

Block

5

PALAEOLITHIC CULTURES

UNIT 1

Lower Palaeolithic Cultures **7**

UNIT 2

Middle Palaeolithic Cultures **32**

UNIT 3

Upper Palaeolithic Cultures **47**

UNIT 4

Palaeolithic Art **66**

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BLOCK 5 PALAEOOLITHIC CULTURES

Introduction

Man, by his tool making ability, emerges from an animal background and assumes higher status than any other animal. He makes tools on stone, wood, bone and antler and obtains his food by hunting. This capacity of tool making is the harbinger of culture. He learns to build shelters, to use fire, to clothe himself, and to transmit ideas through signs or symbols and presumably even by speech, though not in writing. This period of man's history belongs to the realm of prehistory. And the evidences for reconstructing the life ways of prehistoric man are the tools, which are, predominantly, the stone tools that survived the ravages of time. By studying the stone tools—the techniques by which stone tools are made and their functions—prehistoric archaeologists have identified different cultures, which are called Stone Age cultures. These are Palaeolithic (or the Old Stone Age), Mesolithic (Middle Stone Age) and Neolithic (New Stone Age).

The long period of human development, before the advent of agriculture and use of metal is the epoch of Palaeolithic and Mesolithic cultures. The Palaeolithic is divided into Lower Palaeolithic, Middle Palaeolithic, and Upper Palaeolithic cultures. All these are hunting-gathering cultures. These cultures are distinguished by their respective tool types, the ensembles of which are called industries. The stone tools show progressive refinements in the techniques of tool manufacture and advancement in hunting methods from Lower Palaeolithic to Upper Palaeolithic.

The Palaeolithic cultures flourished in the geological era called Pleistocene. The Pleistocene era, climatically, is characterised by glacial (extreme cold conditions and extensive ice caps) and interglacial (warm period) conditions in the temperate zones and pluvial (heavy rainy or wet period) and interpluvial (dry period) conditions in the tropical belt. Early human populations (i.e. Palaeolithic) lived in major parts of the temperate zones (Europe) and tropical zone (Africa and Asia) successfully adapting to these climatic events and environments.

The earliest stage of the Lower Palaeolithic culture is represented by a stone tool industry known from Kadar Gona and Hadar regions of Ethiopia in Africa. This is dated to 2.5 million years. The Lower Palaeolithic culture in Africa is recognised by two stone tool industries, i.e. the Oldowan industry, and the Acheulian industry (the handaxe-cleaver or biface industry). The Oldowan is a crude industry of pebble tools, mainly chopper-chopping tools which is well documented in Bed I of the famous Olduvai Gorge in Tanzania, and is dated to 1.85 million years BP. Human fossils associated with Oldowan tool traditions belong to the *Australopithecine* and *Homo* lineages. The Soan industry in the northwestern part of the Indian subcontinent (Soan Valley in Pakistan) is a pebble tool industry. From the Indian side of the border, pebble tool industries are known from the Sirsa and Ghaggar valleys of Haryana, Beas and Banganga valleys of Himachal Pradesh, and the Hoshiarpur-Chandigarh zone of the Siwalik Frontal Range.

The Acheulian industry (named after the French site of St. Acheul), synonymous with the handaxe-cleaver industry, as the name suggests, is characterised by handaxes, cleavers, and a variety of scrapers on cores and flakes which are finished

by careful working on one side (unifacial flaking) and on both sides (bifacial flaking), and also secondary retouch. Prehistoric sites yielding handaxe-cleaver industries are wide spread in Africa, Europe, Southwest Asia (also called Middle East) and South Asia (i.e. India). In Africa, it is best represented at Olduvai Gorge (Bed II), Olorgesailie, Koobi Fora, Kalambo Falls and Isimila. Absolute dates from these sites show that the Acheulian persisted from about 1.65 million years BP till 0.25 million years BP. The extinct human species *Homo erectus* (which appeared around 1.8 to 1.7 million years ago) is associated with the Acheulian culture.

Acheulian industries have extensive distribution in almost all the river valleys of the Indian subcontinent. The earliest known Acheulian site in India is Isampur in the Hunsgi Valley of north Karnataka, which is dated to 1.2 million years BP; and other dates from Rajasthan, Gujarat, Maharashtra and Karnataka range between 0.7 million and 0.2 million years BP. In the later stages of the Acheulian tradition, handaxes and cleavers have become very refined and symmetric in shape, and also flake-tools of refined forms (scrapers, points etc.) are manufactured. These foreshadow the succeeding Middle Palaeolithic cultures, characterised by flake-tool industries.

The Middle Palaeolithic culture is characterised by flake-tool traditions and consists of a variety of tools made on flakes such as scrapers, points, borers and awls; and miniature handaxes and cleavers of fine workmanship occur at some sites. These flaks are produced by specialised technique called prepared core technique. The Middle Palaeolithic culture is best documented in the excavations of cave sites and open-air sites in Europe, Southwest Asia, and Africa. In these regions, the Middle Palaeolithic culture is called as the Mousterian culture, named after the rock shelter of Le Moustier in France. The human species associated with the Mousterian culture is the extinct *Homo neanderthalensis*. The popular name for this hominin is Neanderthal man. There are a variety of sub-regional variations in the Middle Palaeolithic culture in different parts of the Old World. The time span of Middle Palaeolithic culture ranges between 0.25 million and 50,000 years BP. Neanderthals very probably started some of the activities and beliefs that are considered most characteristic of humankind. They practiced hunting magic; buried the dead with care and performed death rituals; took care of the crippled and disabled; and in some cases resorted to cannibalism. In India, Middle Palaeolithic culture is wide spread, and is characterised by typical flake tool industries. Absolute dates for the Middle Palaeolithic in India point to a time range of 165,000 years BP to 31,000 thousand years BP.

