

Chapter 5

Development of Indian Archaeology

Libraries

The archaeology of India, is best served in archaeological matters in the Republic of India. There is indeed a rich harvest a waiting the Indian archaeologist. However, to understand the problems which India presents, the geographical conditions must be taken into account. For archaeological purpose India can be divided into five regions:

1. The Indus basin, which has affinities with Persia and Central Asia ;
2. The Ganges Valley, which also has connections with Central Asia ;
3. The Ganges Valley, which also has connections with Central Asia and is in touch with the more eastern countries;
4. A massif of barren hills and deserts, which forms a barrier running across the whole country from the north-west corner of the Bay of Bengal on the east almost to the Indian Ocean on the west ;
5. The peninsular of India.

It is clear, then, that northern India's contacts with other countries, which were chiefly by land, must be entirely different from those of Peninsular India, which were always by sea.

In the north, Afghanistan must be reckoned as part of India, for the kurbul river is a tributary of the Indus, and the passes-of which the Khyber is the most celebrated-are practicable for traffic, either commercial or warlike. Afghanistan lies at the foot of the mountain range of the Hindu Kush, through which passes lead to head waters of the Oxus and so down into Bactria and these into Central Asia or Europe. The land route from Persia lies through Kandahar, which controls the Southern passes, and therefore controls the trade, through these passes to

Sind and Multan. The sea-borne Traffic from Persia and the Persian Gulf entered India at the country of Makran, between Baluchistan and the sea, and went up the Indus Valley.

The contacts and, therefore, the civilizations of the Ganges Valley and of the Peninsula differ from each other and from those of the Indus Valley. In the Peninsula the contacts were by sea almost entirely. The belt of barren hills which divides India into a northern and southern region reaches the sea on the east and to the south of that belt lays the Chika lake, which effectually blocks all access from the north to the Peninsula on the east except by sea. On the west there is a strip of land between a belt of hills and the sea : through this trade could filter to some extent. There are some good harbors down the west coast, so that sea-born traffic counter enter the Peninsula more easily on the west than on the east, where the harbors are poor.

5.1 Stone Age Culture

The Paleolithic cultures are well represented in India, and it is a remarkable fact that the implements of the Lower Paleolithic period are found as in all other parts of the world. The forms are completely stabilized and the methods of chipping are the same wherever the implants are found ; and on the sites where they occur they are found in great quantities. The wide distribution of these highly specialized implements is one of the many problems of archaeology. In the Neolithic period the people lived on high rolling country, where there were neither forests or swamps. On such sites Neolithic implements are found, but, unlike the Paleolithic people, the Neolithic fold made very few tolls. In India many prehistoric sites have been explored and excavated. Personalities like R B, Foot, Cammiade and Burkit were responsible in creating interests in the collection of the prehistoric artifacts. It was De Terra and Paterson laid the real foundation for Scientific studies of prehistory in India. The lead given by De Terra was followed

by N.K, Bose, D. Sen and H.D. Sankalia. Dr. Sankalia discovered Middle Stone Age industries in Maharashtra and his students upper Paleolithic cultures in Andhra Pradesh. The excavations at Chirki on the Pravara river and at Mahdeo Piparia and his students upper Paleolithic cultures in Andhra Pradesh. The excavations at Chirki on the Pravara River and at Mahdeo Piparia and Maheswar near Narmada brought to light prehistoric habitat and a factory or workshop site. R. V. Joshi conducted Pleistocene glacial studies in the Kangra Valley and Kashmir basin. The Palaeolithic sites at Adamgarh, rock shelter near Hoshangabad on the Narmada, the Billa Sargam caves in Kurnool district of Andhra Pradesh and caves at Patched and Hathikhamba in Kon Kan etc. Add considerable information to the Indian prehistory. Among the other important prehistoric sites mention may be made of Burzahom, Brahmagiri, Nagarjuna konda, Chirand, Piklibal, Paiyampalli and many others.

However, until excavations were carried out at Mohenjodaro and Harappa, the Bronze Age was hardly reprinted in India. It appears to be known only in the Indus Valley, where it may have been imported from the north or west. The Iron age, however, begins so early and is so important that many authorities are of the opinion that the smelting and working of iron began in India and that art filtered by slow degrees through the usual channels of communication to the Near East and Russia, and so to the west. The megalithic culture, in equities. In India number of megalithic types like cairn circles cist burials, Dolmens, menhirs, Sarcophagus etc. have been noticed concentrating in Tamilnadu, Andhra Pradesh and Orissa, Madhya Pradesh, Karnataka and to test out the sites are many.

5.2 Bronze Age Cultures

The two principle excavations in the Indus Valley are at Harappa and Mohenjo-Daro which are now in Pakistan. Mohanjo-Daro (the Mound of the

Dead) lies in the Sind desert, about three hundred and a half miles from the Indus, but as the river is constantly changing its course the town was probably at one time actually on the river bank. Nine strata of buildings have been identified, all belonging to the Bronze Age. It is interesting to note that the burnt brick was already the main material for all buildings at its early period ; it was known, though little used, in Mesopotamia in the contemporary period, but in Egypt it is not found till Roman times. The town was laid out with two arterial streets thirty-five-feet wide, crossing each other, at right angles ; Other smaller streets and lanes branched off these, also at right angles. The houses were built, like modern oriental houses, round a court yard. The alluvial plain in which Mohenjo-Daro stands has no metal and no stone; both these materials had to be imported. The few large slabs, used for covering drains and similar heavy work, were quarried a hundred miles or farther up the river and brought down by boat. Small Semi-precious stones came with the metals from some other part of India, or from Afghanistan or Tiber.

Some of the small stone seals found at Mohenjo-Daro and Harappa show connection with seals discovered in Mesopotamia and Elam ; by these the date of the upper levels of Mohenjo-Daro can be considered with some certainty to be 2500 B.C. Other connections with Mesopotamia and Elam are seen in the fragments of Steatite Vases carved with a mat pattern, found in all three places. and also the strangely etched carnelian beads which are known at Mohenjo-Daro and in Mesopotamia and Russia. Cotton was used for weaving, but no flax. The actual fibers of the cotton have been found preserved by being corroded on a silver vase ; the threads which formed the fabric show its texture.

The whole civilization revealed at Mohenjo-Daro indicates a trading town. Everything was severely practical-there was no attempt at art ; and though religion was manifest, the great temples with their beautiful architecture, which

are a feature of Egypt and of latter India, do not occur. Mohenjo-Daro existed for trade alone.

Among the other Harappan culture sites excavated mention may be made of Kalibangan, Lothal, Ropar, Surkotada, Daimabad, Bhagawanpura etc.

The knowledge of proto-historic culture in India is enriched by excavating sites like ahar, Maheswar and Nardatoli, Nevasa, Eran, Inamgaon, Maski etc.

Archaeology of Buddhist India

When India first comes into the light of history, about 600 B.C., the northern part of the country was already subject to Hinduism. The expedition of Alexander the Great is however, the beginning of detailed and consecutive history. From that date until the beginning of the Middle Ages the Chief periods are as follows :

- (1) Mouryan (in the Ganges Valley), 323 B.C.-A.D. 100; This includes the Sunga. and also the Bactrian and Parthian into the North West ;
- (2) Kushan (Indo-Seythian), A.D. 100-320 ;
- (3) Gupta (in the Ganges Valley), A.D. 320-6th century, conquered all western India ;
- (4) Vakataka (in the Deccan) ;
- (5) Pallava (in Peninsular India), A.D. 642-11th century ; This includes the Chola.

The chief king of the Mouryan dynasty was Asoka (273-332 B.C.) who made Buddhism the state religion of his great empire. This empire comprised practically the whole of the north of India, and stretched from the Hindu Kush mountains in the north to the barren belt of hills which divides northern India from the Peninsula. As the most powerful kingdom in India ambassadors and traders flocked in, and Asoka's subjects traded with the lesser kingdoms of the

south, including Ceylon, and with the whole of western Asia, eastern Europe and Egypt. With the full force of a remarkable character Asoka sought to introduce the tenets and practices of his religion into other countries to this end he sent out missionaries, who established themselves in many lands, east and west.

