



PLENTI MUSEUM GUIDEBOOK



Contents

BACKGROUND OF THE PROJECT.....	2
INTRODUCTION	3
CHRONOLOGY AND CHARACTERISTICS OF INDIAN PRE-HISTORY.....	6
STONE TOOL GALLERY.....	7
THE STORY OF MINIATURE GALLERY.....	15
OPEN AIR GALLERY	23
ANNEXURE: STONE TOOL TECHNOLOGY	ERROR! BOOKMARK NOT DEFINED.

BACKGROUND OF THE PROJECT

The museum is an ode to our vast pre historic past. It covers an unimaginable expanse of more than two million years, includes many of our cousin species, and goes all the way up to a few thousand years ago, and India's first great ancient civilization. The museum is a short and immersive ride, that presents the information in an easy to digest fashion, and links what you read to what you see for a complete experience.

The project was conceptualized and executed by Mobeersha. An archaeologist by trade and passion, Mobeer at his young age has already had a varied and wonderful work history. He served time in the India army, part of the fearsome paratroopers regiment. A back injury sustained while landing from a parachute jump cut short his armed forces involvement.

That allowed him to focus on his love for things old and prehistoric and he started his archaeological career. Mobeer has worked on some of the most storied sites around India. Some of whom you will read about within. He has been incredibly generous, not only in sharing his knowledge, but has donated actual stone tool antiquities that he collected from digs all over India, to make the museum really come to life!

We were lucky enough to attract Mobeer for a short stint in 2019.20. An avid bird-watcher and coffee connoisseur, Mobeer loves the outdoors, and we shared many experiences on these subjects in his time here.

And this project of course would not be possible without the patronage of Phillida and Christopher, who generously gave Mobeer the time, space and encouragement to execute his vision at PLENTI House.

We hope that you enjoy the museum, and learn a little about our pre historic past.

Ankur Dhawan

CEO PLENTI project. October 29th 2020.

INTRODUCTION

Archaeology is nothing but time travel. An archaeologist can not only visualise, but experience the touch and feel of how the past would have looked like with available evidences. He or She can see how humankind lived their daily life, what clothes they wore, what kind of houses they built, what culture they practiced and what norms they believed in. With just one piece of antiquity, he can travel back in time! Isn't it that wonderful?

Let us all go on one such time travel from the Palaeolithic period to the Indus Valley Civilisation.

The PLENTI museum is divided into three galleries.

1. Stone Tool Gallery - Located on the fire place
2. Miniature Gallery - Located in the yoga room
3. Open-Air Gallery - Located in the garden by the office, next to the right wing

STONE TOOL GALLERY

The tools displayed here are from the Middle Palaeolithic to the Neolithic Period. *These are actual antiquities* that were found from different archaeological sites in Tamil Nadu, Andhra Pradesh, and Karnataka. The objects have been documented under Archaeological Survey of India and treated with chemicals to preserve them.

Visitors are *encouraged to touch, pickup and feel* the objects, but with **utmost caution!**

MINIATURE GALLERY

The display here tells the story of evolution of houses and agriculture from Mesolithic period to Indus Valley Civilisation.

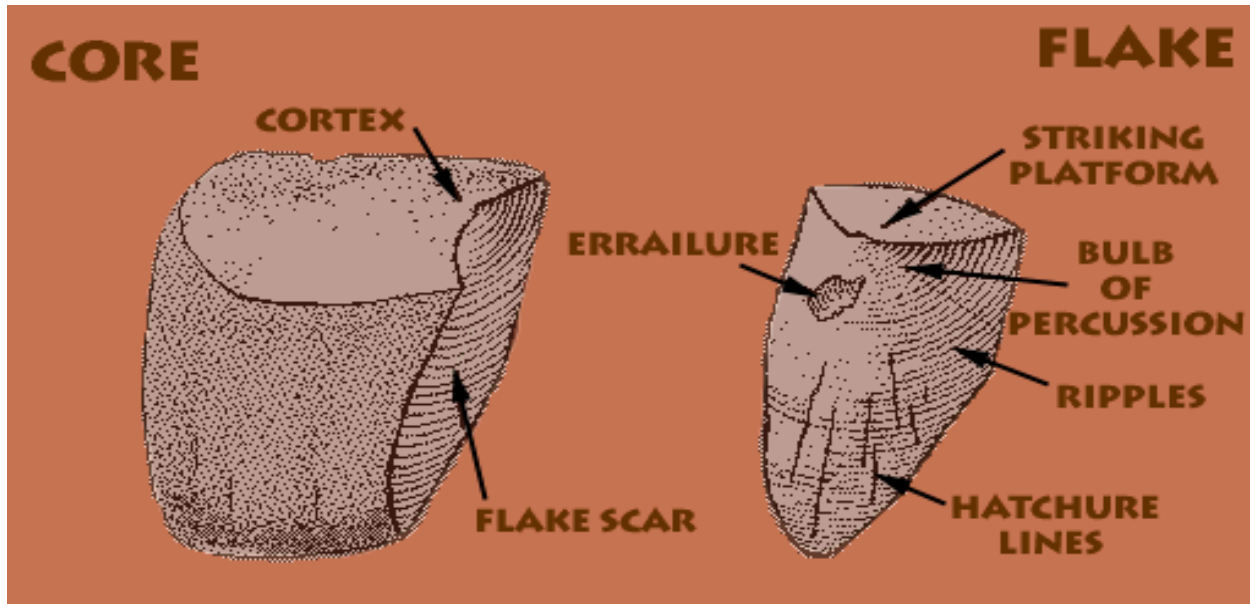
OPEN AIR GALLERY

Agricultural tools used by mankind during the Neolithic period are displayed in this gallery. Based on archaeological evidences these tools were recreated by experimental archaeology. Visitors are encouraged to touch as well as use the objects to have a real-life experience.

HOW TO USE THE GUIDE BOOK

We recommend that you grab a comfortable seat in the living room, and spend the next fifteen minutes or so, reading the background information. After which, you can begin your tour at the fireplace, with the Stone Tool gallery. And then move on to the Miniature gallery, and Open-Air gallery.

STONE TOOL TECHNOLOGY



Core

A core is any piece of material that has had flakes removed from it. Thus, a core could be used only as a source of sharp flakes, as in this example. At other times, cores themselves might also be made into tools, in which case the resulting tool is called a core tool.

Flake

A flake is any material removed from a core, whether intentional or not. In some cases, the flakes themselves were meant to serve as tools. In other cases, the flake is further modified to make a tool. At other times, the flakes may just be the waste material from shaping, thinning, or resharpening a stone tool. This waste material is called debitage, and is one of the most important collections of lithic material that archaeologists study. By studying the waste flakes and failures, we can actually reconstruct the prehistoric production technology and gain valuable insight into an important component of prehistoric human behaviour.

Flake Scar

The flake scar is the concave surface left on a core after a flake has been removed from it. The flake scar will show the reverse image of the bulb of percussion on the flake, and will also exhibit ripples on occasion. The flake scar is equivalent to the hole left in the window pane from our last example.

Cortex

The cortex of a core or flake is the weathered, outer surface of the rock. Archaeologists often examine flakes to determine the amount of cortex on them in order to gauge the stage of manufacture and the degree to which cores were being used to exhaustion.

Striking Platform

The striking platform is the prepared surface on both the flake and the core where the blow that detached the flake was struck. Striking platforms will have different characteristics depending on the technique that was used to remove the flake. For example, on this flake and core, the striking platform has only one surface, and is quite wide, indicating that the flintknapper wanted to detach a large, thick flake. The platform will often have half of a ring fracture right at the exact point where the detaching blow was struck.

Errailure

The errailure is a French term denoting a subsidiary flake scar on the bulb of percussion of a flake. These scars occur as a result of excessive force being applied in the removal of the flake. The bulb of percussion is compressed so much that its elastic response is violent enough to cast secondary flakes off of itself.

Bulb of Percussion

The bulb of percussion is the conic section resulting from the fracturing of the rock. Depending on the amount of force in the detaching blow, the bulb of percussion can be very pronounced. The bulb is the result of the compression of the rock due to impact, and it is the elastic rebound from this compression that actually detaches the flake from the core.

Ripples

Ripples can often be observed on flakes made of obsidian and other very fine-grained materials. These radiating waves in the stone are actually deformations of the rock resulting from the shock wave that accompanied the detaching blow. They look like frozen ripples on a pond after a pebble has been tossed into it.

Hatchure Lines

Hatchure lines occur in flakes where extreme force was used in their removal from the core. The lines are actually hairline cracks resulting from interference shock waves bouncing around within the rock before the flake actually detaches itself. In the most extreme cases, these interfering shock waves can actually cause the flake to shatter as it is being detached.