The Upper Palaeolithic culture succeeds the Middle Palaeolithic Mousterian or other flake tool cultures in different parts of the Old World. This phase marks the first great climax of human achievements. Upper Palaeolithic cultures flourished in Europe, Southwest Asia, Africa, South Asia and Southeast Asia during the later stages of Upper Pleistocene, often referred to as Late Pleistocene. The age of the Upper Palaeolithic falls between 40,000 and 12,000 years BP. The human species associated with this cultural phase is Anatomically Modern *Homo sapiens* (AMHS), the extant and the only surviving human species. We belong to this species.

The Upper Palaeolithic shows technological advances in stone tool manufacture by the production of parallel sided blades which are finished into a variety of

tools finished by blunting or backing, and secondary retouch. These blades are produced by specialised technique called prismatic core technique or fluted core technique. There are a variety of sub-regional manifestations of Upper Palaeolithic cultures in Europe and Southwest Asia. Southwestern France is considered as the “classical region” in which all these Upper Palaeolithic sub-regional successions are well preserved in stratified contexts. These cultures are Chatelperronian (35,000 – 29,000 years BP), Aurignacian (34,000 – 29,000 years BP) Gravettian (28,000 – 22,000 years BP), Solutrean (21,000 – 19,000 years BP) and Magdalenian (18,000 – 12,000 years BP). Further, in addition to stone tools, these cultures have excellently executed bone and antler tools such as points, harpoons, awls etc. In India, the Upper Palaeolithic culture is well documented in all the major river valley systems; and the Kurnool caves have yielded an assortment of bone tools. The Upper Palaeolithic cultures in different parts of the Old World are succeeded by epi-Palaeolithic cultures of short duration at the fag end of the Ice Age, which develop into the Mesolithic cultures of specialised hunters, fishers and gatherers in the Holocene period.

The hallmark of the Upper Palaeolithic is art. Upper Palaeolithic art begins in the Aurignacian culture, develops in the Gravettian and Solutrean, and blossoms in the Magdalenian, both in the splendid decoration of ordinary objects (called art mobilier or home art), and in the superb polychrome cave paintings (parietal art or cave art). A large variety of paintings on cave or rock walls and cave ceilings, and petroglyphs (engravings or line drawings on rock or cave walls) have been found especially in France and Spain. Another important category of art is in the form of ‘Venus Figurines’. These are small statuettes of naked, and often obese or pregnant women, sculpted in mammoth ivory, stone or clay. These figurines may be fertility icons or emblems of security and success. According to some scholars, the appearance of language during this period made these behavioural changes possible.

UNIT 1 LOWER PALAEOOLITHIC CULTURES

Contents

- 1.1 Introduction
- 1.2 Birth of Prehistory
- 1.3 Man's Place in Biological Evolution
- 1.4 Earliest Stage of Human Culture in the Old World
- 1.5 Geographical Features of India
- 1.6 Changing Perspectives in Indian Palaeolithic Research
- 1.7 Phases within the Paleolithic and Dating
- 1.8 Archaeological Record of the Palaeolithic
- 1.9 Lower Palaeolithic Stage in India
 - 1.9.1 The Soanian Cultural Tradition
 - 1.9.2 The Acheulian Cultural Tradition
 - 1.9.2.1 Important Sites
 - 1.9.2.2 Stages within the Acheulian Tradition
 - 1.9.2.3 Hunting and Foraging
 - 1.9.3 Settlement Patterns
 - 1.9.4 Non-utilitarian Behaviour
 - 1.9.5 Hominin Fossil Record and Origins
- 1.10 Summary
 - Suggested Reading
 - Sample Questions

Learning Objectives



Once you have studied this unit, you should be able to:

- describe how “prehistory”, having a hoary past, emerged as a branch of “human history”;
- understand about the origin of our ancestors (early hominins); and
- discuss the antiquity and cultural manifestations of Stone Age societies in India.

1.1 INTRODUCTION

In this lesson we shall learn about the earliest stage in the history of man's biological and cultural evolution. This is the stage when creatures ancestral to man began to branch off from their ape-like cousins. This journey covers a time span of 2.5 million years and involved improvements both in aspects of the biological make-up like bipedal posture and brain enlargement and in cultural behaviour, of which intentional preparation of tools out of natural materials like stone and wood was a critical one. The branch of archaeology which deals with the study of this initial stage of human history is called prehistory.

