

**KARNATAKA STATE**  **OPEN UNIVERSITY**

Mukthagangothri, Mysuru -570006

**1 Year - 1 Semester**

**DEPARTMENT OF STUDIES &  
RESEARCH IN ANCIENT HISTORY & ARCHAEOLOGY**

# **INTRODUCTION TO ARCHAEOLOGY**



Course : Archaeology  
Course Code : A.H.A. HC 13

Block : 1 - 4  
Units : 1 - 16

**KARNATAKA STATE**



**OPEN UNIVERSITY**

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**DEPARTMENT OF STUDIES & RESEARCH IN ANCIENT HISTORY & ARCHAEOLOGY**

**I YEAR**

**I SEMSTER**

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## **INTRODUCTION TO ARCHAEOLOGY**

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**Programmed Name:** MA in Ancient History & Archaeology **Year/ Semester:** First **Block No:** 1 - 4  
**Course Name:** Ancient History & Archaeology **Credit:** 4 **Units No:** 16

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**Dr. Shalva Pille Iyengar**

**Member**

Assistant Professor & Course Designer  
DOS&R in Ancient History & Archeology  
Karnataka State Open University  
Mukthagangotri, Mysuru – 570006

**Dr. Shalva Pille Iyengar**

**Member**

Chairman  
DOS&R in Ancient History & Archeology  
Karnataka State Open University  
Mukthagangotri, Mysuru – 570006

**Dr. Shalva Pille Iyengar**

**Member Convener**

Chairman  
DOS&R in Ancient History & Archeology  
Karnataka State Open University  
Mukthagangotri, Mysuru – 570006

---

### Course Writer

---

Mr.Gautam.J.R  
Guest Lecturer,  
St. Joseph College,  
Bangalore

Block -1,2,3&4, Units 1,2,3, 4, 5,6,7,8  
9,10,11,12,13,14,15 & 16

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## Course Editor

---

Dr. Shalva Pille Iyengar  
Chairman,  
DOS&R in Ancient History & Archeology,  
Karnataka State Open University,  
Mukthagangotri, Mysuru – 570006.  
[shalvapille@gmail.com](mailto:shalvapille@gmail.com)

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Dear Students,

We welcome you all to the Karnataka State Open University, the pioneer higher education institution. We are happy to inform that the KSOU is celebrating its Silver Jubilee this year. Established in 1986, the varsity has reached higher education to lakhs of students extending education through Distance Education Mode.

The KSOU is presently offering education in **32 subjects** both at Under Graduate and Post Graduate levels. Our main motive is “Higher Education to Everyone Everywhere.” Bhagavad Geetha states that “Nothing is equal to knowledge in this world. So the best wealth is the education and knowledge”. The KSOU is providing education to different sections of the society irrespective of economic background and age unlike the traditional universities in the state. The fees structure is nominal while concession is extended to students to ensure that they are not deprived of higher education.

The KSOU has introduced Choice Based Credit System (CBCS) from June 2021, which is very important from the students view point as they can compete with the existing academic structure/ programs of other universities.

The Department of Ancient History and Archaeology is the youngest of all the departments in the KSOU. It was established in 2013–14. The department offers only Post Graduate course which is stretched over two years in four semesters.

Archaeology is a hard core paper in your studies. Without the knowledge of basics of archaeology you cannot become an archeologist. In this paper, you study about the definition, aims, scope and ethics of Archaeology, how Archeological Studies begins, how it was developed in Europe and Africa and In India.

Also this paper discuss, about the Archeology and other Sciences in detail. It also elaborates the types of Archaeology which are Prevailing.

In the last blocks, it gives insight to archaeological acts in India and Karnataka and establishments of ASI.

We wish you to become Archaeologist in your future.

Wish You a Bright Future

# **Block -1. Introduction to Archaeology**

## **Unit -1. Definition – Aims - Scope- Ethics of Archaeology**

1.1.1.1. Objectives

1.1.1.2. Introduction

1.1.1.3. Definition of Archaeology

1.1.1.4. Aims/Goals/Focus of Archaeology

1.1.1.5. Scope of Archaeology

1.1.1.6. Nature of Archaeology

1.1.1.7. Traditions in Archaeology

1.1.1.8. Relevance of Archaeology

1.1.1.9. Ethics of Archaeology

1.1.1.10. Summary

1.1.1.11. Key Words

1.1.1.12. Check your progress

1.1.1.13. Key Answers

1.1.1.14. References

### **1.1.1.1. Objectives**

Define the discipline of Archaeology

List out the aims of Archaeology

Describe the scope of Archaeology

Explain the ethics of the Archaeology discipline

### **1.1.1.2. Introduction**

Humans have always been curious of their past. This curiosity manifested in many ways. Treasure hunters wanted to unearth hidden treasures of the past. Common men wanted to know how their distant ancestors lived, what they did and thought. Intellectuals wanted to tap into lost knowledge systems of the past. Ethnic groups wanted to claim superiority over others by attempting to link themselves to past cultures, races or ethnicities. Nationalists wanted to invoke nationalist sentiments. Religious groups wanted to claim antiquity as well as authenticity to their belief systems. Political groups wanted to reclaim territories. History did satisfy the curiosity and intentions of such individuals and people groups, however in a limited way. History could go as far back as when writing started, which is only a small part of the entire human past. It was archaeology that could go much beyond, knocking on the doors of the very first humans.

### **1.1.1.3. Definition of Archaeology**

The word archaeology comes from two Greek words 'arkhaios' (meaning primitive, ancient) and logos (meaning knowledge, discourse). In essence, archaeology means knowledge of the ancient. Scholars have defined archaeology variously as below:

“The study of humans past using the surviving material remains of human behaviour”  
Brian Fagan



Archaeology is the study of material culture in its relationship to human behaviour- the physical manifestations of man's activities, his rubbish and his treasure, his building and his graves" Philip Rahtz

"The sub-discipline of anthropology involving the study of the human past through its material remains" Colin Renfrew & Paul Bahn

"The study of humans through their material remains"  
Robert Muckle

Archaeology is a specialized field of study within anthropology, which itself is a behavioural science that studies human societies and the cultures, language and biology of their people" William & Michael Schiffer

"The study of human history and prehistory through the excavation of sites and the analysis of artefacts and other physical remains"

The Oxford Dictionary

Archaeology is a total study. It involves analysing everything that remains from the past with the aim of reconstructing the past as fully as possible"

Jane McIntosh

#### **1.1.1.4. Aims/Goals/Focus of Archaeology**

Simply put, the aim of archaeology is to study past humans through their material remains. However, the way material remains are studied has undergone changes over time and with it, the aim of archaeology.

1. Focus on **form** - Here, the aim of archaeology is to interpret the material remains by focussing on the form of the material remains.

Archaeology established itself as a proper discipline around the mid nineteenth century. At this time, the focus was on the study of the various forms of archaeological materials and its distribution in time and space. Study of forms included:

Documenting the material, shape, size, weight

Describing the object

Classifying them

Dating them

Such a study of forms was done on all archaeological objects, common ones being pots, bricks, stone tools and metal tools. Even today, excavation reports contain appendices showing the classification of various objects found in that particular excavation along with their images/sketches. Each distinct geography that yielded a group of distinct objects came to be called as a 'culture'. This phase of Archaeology is called as the Cultural-historical phase or Traditional archaeology phase.

2. Focus on **function** - Here, the aim of archaeology is to interpret the material remains by focussing on the function of the material remains.

By the early twentieth century, archaeologists began to realise that a mere study of form was not satisfactory enough to gain insights into the life of the past humans. They started to determine the function of the archaeological objects. This gave insight into the various activities of past humans, which was more interesting. This phase of Archaeology is called as the Functionalism phase.

3. Focus on **cultural process** - Here, the aim of archaeology is to interpret the material remains with focus on the processes involved in the 'how' and 'why' of culture changes.

By 1960s, neo archaeologists felt dissatisfied with the way archaeological was progressing. They brought about two major changes, one in the introduction of scientific research methodologies in archaeological interpretations such as deductive reasoning and hypotheses formulation. The other major change was in identifying each culture as a system. These systems tend to change due to cultural processes which either try to stabilize the system or improvise it. This phase of archaeology is called as the Processual phase.

4. Focus on **human mind** - Here, the aim of archaeology is to interpret the material remains with focus on the various aspects of the mind of past humans such as sentiments, feelings and emotions.

By 1980s, there were a set of archaeologists who went past the processual theory and advocated the interpreting of the human mind. They felt that this was more fruitful. This phase of archaeology is called as the post Processual phase. It is also known as Interpretive archaeology since explaining of the human mind relies a lot on interpretation. More recently, archaeologists are attempting to utilize the findings of archaeology to address general issues concerning human behaviour and history, thus making archaeology more relevant.

### **1.1.1.5. Scope of Archaeology**

#### **1. Evidence wise**

Tangible evidences

Objects made of Stone, Clay, Metal etc. Basically everything made by past humans from simple tools to complex machines, from simple dwellings to complex buildings and townships

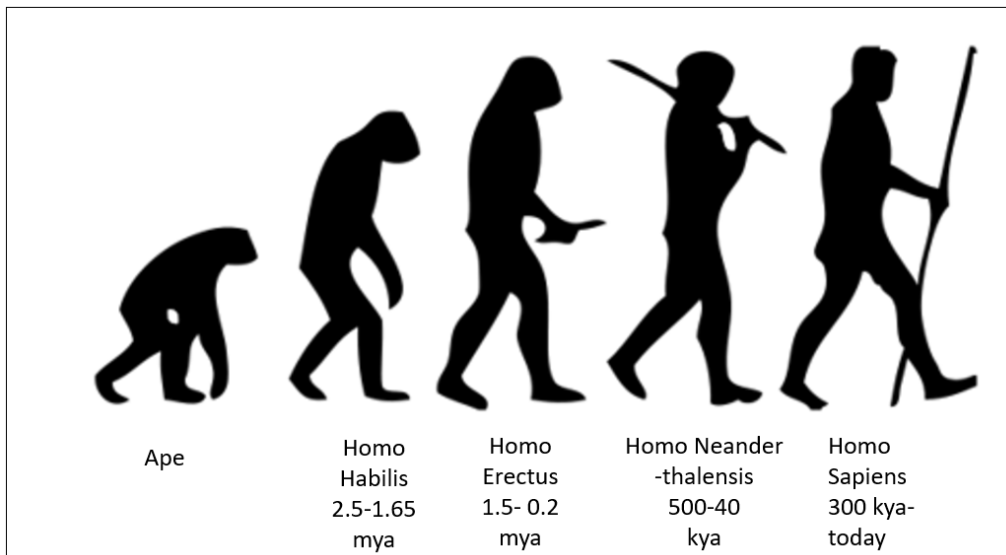
Intangible evidences

Oral traditions, folklores

#### **2. Time wise - Early human (ca. 2.5 mya.) to today**

The scope of archaeology starts with the first humans that inhabited the earth. Roughly around 2.5 mya. (million years ago), the first members of our own genus *Homo* appeared in Africa. *Homo* evolved from their predecessors, the *Australopithecus*. The *Australopithecus* exhibited both human like and ape like characteristics. Their brains were small like apes but they were bi-pedal like humans. They also used simple stone tools. In comparison with the *Australopithecus*, the *Homo* had bigger size brains as evidenced by their fossils. The first species in the genus *Homo* is called *Homo habilis*. Apart from larger brain size, *Homo habilis* exhibit hand bones which could manipulate objects. Hence, this species is also called as Handy man. The Oldowan tool kit is associated with this species. By about 1.5 mya. '*Homo erectus*' species appeared in Africa. This coincides with the appearance of Acheulean bi-faced tool kit and large grass lands are Africa. It is perhaps these grasslands that forced them to stand erect. This group was also the first to venture out of Africa and move towards Europe, South Asia and South East Asia. The next species are the *Homo Neanderthalensis* who appeared around 500 kya. (Kilo years ago) and are found mostly in Europe and West Asia. They had slightly

larger brain size than modern humans and are associated with the Mousterian tool kit. *Homo sapiens* species appeared roughly around 300 Kya. Although with a slightly smaller brain size than the *Homo Neanderthalensis*, they seemed to be more productive and ended up dominating all regions of the world by around 40 Kya. The period from the early human till about 12kya is called the Palaeolithic period. Archaeology also covers the succeeding periods such as Mesolithic, Neolithic, Chalcolithic, Iron Age and the Historic period till today.



**Fig 1 Evolution of humans**

### 3. Discipline wise

Archaeology has grown today to a multi-disciplinary status interacting with other disciplines of social Sciences and natural Sciences

#### Epigraphy

It is the study of objects with inscriptions. These objects usually belong to the Historic period and bear various scripts, many decipherable but some still undecipherable

#### Numismatics

It is both the collection as well as study of coins. Numismatists are trained to use specific methods and tools to extract historical information from coins. Coins are usually robust and easily datable, so their finds in stratigraphically contexts prove quite useful to date other objects

#### Architecture

It is the art and science of building construction. The materials used for construction, the technology utilized and the aesthetic senses have all undergone changes with time. Different space time combinations patronized different styles of architecture and this can be noticed during archaeological activities.