5.2.1 Asoka's Missionaries

In Ceylon and farther east their efforts were crowned with success. In the west the most important for Europe was the mission to Egypt, which preached and practiced asceticism and the necessity of withdrawing from the wickedness of this world. The effect of this preaching and of the long contact of Egypt with Buddhist India was not seen till Christianity, which also preached renunciation of the world, swept over Egypt like a flood. Egypt grafted Buddhist asceticism on Christian doctrine, monasteries were founded, hermits withdrew to the desert, until nearly a third of the inhabitants of Egypt were under religious vows. The missionary spirit, emanating first from India, was also introduced into Christianity, with far-reaching effect on the civilization of medieval and modern Europe.

Asoka appears to have been the first to use stone work for his monuments. His inscriptions were on stone, his commemorative pillars were of stone and his buildings were of stone, the earlier temples and palaces were probably of sundried brick. The change was brought about by foreign influence, and as the beautiful monolithic pillars show a Persian style, it is evident that the influence was from Persia.

After the fall of the Mauryan dynasty the Sung kings continued as Buddhists ; so also were their successors, the Kushan kings. The religious building of this period is the stupa, a solid mound of brick or stone surrounded by stone railings and carved stone gateways, with monasteries and shrines adjacent, The railings and gateways are obviously copies or constructions in wood, but the detailed and the delicate carvings with which they are adorned

suggest that the carver learnt his art on ivory or some equally fine material. Wood was largely used in the construction of private houses, a temple being usually only a more elaborate dwelling place. In the Mauryan and Kushan periods are found the prototypes of those rock-cut halls and cells which, later on, became so characteristic of Buddhist art in northern and central India.

Kings of the Gupta dynasty were patrons of all the arts. The earliest stone buildings which still survive belong to this period and they are all Hindu, not Buddhist ; they show a stage of development between the primitive caves and the fully developed temples and shrines of Ajanta, Ellora and other caves of medieval India. Working in metal on a large scale is characteristic of this age. Statues are known which weigh about a ton, and the celebrated Iron Pillar of Delhi, which stands nearly twenty-four feet high and weighs about six tons, dates from this dynasty.

Our knowledge of the archaeology of this period is derived chiefly from the sculpture in the temples ; the general life of the people cannot be understood without excavation of ancient towns. As in Egypt, working in stone, when once introduced, improved rapidly, until the artificial caves of Ajanta and rock-hewn temple of Ellora are among the greatest achievements in stone working that the world has seen. The Ajanta caves show in their sculptures and frescoes the progress of Hinduism and the decadence of Buddhism ; They are still Buddhist in type, but progressively Hindu in feeling. At Ellora the cave technique resulted in the carving of a temple out of a rocky hill. The hill has been completely cut away above and at the sides, leaving a solid four square mass of rock standing ; this mass has been hollowed out and forms the temple, which is enriched with carving. It stands upon a great rock plinth, surmounted by a remarkable frieze of elephants which appear to carry the temple on their backs.

The names of Hindu gods occur on cuneiform tablets of the fifteenth century B.C found at Boghaz Keui in Asia Minor, showing that some of the Vedic deities are connected with the Near East and the eastern Mediterranean. As the fifteenth century B C. is the time of the Aryan invasion of northern India it is very possible that the spread of this culture may have been due to that great movement of peoples which convulsed the ancient Mediterranean civilizations and resulted in the collapse of Minoan Culture and the loss to Egypt of northern Syria. Though the people who entered India spoke an Aryan language, Sanskrit, which is the foundation of a great number of the languages of India it must not be supposed that the invaders were all of one race. They were probably a mixture of races speaking one language, like the Celts of the Iron Age and the Arabs of the Middle Ages ; they were united by language but not necessarily by blood.

The megalithic sites are numerous in number and are noticed in all most whole of India with denser distribution in the Deccan and South India.

Among the early historic sites notable ones are Atranji khera, Ahichchatra, Vidisa, Taxila, Nagarjuna Konda, Dharanikota, Kausambi. India is dotted with many Buddhist sites, all over India. In Andhra Pradesh alone the entire belt of coastal Andhra, Telingana and Rayalaseema reveal many Buddhist sites. However, the well-known Buddhist sites include Pauni, Amaravati, Nagarjuna Konda, Paharpur, Ratnagiri, Kalingapatnam, Bavikond, to mention a few of very many. Besides excavations at the epic sites like Hastinapur, Ayodhya, Bharadwaj Ashram, Dwarka has gone long way to establish the historicity of the sites.

As a result of salvage Archaeology many sites that were to be in undated were brought to light. One such internal site is Nagarjunakonda in Guntur district. Indian archaeology can also boast of underwater archaeology to throw light on

Dwarka is in progress. Other sites such as Kaveri pumpattanam, Kalingapattanam etc. are very promising to undertake under water archaeology.

5.2.2 Chronology and Growth of Indian Archaeology

As early as in the last quarter of the 18th century, the antiquarian wealth of India started attracting the attention of the officer of the East India Company. In 1784, under the initiative and guidance of Sir William Jones, the then Supreme Court Judge, the Asiatic Society was started at Calcutta for enquiring into the history, antiquities, arts, sciences and literature of the Asia. Governor General, Warren Hasting was one of the active members of that Society. Acting on the letter of Dr. Johnson, the society was intended to examine the tradition and the history of the east and to conserve the remains of its ancient edifices and trace the vestiges of its ruined cities. The establishment of the Asiatic Society at Calcutta gave a great fillip to the Asian Studies. As a result of this in 1788, the journal called "Asiatic Researches" was commenced and in 1814, a museum was established to house the finds collected by the members of the Society. Archaeology, as a body to investigate and study the relics of the past, however, remained in the beginning as modest in the activities of the society. Whatever work was done during this period it was also on a limited scientific basis. Thus, in 1788, Charles Wilkins could decipher Gupta and Kutila scripts. The exploration of the Afghanistan by Hoarse Hayman Wilson was again a remarkable work of this age.

In 1800, Francis Buchanan was deputed to survey Mysore and in 1807, he was asked to survey Bengal. However, his survey report on the districts Dinapur, Rangapur, Purnea, Bhagalpur, Patna and Bihar etc. could not see the light of the day. It was in 1838, again, James Prinsep, Assay-Master of Calcutta, Mint unraveled the history of Brahmi script. This was followed up by the decipherment of the inscription of the Asoka and the establishment of his contemporaneity with

Greek rulers of the East who are mentioned in the inscriptions. Thus, for the first time Indian history was placed on a sound chronological basis. Later for 18 years (1829-1847) James Fergusson conducted a thorough architectural survey of the country and systematically classified the monuments.

In 1844, on the advice of the Royal Asiatic Society of Great Britain and Ireland, the Court of Directors of East India Company decided to form a commission for collecting the information regarding the monuments. It was also decided that experts should take up the study of the archaeological monuments scattered over the country. It was in 1861, that Alexander Cunningham could impress upon the Lord Canning, the then Governor General of India, the necessity of undertaking the systematic programme of exploration in the name of Archaeological Survey of India. From 1861, onwards Cunningham made a very exhaustive exploration studying all the monuments on the basis of the accounts left by the foreign travelers like Fahien and Hiuen-Tsang. Unfortunately, Government abolished the survey in 1865 for the reasons best known to it.

After five years from this period there was a fall in the archaeological activities until again Cunningham was appointed as the Director General of the Archaeological Survey of India in 1870. The next fourteen years that is up to 1895 Cunningham's contributions to the archaeology were splendid. It was his effort to place on the archaeological map of India, the city of Taxila, the fortress of Sangla, all connected with the history of Alexander the Great. He could also discover Buddhist sites like Sankisa, Sravasti, and Kausambi. The Barhut stupa and the rock edicts of Asoka with Brahman characters was again the discovery of this man. He also tried to study the architecture of the Gupta temples and became responsible for discovery of the Gupta dynasty at Eran, Udayagiri and other places with the help of the available epigraphical evidences. But Cunningham's field of activity was confined only to the northern and eastern India. In order to cover up

West India, archaeological survey of South India was added and James Burgess was made in charge of this region.