Stated in other words, prehistory deals with the origins and growth of human societies before the advent of writing systems, which in the case of India developed by about the middle of the first millennium B.C., e.g. the edicts of Asoka inscribed in Brahmi and Kharoshthi scripts and scattered in different parts of the country. Considering evidences like the composition of Vedic texts and the (still undeciphered) script of the Indus Civilisation, a transitional stage called protohistory has been provided between history and prehistory in India. Broadly speaking, this stage covers the third and second millennia and early half of the first millennium before the Christian era. It is characterised by the rise of many early agropastoral Neolithic-Chalcolithic communities characterised by settled village life, domestication of animals like cattle and sheep/goat, cultivation of crops like wheat, barely, rice and millets, and emergence of various crafts and arts. In the Indus valley, this phase eventually led to the growth of an urban civilisation based on town planning and bronze technology. It is the long period of hunting and gathering way of life preceding the agropastoral stage which forms the subject matter of prehistory.

1.2 BIRTH OF PREHISTORY

Ancient thought in different parts of the world offered divergent interpretations of the story of man. For instance, in ancient Hindu thought you will notice the concept of four *yugas* (Krita, Treta, Dvapara and Kali) spanning more than 4 million years and their cyclical repetition. Christian theology on the other advocated the view that the world including man was created by God in 4004 B.C. In the 18th century some of the Enlightenment thinkers of Europe postulated that human society passed through the successive stages of hunting and gathering, pastoralism, agriculture and civilisation. Then in 1836 C.J. Thomsen, Curator of the Royal Danish Museum in Copenhagen, put forward the famous Three Age system. It divided the preliterate past of Northern Europe into Stone, Bronze and Iron Ages. But it was still implicitly believed that these Ages would fall within the temporal framework of 6000 years provided for the entire human story in Christian theology.

The actual birth of prehistory took place in May 1859 when a team of three British scientists comprising Joseph Prestwich (geologist), Hugh Falconer (palaeontologist) and John Evans (archaeologist), based upon their personal inspection of the actual sites, ratified before the Royal Society in London the findings by John Frere in England and by Boucher de Perthes in Northern France of primitive stone implements in drift gravels of rivers along with fossilised bones of extinct species of wild cattle and other large mammals. It was thus clear that Northern Europe was occupied by man much before its landscape assumed its present form. A long phase of infancy was thus prefaced to human history. Happily this development coincided with the publication in the same year of Charles Darwin's famous book *On the Origin of Species*, which advocated evolution of organic life from simple to developed forms through the process of natural selection.

Darwin's book gave the much needed impetus to prehistoric studies. In his book *Prehistoric Times* (1865) Sir John Lubbock not only announced the birth of a new science called prehistory but divided the Stone Age into Palaeolithic (Old Stone) and Neolithic (New Stone) ages. And by the end of the 19th century, not

only an intermediate stage called the Mesolithic was introduced between the Palaeolithic and the Neolithic but several stages were identified within the Bronze and Iron Ages. Furthermore, thanks to the cultural sequence obtained from cave and open-air sites in France, three phases were recognised within the Palaeolithic (Lower, Middle and Upper).

In the early decades of the 20th century important Stone Age sites were reported from southern part of Africa. Soon East Africa followed suit and the team led by L.S.B. Leakey undertook sustained investigations in the Olduvai Gorge of Tanzania. Other discoveries followed in Kenya and Ethiopia. And East Africa has now emerged as the cradle of mankind. In West Asia a large number of cave sites were found in the Mount Carmel area. Then important discoveries were made at the open-air sites of Ubeidiya and Gesher Benot Ya'akov. In East Asia, the lead was taken by China and the famous discoveries of Peking Man were made at the cave site of Zhoukoudian. Likewise, discoveries of Java Man were announced from Indonesia.

It will be a pleasant surprise for you to know that Robert Bruce Foote of the Geological Survey of India found Palaeolithic sites near Madras (Chennai) in 1863, just four years after the birth of prehistory in Europe. And by the 1930s a four-fold Stone Age sequence was identified in the Kurnool area of Andhra Pradesh.

The continents of Australia and America also have Stone Age sites but these are chronologically much later and also the courses of cultural developments in these regions are somewhat different than those of the Old World comprising Africa, Europe and Asia.

1.3 MAN'S PLACE IN BIOLOGICAL EVOLUTION

In the evolutionary scheme the humans together with the apes, monkeys and prosimians belong to the Order Primates, which itself forms part of the Class Mammalia. The ancestor common to us and the African apes (our closest relatives living today) lived between 8 and 6 million years ago. The earliest creatures that branched off from this ancestor and paved the way for human evolution are called the hominins. The fossil discoveries from southern, eastern and central parts of Africa clearly show that between 6 and 2 million years ago more than a dozen hominin species existed, with evidence of bipedal posture and dental features more hominin and less ape-like. Among these the more common and widely known are the *Australopithecines* (Southern Apes), several forms of which appeared around 4 million years ago. These *Australopithecines* included both gracile and robust forms and the first stone tools appeared 2.5 million years ago.

Between 2 and 1.7 million years ago (the boundary between the geological periods called Pliocene and Pleistocene) another major development took place. This is the emergence of early forms of the genus *Homo*, known as the *Homo rudolfensis*, *Homo habilis* and *Homo ergaster*. These are characterised by larger brains (cranial capacity between 510 and 687 cc), smaller jaws and teeth, longer legs, shorter arms, and more dexterous hands with a longer thumb. From this stage developed the later hominin forms called *Homo erectus*, *Homo heidelbergensis*, *Homo neanderthalensis* and, finally, our own species *Homo sapiens* (Fig. 1.1).

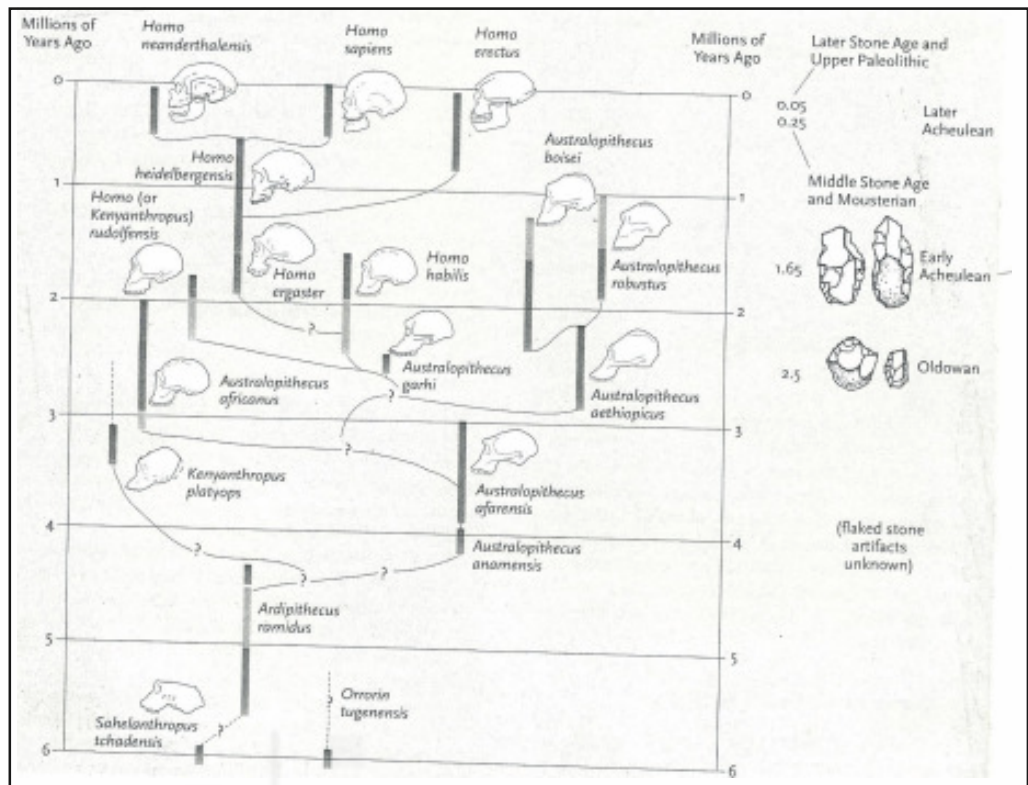


Fig. 1.1: Chart showing one interpretation of hominin biological and cultural evolution

1.4 EARLIEST STAGE OF HUMAN CULTURE IN THE OLD WORLD

With this knowledge of the biological basis of human lineage, we will briefly review the evidence pertaining to the cultural or behavioural aspects of this formative stage of human history. In Africa, the earliest known artificially modified objects of stone (i.e. stone tools) are found at Kadar Gona and Hadar in Ethiopia and are dated to 2.5 million years ago (Fig. 1.2).

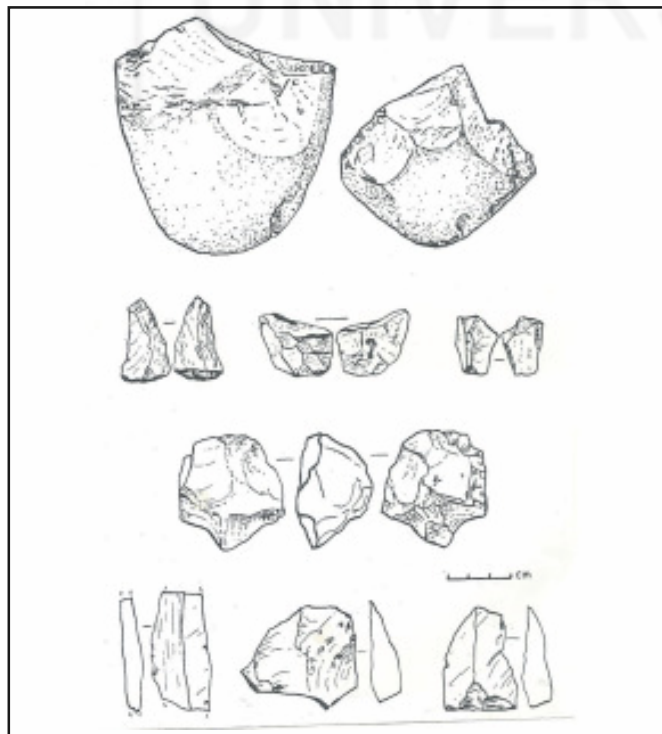


Fig.1.2: Stone artefacts (choppers/cores and flakes) dated to 2.5 million years ago from Hadar and Omo valley in Ethiopia

Even organic material like wood might have been employed but no traces have survived. More spectacular and authentic are the stone tools found in Bed I of the famous Olduvai Gorge site in Tanzania, dated to 1.85 million years ago. These artefact assemblages have been designated as the Oldowan industry by L.S.B. Leakey. It appears that members belonging to both *Australopithecine* and *Homo* lineages were responsible for these cultural assemblages representing the earliest stage of human inventory. These include *Australopithecus/africanus/aethiopicus/gorhi/boisei/robustus* and *Homo habilis/rudolfensis*. The artefacts themselves consist of types such as choppers, heavy scrapers, discoids, awls, polyhedrons, anvils, hammer stones, etc. (Fig. 1.3). The Oldowan tradition continued into later periods (Bed II at Olduvai Gorge) and this later tradition is called Developed Oldowan. The Oldowan sites tend to be concentrated close to river flood plains and channels, deltas and lake margins. These hominins probably formed themselves into small groups of about 30 individuals. They gathered wild plant foods and obtained animal foods either by hunting or scavenging.

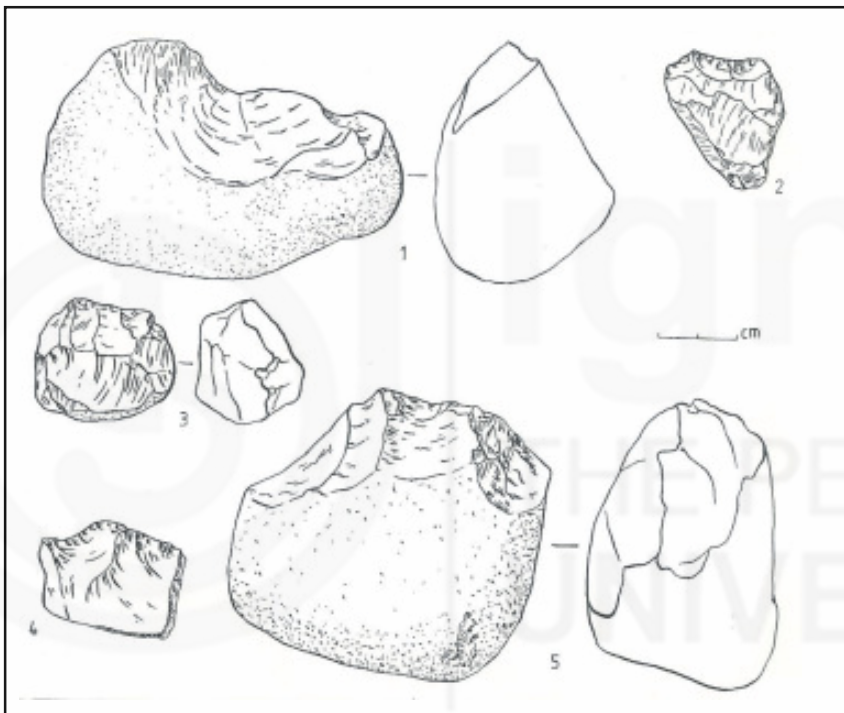


Fig.1.3: Stone artefacts of the Oldowan tradition dated to 1.85 million years ago from Olduvai Gorge in Tanzania: 1) unifacial chopper; 2) flake scraper; 3) light duty chopper; 4) utilised flake; 5) bifacial choppers.

The second major stage in cultural development came with the appearance of hominin species that anticipated living people in anatomy and cultural behaviour. This is called *Homo erectus* which appeared around 1.8 to 1.7 million years ago. Associated with this stage a new cultural tradition called the Acheulian appeared. It is named after the French site of St. Acheul where handaxes and cleavers characteristic of this stage were first found by Rigollot in 1854. Similar but somewhat cruder artefacts were found by another Frenchman Boucher de Perthes between 1836 and 1846 near the town of Abbeville in Northern France. In Africa, this tradition is best represented at Olduvai Gorge (Bed II), Olorgesailie, Koobi Fora, Kalambo Falls and Isimila and persisted from about 1.65 till 0.25 million years ago (Fig. 1.4). In the later stages of the Acheulian tradition, handaxes and cleavers became very refined and more symmetric in shape. Also flake-tools of refined forms (scrapers, points, etc.) appeared, foreshadowing the next cultural

stage called the Middle Palaeolithic which is associated with Neanderthal man and dated roughly between 0.25 million and 50,000 years ago. The Middle Palaeolithic tradition was followed by the Upper Palaeolithic stage attributed to *Homo sapiens*.

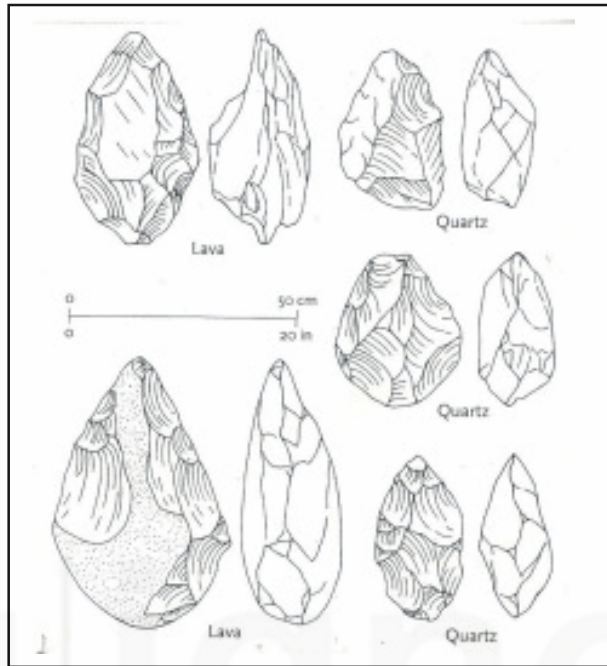


Fig. 1.4: Stone artefacts of the Acheulian tradition dated to 1.65 million years ago from Olduvai Gorge, Tanzania.

Now you will be curious to ask the question: When did the hominin occupation of other parts of the Old World take place? Since the end of the 19th century fossil remains of *Homo erectus* have been found in river deposits at Trinil, Mojokerto and Sangiran on the island of Java. These have been designated as Java Man or *Pithecanthropus erectus*. While some scholars hold that these are not older than 0.8 million years, others ascribe an antiquity of 1.65 millions to these findings. In China *Homo erectus* fossils are known from Zhoukoudian and Gongwangling; these are dated between 0.8 and 0.4 million years ago. The stone artefacts from Nihewan basin, some 150 km west of Beijing, have been dated to 1.6 million years ago, thereby implying human colonisation of Northeast Asia at an early date. Such a possibility gains in strength because of the existence of very early sites like Ubediya in Israel (dated between 1.4 and 1.1 million years ago) and Dmanisi in Georgia (dated to 1.8 million years ago) yielding stone artefacts, animal bones, and skulls and lower jaw of *Homo ergaster*. Considering that the Chinese tool assemblages consist of simple core tools (choppers and chopping tools) and flakes but lack true handaxes, in the 1940s, the late Professor Hallam L. Movius Jr. of U.S.A. drew a line through northern India to distinguish the handaxe or Acheulian tradition of Africa, West Asia and Europe from the pebble-tool tradition of Eastern and Southeast Asia. This is called the Movius Line.

What about the human occupation of the European continent? Thanks to the finding of a lower jaw at Heidelberg in Germany, representing a form of *Homo ergaster* called *Homo heidelbergensis*, it is known since long that a late form of the Acheulian culture spread from Spain and Italy to northern Europe by 0.5 million years ago. The human fossil remains and stone artefacts from cave deposits

of the Sierra de Atapuerca in Spain and human skull cap found at the site of Ceprano in Italy show that human colonisation of southern Europe was already underway by 0.8 to 0.9 million years ago. More recent stone artefact findings from Orce in Spain, Monte-Poggiolo in Italy and Pont-de-Lavaud in France show that this colonisation may have already been initiated between 1 and 1.4 million years ago.

So far we have examined the biological and cultural aspects of the Lower Palaeolithic stage in Africa, Europe, and East and West Asia. Let us now consider the evidence for this stage in South Asia.

1.5 GEOGRAPHICAL FEATURES OF INDIA

India (or South Asia, for general geographical and cultural purposes) is a distinct geographical entity at subcontinental level. It is a land of tremendous diversity, geographically, culturally and linguistically. Its principal geographical zones are the towering snow-clad Himalayas in the north; the Hindukush and Karakoram ranges in the northwest; the arid Thar desert of western Rajasthan; the fertile Indus and Gangetic alluvial tracts; the somewhat triangular-shaped peninsular tract flanked by the Sahyadris on the west and Eastern Ghats on the east; and the hill-tract of Northeast India. Each zone has tremendous variability in terms of landforms, soils, rainfall and vegetation.

In the Pleistocene, which has a duration about two million years, India was a part of global climate. Oxygen isotope studies of marine core-sediment samples have proved that the northern latitudes of the earth witnessed an alternation of nine or ten glacial and interglacial (cold and warm) periods. During glacial periods India experienced dry climate and weak monsoon, while interglacial periods were characterised by strong monsoon with high rainfall. The gravels and silt sediments preserved in the various river valleys in India do suggest a succession of wet and humid climatic phases.

The Indian landscape was endowed with all the prerequisites for a successful hunting-gathering way of life: suitable landforms permitting free movement of hunter-gatherer groups; occurrence of a variety of basic rocks and siliceous stones for making tools; existence of perennial water bodies in the form of a large and small streams and springs; and availability of a large variety of wild plant and animal foods. It is therefore not surprising that, barring the Himalayan tract proper and the Indo-Gangetic alluvial tracts, Stone Age groups occupied the whole of the Indian landmass. It is interesting that even the desertic zone of western Rajasthan was marked in the past with streams and pools and ponds which attracted Stone Age groups right from the Lower Palaeolithic till the Mesolithic stage.

1.6 CHANGING PERSPECTIVES IN INDIAN PALAEOOLITHIC RESEARCH

Robert Burce Foote, who joined the Geological Survey of India at Madras (Chennai) in 1858, almost single-handedly laid the foundations of prehistory in India (Fig. 1.5). He was inspired by the Royal Society's ratification of the findings of stone tools and animal fossils in England and the Somme valley of Northern France and started looking for similar Palaeolithic implements on the Indian soil.

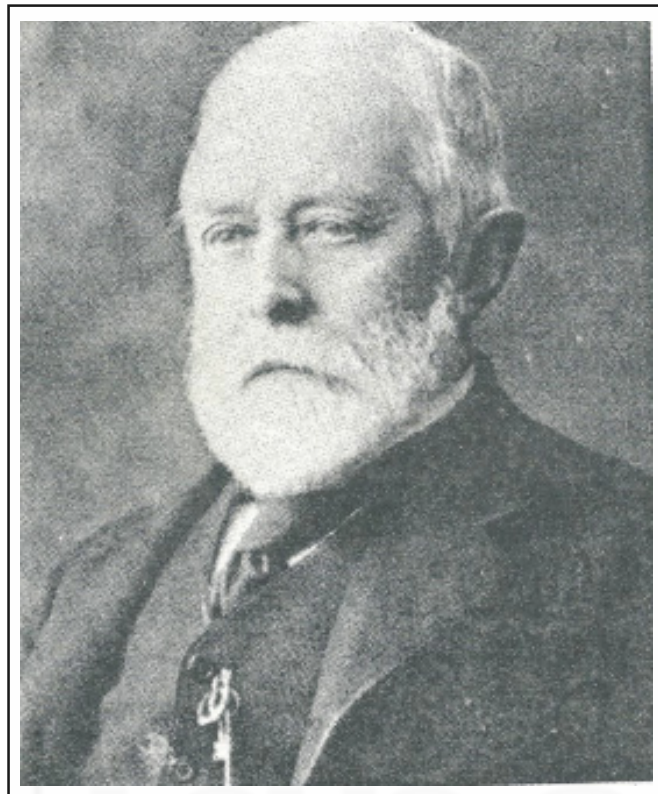


Fig. 1.5: Robert Bruce Foote (1834-1912), the Father of Indian Prehistory

He found the first group of implements at Pallavaram (now a suburb of Chennai) in May 1863 and continuously followed up this discovery for nearly three decades. In the course of his geological surveys in South India and Gujarat he discovered nearly 400 sites and classified them under the Palaeolithic, Neolithic and Iron Ages. In the elaborate Introduction of his publication about these sites which he prepared in 1916, Foote made many insightful observations about the life and times of Palaeolithic societies.

Robert Bruce Foote, a British geologist joined the Indian geological survey in 1858, then after the establishment of archaeological survey of India in 1862, Boote began the systematic research of human prehistoric remains in India. He discovered the handaxe in southern India at a place called Pallavaram near Chennai.

The next major development took place in 1930. Based upon the stratigraphical evidence of gravels and silts recorded in the rivers of Eastern Ghats in Kurnool area of Andhra Pradesh and also considering the typological aspects of stone tool assemblages recovered from these deposits, L.A. Cammiade (a District Collector) and M.C. Burkitt of Cambridge University proposed that Southeast India witnessed a four-fold Stone Age sequence. They designated these stages as Series I to IV, which broadly correspond to Lower, Middle and Upper Palaeolithic, and Mesolithic stages, respectively. In the next four decades similar stratigraphical and typological studies were carried out in different regions of the country. H.D. Sankalia and his colleagues and students at the Deccan College, Pune, played a pivotal role in these studies. Sankalia's book *Prehistory and Protohistory in India and Pakistan* (1974) provides an elaborate synthesis of the results.

Since the 1970s new perspectives were developed in Stone Age research. These were aimed at rising above classificatory studies of stone tools and making inferences about the behavioural patterns of hunter-gatherer communities. Emphasis now began to be laid on intensive regional surveys aimed at the identification of *in situ* or primary sites of all sizes and kinds. Settlement system approach was adopted to relate the sites to respective landscape settings. Emphasis was also laid on the identification of formation processes of sites. Analogies were sought from ethnographic and experimental studies. In tune with these new perspectives many fresh studies including the excavation of primary sites and ethnographic research about the exploitation of wild plant and animal foods were undertaken in Kurnool and Cuddapah basins of Andhra Pradesh, Kortallayar valley of Tamil Nadu, Kaladgi and Bhima basins of Karnataka, Western Deccan plateau, Central India, Rajasthan and Chhota Nagpur area.

1.7 PHASES WITHIN THE PALAEOOLITHIC AND DATING

For some time after Independence archaeologists expressed doubts about the existence of an Upper Palaeolithic stage in India. But excavations in Kurnool caves in Andhra Pradesh, Bhimbetka caves in Madhya Pradesh, and at the open air sites of Renigunta in Andhra Pradesh and Patne in Maharashtra, have revealed clear-cut cultural levels of this stage. So the Indian Palaeolithic can now be safely divided into three developmental stages: Lower, Middle and Upper. The Lower Palaeolithic has two cultural traditions, viz. the Soanian pebble-tool tradition and the peninsular Indian handaxe-cleaver tradition. These traditions involved the use of large pebbles or flakes for making choppers and chopping tools, handaxes, cleavers, knives, etc. The Middle Palaeolithic is based on the use of a variety of flakes struck from cores for preparing scrapers, points, borers and other tools. Further refinements came in the Upper Palaeolithic stage. Now implement types like blunted and penknife blades, blades with serrated edges and arrow points are made on long parallel-sided blades struck in a series from cylindrical cores by punch technique.

For a long time the topic of dating these stages within the Palaeolithic remained at the level of assigning relative ages to them on the basis of stratigraphical positions of tool-assemblages found in river-bank sediment profiles. Happily, during the last quarter-century it has been possible to date some of the sites in absolute terms by means of scientific dating techniques such as the radiocarbon, palaeomagnetism, thermoluminescence, potassium argon, argon argon and uranium thorium.

At Riwat near Peshawar in Pakistan a flaked pebble and some other artefacts were found in a cemented gravel occurring at the base of a 70 m deep section within the Siwalik sediments (Fig. 1.6). This gravel has been dated to 1.9 million years ago (revised to 2.5 million years) on the basis of palaeomagnetism. Likewise, at Uttarbaini in Jammu some nondescript artefacts were found in Siwalik sediments which have been assigned an age of 1.6 million years (revised to 2.8 million years) by fission track method. Although some doubts are expressed about these dates, these sites are presently the earliest known archaeological sites in India.

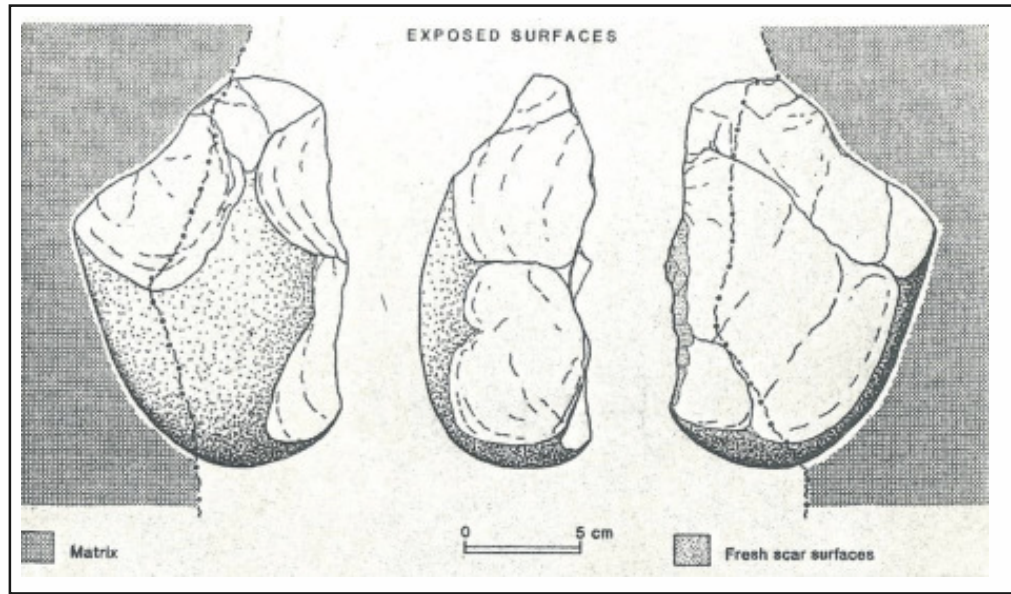


Fig. 1.6: Flaked artefact of quartzite dated to 1.9 million years ago from Riwat in Pakistan

The site of Isampur in North Karnataka has given a date of 1.2 million years on enamel of animal teeth, obtained by means of electron spin resonance method. This is the earliest known Acheulian site in the subcontinent. Other Acheulian sites such as Dina and Jalalpur in Pakistan, Didwana (Rajasthan), Umrethi and Adi Chadi Wao (Gujarat), Nevasa, Bori and Morgaon in Maharashtra, and Sadab, Teggihalli and Yedurwadi in Karnataka have produced dates on materials like calcretes, milliolites and volcanic ash. These range between 0.7 and 0.2 million years, thereby suggesting that the Acheulian culture persisted for one million years.

Absolute dates are available for the Middle Palaeolithic sites of Didwana (Rajasthan), Kalpi (U.P.), Jetpur (Gujarat), Dhom and Mula Dams (Maharashtra) and Jwalapuram (Andhra Pradesh). These dates range from 1,65,000 years to 31,000 years B.P.

More than one dozen dates obtained by thermoluminescence and radiocarbon methods are known for the Upper Palaeolithic sites in Andhra Pradesh, Maharashtra, Madhya Pradesh and Rajasthan; these range from 40,000 years to 11,000 years B.P.

1.8 ARCHAEOLOGICAL RECORD OF THE PALAEOLITHIC

Let us now examine the nature of archaeological record (i.e. the traces of human habitation that survived the ravages of time) of this period. Palaeolithic sites are of two principal types: open air sites and caves or rockshelters. Open air sites are more common in all parts of India and occur on or close to large and small rivers and also in interior basins or valleys and foothill zone of hill ranges. They represent various formation processes ranging from true *in situ* or undisturbed sites found on weathered bedrock or else in soft silts to occurrences in colluvial and river-borne gravels. Cave and rockshelter sites occur in hilly areas covered with sedimentary rocks (sandstones and limestones). Bhimbetka complex in Madhya Pradesh and Kurnool caves in Andhra Pradesh are well-known examples. Sanghao cave in Pakistan and Batadomba and Beli-lena Kitulgala in Sri Lanka are some other famous cave sites. The principal aspects of cultural record found at these sites are as follows:

- 1) The record basically consists of stone tools made of basic rocks (quartzite, dolerite, granite and limestone) and siliceous materials like cherts and chalcedonys.
- 2) The earliest known wooden artefacts consist of spears of spruce found at Schöningen in Germany. These are dated to 0.4 million years ago and were used for hunting horses (Fig. 1.7). Wood might have been used for shaping spears, points and arrows in India too, and for that matter in many parts of the world, but nothing has survived. