purnakalsh, Agnikunda etc.

In one of the images of Kalyansundar (now displayed at the Minneapolis Institute of Arts) the sculptor has tried to show the palace of Himalaya in background. We know that in ancient time there was a great tradition of illustrated curtain which was hung behind any scene. Different forms of folk art have come from this art such as Kalighat, Molela etc.

In different images of Kalyansundar artists have highlighted the figures of Shiva-Parvati. To express their views artists have created the figures of Shiva and Parvati bigger than the other characters like-Vishnu, Brahma, Himalaya, Mena etc. When we go to see any drama in a theatre, we see that the art director throws lights on the main characters on the other hand the supportive characters remain less highlighted.

Not only according to stage show these images are **great examples of still photography**. It seems to be any image of Shiva Parvati where photographer takes photo when they are moving around the fire, looking at each-other, the ritual of Kanyadan (when Vishnu or Himalay mena donate their daughter to Shiva) the begging of clan from the best friend of Malini all these moments are lively visualized in the images of Kalyansundar.

The most attractive part of these images are the costumes and ornaments worn by the couple. There is a natural attraction of expensive ornaments and being well dressed up in human

being. In every custom of marriage bride and groom put on fashionable traditional costumes and ornaments which increase the beauty of bride and the attraction of the groom.

In the images of Kalyan Sundar Pravati has been shown in different types of costumes just like – Uttariya, Kanchuki, Stanashuka, Ghaghara, Chalnak (Chalnak was a pyjama type lower dress which were worn by dancers[6]). At present time too, the Bharatnatyam and Kuchipuri dancers wear this costume because it is comfortable for movement.

Every one knows uttariya was like modern Duptta, while Kanchuhki just like short kurti or blouse, stanshuka was thin cloth which was used for covering the breast, Ghaghara is also very popular today which is worn by newly married bride. In these sculptures Shiva is depicted wearing Dhoti, which is a popular traditional dress for groom describing contemporary period, too. There are so many references in ***Vamanpuran, Shivapurana*** etc. In most of the scenes Shiva has been depicted wearing Jata mukut but the sculpture found from Ambarnath Bhuwaneshwar he has been shown with kirit mukut too, while Parvati can be seen with laltika (symbol of shaubhagya).

These images have been shown with fully decorated attractive ornaments like – kundal, muktahar, keyr, anga, katak, valay, mekhala, kinkani, nupur etc. and yes of course, different types of Jatajuta and the bun of churapash can also be visualized in their images and all these are independent subjects of research.

Infact the images of Kalyansundar are very special on the basis of "Aesthetics". These are not only Icons for the study of Iconography but these are a saga of passion between bride and groom, traditional narration of the India brahmin marriage and beautiful images according to fashion in which a fashionable things of a society of contemporary period can be seen in the costume, coiffeur designing and the features of the expensive ornaments.

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Mithila / Madhubani Painting

Swarnlata Kumari*

Madhubani art or Mithila painting was traditionally created by the women of various communities in Mithila region of the Indian subcontinent. It originated from Madhubani

* Librarian, Upendra Maharathi Shilp Anusandhan Sansthan, Patna. Email: karnminu2015@gmail.com

district of Mithila region of Bihar, and, it is popularly called Mithila painting or Madhubani art. Madhubani is also a major export centre of these paintings. This painting as a form of wall art was practiced widely throughout the region; the more recent development of painting on paper and canvas mainly originated among the villages around Madhubani, and it is these latter developments led to the name *Madhubani art* being used alongside the name "Mithila Painting." Madhubani painting-Bihar's unique and most famous folk art is it's Mithila or Madhubani Painting that is practised in the interiors of Mithila region in Bihar. Legend has it that Mithila, named after king Mithi, once ruled by king Janak who was the father of Hindu goddess Sita; wife of Lord Rama. This region in the northern part of Bihar, Known as Mithilanchal, is famous for its sacred and fertile soils, erudite scholars, betel leaves, makhana, mangoes,sweet tongue of locals, and madhubani painting

When Mithila Painting came on the Horizon, it is difficult to say authentically. Females of Mithila have been doing such paintings on the home walls and on floor since thousands of year back. They also make it learn to their daughters, daughters to their daughters and so on. Generation to generation there is no serious attempt to make it learn or somebody learns it. As the female child comes senses she begins painting with her mother. In the same way it is on go since time immemorial. Each generation has its own logic, but descriptive and painted facts are unchangeable. Thus it is difficult to guess that at what moment of history this painting come into existence and took strides.