In 1837, the Supreme Court issued instructions to the local Government to preserve monuments. In 1878, Lord Litton, the Governor General however, felt that the responsibility of the preservation of the monument should be with Supreme Government and this resulted in the appointment of H.H. Cole as the curator of the ancient monuments in 1881. As this did not work up well, in 1883, preservation of monument was once again became the responsibility of the local Government. Cunningbam felt the immediate necessity for the systematic probe to the epigraphical data in the country and accordingly in 1883, John Faithful Fleet was appointed the Government Epigraphist for a period of 3 years for taking up the systematic study of the epigraphs. In 1886 E. Hultzsch was appointed as epigraphist for South India inscriptions. In 1885, on the retirement of Cunningham as Director General, James Burgess took over the charge of the archaeological Survey of India. Three years after the advent of Burgess there was a move for abolishing the archaeological Survey of India. It was decided to divide India into five circles and the work of the archaeological activities was entrusted to the local government. Thus, this period was unstable and chaotic as far as the activity for the archaeological Survey of India was concerned.

It was only in 1899, Lord Curzon, the Governor General of India who saw the chaotic condition prevailed in the archaeological Survey of India and the failure of the local government in looking after responsibility of the archaeological, once again decided to bring explorations, excavations, researches, epigraphs, publication and preservation of monuments under Central Government. In 1900, he asked the British Government to revive the post of Director General and in 1902, the British Government having accepted the proposals of the Lord Curzon, brought John Marshall to India as the first Director

General of the reconstituted archaeological Survey of India. The activities of the archaeological Survey of India was accelerated after all round progress in archaeology. Excavations were conducted Some of the monuments at Delhi and Agra were overhauled In 1904, the Ancient Monuments Preservation Act was passed for the preservation of ancient monuments, for the exercise of the control over the excavations in certain places, for the protections and the acquisition in certain case of ancient monuments and of objects of archaeological, historical : art and artistic interest. In 1906, the survey was placed on permanent footing. It was to consist of the Director General, Government Epigraphist and six circles to cover the whole of India. Thus, placed on permanent footing and well defined policies to guide it, the Survey continued its work with great vigour and confidence. Hundreds of monuments and sites were declared, protected and brought under the purview of the Ancient Monument Preservation Act. In 1921, under the Government of India Act, 1919, the archaeological was made the central subject. The provinces were left merely with the power of declaring monuments and sites protected under the Ancient Monument Preservation Act. Even this power was transferred to the centre by the Government of India in 1935.

During this period as under Cunningham, preference for excavation was given to the Buddhist sites. The sites like Sarnath, Rajghir, Sanchi, Sravasti, Kusinagara, Nalanda and north-east provinces were given importance, where Buddhist art iconography flourished. Excavations at Taxila were continued. In 1922 excavation at Harappa in Montgomery district of Punjab was started in order to know the Harappan culture, Comprehensive exploration work was also conducted in Sind and Baluchistan. Cultures like Harappan Amri, Jukkar etc. were all known. In 1932, excavation at Harappa in Montgomery district of Punjab was started in order to know the Harappan culture. Comprehensive exploration work was also conducted in Sind and Baluchistan. Cultures like Harappan Amri,

Jukkar etc, were all known. In 1932 Marshall retired. In order to encourage outsiders Ancient Monument Preservation Act was amended. Taking advantage of this, the American School of India and Iranian Studies and the Boston Museum of Fine Arts jointly excavated the site at Channudaro in 1935-36. In 1935, the Yale and Cambridge Universities sent the Geological and Proto-historical expedition to India under the leadership of Helmut De Terra. The expedition did the most valuable work in the country, particularly in the north-west. Between 1940-44, the department took extensive excavation at Atichchatra in Distric Bareilly, and established for the first time cultural sequence of the upper Ganga Valley between the 2nd fo the 1st millennium B C to about 1100 A.D. In 1944, Dr. Robert Eric Mortimer Wheeler was appointed Director General. During his tenure the archaeological Survey of India shown all round progress. He reorganized the circle and trained departmental officers and conducted excavations in the important sites like Taxila, Arikamedu, Harappa. Brahmagiri etc. Each excavation brought significant result. In 1950, the constitution of India made far reaching changes in the position of archaeology. The provisions of the constitution envisaged that the state Governments should have laws and organizations to preserve monuments and sites in their charge. Some state governments had already equipped themselves accordingly. Mysore had its own department since 1900 to be followed shortly afterwards by Kashmir, Pudukkota, and Mayurbhanj. Later on Hyderabad, Gwalior, Bhopal, Baroda, Jaipur etc. joined the list. Following the disappearance of all Indian States with the Independence of India and taking over of the monuments of importance. The major part of the staff of the department of Archaeology of the States was taken over by the central department in 1953. By 1959, archaeological integration of India was complete. The department of archaeology was attached to the Ministry of Scientific Requires and culture affairs of Government of India. The head quarries office was located at New Delhi and India was divided into 9 circle headed by Superintendent. Primary function of circle is the preservation of the

monuments. They are also responsible for all general archaeological work within their jurisdiction and may also undertake explorations and excavations.

(a) First Traces of Primitive Man

It is as yet impossible to fix with any accuracy the period at which Man appeared on earth. Actual human remains, such as bones, and skulls, are not found till well into the quaternary era, but flints showing artificial chipping have been discovered in the strata formed at the junction of the tertiary and quaternary epochs. These early stone implements are known as coltish (Greek, eos dawn ; Lithos, Stone).

The most interesting eoliths are the rostro-carinates, or keel-backed implements. The shape is, characteristic, and is not found at any other period than in Eolithic period. It is like an upturned boat with a keel running the whole length of the back, a downward-curving beak at the front, and with the chipping so arranged as to give firm grip to the thumb and fingers of the right hand.

At Foxhall, near Ipswich, in the same type of strata as contains the rostro-carinates, were found a number of burnt flint implements and pot boilers, i.e. stones which had been made red-hot in the fire and then thrown into water to heat it. This shows that the use of fire had been discovered even at this remote period of time. Eoliths of other forms, known as Pre-Chellean, are found in many countries.

(b) Earliest types of the Human Race

Human remains of the Pleistocene era are rare, for earth movements and climatic changes have destroyed them. Stone implements fashioned by the hand of man can survive long immersion in water or being dashed about in a torrent ; Sudden and heavy falls of earth and rock will not break them or grind them to powder. But human bones are much more fragile than stone, and the wonder is

that any have survived at all. Prehistorians and anatomists are agreed that no human bones of the Tertiary period have survived, the earliest appear to belong to the RISS-Wurm interglacial epoch. All authorities are of opinion that the earliest type of man was nearer to the ape than present more developed species, though the missing link is still not found on firm ground. The apes which are nearest to Man are the chimpanzee and the gorilla, but there is a marked difference in the skull and the teeth of apes and men. The human skull has a much larger brain cavity is one of Man's distinguishing marks. In 1938, Dr. Robert Broom of the Transvaal Museum, Pretoria, recorded his discovery of the Kromdraai skull, that of a new type of fossil ape very near to Man, which he named *Paranthropus robustus*. The remarkably human structure of the well preserved palate and certain important teeth, suggested that here might be a real link between man and the apes.

(c) Early Man of India

The Indus Valley people of the 4th-3rd millennium B.C. are now known to be in close cultural relations with Mesopotamia and even with far-off Egypt as shown by Mackay in his excavations. He draws our attention to the oblique-eyed Mongolian figurines which go to strengthen the finding of Dr. B.S. Gaha who identified the solitary Mongoloid skull discovered in the Indus Valley. So in the Chalcolithic age, possibly as early as the 4th millennium B.C. India was negotiating with the Mongolian world where the Neolithic antiquity may reach as high as 10,000 B.C. Beyond that stretches the sequences of the Paleolithic age and culture. To the partial elucidation of the problem of those remote ages three Prehistorians H. de Terra, P. Teilhard and T.T. Paterson collaborated on the Siwalik finds, announcing the summary of their results, from 1936, through