### **Iconography**

It is the study and interpretation of visual images and symbols. Archaeology frequently yields objects containing visual images and symbols and they need to be interpreted by an Iconographer.

### **Archives**

Archives are places that provide primary historical sources such as gazetteers, letters, reports, memos, photographs, news articles. When it comes to historical archaeology, an archive may need to be consulted for relevant data.

### **Museology**

It is the study of museums including its setup, operation, antiquity management, preservation and conservation of objects and publication. While an archaeologist might have done the initial artefact conservation activities at the site, the permanent conservation of them must be done by a museologist.

### **Linguistics**

It is the study of languages and its evolution over time. It is estimated that language skills in humans developed about 50 Kya. Early languages have not left any material evidences. Language can be studied only from the time writing was introduced, that is roughly about 3000 BCE. A philologist is a person who studies the evolution of languages. Philologists are required to decipher epigraphs.

### **Archaeophysics**

Dating of artifacts involves a sound knowledge of their physical properties. Concepts of physics such as magnetism, sound, electricity, X-rays are used during explorations and in artifact imaging, photography, and videography. Non-invasive examination of artifacts to determine their constituents applies concepts of physics.

### **Archaeochemistry**

Cleaning, preservation and conservation of artifacts require use of specific chemicals in proper proportions. Some artifacts need to be chemically analysed to understand them better

### **Palaeobotany**

Botany is the science of study of plants. The knowledge of botany needs to be applied when archaeologists encounter plant samples. A good analysis of plant samples provides important information of palaeo-ecology and palaeo-diets.

### **Paleozoology**

Zoology is the science of study of animals. The knowledge of zoology needs to be applied when archaeologists encounter animal samples. A good analysis of animal samples provides important information of palaeo-ecology and palaeo-diets.

### **Geoarchaeology**

The focus of Geoarchaeology is on the site formation process and geological processes that may have occurred post artefact deposition. The understanding of soil and sediment formation is important to an archaeologist from a dating perspective.

## **4. Activity wise**

### **Survey**

It is the determination of the shape, area and position of a site's surface through the measurement of horizontal and vertical distances.

### **Exploration**

It is a method or a group of methods used by archaeologists to locate unknown habitation sites and subsequently determine their potential to yield material remains.

### **Excavation**

It is a method or a group of methods used by archaeologists to recover artefacts, features and Eco facts from the ground in a systematic manner.

### **Conservation**

It is the process of treating damages in excavated objects at the site so that their life is increases.

## **Documentation**

It is the systematic collection of all archaeological data along with its contexts.

## **Analysis**

It is a method or group of methods for studying archaeological objects so as to understand them better.

## **Dating**

It is a method or group of methods for estimating the age of archaeological objects. Dating can be relative or absolute.

## **Interpretation**

The explanation of the outcome of the analysis.

## **5. Career wise**

Given the multidisciplinary nature of archaeology, there are various specializations available today to choose from. Each of these require their own set of skills and methods. The various archaeology specializations are:

Based on time period:

Pre-Historic Archaeology

Proto-Historic Archaeology

Historic Archaeology

Classical Archaeology

Modern World Archaeology

Based on nature of work:

Environmental Archaeology

Ethno-Archaeology

Settlement Archaeology

Household Archaeology

Marine Archaeology

Commercial Archaeology

Industrial Archaeology

Salvage Archaeology

Experimental Archaeology

Bio-Molecular Archaeology

Cognitive Archaeology

Digital Archaeology

Cultural Resource Management (CRM)

### **1.1.1.6. Nature of Archaeology**

Archaeology is a complex discipline interacting with other major disciplines, both influencing them and drawing from them. The archaeology discipline has an interesting position by being in between social Sciences and natural Sciences. This position comes due to its aim, i.e to understand human behaviour from their material-cultural remains. These material-cultural remains, being primarily material objects have to be studied from a natural sciences perspective. However, the same objects being representations of a cultural aspect, have to be studied from a social Sciences perspective.

The nature of Archaeology is:

#### **1. Humanistic**

Since archaeology primarily attempts to know all about past human skill, behaviour, thought, emotion, faith, tradition etc. it is naturally a Humanistic study.

#### **2. Scientific**



While the primary focus is Humanistic, the evidences available for study are materialistic. Hence scientific methods have to be employed to analyse them effectively. Also scientific approaches like hypothesis formulation, hypothesis testing and statistical modelling may need to be employed.

### **3. Interpretive**

The general meaning of interpretation is translation. An archaeologist is essentially a translator standing between the past and the present. Archaeologist studies the objects of the past and provides interpretation in the present. However, the interpretation may not be free from bias. As argued by Ian Hodder, social and cultural contexts in the present can influence an archaeologist's interpretations of past material cultures. Thus there can be several interpretations for the same set of archaeological data.

### **4. Multidisciplinary**

As explained in the previous section, archaeology is multidisciplinary in nature interacting with other disciplines under social Sciences and natural Sciences.

#### **1.1.1.7. Traditions in Archaeology**

Archaeology as a discipline initially developed quite independently in Europe and in the Americas. In Europe, archaeology was linked closely with History and natural Sciences. Hence the tendency of archaeological interpretation was more towards the materialistic aspects. Also the periodization of archaeology as pre historic, proto historic and historic was introduced in Europe. On the other hand, in the Americas, archaeology originated and is still considered as part of anthropology. Hence the tendency of archaeological interpretations here was more humanistic. These two separate traditions have somewhat merged during the last few decades.

#### **1.1.1.8. Relevance of Archaeology**

From the period of antiquarianism, if not earlier, we see an immense public interest in archaeological data and its study, thereby sparking both romanticism and nationalism. From the mid nineteenth century, the outcome of pre-historic archaeology was viewed with awe both by public as well as religious and social movements. However, the popular image of archaeology that it has no relevance to the needs or issues of the present, continued. It is only in recent times that archaeologists themselves have had some clarity on the aim and relevance of archaeology. They have started to see archaeology as two distinct dialogues, an internal one and an external one. In the internal dialogue, archaeologists seek to develop methods for inferring human behaviour from archaeological data. In the external dialogue, they use these findings to address general issues concerning human behaviour and history. Thus archaeology has become much more relevant to our present.

#### **1.1.1.9. Ethics of Archaeology**

The main activity in an archaeological project is excavation. It is a one way activity and once carried out, usually cannot be undone. Excavation is carried out in both habitation sites as well as burial sites. There are some ethnic groups that worship their ancestors and to them, excavation, especially of burial sites is sacrilege. Ethics of archaeology deals with such moral issues surfacing during the study of our past.

Some of the important ethical concerns in archaeological activities are:

##### **1. Treatment of Human remains**

This is one of the most sensitive areas of archaeology. Archaeologists are now taking a more sensitive and respectful approach in the treatment of human remains. In 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) was introduced in USA to facilitate the return of human remains and other sacred objects back to the native American

tribes. In other places in the world too, sites of indigenous tribes are tread more cautiously by archaeologists today.

## 2. Non-disclosure agreements (NDAs) in commercial Archaeology

Development projects in the USA are commercial in nature including those that have a cultural implication. However, archaeologists involved in such development projects with cultural implications are required to sign a NDA with the private entities funding the development, thereby preventing the related findings from reaching the general public or academic institutions. This is hence an ethical concern.

## 3. Archaeology in forcefully occupied lands

In order to prevent unethical archaeological activities in forcefully occupied lands, the World Archaeological Congress has passed a resolution preventing professional archaeologists and academic institutions from undertaking archaeological projects in forcefully occupied lands, be it military occupied or under a colonial rule.

## 4. Ethno archaeology

Ethno archaeology is a specialized area of archaeology where the ethno archaeologist (observer) collects data first hand by interaction with the specific ethnic tribe. The work of ethno archaeologists is quite involved and they sometimes spend few years on a single tribe. There are two approaches to interact with the tribes, undisguised and disguised. In the undisguised approach, the observers share their true intentions with the tribe. However, with the disguised approach, the observers do not share their true intentions with the tribe. Additionally, sometimes the observers get too involved with the tribe, thereby causing interference in the normal proceedings of the tribe. All these cause ethical concerns. To address this issue, the Nuremberg Code (1947) and the Declaration of Helsinki (1964) have been

formulated wherein ethno archaeologists need to take prior approval from an ethics committee. Additionally, all interviews must have prior informed consent from the research subjects.

To regulate the ethical practice of archaeology, different societies have been set up across the world. A few among them are:

- World Archaeological Congress (WAC)
- Society for American Archaeology (SAA)
- European Association of Archaeologists (EAA)
- Australian Archaeological Association (AAA)
- Canadian Archaeological Association (CAA)

Additionally, ‘code of conduct’ and ‘code of ethics’ have been published by various archaeological societies and institutes.

#### **1.1.1.10. Summary**

In summary,

1. Archaeology is a multidisciplinary subject standing in between pure Sciences and social Sciences
2. The aims of archaeology have evolved over time. It was materialistically inclined earlier and has now moved to the humanistic side
3. The scope of archaeology is vast with multiple archaeological specializations available today
4. Ethics in archaeology is a recently evolving area and needs more attention from both professional archaeologists and societies

#### **1.1.1.11. Key Words**

**Artefacts:** Objects made by humans, typically one of cultural or historical interest

**Eco facts aka. Bio facts:** Organic materials such as remains of flora or fauna material found at archaeological sites

**Features:** A man made construction E.g.: House, Stupa

**Law/Principle:** A fundamental truth e.g.: Scientific laws

**Method:** A systematic way of collection of data

**Theory:** A well-substantiated explanation based on valid evidence. A hypothesis/explanation that helps in interpretation of collected data

### **1.1.1.12. Check your progress**

1. What are the aims of archaeology?
2. Describe the scope of Archaeology.
3. What is the nature of the Archaeology discipline?
4. List and explain the important ethical concerns in Archaeology. What has been done so far to address these concerns?

### **1.1.1.13. Key Answers**

1. Refer section 1.1.1.4.
2. Refer section 1.1.1.5.
3. Refer section 1.1.1.6.
4. Refer section 1.1.1.9.

### **1.1.1.14. References**

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## **Figures**

Fig 1 <https://commons.wikimedia.org/wiki/File:Human-evolution-man.png>, José-manuel Benitos, GFDL <<http://www.gnu.org/copyleft/fdl.html>>, via Wikimedia Commons, Left most part of original image deleted

# **Block -1**

## **Unit -2. Growth of Archaeological Studies**

.1.1.2.1. Objectives

.1.1.2.2 . Introduction

.1.1.2.3 . Antiquarianism (till late 19<sup>th</sup> Century)

.1.1.2.4 . Traditional Archaeology or Cultural-Historical phase (late 19<sup>th</sup> Century to mid-20<sup>th</sup> Century)

1.1.2.5. Functionalism (early 20<sup>th</sup> Century onwards)

1.1.2.6. New or Neo Archaeology (1960 onwards)

1.1.2.7.Cultural process, Processual theory and Processua

1.1.2.8. General systems theory

1.1.2.9.Scientific advances in dating methods:

1.1.2.10 .Post Processualism and Interpretive Archaeology (1980 onwards)

1.1.2.11. Recent trends in Archaeology

1.1.2.12. Summary

1.1.2.13.Key Words

1.1.2.14. Check your progress

1.1.2.15. Key Answers

1.1.2.16 References

### **1.1.2.1 . Objectives**

1. To trace the growth of archaeological studies from antiquarianism to today
2. To appreciate the various archaeological theories that has furthered its growth and relevance
3. To understand the influences of other disciplines on the growth of archaeology
4. To introduce the important scholars who contributed to the growth of archaeology

### **1.1.2.2 . Introduction**

It is quite difficult to date the exact beginnings of archaeology. We do however get some historical instances. Nabonidus (c. 556-539 BCE) was the last ruler of the neo-Babylonian empire. He is sometimes referred to as the ‘first archaeologist’ of the world. His own inscriptions suggests his particular interest in history and antiquity. When he renovated older Mesopotamian temples, he laid inscription stones attempting to list and date his predecessor kings as far back as 3200 years before himself. In the temples that he renovated, he also attempted to restore older statues. The daughter of Nabonidus was Bel-Shalti-Nanna *aka*. Enigaldi. She was the designated high priestess of the neo-Babylonian empire. She carried on her father’s legacy in antiques and is said to have developed and curated a museum of artifacts in ca 530 BCE (see Fig 1). The artifacts displayed in the museum belonged to the preceding 1500 years of Mesopotamian history and were all labelled and catalogued. It is believed that at least some of the objects in this ancient museum’s display could have been excavated by Ennigaldi herself and her father Nabonidus. Herodotus (ca. 484 - 425 BC), considered the father of history for his systematic historical writings, has also documented useful information on some of the ethnic tribes he encountered during his travels. In ca. 1 Cen CE, Roman emperor Claudius published antiquarian works. Varro, Pliny the Elder, Aulus Gellius, and



Macrobius were some of the antiquarian writers of ancient Rome. A Chinese scholar named Ouyang Xiu (ca. 11 Cen CE) is known to have collected archaic inscriptions. Firuz Shah Tughlaq (ca. 14 Cen CE) got two Ashokan pillar inscriptions moved from Meerut and Topra respectively to Delhi with the intention of getting it deciphered by his court scholars. The Renaissance period (ca. 14-16 Century CE) in Europe saw amongst many changes, a keen interest in classical antiquity. Scholars started to study antique artefacts, be it monuments, manuscripts or objects belonging to the classical period of Europe and also collect them. Antique objects became centre pieces of homes, drawing much attention. A distinct group surfaced who involved themselves in the study of history, grammar, poetry, literature and philosophy, deriving knowledge and inspiration from the classical period. These came to be known as Renaissance humanists and this period of archaeology is known as Antiquarianism. During this period, the unearthing of archaeological objects was done in a primitive manner, sometimes destroying other objects in their vicinity. Archaeology as a proper discipline evolved only by the mid nineteenth century. Developments such as Darwin's theory of evolution (1859), Geological estimation of the earth's age, discovery of pre historic sites outside the classical world like Egypt, Palestine, Mesopotamia, France, Spain etc. fuelled the growth of archaeology. Advancements in the natural sciences have paved way to better analysis of archaeological data, thereby leading to better interpretations. Since the 1960s, archaeologists have questioned the traditional ways of archaeology, thereby leading to newer and better archaeological theories and approaches. Today, archaeology is a large discipline with many specializations under it.