Local women are expert in drawing pictures of different deities and for ages, they have been decorating doors, walls and courtyards of their houses for their religious ceremonies, using natural vegetable dyes. There is no use of painting brush; their skilled finger tips do the drawing instead.

However, this art form gained tremendous recognition during the last 40 years and is now a major source of income for several families in the Madhubani district. Before 1969 this painting form and content was limited to Mithila region only. But during the severe famine of 1969 this all on sudden attract the eyes of the world. At that time only women of upper caste were adapted in this art. This was their heritage. Their paintings were connected with Puranic lores. But during the panic of famine in 1967 Harijan and backward women were attracted to learn it and adopt it commercially. They were not fully apprised of Puranic themes. So they began painting their god Sahlesh, Dina Bhadri, trees leaves flowers etc. Contained in their religions faiths. In due course they also became expert. Their painting form was called "Harijan Painting." Now this type of distinction is not there. Women drawn from all religions and casts are active in this field giving a touch of market trends in their painting and in their beliefs and concepts. But still in their paintings Ram – Vivah, Dhanush – Bhang, Sita – Haran, Kevat mention, dialogues of Radha – Krishna like Puranic references are prominently there.

Shantiniketan (west Bengal)'s famous Shilp Gram, a hub of rural products of eastern India, has a separate Bihar Hut where tradition form of Bihar like Madhubani paintings and Sikki, Sujuni and stone crafts have been put on display.

Even though this art form is now taught in many institutes and training centres in Bihar, the original Madhubani painter hail from three villages in the Madhubani district-Ranti, Jitwarpur and Rashidpur. Almost every household in these villages produces Madhubani paintings. Traditionally only women would paint but these days men and boys also learn this art form.

Famous Artists of this painting:

Godavari Dutta, Maha Sundari Devi, Karpoori devi, all from village Ranti, Shanti devi and shivan Paswan from Laheriagang and Lila Devi of village Rashidpur bagged national awards and merit certificates. Ganga Devi has wonderfully depicted the Ramayana episode in her paintings. She also depicted her journey from Madhubani, a small town in north Bihar,to All India institute of Medical Science in New Dehli, where she went for treatment of cancer she was suffering from.The train, doctors, hospital, syringe, Medical ward-everything she drew delicately.Her innovations were excellent, appealing and unique in many respects. Jamuna devi together with her brother Mitar Ram, has developed a brightly coloured style that has no equivalent in mithila art. But she strictly maintains the tradition in term of obtaining colour,preparing background of the canvas and depicting the pictorials etc.

Satyanarayan Lal Karn and his wife Moti Karn have been working together on every painting using natural colours from plants and vegetables. Satyanarayan Lal Karn has learned the craft from his mother Jagdamba Devi, a Padmashri recipient, who was the first person to put the art on paper. Moti Karn, has learnt the skills from her mother Karpoori Devi, also a national award winner who has been to Japan to set up the Mithila Art Museum there. They also conduct workshops on traditional designs and motifs of Mithila painting.

Historical Background:

Folklore has it that the Mithila Painting originated when King Janak called artists to create painting at the time of Sita marriage. Tulsidas in his magnum opus, the Ramcharitamanasa, gives a vivid account of Mithila Painting decorations for the marriage of Sita. But the world at large came to know about this painting only few decades before. This painting has come in official recognition when the great artist of this painting Jagdamba Devi had received a award from the President of India at 1970.

It was in the aftermath of a major earthquake in 1934 that the local collector William Archer, while inspecting the damage in Mithila village, saw the wall and floor painting for the first time and subsequently photographed a number of them. Recognising their great beauty, he and his wife, Mildred, brought them to wider attention in several publications.

The Archer obtained some drawing on paper that the women painters were using as aids to memory. Works that the Archers collected went to the India Research Office in London (now part of the British Library) where a small number of specialists could study them as creative instances of India's folk art.

In the 1950 and early 1960s several Indian scholars and artists visited the region and were fascinated by the painting.

Women painters to share their work with the larger world was a major ecological and economic crisis that result from a prolonged drought in 1966-68 that stuck Madhubani and surrounding region of Mithila. In order to create a new source of non- agricultural income, the All –India Handicrafts Board encouraged the women artists to produce their traditional paintings on hand made paper for commercial sale.

The board sent an artist, B Kulkarni, to Mithila to encourage the women to make painting on paper that they could sell. Although traditionally women of several castes painted, Kulkarni was able to convince only a small group of Mahapatra Brahmin and Kayaspa women to paint on paper. By the late 1960s and early 1970s, two women from these communities, Sita devi and Ganga Devi both in India where they received numerous Commissions, and in Europe, Japan, Russia and the United states where they represented India in cultural fairs and expositions.

Their successes coupled with active encouragement led scores of other women to paint. Many of these women have also been recognised as artists of nation and international stature. Furthermore, women of several other casts, especially Dusadh, are also painting now.

The Themes of this painting:-

The most overwhelming themes in Mithila paintings are marriage and Lord Krishna. The ''Kohbar'' the chamber of the brides home where marriage rituals are performed, is replete with paintings based on mythologies. In the "Kohbar room" inside and outside these paintings have their importance. Kohbar room means such room in which bride and bridegroom meet after wedding. In Kohbar painting the figure of Bamboo symbolizes family growth and male organ. Parrot is the symbol of knowledge. So leaves of lotus are for women vagina, tortoise for the long life of the couple and fish for being blessed with a Son. For the graces of riches for the couple "Kamla" or "Sriyantra" of the great learning's is painted. For giving an artistic touch to the painting Sun, birds – animals or Moon- Stars are also shown.

Aripan is a refined decorative art. This is done at the time of some pleasure, festivals, celebrations of happiness and expressing love. It is like its objective. Prominently this is done on the main door of the house. No matter it takes time but no auspicious work is performed without it. It is customary to prepare Aripans differently for each ceremony considered good and favourable. In each Aripans some sort of religious sentiment is bound to be incorporated. In this type of painting women use specially vermillian, rice and wheat dust and Ramras. No doubt arithmetical measures are there in decoration of designs but certainly the desired deity, his foot prints and human figure must be there.

The themes of this painting generally revolve around Hindus deities like Krishna, Ram, Shiva Kali, Durga etc. Symbols of fertility and prosperity like fish, parrot, elephant, turtle, sun, moon, bamboo tree and lotus are quite prominent in the painting. The human figures

are mostly abstract and linear in form; the animal are usually naturalistic and are invariably depicted in profile. Each painting has a central towering form. The smaller gaps are then filled with birds, human beings, animals, flowers and leaves

Over the years the subjects matter of the paintings has expanded to include ancient epics; local legends and folklores, domestic, rural and community life, rituals, local, national and international politics as well as the painter's own life histories. Artists of different castes and genders are now borrowing themes and styles from one another.

Tools of this painting

In the past Colours are deprived from plants. The frequently-used colours are red, green, yellow, no brush is used in these paintings, artists use a wooden splinter to draw fine black outline without any preminary sketching. The filling in of space is done with a 'Pihua' or a bamboo twig with a piece of cloth tied at one end.

Modern patterns of this painting;-These days artists prefer to use oil paints available in the market. They say these paints last longer than the natural ones as the tatter fades out in a few year. Even a canvas has changed. Because paintings are prepared for commercial purposes, the ones made on recycled paper or thick handmade paper fetches a higher price.

Mithila painting is more than an art If you ask the women what they are doing, they would respond,'' We are writing....''.For them, their style is a kind of script through which they which they communicate with the men folk or with the people of the rest of the world.

Because of money culture, some men are also now in to Mithila painting. But in its essence and nature, it remains a women's creativity.

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19. Nighat Aslam and Professor Dr. Mastoor Fatima Bukhari

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Pl. 2 : National Museum of Pakistan Karachi

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Pl. 4 : Sindhmuseums Hyderabad Sindh

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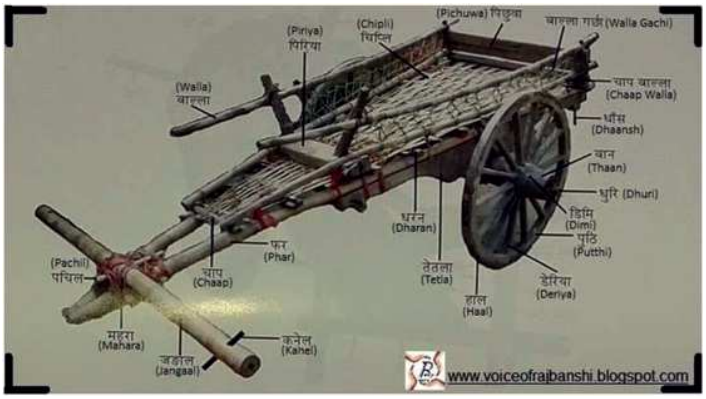
And example of Tharu Household

Net for Fishing

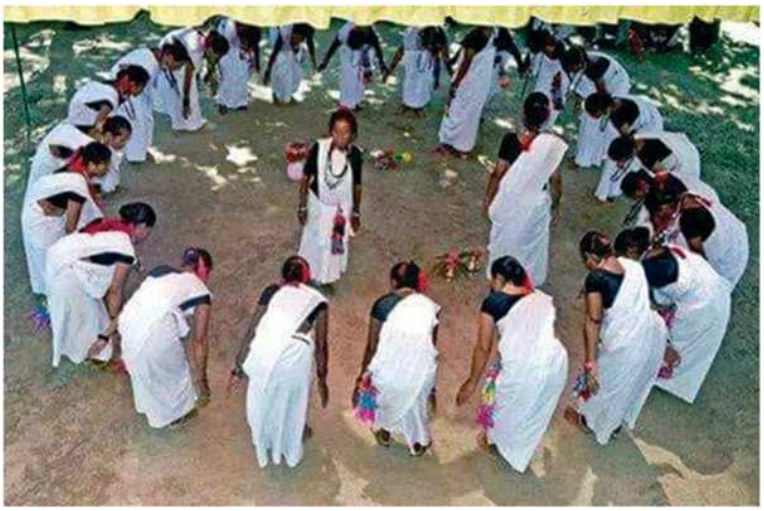
Tharu Musical Instuments

Pl. 5 : Pictures of Tharu Museum Sauraha

Pl. 6 : Tharu Cultural Museum, Harnatar, West Champaran, Bihar, Inaugurated by local MLA Sri Rinku Singh.



Pl. 7 : Tharu objects in Tharu Museum Harnatand



Pl. 8 : Jhamta Dance performed by Tharu Women

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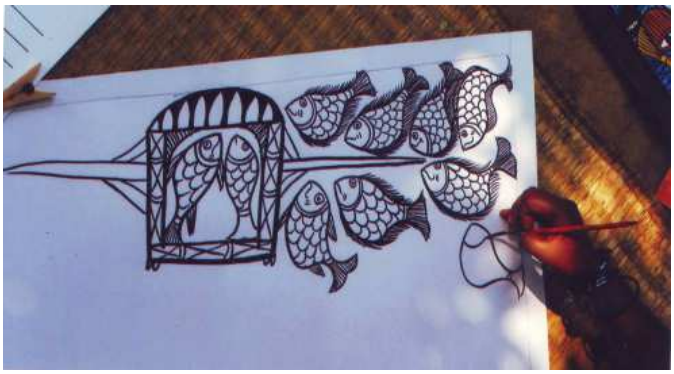
Pl. 2. A Scroll Depicting a Wedding Ceremony of Tribes

Pl. 3. A Tribal Scroll Depicting a Hunting Scene

Pl. 4. 'Punti Macher Bea' (Wedding of Fish)



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Pl. 11. 2. Naya Gram During Patamaya Festival

Pl. 11.3. Naya Gram During Patamaya Festival

Pl. 11.4. Naya Gram During Patamaya Festival

Pl. 11.5. Naya Gram During Patamaya Festival Pl. 1. A Lady Sings Pater Gaan