scientific periodicals. The earliest Stone Age Culture of India is represented by the hand-axe technique of Madras ; and the old Stone Age peoples may have migrated from South India into Central India where, in the Narbada Valley, have been found Middle Pleistocene tools, and fauna which gradually extended through the Ganges and Jamuna Valleys to Northe Western India right upto the Himalayan hills. These valuable conclusions which gave a new significance to the early history of Man in India were the results of the Scientific explorations under Dr. Helmutt de Terra in the Siwalik hills under the auspices of Yala University, the Carnegic Institution of Washington and the American Philosophical Society. The first valuable paper, *The siwaliks of India and Early Man*, was Communicated by Dr. De Terra to the Symposium (March, 1937) on Early Man published in commemoration of the 125th anniversary of the foundation of the Academy of Natural Sciences of Philadelphia. Since the publication of "The Siwaliks of India and Early Man" in 1937, Dr. H. de Terra and his colleagues have published their report entitled *Studies on the Ice Age in India and Associated Human Cultures*. The most ancient fossil mammals were discovered in 1836 by falconer and Causley in the Siwalik Hills. Almost a century later, Dr. de Terra discovered (1932-33) Stone Age artifacts in Kashmir and in the Punjab Salt Range together with a number of new fossil anthropoids from the Siwalik beds ; and Dr. de Terra sought the Collaboration of T.T. Paterson of the Cambridge University and of P. Teilhard de Chardin, the famous French Paleontologist of the Peking Man's laboratory. Their joint collaboration has produced a report which, for years to come, consulted as an authoritative document on the prehistoric archaeology of India. The field work was resumed in 1935 when D. Sen of Calcutta University and N K. Aiyengar joined the party exploring Kashmir and Jammu, the salt Range, the Soan Valley of the Patwar region near Rawalpindi and thence, through sukkur region and Mohenjo-Daro in sindh to the Narbada Valley and the Paleolithic site of Khandivili (near Bombay), and further South, examining the terrace geology, and archaeology of the regions

near Madras. They thus contributed for the first time to a clear understanding of Pleistocene geology and pre-history in Asia in their relations with India. Their conclusions with regard to the associated human cultures deserve special attention : Paleolithic Man invaded the foot hills in the Punjab and in Pooch as early as the Middle Pleistocene epoch. But similar records are lacking from Kashmir proper where tools showing flaking tradition have been recovered with pot shreds in alluvial deposits on the banks of the Jhelum and in terrace sites of Neolithic age. But the chronology of Neolithic age in India remained Vague and needed further clarification. In the Megalithic site of Burza-hom between Srinagar and Gandarbal, have been discovered flakes and coarse, reminiscent of Paleolithic technique but most of the flakes were associated with pottery-bearing layers of either Neolithic or Aeneolithic culture. In the industries of Rohri and Sukkur area were found extensive use of cores and blades of different techniques, suggesting that the industries were late, but certainly earlier than the earliest periods of the Chalcolithic civilization of the Indus Valley (C. 3000 B.C.) For we notice the absence of pottery and of metal in the industries of Rohri and Sukkur area, marking the upper limit of the Chalcolithic Age of the Indus Valley. The Pre-historic hunter of the old Stone Age apparently found the Pir Panjal Range too dangerous to cross for he "came from peninsular India where no mountain barriers of equal height and wildness arose on his migration routes".

The oldest agricultural periods in the history of Mesopotamia range from 4000 to 600 B.C. with the intensive study of allied problems in India it was hoped to mark gradually the transition from the pre-agricultural to agricultural periods in the culture history of India, supplying thereby the background to Chalcolithic culture of the 4th millennium B.C.

From North-Eastern Asia have come the Tibetan, the Dolicho-Cephalic Mongoloid of Northern and Eastern Assam and the Brachy-Cephalic Mongoloid of Burma, Shan states and adjoining lands. These race movements have

continued through millenniums, from the dim pre-historic past, through the proto-historic to the historic periods. Then the advent of the Indo-Aryans and the sustained hegemony of the Aryan civilization, from the 2nd millennium B.C. to the end of the 1st millennium A.D., naturally, made India the radiating centre of culture for nearly three thousand years.

The above given account of early man of India and the racial history would provide an adequate link for the present scholars of pre-historic archaeology to formulate their conclusion on prehistoric archaeology and racial history in the light of enormous research years in India and elsewhere.

Thus, pre-historic archaeology deals with the early man, his mortal remains, the artifacts he used, the environment under which he had lived, the associated Flora and Fauna which will throw much light on the way of life he had led. Since no written records are available during the period, we have to depend upon the remains and the relics that are available to us pertaining to the people of the time. The life was not uniformly throughout, there were different climate conditions under which he lived which had tremendous influence over the human life. To comprehend the same in the right perspective the lengthy period of Pre-historic archaeology may again be sub-divided into four age :

- (1) Early Stone Age
- (2) Middle Stone Age
- (3) Late Stone Age and
- (4) Neolithic Age

The periods correspond with the Pleistocene and Holocene geological eras.

- (1) It is roughly estimated to be five hundred thousand years since the beginning of the old stone Age or early stone age. It falls roughly in the middle Pleistocene period. The prehistoric man has started to produce the early Paleolithic unpolished hand axe and the flake tools. *Elephas namadicus*

was the available Fauna. he led the life of food gatherer and remained in the natural shelters.

(2) At the end do Pleistocene period and the beginning of Holocene, there were entirely different climatic conditions, so also flora and fauna. Evidently man discontinued to use heavy tools and preferred smaller ones to suit his requirements and the conditions. The tool industry prevailed was known as flake industry based on Levalloison technique. They are mostly blade and scraper types made on finer variety of stones like chart and chalcedony. They were smaller than early Stone Age tools, but bigger than the late Stone Age tools in size. Hence they are termed as Middle Paleolithic flake industry. Still the man led the life of a food gatherer-an unsettled life.

(3) Next stage is called as Mesolithic or Mesolithic on the basis of the diminutive tiny tools he used, recently termed as Late Stone Age. This industry represented by blades, burins, crescents, triangles, cores, arrow-heads, and scrapers made of more finer variety of stone-chalcedony, agate, quartz etc. In geological context, it falls within Holocene period, roughly dated to 8000-6000 B.C. In the latter half of the industry, the man started to make pottery-coursed, ill-fired dull red, were ad the tool became geometric design. Microlith is usually found on surface but at very few places like Birphanpur, Longnaz, and at Teri sites in Tinnavelley district, they were found in stratified deposits. During this period an attempt was made to settle in life, but the way of life he led was difficult to be assessed.

(4) The last stage that of the pre-historic archaeology covers is the Neolithic Period or New stone Age. By now man became a food producer, settled in life, and lived in groups, in the shelters prepared by him with perishable material on planes. The study of tools used by him suggests that he knew the art of carpentry, bead making and cultivation. He also had the knowledge of pottery making both hand-made and wheel-made, mat

making, domestication of animals and plants. There was revolution in tool making. He started burying the dead. He was having the rudimentary knowledge of painting the pottery.

5.3 Archaeology as Source Material

Archaeology when correctly defined is the study of the material remains. It provides sources material for history. A true history of any country cannot merely be the chronological narration of political events but it also must deal with its physiognomy and the inner most character of its past and present generation. Consequently, therefore, historian has to enquire into the various aspect of any contemporary life such as the way of life, pastimes, private and public occupations and the type of dresses, in fact regarding all aspect which compose a particular culture. Archaeology rightly provides ample information about the material culture with which true history can be reconstructed. Excavations at the sites like Kalibangan, Taxila, Nagarjuna Konda mention a few have revealed the town planning in ancient India. Historians could have been groping in darkness had not the archaeologist took up these excavations to know the town planning in ancient India. Similarly, some of the sculptures that have been unearthed during the excavations have amply contributed information regarding the mode of dresses; the people wore in the ancient past. The Excavations at Nagarjuna konda for example have given large material for constructing the life of the people during Ikshvaku period. Interestingly, the gold ornaments which include earring, and necklace, effects evolved technical skill that was in Vogue during the Ikshvaku period. The filigree and granulation that is exhibited in the manufacture of these ornaments reveal the adroitness of the jewel maker as early as in 1700 years ago. It is well-known that outside India filigree and granulation techniques have had a long tradition in Mesopotamia, Syria, and Asia Minor. The royal tombs at Ur of about 2500 B.C, testified the filigree work of high order and the incipience of the granulation. Surprisingly,

these processes do not have an early adoption in Egypt where granulation is not recorded before 1900 B.C. In Greece, granulation and filigree work began between 800-600 B.C. From B.C. to end of 1st century B.C. filigree gradually replaced the granulation. In Roman jeweler filigree and granulation are found but neither process was popular. Excavations at Taxila have interestingly revealed that in India such methods have been widely used on ornaments as early as in 2nd century B.C. It is quite likely that they have borrowed this technique from Greco-Roman world. But as far as Nagarjuna konda is concerned it could have been through Roman with whom they had trade contacts in early centuries of Christian era.