The development of the discipline of Archaeology can be seen in five phases, each with its own approaches and theories. The first phase is 'Antiquarianism' wherein the focus was mainly to collect classical antiquities and take pride in them. The second phase is 'Traditional Archaeology' phase or the 'Cultural-Historical' phase where emphasis lay in documentation,

description, classification and dating of archaeological objects from distinct cultural regions. This phase mostly served in kindling nationalist sentiments. The third phase is called 'Functionalism' where archaeologists started to map artefacts by their specific functions in the society that they belonged to. This helped to picture the functioning of the society as a whole. The fourth phase is called 'New Archaeology' which focusses on the internal dynamics of past society and human behaviour. The fifth phase is called 'Post Processual' phase. Here the focus is not on just human behaviour but also on the human mind and emotions. Today, archaeologists are going one step ahead and using these archaeological findings to address general issues concerning human behaviour and history, thereby making the discipline more relevant than ever.



Fig 1 Earliest Antiquarians

### 1.1.2.3. Antiquarianism (till late 19<sup>th</sup> Century)

The interest in antiquities from the earliest times till the late nineteenth century can be termed as the Antiquarianism phase. In the previous section, we saw some of the earliest antiquarians such as Nabonidus, his daughter Ennigaldi, Herodotus, Roman emperor Claudius, Roman antiquarian writers such as Varro, Pliny the Elder, Aulus Gellius and Macrobius, Chinese scholar Ouyang Xiu and Firuz Shah Tughlaq. We now proceed to more recent times of which we have much more detailed evidences.

Renaissance and Enlightenment period (ca. 14-18 Century CE):

The Renaissance period (ca. 14-16 Century CE) in Europe saw amongst many changes, a keen interest in classical antiquity. People started to study antique artefacts, be it monuments, manuscripts or objects belonging to the classical period of Europe and also collect them. Antique objects became centre pieces of homes, drawing much attention. A distinct group of people surfaced who involved themselves in the study of history, grammar, poetry, literature and philosophy, deriving knowledge and inspiration from the classical period. These came to be known as Renaissance humanists.

Cyriacus of Ancona (ca. 15 Cen CE) travelled in the Mediterranean region for twenty five years, collecting books, copying inscriptions and gathering other objects of antiquity. William Camden ( 1551-1623), an English antiquarian started a periodical called *Britannia* covering history and antiquity of Great Britain and Ireland. John Aubrey (1626-97), another English antiquarian recorded many megaliths and other monuments in southern England. In 1649, he discovered the megalithic remains at Avebury. He documented all his finds in his important antiquarian work *Monumenta Britannica*. Edward Lhuyd (1660-1709) was another antiquarian from Welsh, Great Britain. He was a friend of John Aubrey. He published the first figured catalogue of fossils. He was also the second keeper of the Ashmolean museum in Oxford. Sir Henry Rowlands (1655-1723) was a priest at Llanidan, Wales. He was also a friend of Edward

Lhuyd. In 1723, he authored the first edition of *Mona Antiqua Restaurata: An Archaeological Discourse on the Antiquities, Natural and Historical, of the Isle of Anglesey, the Antient Seat of the British Druids*. William Stukeley (1687-1765) was another English antiquarian who published many books on archaeology. He also undertook excavations and was one of the first to recognise the principles of Stratigraphy.

Following the Renaissance period in Europe was the Enlightenment period (ca. 17-18 Century CE). This period witnessed intellectual, scientific and philosophical movements in Europe that had lasting impacts across the world. Thus, the Renaissance and Enlightenment periods thus saw a huge surge of interest in antiquity, however, the methods of excavating objects from archaeological sites were largely unscientific and sometimes even destructive.

Napoleon I's conquest of Egypt:

Napoleon I (Napoleon Bonaparte) of France conquered Egypt in 1798. Napoleon I arranged for a large body of 160 scholars including antiquarians to survey Egypt and record its important features. The 'Egyptian Scientific Institute' was setup in 1798 for this purpose. Their findings were published between 1809 and 1813 under the name 'Description de l'Egypte'. The findings also included the famous 'Rosetta stone'. This entire activity was perhaps the first step towards an organized study of the past through archaeology.

Developments in Geology:

By the beginning of the nineteenth century, archaeology was starting to gain a firm footing. However there were certain inhibitions in the thought process concerning the antiquity of humans and the earth. Archbishop James Ussher studied the Masoretic Biblical texts and declared the date of creation of the earth as 4004 BCE. So it was difficult for early archaeologists to conceive or suggest any event or object earlier to this date.

John Frere (1740-1807), a fellow of the Royal Society, London studied a clay pit dug at Suffolk, which had stone weapons and bones. He concluded that the stone weapons were made and used by past people who were not yet introduced to metals i.e. they were beyond that of the present world. He shared his findings and views in a letter to the Society of Antiquaries, London. However it received little attention. Father John MacEnery (1796-1841), a Roman Catholic priest and archaeologist from Ireland studied the prehistoric remains at Devon between 1825-29. He observed that the Palaeolithic flint tools were found in the same context as extinct mammoths and concluded that both of them must have co-existed. However he was talked into not publishing his controversial findings. It was only in 1869, long after his death, that William Pengelly (1812-1894), a British geologist and archaeologist, who had himself studied the prehistoric remains at Devon, published John MacEnery's original manuscript. William Pengelly was also one of the first to challenge Archbishop James Ussher's estimation of 4004 BCE for the earth's creation. Joseph Prestwich (1812-96) published at the Royal Society in 1859, the occurrence of undisturbed flint implements along with extinct animal species. He further argued that the flint implements were the work of humans and they were contemporary to the extinct animal species. Sir Charles Lyell (1797-1875), a Scottish professor of geology at London observed that it was the changes in land and sea levels and the work of rivers that was mainly responsible for creation of strata and not any universal floods. His principles of geology were published between 1830 and 1833. His principles of geology were food for thought to contemporary archaeologists who began to realise that artifacts such as graves found many feet under the soil were actually very old. In 1863, Lyell published his findings of the Neanderthal man in his work 'Geological Evidences of the Antiquity of Man'.

By 1890s, archaeologists started to adopt the concept of geological stratigraphy in archaeological excavations. The pioneer archaeologists here were William Matthew Flinders Petrie, Heinrich Schliemann, R. Pumpelly, Hubert Schmidt and General Pitt-Rivers.

Three Age system:

C. J. Thomsen (1788-1865), a Danish scholar was the pioneer of the 'three age system'. He was the first curator of the National Museum in Copenhagen, Denmark. After studying the various artifacts in the museum, he classified them into three ages, stone, bronze and iron. He further suggested that these three ages were chronologically successive. C. J. Thomsen was assisted at the museum by Jen Jacob (1821-85), a law student and a keen antiquarian. In due course, he succeeded Thomsen as the director of the museum. He strongly advocated Thomsen's three age system and went on to publish a Danish book in 1843, later translated to English as 'Antiquities of Denmark'. For his systematic work on archaeology, many scholars regard Jen Jacob as the father of modern archaeology. It took another five decades for England and France to reach to this level of development in archaeology.

Darwin's Theory of Evolution:

Charles Darwin, a British geologist and biologist published his book 'On the Origin of Species' in 1859. Although his book did not explicitly discuss on the antiquity of humans, he made inferences of humans originating from animal species. Thomas Huxley in 1863 published his work 'Evidence as to Man's Place in Nature' (the same year as Lyell published his findings of the Neanderthal man) where he provided clear evidence of the evolution of humans and apes from a common ancestor. Thus the work of Darwin, Lyell and Huxley were important to settle the question on antiquity of humans and pave way for more accurate and meaningful archaeological interpretations.

Growth of Anthropology:

Anthropology is the study of humans through space and time, in its entirety, be it physical character, culture, environmental or social relations. Anthropology is generally divided into three subfields, socio-cultural anthropology, biological anthropology and archaeology.

Archaeology and anthropology share a common scope when it comes to the pre-historic period. So the previously listed developments in geology, biology and the 'three age system' which directly affected the understanding of prehistory furthered not only archaeology but also anthropology. There were two main scholars of anthropology who studied prehistory and thereby contributed to the development of both anthropology and archaeology.

Edward Burnett Tylor (1832-1917), a British anthropologist, studied the ethnic people groups in Mexico. He published his work in 1861 upon his return to Britain. He continued to study tribal communities and published his second work 'Researches into the Early History of Mankind and the Development of Civilization' in 1865. His work 'Primitive Culture', published in 1871 was his greatest contribution. Lewis H Morgan (1818-81) was an American anthropologist who studied American Indians and their origins. After studying the entire period of human existence, he proposed that a human society has three major chronological stages: savagery, barbarism and civilization. He associated archaeological artifacts to these three stages, fire, pottery, bow and arrow to the savagery stage, domestication of animals, agriculture, metal working to the barbarism stage and writing to the civilization stage. This 'three stage social progress' ie. savagery, barbarism and civilization that he proposed for America became akin to the 'three age system' in Europe. Morgan's *magnum opus* 'Ancient Society' was published in 1877.

By around 1870s, archaeology had got the much needed clarity and relevance to establish itself as a serious discipline. What followed this were methodical excavations, systematic documentations, logical explanations, all leading to exciting discoveries all across the world.

#### **1.1.2.4. Traditional Archaeology or Cultural-Historical phase (late 19<sup>th</sup> Century to mid-20<sup>th</sup> Century):**

In this period, archaeologists started to study artefacts in a more orderly manner. These traditional archaeologists documented, described, classified and dated archaeological artefacts from a given time period and geography. Archaeology thus became a way of knowing the history of those periods where writing was absent (i.e pre-historical periods). This phase is identified as Traditional Archaeology. In this phase, archaeologists also started to notice distinct sets of archaeological artefacts in different time periods and geographies. With this, the concept of culture started to develop. Within each distinct culture, there was a common set of human ideas resulting in similar artefacts across that culture. Eg: All across Sindhu-Sarasvati civilization, we see similar weights and measures, seals, town planning, pottery, metal objects etc. So the Sindhu-Sarasvati civilization is a distinct culture. A study of all such distinct cultures in a particular geography or region gave an understanding of the cultural evolution in that region. A comparative study of cultural evolutions in related geographies gave information about cross cultural interactions and sharing of skills and techniques. Eg:- Through such cultural evolution studies, it is believed that the bow and arrow might have independently developed in different cultures. However the skill of iron smelting is believed to have developed in one culture and then spread to other cultures. Since the focus during this time period was on both history and culture, this phase is also known as the Cultural-Historical era. The underlying theory that emphasises to identify past societies into distinct ethnic and cultural groups is known as the Cultural-Historical archaeology theory. Two German archaeologists Rudolf Virchow (1821-1902) and Gustaf Kossinna (1858-1931) were the early proponents of Cultural-Historical archaeology. Gustaf Kossinna used the Cultural-Historical approach to study German prehistory and subsequently went on to proclaim that German people of the past were superior to their Slavic neighbours.

It may be noted here that Traditional Archaeologists often used Inductive reasoning methods to arrive at their conclusions or theories. Eg:- In most of the Harappan inscription samples found,



the direction of writing is from right to left. So Traditional Archaeologists concluded that the direction of writing of the Harappan script is from right to left.

#### **1.1.2.5. Functionalism (early 20<sup>th</sup> Century onwards)**

By the beginning of 20<sup>th</sup> Century, traditional archaeologists started to get influenced by contemporary sociologists like Auguste Comte (1798-1857) and Durkheim (1858-1917) who advocated society to be a system. These archaeologists started to study archaeological objects, especially pre historic objects with a focus on their specific functions Eg:- Some stone tools were using for chopping, some for grinding , some for cutting etc. there were also some artefacts that were found only in cemeteries. It was Grahame Clark (1907-1995), a British archaeologist of pre-history who pioneered the functional approach. His book, *Prehistoric Europe: The Economic Basis (1952)* reflected his ideas. This phase of development of Archaeology is called as Functionalism and the underlying theory that emphasises to view artefacts as belonging to specific functions or activities of the society is called the Functionalism theory. This phase also laid the foundation to the next phase of Archaeological development, i.e New Archaeology.

#### **1.1.2.6. New or Neo Archaeology (1960 onwards)**

Despite the afore mentioned developments in the Archaeological discipline, there were still dissatisfactions in the archaeology community. These dissatisfactions were not so much with the scientific methods of excavation already followed but more to do with the subsequent interpretations of the data. The period from 1960s saw a fresh turn or movement in the development of the discipline of Archaeology and is called as New Archaeology. This movement advocated the use of more scientific research methodologies in archaeological interpretations. Deductive models of reasoning based on well formulated hypothesis

(formulated at the beginning of explorations and excavations) were applied in Archaeological research to interpret the data.

The New Archaeology phase is influenced by two major archaeological theories, Processual theory and General systems theory which are explained in the subsequent sections.

#### **1.1.2.7. Cultural process, Processual theory and Processualism**

In 1959, Joseph Caldwell, in his article *The new American Archaeology*, explained the increasing trend to study settlement patterns and ecology of past societies. He opined that archaeological cultures can no longer be regarded as just the sum total of their artefacts, but as functionally integrated systems. He said that changes observed in archaeological cultures must be explained in terms of cultural process. Alfred Louis Kroeber, an American anthropologist defined cultural process as factors that operate towards the stabilization and preservation of cultures, or their parts, or towards their growth and change Eg:- The process of moving of pre-historic human from simple stone tools to flaked stone tools is an action towards better hunting and scavenging and hence a technologically more advanced culture. Since the focus here is on cultural processes, this theory came to be known as the Processual theory. Lewis Roberts Binford, an American archaeologist was the major advocate of the Processual theory.

Lewis Roberts Binford popularised this theory through his two important papers *Archaeology as Anthropology (1962)* and *Archaeological systematics and the study of culture process (1965)*. He subsequently authored two related books *New Perspectives in Archaeology (1968)* and *An Archaeological Perspective (1972)*. Binford in parallel advocated the borrowing of methodologies from natural sciences for interpretation of archaeological data.

#### **1.1.2.8. General systems theory**

In this theory, culture is viewed as an open system that was conditioned by external stimuli. Lewis Roberts Binford and David Clarke, a British archaeologist were the major advocates of this theory.

Binford suggested to look at culture as human's extra somatic adaptations to external factors, either in their natural surroundings or in adjacent competing cultural systems. Eg: (1) As summer turned to winter, pre historic humans kept themselves warm by using fire (2) In the metal age, humans learnt from their neighbouring cultures to procure metals, smelt them and make useful tools.

Binford defined three major subsystems of a culture, namely, technology, social organization and ideology. He termed the corresponding artefacts as technofacts, sociofacts and ideofacts. He went on to explain each artefact found in archaeology in terms of these three subsystems.

David Clarke, through his works *Analytical Archaeology (1968)* and *Analytical Archaeologist (1979)*, emphasised that culture is a system consisting of many mutually dependent and interlinked sub-systems that are conditioned by the surrounding ecosystem.

Adaptation of scientific techniques like faunal analysis, palaeobotany, dendrochronology and carbon dating came to the aid of Neo Archaeologists to apply these theories in their archaeological pursuits.

#### **1.1.2.9. Scientific advances in dating methods:**

During the early days of excavation, artifact dating was usually done by artifact typology, geological time scales and stratigraphic principles. The outcome was largely relative or approximate dating of the excavated artifacts. This resulted in rather hazy interpretations. Carbon dating was developed in 1940 by Willard Libby which subsequently revolutionized the archaeological dating process. Using this method, any organic artifact could be absolutely

dated, however the maximum age limitation being 50kya. Potassium-Argon dating was introduced in the 1950s and was able to date volcanic rocks. Thermoluminescence was introduced in 1950s and could date fired clay artifacts like bricks, pottery and terracotta sculptures. Fission Track Dating was introduced in the 1960s and could date volcanic rocks. Uranium-Thorium dating was introduced in the 1970s to date artifacts with calcium carbonate content eg: shells, bones, teeth. Electron Spin resonance was introduced in 1975 and could date minerals (eg. carbonates, silicates, sulphates), biological materials (eg. tooth enamel) and fired clay artifacts (eg. bricks, pottery). Thus in a matter of few decades, advances in natural sciences has revolutionised archaeological dating methods.

#### **1.1.2.10 .Post Processualism and Interpretive Archaeology (1980 onwards)**

By 1980, a number of archaeologists had started to feel dissatisfied with the New Archaeology phase and its connected theories. After testing out various existing approaches and theories such as Functionalism, Cultural process, General Systems theory, they felt that existing approaches were not sufficient to explain everything about the past. Ian Hodder was the earliest archaeologist to realise this. In his work '*Post-processual Archaeology*' published in *Advances in Archaeological Method and Theory (1985)* , he brought out his thoughts and ideas and called his approach as Post processualism. His emphasis was not to use material evidence in just the reconstruction of the human behaviour but also to interpret the human mind and its various manifestations like sentiments, feelings and emotions. Eg:- Burial customs such as construction of megalith monuments, sepulchral, coffins etc.. are not just trends in human behaviour, but they reflect a deeper thought process filled with feelings and emotions. Since Ian Hodder's approach relied a lot on interpretation, it is also called as Interpretive Archaeology.

#### **1.1.2.11. Recent trends in Archaeology**

1. Archaeology has now grown into a large multidisciplinary subject, with various specializations available to choose from. Each of these specializations require their own set of skills and methods.
2. Archaeologists today are going forward one more step from Interpretive archaeology by attempting to use their findings to address general issues concerning human behaviour and history, thus making archaeology more relevant.
3. Ethics in archaeology has come into focus and various archaeological societies the world over are trying to formulate ethics related rules and code of conducts.

#### **1.1.2.12. Summary**

1. The development of archaeology can be viewed in five phases – Antiquarianism, Traditional Archaeology, Functionalism, Processual Archaeology and Post Processual Archaeology.
2. Antiquarianism was the first phase in the discipline of archaeology. Here there was no specific methodology or theory to govern archaeological activities. Objects of classical antiquity were randomly collected and studied for their historical and aesthetic value and also to derive knowledge and inspiration from them. Sometimes, these unscientific excavations led to loss or damage of antiquities.
3. Between 1850 and 1870s, several developments in Geology and natural Sciences had a profound influence on archaeology. Archaeology thereby became a serious and systematic discipline.
4. By the late nineteenth century, Antiquarianism paved way to Traditional Archaeology or the Cultural-historical phase. Here focus was on collection, description, classification and dating of material evidences from a specific space-time context. These space-time contexts with their own unique material evidences were called as cultures. So the overall objective was to understand the age of each culture, evolution of that culture over time and the mutual interactions between neighbouring cultures.
5. Subsequently, being influenced by Social science researchers, the theory of Functionalism was adopted in archaeology. Archaeologists now started to focus on the

specific function of each material evidence. With this, they started to picture the functioning of the society at large.

6. The next phase of archaeological development was the New Archaeology phase. Here scientific methodologies such as deductive models and hypotheses framing were employed to interpret archaeological data. The new theories of Processual and General Systems were introduced. Processual theory emphasises that changes in archaeological cultures must be explained in terms of cultural processes. General systems theory states that culture can be viewed as an open system that was conditioned by external stimuli. So any change in the culture is a reaction of the system to the external stimuli.
7. The major critic to New Archaeology came in the form of Post processualism. Here archaeologists criticized the purely scientific approach followed by New Archaeologists to interpret the material culture. They strongly felt that material culture has a subjectivity aspect to it in the form of human thoughts and emotions. This aspect has to be brought out by the archaeologist by way of proper interpretations.

### **1.1.2.13 Key Words**

***Anthropology:*** It is the study of humans through space and time, in its entirety, be it physical character, culture, environmental or social relations. Anthropology is generally divided into three subfields, socio-cultural anthropology, biological anthropology and archaeology.

***Carbon dating:*** A popular dating method used on artefacts with organic content . The ratio of isotopic Carbon-14 to normal Carbon-12 in a given organic substance helps to calculate its age

***Classical antiquity:*** The period of cultural history between 8 Cen BCE to 6 Cen CE in the Mediterranean region, involving both civilizations, ancient Rome and ancient Greece

***Culture aka. Archaeological Culture :*** A time-space boundary that displays a common set of human ideas thereby resulting in a similar set of artefacts

***Cultural Process:*** Factors that operate towards the stabilization and preservation of cultures, or their parts, or towards their growth and change

**Enlightenment period:** The period subsequent to the renaissance period in Europe that witnessed an intellectual and philosophical movement

**Functionalism theory:** Theory that emphasises to view artefacts as belonging to specific functions or activities of the society

**Renaissance humanists:** These are people from the Renaissance period who involved themselves in the study of history, grammar, poetry, literature and philosophy, deriving knowledge and inspiration from the classical period of Europe

**Renaissance period:** The period in European history which saw a revival in intellectual and cultural aspects inspired by studies in literature and objects of classical antiquity

#### **1.1.2.14. Check your progress**

1. Explain the Antiquarian developments in Europe during the Renaissance and Enlightenment periods.
2. Explain how the developments in Geology during the mid-nineteenth century impact the course of Archaeology.
3. Explain how the work of Darwin and Thomas Huxley in biology during the mid-nineteenth century impact the course of Archaeology.
4. Explain the 'three age system' theory that developed in Europe. What was its counterpart in America and who proposed it ?
5. Explain the Cultural-Historical phase of Archaeological development.
6. Explain Functionalism.
7. Explain Cultural process and Processualism.
8. Write a brief note on Scientific advances in dating methods.
9. Explain Post Processualism. Why it is also called as Interpretive Archaeology?

#### **1.1.2.15. Key Answers**

1. Refer section .1.1.2.3.
2. Refer section .1.1.2.3.

3. Refer section .1.1.2.3.
4. Refer section .1.1.2.3.
5. Refer section .1.1.2.4.
6. Refer section. 1.1.2.5.
7. Refer section 1.1.2.7.
8. Refer section 1.1.2.9.
9. Refer section 1.1.2.10.

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### **Figures**

Fig 1(a) <https://upload.wikimedia.org/wikipedia/commons/f/f7/Ur-Nassiriyah.jpg>, Author: M.Lubinski from Iraq/USA, Under Creative Commons Attribution-Share Alike 2.0 Generic, via Wikimedia Commons

Fig 1(b)

[https://commons.wikimedia.org/wiki/File:Herm\\_bust\\_of\\_Herodotos\\_from\\_roman\\_period\\_at\\_Metropolitan\\_Museum\\_of\\_Art\\_in\\_New\\_York\\_2022.jpg](https://commons.wikimedia.org/wiki/File:Herm_bust_of_Herodotos_from_roman_period_at_Metropolitan_Museum_of_Art_in_New_York_2022.jpg), Julius Tang, Public domain, via Wikimedia Commons



## **Unit -3. Development of Archaeology in Europe and Africa**

1.1.3.1 Objectives

1.1.3.2 Introduction

1.1.3.3 8 Cen BCE – 5 Cen CE (Classical period)

1.1.3.4 14 – 18 Cen CE (Renaissance and Enlightenment Periods)

1.1.3.5 In Great Britain

.1.1.3.6 In France

1.1.3.7 In Sweden and Denmark

.1.1.3.8 1800 – 1840's

.1.1.3.9 1840 – 1870's

.1.1.3.10 1870 – 1960's

1.1.3.11 Post 1960s

.1.1.3.12 Summary

.1.1.3.13 Key Words

.1.1.3.14 Check your progress

.1.3.3.15 Key Answers

.1.1.3.16 References

### **1.1.3.1 Objectives**

Study the chronological development of Archaeology in Europe and Africa.