CHRONOLOGY AND CHARECTERSTICS OF INDIAN PRE-HISTORY

Sr. No.	Period	Timeline	Significant characteristics
1	Palaeolithic period	2.5 million BCE to 10,000 BCE	<ul style="list-style-type: none"> • Cave life • Invention of Stone Tools • Discovery of Fire • Hunting and gathering was the main source of food <p>Note: <i>Timeline of Palaeolithic period in India is still under debate between scholars</i></p>
2	Mesolithic Period in India	10,000 BCE to 8000 BCE	<ul style="list-style-type: none"> • Invention of microlithic tools • Domestication of animals from later Mesolithic period (wild dogs) • Initiation of agriculture from later Mesolithic period and hence the beginning of settled life
3	Neolithic Period in India	8000 BCE to 4000 BCE	<ul style="list-style-type: none"> • Invention of Neolithic Celt • Transition from food gatherers to food producers • Invention of wheels • Domestication of animals (cattle) • Invention of new agricultural tools like plough, axe, and spade
4	Chalcolithic Period in India Indus valley civilization	4000 BC to 1,500 BCE 2700 BCE to 190 BCE	<ul style="list-style-type: none"> • It is also known as stone-copper age • Indus Valley Civilisation belongs to the Copper Age

STONE TOOL GALLERY

(Top of the fire place)

How can one differentiate stone tools from other stones?

This is a question that I am often asked, as an archaeologist.

If you have a closer look at the tool, you can observe many features that won't appear on a normal stone. For example, take a look at the stones used to build the Plenti wall, the stone pieces used have been broken into pieces to suit the needs of building this wall, which is evident from each piece. Now compare it with any normal block of stone.

Coming to the stone tools on the display. Observe closely to find the pressure points which was made by our fellow ancestors on this tool by using another stone. You will be able to observe that the edges are sharp and pointy, when you hold the tool in your hand you will notice that there will be a dedicated side/part of the stone using which the tool should be held.

Please refer to additional reading for knowing how stone tools were made, this will help you deepen your understanding of stone tools.

Walk to the fire place.

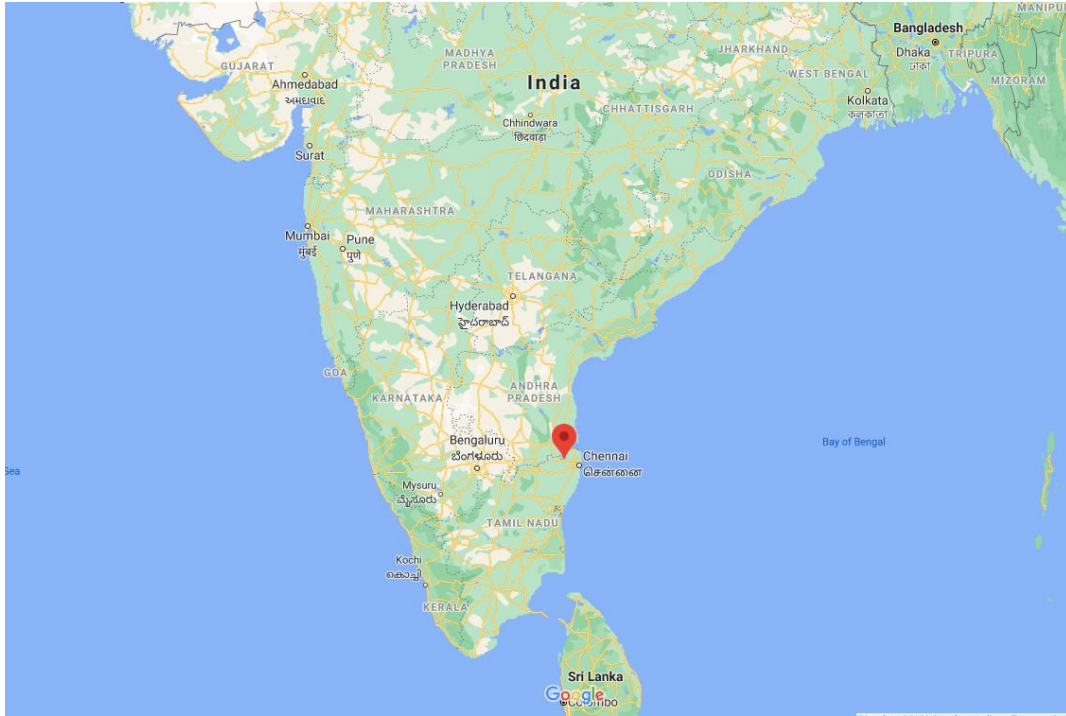
This stone tool was found during one of my exploration trips in Athirampakkam in Tamil Nadu. 1.7 million years ago, our ancestors made this stone tool using flaking technology. That is, they hammer one stone using another stone to remove flakes from the core of the stone that is being hammered. If you observe the stone tool closely you can see flake scar, striking platform, and pressure points on it. This was mainly used for cutting tree branches, cutting or breaking the bones, and so on.

It is a bifacial tool. It is also considered as an all-purpose tool used for digging up roots, cutting and smashing killed animal bones and boring the hide. Generally, hand axe is a tool that is used directly by hand, but there are chances that they served as spear-heads after hafting it on a wood or bamboo shaft.



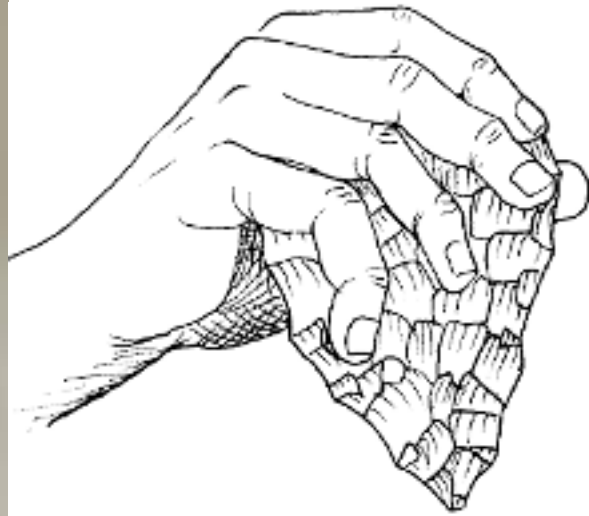
Palaeolithic handaxe

Interesting fact: *The oldest dated palaeolithic site in India is Athirampakkam– Tamil Nadu, which is 1.7 million years ago*



Location of Athirampakkam Palaeolithic site

This is another hand axe from palaeolithic period. Take both tools in your hand and compare. Do you feel any difference in these? When you compare the first tool to the second tool, first one is heavier, isn't it? Now, look at the shape, the first one is triangular and the second one is oval! Coming to the sharpness of edges, second one is sharper than the first one. This is because flakes removed from the second tool is more compared to the first one. It means the first tool is older than the second tool. This classification is known as typology.



Cleaver

Another important palaeolithic stone tool displayed here is a cleaver. It is also made with flaking technology and, the use of Cleaver is similar to that of Hand Axe the only difference is Cleavers having a transverse or horizontal working edge.

Go ahead and hold the tool in your hand. Feel the sharpness of edge, called the working edge. This is perfect to use on soft surface, for example slicing animal meat or cutting tree bark.



Flake tools

Our ancestors realized that the flakes have more sharp edge than the main tool, gradually they started using flakes itself as a tool, and the archaeologists called it flake tools. Here you can see two small flakes and one proper flake tool. If you closely observe, you can find secondary flaking marks on the edge of the tool, this implies that they tried to sharpen the piece further. As these tools were small and light it became easier for them to carry.



Flake tool

Flake



Neolithic polished axe

Homo Sapiens during the Neolithic age built and used this tool. The stone is made from pieces of rocks collected from streams and river banks. It is given its shape by rubbing the stone with sand using water as the base, and this process is known as grinding.

If you compare the tools you saw at the beginning of the display with these tools you can clearly spot the differences, so go ahead and take one tool from the Paleolithic period and one tool from the neolithic period to feel the difference. You would be able to notice the difference in size, shape and weight.

Now, what were these tools used for?

These were mainly used as agricultural tools, to till the land, cut trees etc. As per the situation or need they built smaller and larger versions of these tools



Interesting fact:*In south India Neolithic will be dated around 3000 BCE*



Exposing of Neolithic polished axe



THE STORY OF MINIATURE GALLERY

Generally, historians consider the Neolithic period as the start of agriculture. But, based on archaeological evidences we can say that agriculture began during the later Mesolithic period. Though during the first half of the transition period humankind practiced hunting and took shelter in caves, they had started growing their own food on a small scale. As they were still understanding weather, climate and different methods of agriculture the harvest was not sufficient to meet their needs. As time passed, they started spending more time in agriculture, or we can say that women focused on agriculture while men went out to hunt. But, hunting was not always rewarding. There might have been days when they didn't get any food and it was also difficult to hunt if the weather was not favourable. Meanwhile, they realized that the harvest from agriculture can be stored for a longer period and was less laborious compared to hunting and hence started devoting more time towards agriculture. Gradually they started moving in search of arable land near rivers, leaving behind them their shelter, till then caves.

The Birth of Houses

People soon realized that it is not possible to have their crops in the plains, and their shelter in caves on the mountains as wild animals destroyed their crops if left unguarded. Hence, they started building their homes in the plains near their cultivation with available raw materials from in and around the area. The houses varied according to different geographical locations. What we are viewing here is a Tipi House which was one of the most common houses during Mesolithic period.

Note:

As people were still studying the relationship between seasons and agriculture, they were not able to have large scale cultivation. It used to be a small patch of land just beside their homes.

The main tools used to be in the form of wooden sticks with a sharp edge. They used to cut strong branches and sharpen the edges using sand and water. We have not displayed these tools here.



Tipi House- one of the most common form of shelter during Mesolithic period

The beginning of Neolithic Period

It was during the Neolithic age that mankind shifted completely from hunting and gathering to agriculture.

This time period also witnessed some of the most significant changes in the history of agriculture. People modified their stone tools which were earlier used for hunting to suite the needs of agriculture, and even made some new tools. There were stone tools to serve every purpose from cutting down trees to plough the land.

Neolithic houses

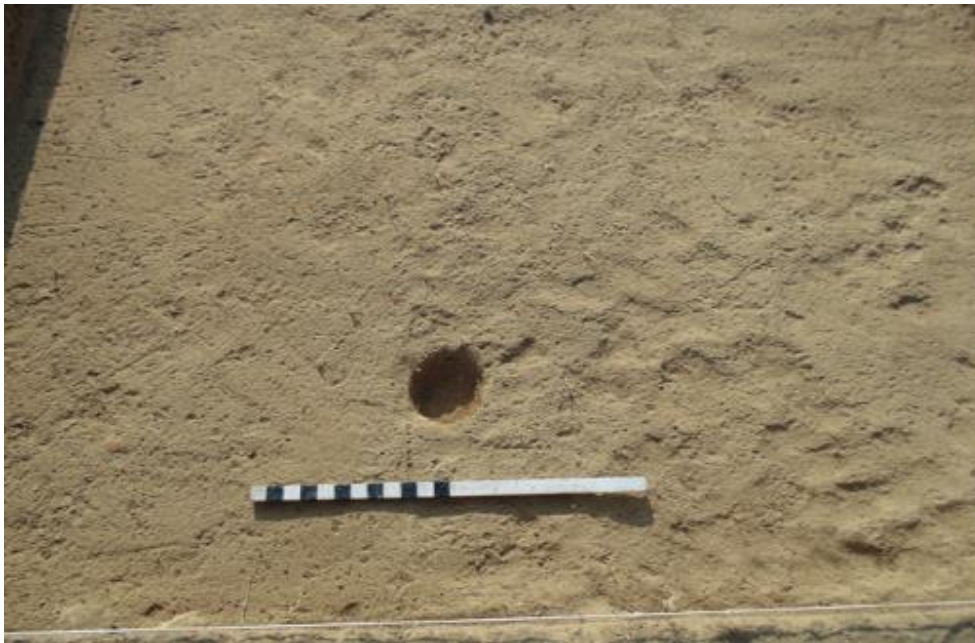
The organization of settlements and the architectural structure of houses differed according to regions and periods, it also reflected environmental, economic and social changes taking place during the long Neolithic Period. Building materials consisted of thick timber posts, reeds, clay and stone for the foundations and the upper structure (walls), while for roofing, tree trunks, reeds, clay and hay were used.



Early Neolithic House



A Neolithic house site



Post hole of a neolithic house

During the Middle Neolithic period the construction of timber-post framed houses continued, while for the first-time houses with stone foundations and walls of mud-bricks (unfired bricks from a mixture of clay and hay) were built. The massive appearance of clay house models marked the invention of bricks. Houses were rectangular, with one-room and some houses had an open or closed porch in the front. Each house was built independently of each other.

The Late Neolithic period showed a considerable increase in number of settlements in the plains, which resulted in a population increase and intensification in cultivation. Large rectangular megaroid buildings were used (Sesklo, Magoula, Visviki), while food-preparation facilities were by now situated inside the house. Many settlements were surrounded by 4-6 metres wide and 1.5-3.5 metres deep ditches or stone enclosures 1.5-1.7 metres high. The function of the enclosures is questionable: was it to defend against wild animals or to demarcate the limits of the settlement and thus protect its goods?



Later Neolithic House made of sun burnt bricks

Agriculture

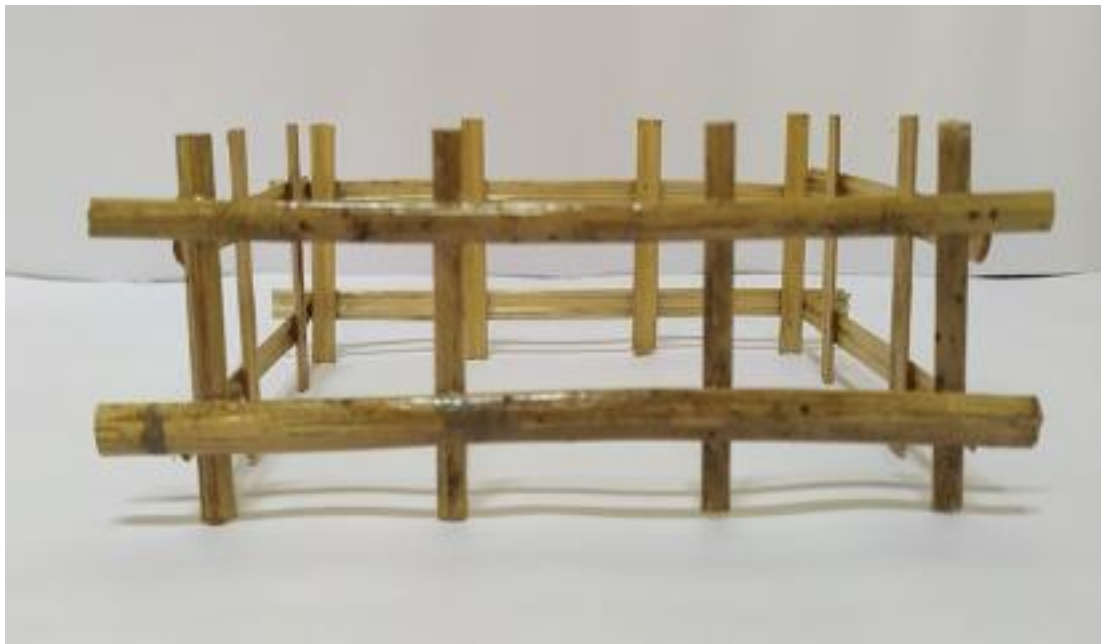
River beds were the preferred location for agricultural settlement. The land was prepared by clearing vegetation using fire. It is interesting to note that they could prepare large plots of land for cultivation this way and that, they started using animals for agricultural labour. Ox were used during this time period to plough and for other agricultural activities. People started taming animals other than cows and ox to use for various purposes other than agriculture like sheep and goats.

The first livestock were domesticated from animals that Neolithic humans hunted for meat. Domestic pigs were bred from wild boars, for instance, while goats came from the Persian ibex. Domesticated animals made the hard-physical labour of farming relatively easy while their milk and meat added variety to the human diet. They also carried infectious diseases: smallpox, influenza, and the measles all spread from domesticated animals to humans.

Domestication of animals

The first farm animals also included sheep and cattle. These originated in Mesopotamia between 10,000 and 13,000 years ago. Water buffalo and yak were domesticated shortly after in China, India and Tibet.

Draught animals including oxen, donkeys and camels appeared much later—around 4,000 B.C.—as humans developed trade routes for transporting goods.



Animal shelter of Neolithic period

Agricultural tools

People continued the use of Burin, a Mesolithic tool, in this time period as well. The main raw materials used for tools during this period was wood and stones.

Agriculture tools of Neolithic period are displayed in the Open-Air Gallery

Neolithic celt is the most important stone tool of this period, it was used to make different tools like plough, axe and spade and all these improved the efficiency of their work.

Beginning of Bronze age

Copper is the first metal that was discovered by humankind and this gave birth to a new era. The discovery of metals also meant the end of stone age.

The culture based on the use of copper and stone was termed as Chalcolithic meaning stone-copper Phase. In India, it spanned around 2000 BC to 700 BC. This culture was mainly seen in Pre-Harappan phase, but at many places it extended to Post-Harappan phase too. The people were mostly rural and lived near hills and rivers. The Chalcolithic culture corresponds to the farming communities, namely Kayatha, Ahar or Banas, Malwa, and Jorwe.

People now began to make agricultural tools using the new discovery, which made their work much easier. But they soon realised that bronze is not a dense metal and hence wears out soon, and hence they also continued using the Neolithic tools.

A well-known civilisation during the bronze age is the Indus Valley Civilisation located in the plains of Indus.

In 1856, British colonial officials in India were busy monitoring the construction of a railway connecting the cities of Lahore and Karachi in modern-day Pakistan along the Indus River valley.

As they continued to work, some of the laborers discovered many fire-baked bricks lodged in the dry terrain. There were hundreds of thousands of fairly uniform bricks, which seemed to be quite old. Nonetheless, the workers used some of them to construct the road bed, unaware that they were using ancient artifacts. They soon found among the bricks stone artifacts made of soapstone, featuring intricate artistic markings.

Though they did not know it then, and though the first major excavations did not take place until the 1920s, these railway workers had happened upon the remnants of the Indus Valley Civilization, also known as the Harappan Civilization, after Harappa, the first of its sites to be excavated, in what was then the Punjab province of British India and is now in Pakistan. Initially, many archaeologists thought they had found ruins of the ancient Maurya Empire, a large empire which dominated ancient India between c. 322 and 185 BCE.

Before the excavation of these Harappan cities, scholars thought that Indian civilization had begun in the Ganges valley as Aryan immigrants from Persia and central Asia populated the region around 1250 BCE. The discovery of ancient Harappan cities unsettled that conception and moved the timeline back another 1500 years, situating the Indus Valley Civilization in an entirely different environmental context.

Scholars are still piecing together information about this mysterious civilization, but they have learned a great deal about it since its rediscovery. Its origins seem to lie in a settlement named Mehrgarh in the foothills of a mountain pass in modern-day Baluchistan in western Pakistan. There is evidence of settlement in this area as early as 7000 BCE.

The Indus Valley Civilization is often separated into three phases: the Early Harappan Phase from 3300 to 2600 BCE, the Mature Harappan Phase from 2600 to 1900 BCE, and the Late Harappan Phase from 1900 to 1300 BCE.

At its peak, the Indus Valley Civilization may have had a population of over five million people. The Indus cities are noted for their urban planning, a technical and political process concerned with the use of land and design of the urban environment. They are also noted for their baked brick houses, elaborate drainage systems, water supply systems, and clusters of large, non-residential buildings.

The Indus Valley Civilization began to decline around 1800 BCE. Archaeological evidence indicates that trade with Mesopotamia, located largely in modern Iraq, seemed to have ended. The advanced drainage systems and baths of the great cities were built over or blocked. Writing began to disappear, and the standardized weights and measures used for trade and taxation fell out of use.



Early Indus House

Later Indus House

OPEN AIR GALLERY

PLOUGH

This plough belongs to the later Neolithic period, closer to the end of that period. It is believed that the plough was used with the help of an Ox. The plough displayed here is entirely made of wood and is tied together using ropes made out of tree barks. The present-day plough is very similar to the one that is seen here.

The invention of plough led to the introduction of animals in agriculture labour. The front part of the plough used to be balanced on two Ox and the farmer used to walk behind, guiding the Ox in certain direction with the other end of the plough with spokes tilling the ground. One might wonder that the design and use of the plough in this way is not much different from some of the rural areas where tractors are still now used





AXE

The axe was an important discovery which made Neolithic time period stand out from other stone ages. It was used for almost all agricultural activities, one of which is displayed here. The axe made here is jointed with the handle by using rope made out of tree barks or animal skin. The primary use of an axe was to cut down trees and branches.



SPADE

Another equally important tool of this period is the spade, like other tools this is also held together using ropes made out of tree barks or animal skin. The technique used by the people during this period to sharpen the tool was to rub the tool against a rocky surface using sand and water. The primary use of the tool was to turn the soil for agriculture.



THANK YOU!

For more information kindly contact:

MOBEERHSA KM

mobeersha30@gmail.com

+91 9562332545