Excavations in many places have revealed game objects like pottery disc, dice etc. These would indicate the types of games that the people used to play during the ancient times. Thus, one can see how archaeology helps in reconstructing the life to the people apart from the narration of the political events through the epigraphs and coins discovered during the excavations. What is interesting is that these archaeological evidences get corroborated from the literary citations. Thus, *Palakatiara*, a necklace known to early Indian art is very well cited in Kautilyas *Arthashastra*. Similarly, the vessels that are unearthed during the excavations while giving out the variety of types known to the people of ancient period also get corroborated by the literary citations. Thus, a dish of Black and red ware or a red ware discovered in early historical site has a literary reference in Chulavagga as *Tholika*. Similarly, the numbers of iron implements that are discovered during the excavations help us in knowing the military standards of the ancient period. A close examination of these weapons discovered during the excavations as well as those depicted in the lithics would tell us the idea of the weapons used in the ancient past. It is apparent that archaeology supplies source material for history which in turn can reconstruct the life of the people through the ages.

5.4 Development of archaeological libraries :

In the early stage there was a nucleus of collection of Mostly been geological and biological, but with the establishment of Archaeological survey in north India by Lord Curzon and the appointment of Cunningham as the Archaeological surveyor, a important place of Archaeology in museums. Mr. Cunningham made efforts to collect the precise material for the archaeological libraries. The Archaeological material based in separate section in museum were enriched and most of the museums devoted to Archaeological development as institutions demanding attention. In fact it was the effort of Lord Curzon and cooperative effort of Sir John Marshall understood the importance of museums and its Archaeological movements accounted for several Archaeological Museums. Most of the Indian museums are indebted for their development to the Archaeological survey.

5.4.1 Contribution of Asiatic Society of Bengal :

Asiatic society of Bengal has contribute precisely to the Archaeological development and cultural heritage of India. Mr. Cunningham, The Director General of Archaeological survey, presented several Gandhara sculptures, antiquities from Both Gaya and more important is magnificent Bharhut rail and gateway which form the important valuable treasure in the museum Mr. Cunningham not only contributed with presentation of antiquities but help even in arranging the material in the museum and his arrangement has essentially continues with necessary modifications.

Mr. Cunningham discovered the ruins of the Bharhut stupa in 1873 but dug them up and saved them by their removal to the museum. He regressed Raja of Nagod near Bharhut, to present the sculptures to the government and carried away a portion of the rail and gateway, which are almost the only extent remain of the magnificent stupa barring the small collection in the Allahabad Museum.

Cotovel calin Mackenzie discovered remains of Amravati stupa in 1797 and sent the remains to Adriatic society and to masulipatnam. Most of their remains were marbles that lay exposed were burnet into lime by the villagers.

During eighties of the last century the fine collection of Gandhara Sculpture was preserved in Madras museum which was the contribution of Major H.H. Cole. He also sent the collection of Gandhara sculpture in an Indian Museum. DR. E. Thurston revenge the policy of predecessors and restricted the scope of museum to provincial limits. Peshawar museum was greatly enriched by the wealth of sculpture unearthed at Sabri-Bahlol, Takkt-i-Bahi, Shahji-ki-Dheri and other places in Gandharva. The most important discoveries was the relic casket of Kanishka, which forms the valuable treasure of the Peshawar museum. The collections of Gandharva was excavated and kept in the museum of Calcutta and Lahore. It was also need for the officers of the Archaeological survey to work in close cooperation. It was also made a policy for Archaeological collection that superintendent of different circle should work en behalf of he provincial museum. All the remains of from age antiquities of alexdus age departed in Madras museum and also the tin sculptures. Similarly Archaeological Collection of prince of woles museum, Bombay was the effort of western circle like sculpture from Aipole and elephant.

The part of Archaeological museum movement was the chamha museum and with collection in Mathura museum which was buitt up by Rai Bahadur. Radha Krishna.

5.4.2 FROM 1901 TO 1947

In 1901 the recommendations were accepted and John Marshall was appointed as the new Director General. Lord Curzon totally centralized the Survey and vested the powers with the Director General of the Archaeological

Survey of India. Marshall assumed charges in 1902 and a new era started in Indian archaeology.

His principles on archaeological conservation are still valid and followed even by modern conservation experts. The main observations of Marshall were:

1. Hypothetical restorations were unwarranted, unless they were essential to the stability of a building;
2. Every original member of a building should be preserved in tact, and demolition and reconstruction should be undertaken only if the structure could not be otherwise maintained;
3. Restoration of carved stone, carved wood or plaster-moulding should be undertaken only if artisans were able to attain the excellence of the old; and
4. In no case should mythological or other scenes be re-carved.

He started the new series of publications namely Annual Reports of the Director General which contained the works and research activities carried out by the Survey. A separate branch for Arabic and Persian in Epigraphy was also created and Dr. Ross was appointed for this purpose. The most remarkable event in relation to protection of monuments is the enactment of Ancient Monuments Preservation Act 1904. In addition to the five Circles created in 1899 certain changes were made by appointing an architect for Muhammadan buildings in north India in 1902. On a strong pleading by Marshall in 1904 on the verge of expiry of his five years tenure for the retention of the Survey, the government accepted the proposal temporarily. Further, on 28th April 1906 , the government announced that the Survey was placed on a permanent and improved footing.

The sanctioned strength on that date was the Director General of Archaeology and Government Epigraphist for the whole of India; Superintendents of Western Circle covering Bombay, Sind, Hyderabad, Central India and Rajputana; Superintendent of the Southern Circle, covering Madras and Coorg, and an attached Assistant Superintendent for Epigraphy; Superintendent and Archaeological Surveyor of the Northern Circle, covering the United Provinces, Panjab, Ajmer, Kashmir and Nepal; Superintendent and Assistant Superintendent of the Eastern Circle, covering Bengal, Assam, Central Provinces and Berar; Superintendent of the Frontier Circle, covering the Northwest Frontier Province and Baluchistan; and Superintendent of the Burma Circle.

In 1912 the government again seriously considered to abolish the post of Director General and replace it by a Professor of archaeology attached to a proposed oriental research institute. However, it was not carried through. An Archaeological Chemist and Deputy Director General were added to the strength in 1917 and 1918 respectively. The Montague-Chelmsford Reforms of 1919 made important changes in the administration of the Survey while the Devolution Rules of 1921 laid down archaeology as a Central subject. The Eastern Circle was renamed as Central Circle and a new Eastern Circle , with Calcutta as headquarters, was created.

The years 1921-22 saw the discovery of the Indus Civilization and subsequently a separate Exploration Branch with a Deputy Director General and three Assistant Superintendents was created. Explorations and excavations were given due attention. The Provincial Governments were left with only the statutory power of declaring a monument protected.

Sir John Marshall relinquished the post of Director General in 1928 and retired on 19th March 1931 as he had to write a series of monographs on Mohenjodaro, Harappa , Taxila, Sanchi, Mandu, Delhi , Agra and Multan . H.

Hargreaves succeeded Marshall as Director General in 1928 and his recommendation for abolition of the Superintendent of Hindu and Buddhist Monuments at Lahore and Superintendent of Muhammadan and British Monuments at Agra into an Assistant Superintendent attached to Frontier Circle and Superintendent of Northern Circle was accepted in 1931.

Rai Bahadur Daya Ram Sahni succeeded him in July 1931. His period saw a curtailment both in posts and funds to be followed by a reverse trend in functioning. The Annual Reports soon had a huge backlog and in 1935 a special officer was appointed to clear them. J.F. Blakiston succeeded as Director General in 1935 during which period through the Government of India Act of 1935 the Central Government assumed all powers vested with the Provincial Government. Under certain amendments in the Ancient Monuments Preservation Act foreign institutions were allowed to undertake fieldwork in India , through which Chanhudaro in Sind was explored and excavated.

Rao Bahadur K.N. Dikshit succeeded in 1937 and the exploration in Sind was revived. However, it met with a tragic end with the death of the team leader Shri N.G. Majumdar at the hand of dacoits. During this period Sir Leonard Woolley was appointed as a foreign expert to report on the matters relating to future excavations. His report highly condemned the nature and policies of the government relating to excavation, the techniques adopted and involved. However he praised the conservation activities carried out by the survey and he did not comment anything on epigraphical activities. He also recommended large-scale excavation of certain sites; the prominent among them was Ahichchhatra in Bareilly district, Uttar Pradesh under the supervision of a competent archaeologist. Hence Ahichchhatra was excavated under the direction of K.N. Dikshit between 1940-1944. The intervening period saw some setback due to World War II, which slowed down the progress of survey.

R.E.M. Wheeler succeeded K.N. Dikshit as Director General in 1944 on a contract of four years. He revived the Excavation Branch under an Assistant Superintendent, which was later elevated to Superintendent. He laid special emphasis on exploration, excavation techniques and to solve the problems related to chronology. In 1945 conservation was centralised and brought under the purview of Survey for which additional staff were sanctioned. A prehistorian in the rank of Assistant Superintendent was also created. To meet the additional work at the headquarters, a post of Joint Director General was created in 1935. A Superintendent of Publications was also created to cater to the needs of high quality publication on the works carried out by the Survey.

He excavated three important sites namely Arikamedu in Pondicherry Brahmagiri in Karnataka and Taxila (now in Pakistan) to ascertain and fix clear chronological timeframe for Indian history which was eluding the archaeologists so long. These excavations were also utilized for training the Indian students in excavation technique, conservation and other related aspects. Wheeler introduced the stratification technique of excavation which was in vogue during that time and improved the system of reporting and publishing. He brought out a new series of publication namely the Ancient India which itself contained detailed excavation reports of many sites apart from research articles and reports on field surveys.

5.4.4 From 1947 onwards

N.P. Chakravarti succeeded Wheeler in April 1948. His period saw the organization of a large-scale exhibition at New Delhi in 1948 on the Indian art objects. These objects were originally exhibited in London in 1947 and later on its return to India formed the nucleus of the National Museum which was opened on 15th August 1949 .

On India becoming a republic and adopting the Constitution the following functions relating to archaeology pertaining to the Union and the State Governments were made:

1. Union : ancient and historical monumentsand archaeological sites and remains, declared by the Parliament by law to be of national importance;
2. State: ancient and historical monuments ...other than those declared by Parliament to be of national importance.
3. Besides these two categories, both the Union and the States would have concurrent jurisdiction over archaeological sites and remains other than those declared by Parliament by law to be of national importance. N.P. Chakravarti relinquished his post in June 1950 to continue until 1952 as advisor to the Survey. Madhav Swaroop Vats succeeded him and his period saw the enactment of the Ancient and Historical Monuments and Archaeological Sites and Remains (Declaration of National Importance) Act in 1951. A. Ghosh succeeded Vats in 1953.

The activities in post-Independence India saw great strides and development in the field of Archaeological Survey of India. The Circles which were created on regional basis largely following the geographical jurisdiction the States, are now rechristened on the basis of the city where the Circle Headquarter is located. Mostly, every state had a Circle usually in the state capital and named after the city in which the Circle is located. However, in states having larger area often two or three circles look after the protection of monuments. For example, three Circles administer Uttar Pradesh with headquarters at: Agra , Lucknow and Patna , while Chandigarh Circle looks after monuments located in the states of Haryana and Punjab.

At present there are 24 Circles looking after more than 3600 monuments.

The following Acts were enacted for better preservation and maintenance of monuments and also to prevent illegal trafficking of antiquities and art treasures.

Ancient Monuments and Archaeological Sites and Remains Act, 1958

The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010 Antiquities and Art Treasures Act, 1972.

In addition to the above periodical amendments and regulations were added to cope with the changing scenario and to protect the monuments. One such action is the declaration of Prohibited area, 100 m from protected limits and further 200 m as Regulated Area from the prohibited limits, to prevent encroachments and unregulated constructions near protected monuments.

The Treasure Trove Act 1878 and the Ancient Monuments Preservation Act, 1904 are also in vogue in addition to the above mentioned legislations.

Many new publications were also started during the post-Independence era. Prominent among them were the Indian Archaeology-A Review an annual publication reviewing all the activities conducted in the country.

In addition many publications started earlier like the Epigraphia Indica and its supplements Epigraphia Indo-Moslemica which was later renamed as Epigraphia Indo-Moslemica - Arabic and Persian Supplement, Memoirs of the Archaeological Survey of India, Corpus Inscriptionum Indicarum, etc. are also continue.

The archaeological libraries in museums were administered by the superintendents of archaeological survey or the Director of the museum. The librarians were given responses abilities of the books, manuscripts and other material suitable to be preserved or kept in librarians. The superintendents of the survey have been in committee of several museums in India. The archaeological

survey distributed material including books to the museums. The librarian was also allotted the responsibility of preparing catalogue, guide books, of the publications of the library and the material supplied by archaeological survey. A copy of descriptive list was also kept and available in archaeological libraries. A handbook sculpture of museums of past art was prepared by Sponer and later revised by Hargreaves. Vogel prepared a catalogue of Mathura museum.

Library buildings :

The museum library buildings are the attraction of museums and the library is a part to it. The building of libraries are generally separate in museum except Nehru Memorial museum. The library buildings are also palatial or monumental buildings. As the building of the have been built kept in mind the remains of the material and their demonstration and presentation, the libraries are not given preference. In early days any building easily available was usually considered for housing the museum. Part the modern museum building are constructed with the aim of display of even the best material. Some of the museums of recent origin have five new building. Allahabad Museum have five new building, well planned. The other, building is Kala Bhawan of Benara Hindu University having a five structure.

There is a need of proper planning of for museum buildings with display galleries. The library is essentially a growing organization and need sufficient space to keep the collection of books, reports, journals and manuscripts and in some museum libraries coins etc.

5.5 Nehru Memorial Museum & Library

The Nehru Memorial Museum & library (NMML) established in the memory of Jawaharlal Nehru (1889-1964) is an autonomous institution under the ministry

or culture of the Government of India. Located in the majestic Teen Murti house, the official residence of the first prime Minister of India, it has four major constituents namely, a Memorial Museum, a Library on modern India, a Centre for Contemporary Studies and a Planetarium.

Mission Statement :

“The NMML recollects, preserves and reconstructs the India freedom struggle and the ideas and values of Jawaharlal Nehru. A premier institute of advanced research on modern and contemporary India, it also popularizes Jawaharlal Nehru and the freedom struggle amongst all Indians.”

The Nehru Memorial Museum & Library (NMML) is a museum and library in [New Delhi, India](#), which aims to preserve and reconstruct the history of the [Indian independence movement](#). Housed within the [Teen Murti House](#) complex, it is an autonomous institution under the Indian [Ministry of Culture](#), and was founded in 1964 after the death of India's first prime minister, [Jawaharlal Nehru](#). It aims to foster academic research on modern and contemporary history. Today, the Nehru Memorial Library is the world's leading resource centre on India's first prime minister and its archives contain the bulk of [Mahatma Gandhi's](#) writings apart from private papers of [C. Rajagopalachari](#), [B. C. Roy](#), [Jayaprakash Narayan](#), [Charan Singh](#), [Sarojini Naidu](#) and [Rajkumari Amrit Kaur](#). In March 2010 it launched a digitization project of its archives, under which by June 2011, 867,000 pages of manuscripts and 29,807 photographs were scanned and 500,000 pages uploaded on the digital library website. Amongst noted publications of the NMML are Selected Works of Jawaharlal Nehru, Man of Destiny by [Ruskin Bond](#), Nehru Anthology (1980) and Nehru Anthology.

Nehru Memorial Museum & Library has over the years supported scholars and historians across India and through its fellowship programme, 'The Nehru Memorial Fellowship' has funded some of India's best academics such as historian [Ramachandra Guha](#) and Chief Information Commissioner OP Kejriwal.^[4] It is also one of the best library in Delhi for [Social Sciences](#) as it has a huge collection on labour related issues in the form of PhD dissertations, reports, books, journals and news papers.

Nehru Memorial Museum and Library famously known as Teen Murti Bhawan (Sculptor: Leonard Jennings of Britain), after the 3 statues which were established in 1922 in honor of the three Indian princely states, namely; Jodhpur, Hyderabad & Mysore after their contribution in World War I by serving in present day Gaza Strip, Israel, Palestine, etc., was architected by the famous Robert Tor Russel who also designed Connaught Place and few parts of Janpath. Spread in 30 acres its construction started in 1929 and took around one year to completion. It is a masterpiece of British and French architecture and woodwork. Initially known as Flagstaff House, it was used by British Forces as the residence of the Commander-in-Chief. After Independence, the house was taken over as the residence of Jawaharlal Nehru (1889–1964), 1st Prime Minister of India. After his death in 1964, it was decided that Teen Murti Bhawan should be converted into a museum and a library which would promote original research in modern Indian History with special reference to the [Nehruvian](#) era.

Nehru Memorial Museum and Library Society was formed on the 1st April 1966. Initially, the Museum was set up in the eastern wing and the Library in the western wing of the sprawling building, with [Bal Ram Nanda](#) as its founder-director, who also curated the museum and library for next 17 years. He received the [Padma Vibhushan](#) in 2003. With the passage of time and the rapid growth of research material in the Library, more space was required and an exclusive Library building was constructed. It was formally inaugurated by the then

President, [V. V. Giri](#), in January 1974. However, the steady increase in the volume of material required for research further necessitated the construction of an annex building which was completed in 1989. The Centre for Contemporary Studies was set up in this building as a new unit in 1990.

To commemorate the Foundation Day of the Nehru Memorial Museum and Library. It has been organising an Annual Lecture on the 1st April every year, and named it Jawaharlal Nehru Memorial Foundation Day Lecture. [Nehru Planetarium](#) is also part of N.M.M.L. (famously known among locals). Additionally, much work is also happening in the field of connecting people with this place with special reference to children, who are considered to be closest to Jawaharlal Nehru's heart, earning the popular name 'Chacha Nehru'. The library also has an archive of the private correspondence between Nehru and [Edwina Mountbatten](#), wife of [Lord Mountbatten](#), but with limited access.

The 'Centre for Contemporary Studies' was set up as an advanced studies unit of NMML in 1990 and is housed in the Annexe building. NMML took over the charge of the [Nehru Planetarium](#) from the 'Jawaharlal Nehru Memorial Fund' in 2005.

5.5.1 Nehru Memorial Digital Library

The collection of manuscripts, historical documents and other archival materials of the Nehru Memorial Museum and Library (NMML) were made available online, after the digitisation project, with help of HCL Infosystems started in 2010. By May 2011, employing the Rs union [Ministry of Culture](#) funding of Rs. 10 crore, project had digitized 50 collections of manuscripts, 834 interview transcripts, 29,802 photographs, over one lakh images of the newspaper [Amrita Bazar Patrika](#) (1905–1938). In all, the digitization will cover nine million documents and would be completed by 2015.

5.5.2 Jawaharlal Nehru Memorial Fund

The Jawaharlal Nehru Memorial Fund (JNMF) was founded in New Delhi on 17 August 1964 under the Chairmanship of Dr [S. Radhakrishnan](#), then President of India and [Indira Gandhi](#) as its Secretary. The foundation awarded the 'Jawaharlal Nehru Fellowships', since 1968 and "Jawaharlal Nehru Fellowships for Post-graduate Studies in India and abroad", initiated by the [Ministry of Human Resource Development](#) since 1993 and organizes the 'Annual Nehru Memorial Lecture' on the eve of Jawaharlal Nehru's birthday (November 14). It also runs or funds a number of institutions, including [Anand Bhavan](#), Jawahar Planetarium, and Jawahar Bal Bhavan, all in Anand Bhavan complex, in [Allahabad](#).

In 2009, several well-known academics such as Ramachandra Guha, Sumit Sarkar, Nivedita Menon, Nayanjot Lahiri, Mushirul Hasan, Mukul Kesavan, [Mahesh Rangarajan](#) and Krishna Kumar, alleged that the institution was being run in an inefficient and corrupt fashion. They pointed out that NMML has discontinued its publication programme, and that the acquisition of manuscripts and oral histories had all but come to a halt. In turn, writer and activist Madhu Kishwar, environmentalist Pradeep Kishen and historians Irfan Habib and D.N. Jha came out in support of NMML and its director Mridula Mukherjee.

5.5.3 Library

The National Museum Library collects books and journals related to the fields of history, art and culture of the World for specialized research and reference. It covers a variety of themes such as anthropology, archaeology, conservation, decorative arts, history, literature, museum studies, painting, philosophy and religion. It contains over sixty thousand volumes of books, bound journals as well as several Indian and international journals and magazines.

The Library has been the proud recipient of several prestigious personal book collections such as the Elwin collection, Satyam Bhai collection, Dr. L.P. Sihare collection, Desikacharya collection and the Heeramanek collection.

Access

The library is open for use by bonafide research scholars, university students, professors, teachers and fellowship holders.

Timings

10.00 A.M. to 5 P.M Monday - Saturday (except the second Saturdays of the month and gazetted holidays)

Contact information

Telephone: 011-23017721, 011-23019272 (Ext. 238 or 235)

Email: natmuslib@gmail.com

5.5.4 Museum libraries and archives

The Museum collection is available to researchers of all different levels through its galleries, libraries and study rooms, as well as online.

(a) Libraries catalogue online

Catalogues for all of the Museum's libraries can be searched online-please note not all Museum libraries have their entire collection recorded in the online catalogue.

(b) Libraries and study rooms

Each of the Museum's curatorial and research departments has public facilities including study rooms and, in most cases, a library.

These can all be accessed for research enquiries by appointment only, apart from the Anthropology Library and Research Centre which is open every week day 10.00-17.00 (12.00-17.00 Thursdays).

Contact the relevant department, for more information.

(c) Museum archive

The Museum's Archive contains administrative records of the Museum dating back to its foundation in 1753, including minutes of meetings of the Museum's Trustees, acquisitions reports and administration, policy and financial records.

The Central Archive holds limited information on the Museum's collection: these records are generally held by the Museum's curatorial departments (with some exceptions). For archival enquiries about Museum objects you should therefore contact the relevant department.

Archive material held by the British Museum Department of Manuscripts (usually with references beginning 'Add') and some other Museum records (before 1973) are now held by the British Library Central Government records concerning the administration of the Museum, including various records of the Museum building, are held by the National Archives.

5.5.6 Need for online library

The Provincial Archaeological Library should now be available online. This online library should be developed by the Archaeology Branch. It is a web based application that enables authorized users to search, view, download, and order archaeological reports in PDF format.

The online library provides many useful ways to search for reports. Specific fields that can be searched include: permit number, permit type, map sheet, title, abstract, author, and Borden number. You can also conduct quick or advanced keyword searches on the full text of all reports in the online library.

The Archaeology Branch has contacted copyright owners of permit reports to request a license to allow the inclusion of their reports in the online

library. The online library contains permit reports for which a license has been granted, plus permit reports where the Province already owns copyright.

5.5.7 Accessing and Using the Online Library

The primary purpose of the online library is to serve high-volume, repeat clients who require archaeological report information for land use planning or archaeological studies. Defined client groups are: archaeological consultants, federal and provincial resource or land use planning agencies, First Nations, and accredited academic researchers. The online library should be not available to the general public.

Non-archaeologists should be aware that the reports in the online library contain scientific and technical information specific to the field of archaeology; you may want to seek professional archaeological assistance in interpreting report contents prior to making land use and resource decisions.

5.5.8 History of Archaeological In India

The history of archaeology in India dates back to the early sixteenth century and involves three groups of people namely Portuguese residents of Goa, other European sailors and occasional travellers. Principally, two categories of monuments are dealt with during this phase: the rock-cut caves of west India and the south Indian temples. Among the monuments in the interior, Elephanta was frequently described, and in the east the Black and White Pagodas, the Konark and Jagannatha temples of Orissa respectively, were known as early as the seventeenth century when they served as prominent navigational markers on the Orissan coast. By the middle of the eighteenth century, European familiarity with Indian monuments was fairly broad-based.

The formal beginning of Indian archaeology can be traced back to the middle of the eighteenth century, when academic interest in the Indian antiquities

began. The archaeology of India has got significance in the writings of some French scholars. The names of the major ancient Indian cities were known from the classical sources, and by the middle of the eighteenth century there was a specific geographical interest to identify them on the ground. Pataliputra, the ancient Mauryan capital described by the Greek ambassador to the Mauryan court, Megasthenes, was one of these cities.

In the second half of the eighteenth century there was considerable philosophical interest in the antiquity of India in Europe, especially among the philosophers of the French Enlightenment. The historical study of ancient India cannot realize its full potential on the basis of textual sources alone due to the fact that the sources which have been used, beginning with the Rig Veda, were not meant to be historical sources, and whatever historical information has been gleaned from them is not free from questions regarding their chronology, geographical applicability and even content. Except for the history of the kings of Kashmir, written by Kalhana in the twelfth century, there is no proper historical chronicle dating from the ancient period of Indian history. Great books which, like the Ramayana and the Mahabharata, have for ages served as popular encyclopedias of national culture.

The problem of sources is not limited to the texts. It affects in good measure inscriptions, coins, sculpture, painting and architecture as well, although in these cases geography and chronology are not among the problems. The number of early inscriptions is severely limited. They increase in number only in the twelfth-twelfth centuries, more in the south than in the rest of the subcontinent. But inscriptions are also textual compositions, and, like other textual compositions, devote a lot of space to conventional descriptions rather than to the enumeration of the event for which the inscription was intended in the first place. Coins come mostly from `stashes`; accidental, non-contextual discoveries which very often end up with the coin-dealers. A framework of the

study of coins has no doubt emerged, but on many occasions the study of ancient Indian coins has not been able to proceed beyond a study of their design. The same is true of the specimens of art and architecture. They are concerned much more with the religious life of the day in different regions and less with the issues of individual authorship and patronage, precisely the issues which would have made them exciting as historical documents.

Over the last two centuries or more, scholars have certainly mapped out the different areas of ancient Indian history. Archaeology can greatly expand the nature of the sources in the context of ancient India. Even in the areas with a much larger mass of detailed and rigorous textual documentation, archaeological research often leads to hitherto unperceived dimensions of the historical landscape. In the case of ancient India, where the basic quantum and the rigor of textual documentation are comparatively limited, archaeological research becomes more than ordinarily significant.

Archaeology can also greatly change the nature of historical questions, and it is here that the second reason of the significance of archaeology in ancient Indian historical research is rooted. Although modern archaeology is not afraid of handling a multitude of issues ranging from environment and subsistence to symbolism and cognition, it is primarily in the reconstruction of the story of man-land relationship through the ages that the subject excels. Through the excavations, ample information of Paleolithic and Mesolithic period is obtained that enriched the study of Archaeology of India as a whole.

The past is a hotly contested arena of modern times, and the fact that it has become so is in a large measure due to a sense of monolithic, racist past that India have inherited as a colonial legacy in a large part of the world. In the case of India, it is realized that since the beginning of research on the history of ancient India, the story of its conquest by a care-fully constructed `superior` racial

and linguistic group called the Aryans has been an overwhelmingly dominant theme and that this conquest and the subsequent assimilation of the various indigenous strands of culture by the conquering Aryans have been said to constitute the very basis of ancient Indian society and history.

As far as the Third World countries go, the most pressing need these days is certainly to go beyond the bagful of colonial theories which they have all inherited and try to build up an image of themselves in which every member of their nation state can participate, irrespective of their regional, caste, tribal, religious, sectarian and a whole host of other affiliations. The primary sector of the past in which such a broad-based participations is possible is the history of their land, that particular patch of the earth's surface which has befallen to their lot as a product of the historical circumstances and through which they have interacted in various ways through time. This approach makes archaeology predominantly a part of the environmental sciences.

Thus, to learn a non-sectarian and multilineal image of ancient India, archaeology, especially aided by the scientific techniques which are now available to the cause of archaeological research, provides the most significant area of historical enquiry.

5.6 Department of Archaeology and Ancient History

The Department of Archaeology and Ancient History was established in the early 1950s under the leadership of Dr. B. Subbarao. The aim of the Department is to make the study of Archaeology an inter-disciplinary subject. The Department, while focusing on its research in the western part of India, has achieved not only a regional but also a national stature. The departmental

research emphasizes on various aspects of ancient culture, such as the development of sciences, technologies, palaeoenvironments and problems pertaining to the formation of early urban and rural centers of western India by incorporating different sources available for the reconstruction of the history of mankind.

The department carries out regular explorations and excavations as part of our teaching programme and also to acquire data pertaining to specific research problems. The department also has the system of holding temporary exhibitions in which the departments ongoing research work is displayed for public awareness. In the 1980s the Ford Foundation identified this department as one of the major centers in the country for research and development in Archaeology and Archaeological Sciences. Since April 2002 the Department has been accorded with DSA recognition by the UGC.

Apart from the mainstream courses in archaeology, the department offers a UGC vocational course on Travel and Tourism Management in the first and second year B.A. levels.

This edited volume is undoubtedly the most important of four volumes compiled by Setter and Korisettar, as it addresses critical methodological and theoretical issues that form the heart of archaeology, not only in India, but also in the whole world. There are fifteen substantive articles that provide critical summaries of the state of different research methods and the quality of theoretical frameworks used by scholars working in South Asia. An appendix provides a useful list of sites reported by the Archaeological Survey of India (ASI) in its annual reports between 1953 and 1993. Overall, I feel that this is one of the most important new edited volumes to come out of India in recent years and recommend it as essential reading for anyone interested in current and future developments in archaeological method and theory.

The first article by R.S. Pappu is an excellent summary of the recent projects in India that have been investigating the Plio-Pleistocene to early Holocene record of climate fluctuations, geological events, and evidence for early human presence in this changing landscape. His main conclusion is that we have a fairly comprehensive understanding of secondary sites that demonstrate the presence of human populations in the subcontinent, beginning as early as 2 million years ago, but that future investigations need to focus on the discovery and excavation of primary occupation and activity sites. The article by M.D. Petragila, appearing later in the volume, directly complements Pappu's article, since it focuses on specific methods of analysis and the excellent summaries, they do not emphasize the major contributions to the field that have resulted from work in India and South Asia in general. Perhaps this is out of a sense of modesty by the two authors, but I can say without hesitation that the Paleolithic settlement analysis done by Petragila with K.K. Paddayya in Karnataka is one of the most thorough and well documented for any primary undisturbed sites. Furthermore, the comprehensive geoarchaeological reconstructions and site catchment analysis done by Pappu and his colleagues is also an excellent example of well-organized multidisciplinary research. Although they do mention it in passing, I feel that they should have given more time to a discussion of the extremely significant work done by Pakistani geologists and the British Archaeological Mission in the Potwar region of Pakistan (though this work is discussed in other articles). The modern political borders and current political tensions between India and Pakistan should not compromise the credit due to outstanding scholarship.

The article by B.B. Lal is only slightly revised from his 1981 article on his research methodology for testing the historicity of the Mahabharata and Ramayana. Lal's work has provided considerable impetus to Hindu fundamentalists who have tried to appropriate the incomplete archaeological

record to legitimize their own views of the past. He does and an up-to-date discussion of the continuing controversy about the contested site of the now destroyed Babri Masjid and the previously destroyed Rama temple, but does not suggest an improved methodology that would avoid future misappropriation of the archaeology record.

In the article by Lahri et al., we are provided with a scathing critique of the Archaeological Survey of India. In their analysis of the annual reports of the ASI, they find serious gaps in terms of survey coverage by the ASI and argue that an overall map of archaeological settlements in India is needed to understand changing settlement patterns. The main thrust of the article is that the ASI does not employ people who have strong theoretical or methodological foundation in modern archaeological approaches, that there is a lack of planning and carrying out of high-quality scientific research, and that it has not fulfilled its responsibility to publish excavation reports.

A series of three articles are devoted to the discussion of the history of theoretical development in “Indian” archaeology and South Asian archaeology in general. K.K. Paddayya’s review of theoretical perspectives is an expanded version of an earlier work and begins with a discussion of “Indigenous epistemological traditions” and concludes that there is no evidence for the existence of an Indian tradition of archaeological research.....