### **1.1.3.2 Introduction**

Europe experienced the 'classical period' from the 8 Cen BCE till the fall of the western Roman empire in 5 Cen CE. The classical period covered two major civilizations, ancient Rome and ancient Greece of which Rome emerged dominant. The collapse of the western Roman empire in 476 CE marked the beginning of the 'middle ages' in Europe. The middle ages was marked by powerful kings and nobles and an influential Roman Catholic church. The beginning of the Renaissance period in the 14 Cen CE marked the end of the middle ages. During the Renaissance (ca. 14-16 Cen CE) and Enlightenment periods (ca. 17-18 Cen CE), Europe witnessed a cultural, artistic, political and economic rebirth. In addition, Europe also experienced the earliest phase of archaeology ie. the Antiquarianism phase. A keen interest in classical antiquity developed at this time. People started to collect and study antique artefacts, be it monuments, manuscripts or objects belonging to the classical period of Europe. Antique objects became centre pieces of homes, drawing much attention. However, during the Antiquarianism phase, the unearthing of archaeological objects was done in a primitive manner, sometimes destroying other objects in their vicinity. Archaeology as a proper discipline evolved only by the mid nineteenth century. Developments such as the discovery of pre historic sites in Europe (1825), Geological estimation of the earth's age (1833), the Three age system (1843), Darwin's theory of evolution (1859), the estimation of human's antiquity to be far earlier than Biblical estimates (1863) fuelled the growth of archaeology as a serious discipline in Europe. By 1871, the anthropological studies in USA aligned with the pre historic archaeology in Europe. By 1890s, archaeologists started to adopt the concept of geological stratigraphy in archaeological excavations. The pioneer archaeologists here were William Matthew Flinders Petrie, Heinrich Schliemann, R. Pumpelly, Hubert Schmidt and General Pitt-Rivers. It was around this time that the second phase of archaeology ie. the Cultural Historical phase started. Two German archaeologists Rudolf Virchow (1821-1902) and Gustaf Kossinna (1858-1931) were the early proponents of Cultural Historical archaeology. By the mid twentieth century, Grahame Clark (1907-1995), a British archaeologist of pre-history started the functionalism phase of archaeology. From the 1960s, the next phase of archaeology, namely Processual phase started. Lewis Roberts Binford, an American archaeologist and David Clarke, a British archaeologist were its major advocates. From the 1980s, the next phase of

archaeology, namely post Processual phase started. The main proponent of this phase is Ian Hodder, a British Anthropologist. Today, Archaeology has grown to be a large multidisciplinary phase, studied all across the world.

This unit gives a step by step chronological account of the development of archaeology in Europe and neighbouring Egypt (Africa).

### 1.1.3.3 - 8 Cen BCE – 5 Cen CE (Classical period)

Hesoid (ca. 7 Cen BCE), Plato (ca. 4 Cen BCE) and Aristotle (ca. 4 Cen BCE) were Greek philosophers who wrote about the origin and development of humans. Herodotus (ca. 484 - 425 BC) was a Greek historian and is considered the father of History for his systematic historical writings. He has also documented useful information on some of the ethnic tribes he encountered during his travels. Roman emperor Claudius (41-54 CE) published antiquarian works in his time. Tacitus (56-120 CE), a noted Roman historian published two works, *Annals* and *Histories*, that together covers the period of Roman history from the death of Augustus (14 CE) to the death of Domitian (96 CE). Varro, Pliny the Elder, Aulus Gellius and Macrobius were other famous antiquarian writers of ancient Rome.



Fig 1 Classical antiquarians

### 1.1.3.4 14 – 18 Cen CE (Renaissance and Enlightenment Periods)

This period saw the emergence of Europe from the ‘middle ages’, also known as the ‘dark ages’. There was a revival of thinking all across Western Europe, starting first with Italy and spreading on to England, France and rest of Western Europe. Hence this period is also called as the Renaissance period. The revival of thinking was in many spheres, cultural, artistic, political and economic. This period also saw a keen interest in classical antiquity. People started to collect and study antique artefacts, be it monuments, manuscripts or objects belonging to the classical period of Europe.

In Italy:

Renaissance began in Italy in ca. 14 Cen CE. There are few important reasons for Italy to be the birth place of renaissance. Italy at that time consisted of few city states which were open to new thoughts and scholarship. These city states, open to the Mediterranean sea were the first ports of call in Europe for both goods and new thoughts from Asia and Africa *via*. the sea route. The trade brought in a huge revenue flow and the rich merchants and nobles here competed with each other for purchasing antiquities. Rome was also the centre of the powerful Catholic Church and this caused intellectuals to concentrate in Rome.

Cyriacus of Ancona (ca. 1391-1455), an Italian merchant, travelled in the Mediterranean region for twenty five years, collecting books, copying inscriptions and gathering other objects of antiquity. Marcantonio Michiel (1484-1552) was a Venetian nobleman and art collector. Marcantonio Michiel and such others who were engaged in the collection of art and antique objects in Italy were called *dilettantes*. In 1709, Prince d'Elbeuf of Italy, while constructing his villa, heard local tales about wells bearing exquisite sculptures in the buried ancient Roman town of Herculaneum. He did find sculptures in his excavations, which however ceased by 1711. Excavations resumed in 1738 under Charles III of Spain's patronage and continued till 1762. Excavations resumed intermittently under different monarchs. Another buried ancient Roman town that was yielding artefacts was identified in 1763 as the lost city of Pompeii. After its identification, it attracted more excavations which continued for more than a hundred years.

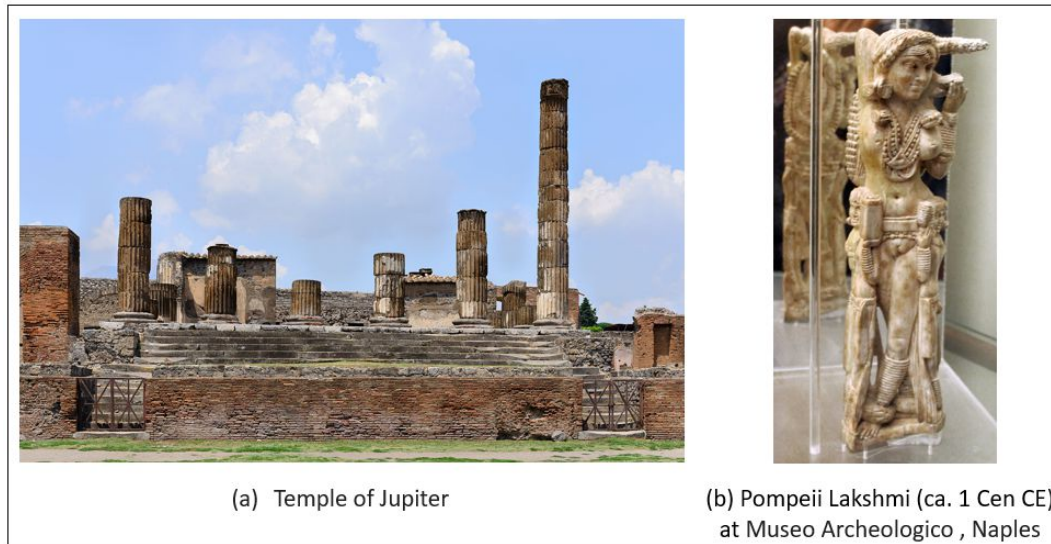


Fig 2 Ancient Pompeii

### 1.1.3.5 In Great Britain:

William Camden ( 1551-1623), an English antiquarian started a periodical called *Britannia* covering history and antiquity of Great Britain and Ireland. John Aubrey (1626-97), another English antiquarian recorded many megaliths and other monuments in southern England. In 1649, he discovered the megalithic remains at Avebury. He documented all his finds in his important antiquarian work *Monumenta Britannica*. Edward Lhuyd (1660-1709) was another antiquarian from Welsh, Great Britain. He was a friend of John Aubrey. He published the first figured catalogue of fossils. He was also the second keeper of the Ashmolean museum in Oxford. Sir Henry Rowlands (1655-1723) was a priest at Llanidan, Wales. He was also a friend of Edward Lhuyd. In 1723, he authored the first edition of *Mona Antiqua Restaurata: An Archaeological Discourse on the Antiquities, Natural and Historical, of the Isle of Anglesey, the Antient Seat of the British Druids*. William Stukeley (1687-1765) was another English antiquarian who published many books on archaeology. He also undertook excavations and was one of the first to recognise the principles of Stratigraphy. The ‘Society of Antiquaries of London’ was setup in 1751 to promote the study of antiquities.

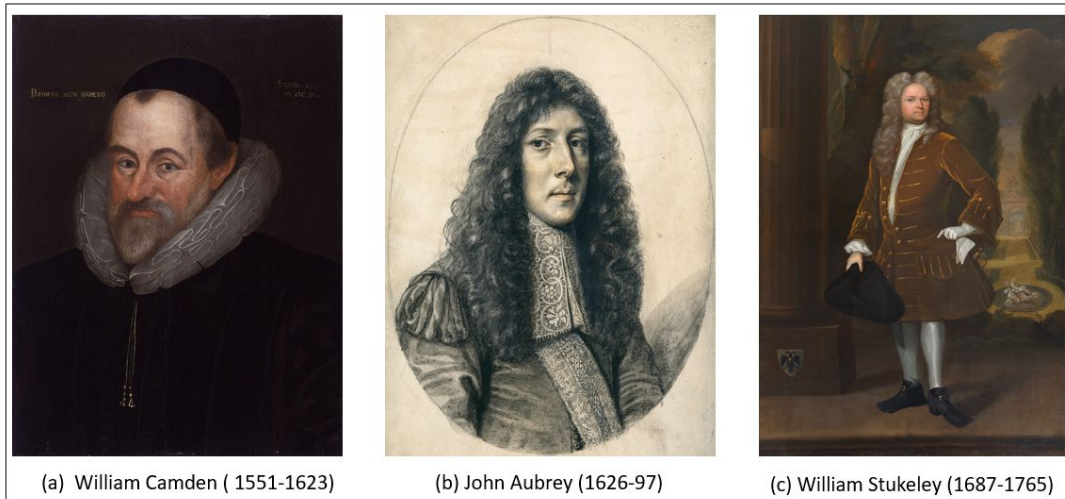


Fig 3 Antiquarians from Great Britain

### 1.1.3.6. In France:

Jacques Cambry (1749-1807) was a French historian and archaeologist. He founded the ‘Society of Antiquaries of France’ in 1804 and was its first president. His work on Celtic monuments in 1805 is remarkable. Vivant Denon (1747-1825) was a French author and archaeologist. He was appointed as the first Director of the Louvre museum by Napoleon I. His two volume work titled ‘Journey in Lower and Upper Egypt’ was published in 1802 which became the basis for modern Egyptology.

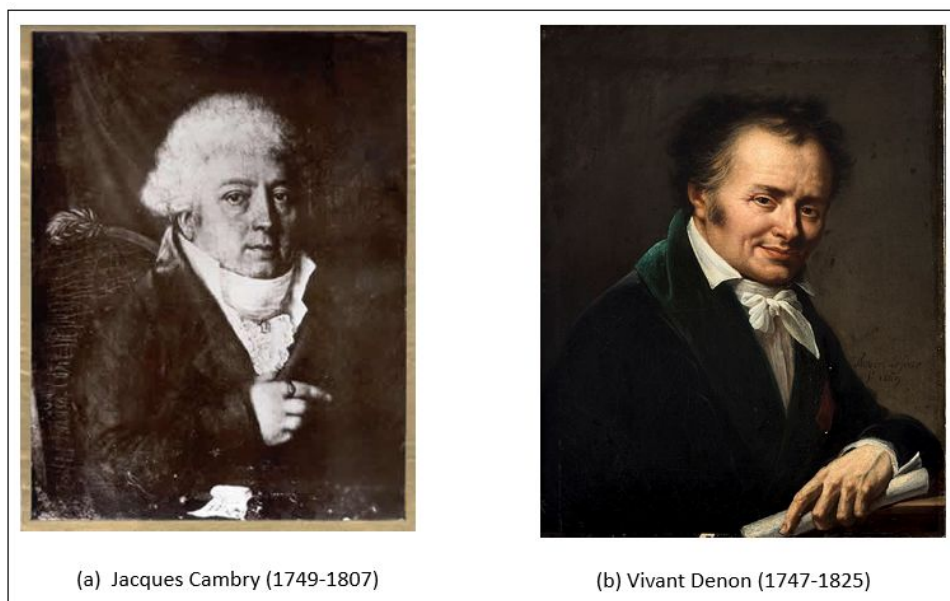


Fig 4 Antiquarians from France

### **1.1.3.7 In Sweden and Denmark:**

With patronage from Gustavus II Adolphus of Sweden (1611 -1632) and Christian IV of Denmark (1588-1658), large monuments with iron age inscriptions were documented. Thus the focus here turned from Classical period to prehistoric period. Laws were passed to protect ancient monuments.

The Renaissance and Enlightenment periods thus saw a huge surge of interest in antiquity and is hence also called as the Antiquarianism phase of archaeology's development. However, two points may need to be noted here. The first point is that the methods of excavating objects from archaeological sites were largely unscientific and sometimes even destructive. The second point is that the antiques discovered were all dated after the Biblical year of earth's creation ie. 4004 BCE.

### **1.1.3.8 1800 – 1840's**

By the beginning of the nineteenth century, archaeology was starting to gain a firm footing. However certain inhibitions continued in the thought process concerning the antiquity of humans and the earth. Archbishop James Ussher who studied the Masoretic Biblical texts had declared the date of creation of the earth as 4004 BCE. So it was difficult for these early archaeologists to conceive or suggest any event or object earlier to this date.

John Frere (1740-1807), a fellow of the Royal Society, London studied a clay pit dug at Suffolk, Great Britain which had stone weapons and bones. He concluded that the stone weapons were made and used by past people who were not yet introduced to metals i.e. they were beyond that of the present world. He shared his findings and views in a letter to the Society of Antiquaries, London. The letter was read at the Society of Antiquaries in 1797 and published subsequently in 1800, however it did not gain the deserved attention, perhaps because it was considered radical at its time.



Napoleon I (Napoleon Bonaparte) of France conquered Egypt in 1798. Napoleon I arranged for a large body of 160 scholars including antiquarians to survey Egypt and record its important features. The 'Egyptian Scientific Institute' was setup in 1798 for this purpose. Their findings were published between 1809 and 1813 under the name 'Description de l'Egypte'. The findings also included the famous 'Rosetta stone' (see Fig 1), a stone with three different texts, Greek, Demotic and Hieroglyphic and dated to 196 BCE. Stephen Weston (1747-1830), a British antiquarian made an English translation of the ancient Greek text on the Rosetta stone in 1802. Subsequently, Thomas Young, a British Egyptologist deciphered the Hieroglyphic script on the Rosetta stone in 1814. In 1824, Jean Francois Champollion, a French Egyptologist corrected Young's work and published the final decipherment of the Hieroglyphic script on the Rosetta stone. This opened up to a new channel in understanding the Egyptian civilization. Napoleon I's entire activity laid the foundations of Egyptology and was also perhaps the first step towards an organized study of the past through archaeology.



Fig 5 Antiquarians 1800-1840s

### 1.1.3.9 1840 – 1870's

The British Archaeological Association was founded in 1843 for the systematic study of archaeology, art and architecture. It also focussed on the preservation of historic monuments



and antiquities. This association is still functioning today and its annual journal is called as 'Journal of the British Archaeological Association'.

C. J. Thomsen (1788-1865), a Danish antiquarian was the pioneer of the 'three age system'. He was the first curator of the National Museum in Copenhagen, Denmark. After studying the various artifacts in the museum, he classified them into three ages, stone, bronze and iron. He further suggested that these three ages were chronologically successive. C. J. Thomsen was assisted at the museum by Jen Jacob (1821- 1885), a law student and a keen antiquarian. In due course, he succeeded Thomsen as the director of the museum. He strongly advocated Thomsen's three age system and went on to publish a Danish book in 1843, later translated to English as 'Antiquities of Denmark'. For his systematic work on archaeology, many scholars regard Jen Jacob as the father of modern archaeology. It took another five decades for England and France to reach to this level of development in archaeology.

Joseph Prestwich (1812-96) published at the Royal Society in 1859, the occurrence of undisturbed flint implements along with extinct animal species. He further argued that the flint implements were the work of humans and they were contemporary to the extinct animal species.

Charles Darwin (1809-1882), a British geologist and biologist published his book 'On the Origin of Species' in 1859. Although his book did not explicitly discuss on the antiquity of humans, he made inferences of humans originating from animal species. Thomas Huxley (1825-1895) in 1863 published his work 'Evidence as to Man's Place in Nature' where he provided clear evidence of the evolution of humans and apes from a common ancestor. Thus the work of Darwin, Lyell and Huxley were important to settle the question on antiquity of humans and pave way for more accurate and meaningful archaeological interpretations.

Sir Charles Lyell (1797-1875), a Scottish professor of geology at London observed that it was the changes in land and sea levels and the work of rivers that was mainly responsible for

creation of strata and not any universal floods. His principles of geology were published between 1830 and 1833. His principles of geology were food for thought to contemporary archaeologists who began to realise that artifacts such as graves found many feet under the soil were actually very old. In 1863, Lyell published his findings of the Neanderthal man in his work 'Geological Evidences of the Antiquity of Man'.

Father John MacEnery (1796-1841), a Roman Catholic priest and archaeologist from Ireland studied the prehistoric remains at Devon between 1825-29. He observed that the Palaeolithic flint tools were found in the same context as extinct mammoths and concluded that both of them must have co-existed. However he was talked into not publishing his controversial findings. It was only in 1869, long after his death, that William Pengelly (1812-1894), a British geologist and archaeologist, who had himself studied the prehistoric remains at Devon, published John MacEnery's original manuscript. William Pengelly was also one of the first to challenge Archbishop James Ussher's estimation of 4004 BCE for the earth's creation.

Edward Burnett Tylor (1832-1917), a British anthropologist, studied the ethnic people groups in Mexico. He published his work in 1861 upon his return to Britain. He continued to study tribal communities and published his second work 'Researches into the Early History of Mankind and the Development of Civilization' in 1865. His work 'Primitive Culture', published in 1871 was his greatest contribution.

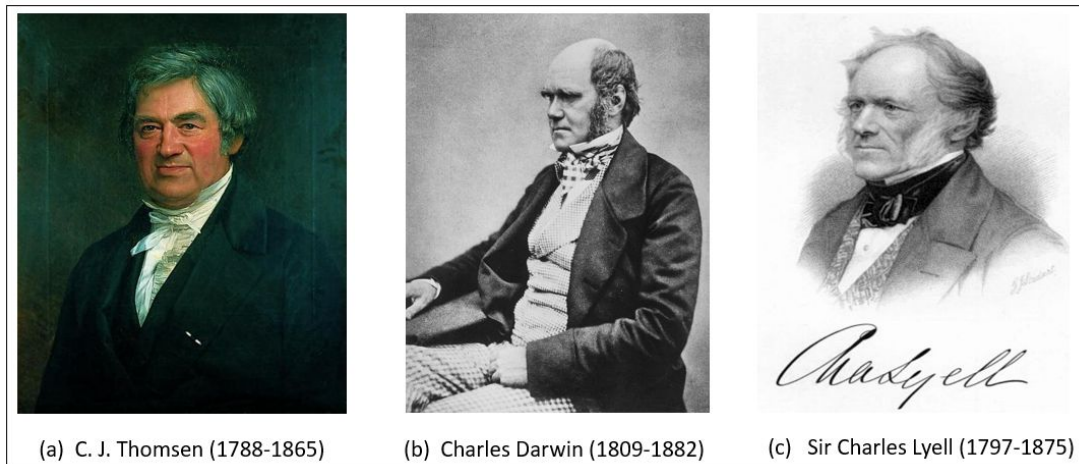


Fig 6 Antiquarian 1840 – 1870's

### 1.1.3.10 1870 – 1960's

This period saw the rise of the Traditional archaeology phase *aka.* the Cultural Historical phase. Two German archaeologists Rudolf Virchow (1821-1902) and Gustaf Kossinna (1858-1931) were the early proponents of Cultural Historical archaeology.

Heinrich Schliemann (1822-1890) was a German businessman, who after an early retirement at the age of 46, devoted to his childhood passion of archaeology. He visited sites of ancient Greek world. He excavated Hissarlik, Myscenae, Tiryns, and Orchomenos which led him to the discovery of Trojan. In 1880, he authored the book *Ilios, City and Country of the Trojans*.

Augustus Pitt Rivers (1827-1900) was a British archaeologist who conducted excavations in many sites like Rotherlay, Woodyates, Wor Barrow etc. His excavations were scientific. He was one of the first to adopt the concept of geological stratigraphy in archaeological excavations. Between 1887 and 1898, he published a four volume series titled 'Excavations in Cramborne Chase'. These books also detail his excavation methods.

Joseph Dechelette (1862-1914) was a French archaeologist, pre historian and museum curator. He was one of the early scholars studying ancient ceramics. Between 1908-14, he authored a great work covering the entire prehistory of France. This work is considered by scholars as the foundation of modern scientific archaeology.

William Matthew Flinders Petrie (1853-1942) was a British egyptologist. He raised concerns in the way his predecessors had excavated in Egypt. He went on incorporate specific plans and strategies in his excavations and suggested others to follow likewise. In 1892, his work titled

‘Ten years Digging in Egypt’ was published. In 1904, another work titled ‘Method and Aims in Archaeology’ was published. His works detail the ground issues in excavations, the multidisciplinary skills required by an excavator, need for labour management, drawings, reporting etc.. He thus paved the way for the modern excavation phase.

Howard Carter (1874 - 1939), a British archaeologist discovered the tomb (see Fig 8) of pharaoh Tutankhamun (ca. 14 Cen BCE) in 1922. The discovery was a significant for two reasons, it was near intact and it contained more than five thousand objects. It took nearly ten years for Carter to complete assessment of all objects which were all transferred to the Egyptian Museum in Cairo.

Sir Grahame Clark (1907-1995) was a British archaeologist of prehistory. Influenced by social anthropologists, he pioneered the functional archaeology approach. He suggested archaeologists to see artefacts as parts of a functioning past society. He thus tried to steer archaeology away from the typology approach advocated by Traditional archaeology.

Europe’s colonialism over parts of Asia and Africa thus gave European archaeologists the opportunity to apply their knowledge of European archaeology in their colonies. A good example of this is India which was at this time a British colony. In 1861, the Archaeological Society of India was set up to promote archaeological surveys and excavations. We shall learn more about this in the next unit.



Fig 7 Traditional Archaeologists

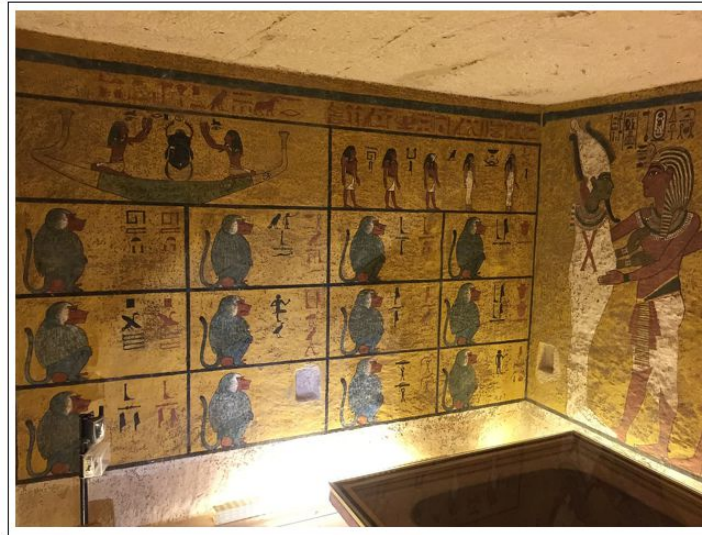


Fig 8 Pharaoh Tutankhamun's tomb, ca. 14 Cen BCE

### 1.1.3.11 Post 1960s

This period saw the emergence of new phases in archaeology such as Processualism and post Processualism. These phases had proponents both in Europe and in America. Some of the important European archaeologists in the post 1960's period are David L. Clarke (1937 -1976), Philip A. Barker (1920-2001), Peter Drewett (1947- 2013), Martin J. Aitken (1922-2017), Colin Renfrew (born 1937), Paul Bahn (born 1953), Kevin Greene (born 1948), Ian Hodder (born 1948).

### 1.1.3.12 Summary

1. Europe was for long the centre for the development of the Archaeology discipline.
2. The colonization by European powers paved way for archaeological activities outside of Europe such as south Asia, west Asia and Africa
3. The period 1840-1870 in Europe saw important developments such as the Three Age system, Geological studies and the Theory of Evolution. It was these developments that aided Archaeology in becoming a serious discipline.
4. The methodical excavations conducted by European archaeologists post the 1870s became benchmarks for field archaeologists world-wide.

### 1.1.3.13 Key Words

**Classical era aka. Classical antiquity :** The period of cultural history between 8 Cen BCE to 6 Cen CE in the Mediterranean region, involving both civilizations, ancient Rome and ancient Greece

**Dilettantes:** Amateur art and antique collectors in Italy

**Masoretic text:** The authoritative Hebrew and Aramaic text of the twenty-four books of the Hebrew Bible

**Middle Ages:** The period in European history from the collapse of western Roman empire in the fifth century CE to the beginning of the Renaissance period in fourteenth century CE

**Rosetta Stone:** A stone with three different texts, Greek, Demotic and Hieroglyphic and responsible for the decipherment of the Hieroglyphic script . The stone is dated 196 BCE.

### **1.1.3.13 Check your progress**

1. Write a note on the antiquarian activities during the ‘Classical period’ of Europe.
- 2 Write a note on the antiquarian activities during the ‘Renaissance’ and ‘Enlightenment’ periods in Europe.
- 3 What were the archaeological developments in Europe in the period 1800 – 1840’s ?
- 4 What were the archaeological developments in Europe in the period 1840-1870’s ?
- 5 What were the archaeological developments in Europe in the period 1870-1960’s ?

### **1.1.3.15 Key Answers**

1. Refer section 1.1.3.3.
2. Refer section 1.1.3.4.
3. Refer section 1.1.3.8.
4. Refer section 1.1.3.9.
5. Refer section 1.1.3.10.

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## Figures

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## **Unit - 4 Development of Archaeology in India**

1.1.4.1 .Objectives

1.3.4.2. Introduction

1.1.4.3. Before 178 Early antiquarians and foreign travellers

1.1.4.4 .1784 – 1830 Asiatic Society and Surveys

1.1.4.5 .1830 - 1861 Epigraphy, Numismatics and Architecture

1.1.4.6 .1861 - 1947 Archaeological Survey of India

1.1.4.7 .After 1947 Post Independence

1.1.4.8 .Summary

1.1.4.9 .Key Words

1.1.4.9 .Key Words

1.1.4.10 .Check your progress

1.1.4.11 .Key Answers

1.1.4.12 .References

### **1.1.4.1 .Objectives**

- Study the chronological development of Archaeology in India before and after Independence

*(Note: The term India used in this unit refers to, before 1947, the broader Indian sub-continent and after 1947, to independent India.)*

### **1.1.4.2. Introduction**

India was always a treasure house of cultures, knowledge, literature, art, architecture and antiques. The Sindhu-Sarasvati civilization was one of the earliest amongst world civilizations. India was also the melting pot of many races, Greek, Scythian, Parthian, Sassanian, Arabian and west European. These races have all left traces in some form or the other. India is hence called as a sub-continent. The aforesaid points make the subject of Indian archaeology very exciting. The scantiness of literary sources of historical nature in India prior to the 12 Cen CE further makes archaeological sources the main foundation for reconstructing India's early history.

### **1.1.4.3 .Before 1784 Early antiquarians and foreign travellers**

Indian royalties of ancient and medieval periods must have certainly kept antiques in their palaces. Firuz Shah Tughlaq (ca. 14 Cen CE) got two Ashokan pillar inscriptions moved from Meerut and Topra respectively to Delhi with the intention of getting it deciphered by his court scholars. In the early historic and medieval periods, many foreign ambassadors and travellers travelled to India and documented what they saw and experienced. However, the contents of some of these works, especially the earlier ones, are known to us only indirectly when subsequent writers have quoted them. This makes the information not entirely reliable. Some of the important foreign travellers and ambassadors to India were Megasthenes (ca. 4 Cen BCE), Heliodorus (ca. 2 Cen BCE), Fa-Hien (ca. 5 Cen CE), Hiuen Tsang (ca. 7 Cen CE), I-tsing (ca. 7 Cen CE), Al-Masudi (ca. 10 Cen CE), Al-Biruni (ca. 11 Cen CE), Marco Polo (ca. 13 Cen CE), Ibn Battuta (ca. 14 Cen CE), Abdur Razzak (ca. 15 Cen CE), Nicolo Conti (ca. 15 Cen CE) and Francois Bernier (ca. 17 Cen CE). Some of the travelogues they have written are pretty detailed. One such example is that of Hiuen Tsang's. He described various cities, Buddhist stupas and monasteries and Hindu temples that he saw. He also provides distances and direction between places. Infact, the translated travelogues of Fa-Hien and Hiuen Tsang

were used by Sir Alexander Cunningham between 1862 and 1884 to guide and corroborate his own archaeological excavations. More about this is covered in a subsequent section.

With the establishment of the direct sea route between western Europe and India *via* the base of Africa at the end of the 15 Cen CE, many European travellers started to arrive by sea. These were mainly merchants, ambassadors, religious missionaries, scholars and adventurers. Jan Huygen van Linschoten (1563-1611) was a Dutch merchant who served as the archbishop's secretary in Portuguese administered Goa. He documented some south Indian temples. Pietro della Valle (1586-1652) was an Italian traveller who stayed in both Surat and Goa. He made detailed observations of some south Indian temples and additionally made sketches of the temple plans. He also visited rock cut caves at Ellora, Elephanta and Kanheri and described them in his works.

Anquetil du Perron (1731-1805) was a French Indologist who also studied Ellora, Elephanta and Kanheri. Carsten Niebuhr (1733-1815), a German explorer in the Danish services also explored Elephanta and made sketches of its important parts. Jean-Baptiste Bourguignon d'Anville (1697-1782), a French geographer was interested in identifying ancient Indian sites mentioned in Greek works. He also prepared a detailed map of India using various sources.

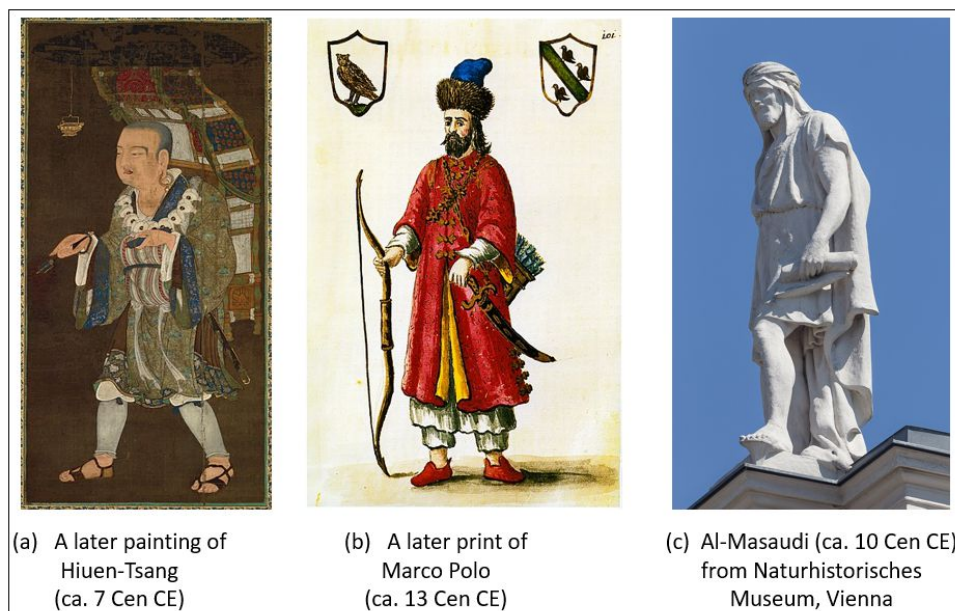


Fig 1 Early travellers to India

#### 1.1.4.4 .1784 – 1830 Asiatic Society and Surveys

At the initiative of Sir William Jones (1746-1794), the Asiatic society was founded in Calcutta on 15 January, 1784. This was a milestone in the development of Indology. There were perhaps three main reasons for the society's formation. First, the British realised that they were staying in India for a long time and hence wanted to get acquainted with it. The second was that there was a quest from some to seek an alternate to Judaeo-Christian thought, and India seemed to be an alternate owing to its cultural and religious antiquity. The third was to have a society locally in India in the lines of the philosophical societies in Britain. The annual journal of the Asiatic society *Asiatic Researches* started its publication in 1788. The Asiatic museum was subsequently established in 1814.

There were two main traditions of enquiry at this time. The first tradition was identification of sites mentioned in ancient Greek texts and travelogues ie. historical geography. The pioneer here was James Rennell (1742 – 1830), a British geographer and historian. He identified ancient *Palibothra*/Pataliputra with modern Patna and ancient *Ozene*/ Ujjayini with modern Ujjain. The second tradition was link Indian history to that of the universal history of mankind. The pioneer here was Sir William Jones. He tried to link Indian people to other known races in order to uphold the unitary origin of mankind as laid down by the Bible. His discourses on India between 1784 and 1793 were aligned to this goal. He used the similarity of Sanskrit with Persian and European languages as the chief evidence of a central human origin. Jones theorised that Persia might have been the place of that central human origin and migration of humans happened subsequently in both eastern (towards India) and western directions (towards Europe). There were however other scholars that believed India to be the centre of origin and the migration subsequently happened westwards to Persia and Europe. Thomas Maurice (1754-1824), a British historian was the principal advocate of this theory. However, by mid nineteenth century, the theory changed entirely opposite, and India became the receiving end of migrating humans and Europe the place of origin. In summary, it can be said that the Indologists of this period did not attempt to objectively study India's antiquity, but rather tried to fit India in the already established scheme of Biblical history.

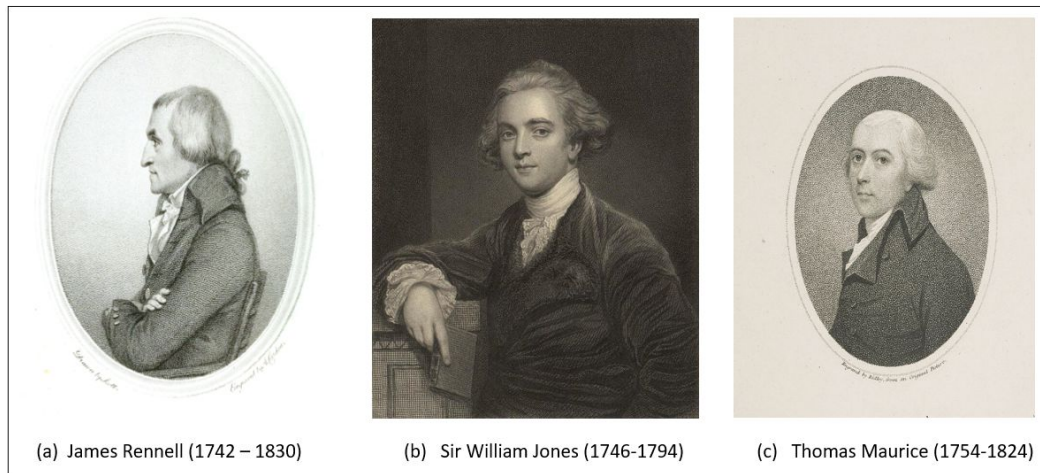


Fig 2 Early Indologists

From the beginning of the nineteenth century, the British began systematic surveys of India. Col. Colin Mackenzie (1754-1821), a Scottish army officer was in the services of the British East India Company (EIC). After the fourth Anglo-Mysore war in 1799 in which British emerged victorious against Tipu Sultan, Mackenzie was ordered to survey Mysore. Between 1799 and 1810, with the help of a team of draftsmen and illustrators, Mackenzie collected data on the topography, history, geography, architecture and customs of Mysore. He had some capable local assistants to his aid, Venkata Boraiah, later his brother Venkata Laxmaiah and Dharmiah. Colin Mackenzie was subsequently appointed Surveyor General of Madras Presidency in 1810. In 1815, he was appointed Surveyor General of India. Between 1816 and 1820, he surveyed Amaravati (Andhra) and surrounding regions and made a set of eighty five sketches. In all, it is believed that Colin Mackenzie made over two thousand scaled drawings of antiquaries, facsimiles of a hundred inscriptions and copies of eight thousand more. Around the same time, Francis Buchanan (1762-1829), a Scottish physician and geographer conducted surveys in Mysore in 1800. Between 1807-1814, he surveyed Bengal and noted the topography, history, geography, architecture, natural resources, occupations, commerce etc. Meadows Taylor (1808-1876) similarly conducted some surveys in the Nizam's territory and made sketches of some monuments.



Fig 3 Surveyors

#### 1.1.4..5 .1830 - 1861 Epigraphy, Numismatics and Architecture

This period saw the decipherment of two important ancient scripts of India, Brahmi and Kharoshti. James Princep (1799-1840), a British assay master in the Calcutta mint was instrumental in both the decipherments. The story of these decipherments itself is interesting, a journey of many decades and involving many scholars. Kharoshti was deciphered almost parallelly by James Princep in 1835 and Carl Ludwig Grotefend(1807-1874), a German philologist, in 1836. Ashokan Brahmi was deciphered by James Princep in 1837. With this, the inscriptions of early historic India including Ashokan rock and pillar edicts began to speak. Inscriptions could now be identified in proper context of space and time. The subject of Indian Numismatics also got a boost at this time when Col. James Tod (1782-1835), a British orientalist published some Greek, Parthian and Indian coins. In 1843, Sir Alexander Cunningham (1814-1893) documented his discovery of the ruins of the Buddhist city of Samkassa/Sankisa (in current Uttar Pradesh). Cunningham utilized the translations of Fa-Hien and Hiuen Tsang's Chinese works to guide and corroborate many of his excavations. In 1856, megaliths were excavated by Meadows Taylor (1808-1876) at the village of Jiwarji on the banks of Bhima River.

James Fergusson (1808-1886), a Scottish architect, took an interest in Indian architecture. He undertook an architectural survey of India between 1834 and 1845. In 1845, he came up with his very first work, *The Rock-cut Temples of India*. His later work, *The History of Indian and Eastern Architecture*, published in 1876 was more comprehensive.

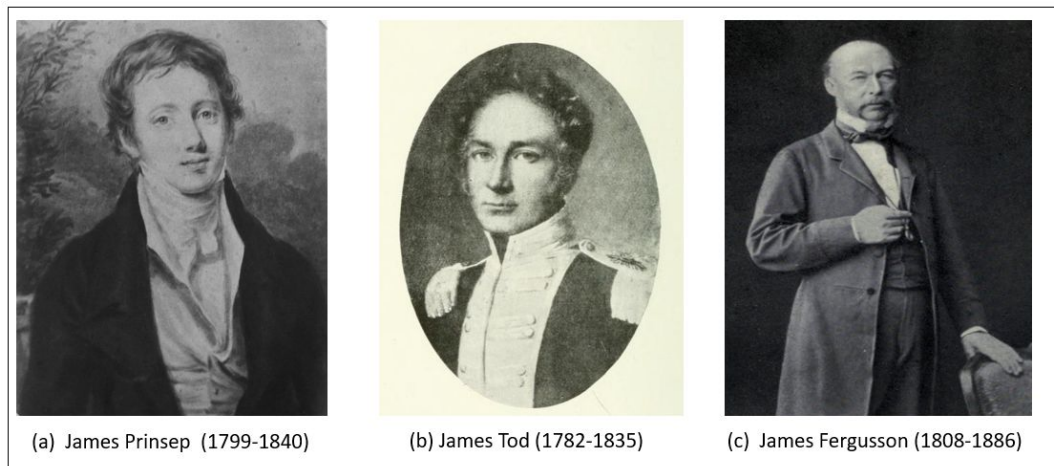


Fig 4 Epigraphist, Numismatist and Architect

#### 1.1.4.6 .1861 - 1947 Archaeological Survey of India

Sir Alexander Cunningham (1814-1893)

Alexander Cunningham for long felt the need for a methodical survey under government sponsorship. Finally in 1861, the Archaeological Survey of India (ASI) was set up for this purpose under the leadership of Cunningham. Cunningham's post was called 'Archaeological Surveyor' between 1861-65 and 'Director General' between 1871-85. Between 1861-65, he mostly worked alone. He was provided two assistants in his second term 1871-85. Over both these terms, he managed to cover a huge geographical expanse including the north western province, Punjab, Rajputana, Gangetic valley and central India. The outcome of his surveys are contained in a set of twenty-three volumes which were published between 1862 and 1887. His volumes contained aspects of historical geography, architecture, epigraphs and numismatics. In 1877, he started the publication of *Corpus Inscriptionum Indicarum (CII)* focussing on epigraphs. In 1878, the Treasure Trove Act was enacted which led to systematic processing and safety of antiques found below the soil during chance digging. In 1891, he published the book titled *Coins of Ancient India*. Cunningham was more focussed towards archaeological activities related to Buddhism. Chakravarti (1981) opines that Cunningham wanted to demonstrate Buddhism as a strong religion in ancient India countering Brahmanism, so that it would weaken the strength of Brahmanism in present day India and facilitate the propagation of Christianity. Because of this focus on Buddhism, archaeology of south India was almost completely neglected. Also he involved himself mainly in identifying of sites of Buddhist periods ie. historical geography rather than studying them in detail.



Robert Bruce Foote (1834-1912) was a geologist working for the Geological Survey of India. During his survey at Pallavaram (near Madras), he discovered a Palaeolithic hand axe. This find was significant as it took India's time line a couple of million years back in prehistory. After this discovery, Foote along with another geologist William King discovered more such Palaeolithic sites in southern and western India.

James Burgess (1832-1916)

Burgess was Cunningham's successor and worked at ASI between 1886-89. Burgess was greatly influenced by the architectural studies of India initiated earlier by James Fergusson. Before he became director general at ASI, he had undertaken survey of monuments in western and southern India. In 1872, Burgess started the journal *Indian Antiquary (IA)*. An epigraphy periodical *Annual Report of Indian Epigraphy (ARIE)* was started by the government epigraphist at Madras in 1887. A supplementary to *Corpus Inscriptionum Indicarum*, namely *Epigraphia Indica (EI)* was started in 1888. Burgess monographs on Indian monuments is phenomenal and became the foundation for Indian architectural studies. However, field archaeology was almost completely neglected by Burgess and continued to remain neglected until the appointment of John Marshall in 1902 as the director general of ASI.

E. Hultzsch (1857-1927) was a German Indologist and Epigraphist who started *South Indian Inscriptions (SII)*, another ASI publication on epigraphs in 1890.

John Marshall (1876 – 1958)

Between 1889 and 1902, there were no appointments made to the post of director general of ASI for due to a cost cutting drive by the government. In 1902, Marshall was appointed to this post, thanks to the patronage of Lord Curzon, the British viceroy to India. During Marshall's time, field archaeology came back into focus. Exploration, excavation and conservation took a definite shape. Marshall also furthered epigraphy by employing a government epigraphist. The 'Ancient Monuments Preservation Act' was enacted in 1904 with an aim to safeguard India's monuments. One of Marshall's important milestone was the discovery of the ruins of Harappa and Mohenjodaro in 1921, thereby identifying an ancient civilization as mature as Egypt and Mesopotamia. In his field works, Marshall focussed more on horizontal excavations, thus succeeding in revealing the total picture of the site. He published volumes called *Memoirs* where he covered each important aspect of his work. Marshall also made some administrative reforms in the ASI. The geography of India was divided into several archaeological circles,

each with its own team of officers and assistants. Some of the salient archaeological developments during Marshall's period were:

1. All parts of the country received equal attention
2. Specialized studies of monuments and habitation sites were undertaken
3. His discoveries revolutionized archaeology and history of India
4. Indian were taken into important posts in the ASI. Daya Ram Sahni, Bhagawanlal Indrajai and Rajendralal Mitra were important among them

Harold Hargreaves succeeded Marshall in 1928 and specialized in Buddhist iconography. Daya Ram Sahni (1879-1939) succeeded Hargreaves in 1931 and held the position till 1935. Sahni had earlier assisted Marshall in his excavations of Harappa and Mohenjodaro. After 1930, there was another cost cutting drive by the British administration and hence there was no significant archaeological activity between 1930 and 1944. Sahni was succeeded by J.F. Blakiston in 1935. J.F. Blakiston was succeeded by K.N. Dikshit in 1937 who held the post till 1944.

#### Prehistorical archaeology

After the stone tool discovery by Robert Bruce Foote, there were more discoveries made. However, these discoveries were mainly done by geologists who just documented the geological context in which the stone tools were found. There were no significant discussions on their typology and manufacture. A couple of significant studies in prehistory came somewhat later. In 1930, L. A. Cammiade and M. C. Burkitt studied a long stretch of the eastern Ghats and documented their finds. Using stratigraphy and typology, they were able to group the stone tools into four chronological brackets, Lower Palaeolithic, Middle Palaeolithic, Upper Palaeolithic and Microlithic. In 1935, H. de Terra of Yale University and T. T. Paterson of Cambridge University jointly investigated the Potwar plateau (current Pakistan) and discovered a succession of palaeolithic industries. Their geochronological approach became the benchmark for subsequent prehistoric studies in India. K. R. U. Todd published his prehistoric discoveries around Bombay region in 1939. In the period between 1939 and 1942, N. K. Bose and D. Sen from Calcutta University discovered an abundant lower Palaeolithic industry in Mayurbhanj (Orissa).

#### South Indian Megaliths

After Meadows Taylor's excavation of megaliths at the village of Jiwari on the banks of Bhima river in 1856, sporadic discoveries and studies of megaliths continued. A large amount

of iron implements and pottery were recovered from such excavations. However no significant interpretations were made.

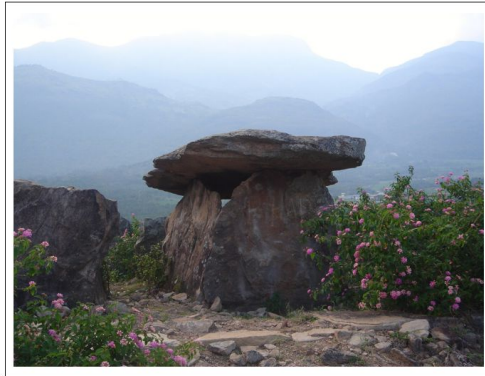


Fig 5 A megalithic dolmen in Marayoor, Kerala

Mortimer Wheeler (1890-1976)

Mortimer Wheeler became the director general in 1944 and held it till 1948. It was at his time that prehistoric archaeology received its due focus. Wheeler is known for adopting stratigraphic principles, grid system and three dimensional recording. The Wheeler-Kenyon method of stratigraphy documentation was a contribution of Wheeler and his student Kenyon. In 1946, Wheeler started a new journal *Ancient India* and contributed significantly to its initial five issues.

Some of the salient archaeological developments during Wheeler's period were:

1. Wheeler took a holistic view of the scope of Indian archaeology and included prehistory in it
2. He stressed on the need for planning in archaeological projects
3. He introduced modern stratigraphic principles in his archaeological activities and advocated stratigraphic documentation of pottery and its comparison with other similar excavations
4. He trained many students including Indians. They went ahead to carve successful careers in archaeology
5. He started the tradition of involving Indian universities in ASI excavations



Fig 6 Archaeologists

### 1.1.4.7 .After 1947 Post Independence

We saw in the previous sections that, from the establishment of the Asiatic Society to the end of the nineteenth century, Indian archaeology was biased to further colonial interests. From the beginning of the twentieth century, Indian archaeology became more objective. It was also at this time that nationalistic trends took over in India with the ultimate goal of achieving freedom.

After independence, many students of Mortimer Wheeler continued an active part in Indian Archaeology. Wheeler was succeeded by N.P. Chakravarti as Director General of ASI in 1948. Prominent archaeologists in the post independent period are H D Sankalia, B Subba Rao, M H Krishna, A Ghosh, R Subramanyam, B B Lal, S R Rao, K Paddayya, M K Dhavalikar, S P Gupta, H Krishnasastri, M S Nagarajarao, M Shesadri, V S Vakankar, R S Bisht, Rakesh Tewari and many others.

At the time of independence, history was still focussed on political (dynastic) aspects. By 1970s, with the advent of Marxist historians, there was a shift towards social and economic aspects of history. This had an impact on archaeology too.

The National Museum at Delhi was inaugurated in 1949. A new annual publication of the ASI, namely *Indian Archaeology-A review (IAR)* was started in 1954. To safeguard Indian monuments further, the 'Ancient Monuments and Archaeological Sites and Remains Act' was brought into force in 1958. Earlier archaeological publications like *Corpus Inscriptionum Indicarum(CII)*, *Epigraphia Indica (EI)* and *Indian Antiquary (IA)* were also resumed in post-

Independence period. *Puratattva*, a bulletin of the Indian Archaeological Society was started in 1967.

To safeguard Indian antiquities and prevent their illegal export, the Antiquities and Art Treasures Act was enacted in 1972. This required all antiquities to be registered with the ASI. Also antiques older than hundred years could not be taken out of India without the permission of the Director General, ASI.

Science in archaeology also received a boost in the post-independence era. Radio carbon dating labs have been setup in Ahmedabad and Lucknow. Tata Fundamental Research Institute at Bombay, Physical Research Laboratory at Ahmedabad, Birbal Sahini Institute of Palaeobotany at Lucknow, National Institute of Oceanography at Goa, National Remote Sensing Agency at Hyderabad, National Geophysical Laboratory at Hyderabad support the scientific analysis of archaeological artefacts. More recently, Archaeological Sciences Centre at Gandhinagar provides facility for many radiometric dating methods.

Administrative changes in ASI post-Independence:

State Archaeology Departments were setup for localized focus. Also more circles were introduced by ASI for better administration. Today ASI has twenty four circles. Sub departments have also been setup within ASI for specific focus areas as below.

Epigraphy Branch – Mysore (Sanskrit based) and Nagpur(Arabic based)

Pre History Branch – Nagpur

Science Branch – New Delhi

Underwater Archaeology – New Delhi

School of Archaeology – New Delhi

#### **1.1.4.8 .Summary**

1. Indian archaeology started formally with the establishment of the Asiatic Society in 1784. However the scholarly outcomes from this society were somewhat biased by the tenets of Christianity.
2. The Archaeological Survey of India was established in 1861 with government funding. Although the scope of Indian archaeology increased, there was an undercurrent to

promote Christianity in India and this limited the scope of Indian archaeology to the historical geography of Buddhism.

3. More objective archaeology is noticed from the beginning of the twentieth century, mainly under Marshall and Wheeler.
4. Post-independence era saw the growth of ASI, the establishment of state archaeology departments, the enactment of many laws to safeguard both artifacts and monuments and the setup of various scientific labs to aid archaeological analysis.

#### **1.1.4.9 .Key Words**

**Epigraphist:** An expert in decipherment of epigraphs *aka.* inscriptions

**Indology:** The study of Indian literature, history and culture

**Numismatics:** The collection and study of coins

**Philologist:** An expert in evolution of languages

#### **1.1.4.10 Check your progress**

1. Explain the activities of early antiquarians and foreign travellers in India before 1784 ?
2. Describe Indian Archaeology during the period of 1784- 1830.
3. Describe Indian Archaeology during the period of 1830 - 1861.
4. Describe Indian Archaeology during the period of 1861 - 1947.
5. Describe Indian Archaeology during the post-Independence era.
6. Write a short note on Marshall's contributions to Indian Archaeology.
7. Write a short note on Wheeler's contributions to Indian Archaeology.

#### **1.1.4.11 Key Answer**

1. Refer section 1.1.4.3.
2. Refer section 1.1.4.4.
3. Refer section 1.1.4.5.
4. Refer section 1.1.4.6.
5. Refer section 1.1.4.7.
6. Refer section 1.1.4.6.
7. Refer section 1.1.4.6.

#### **1.1.4.12 .References**

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## Figures

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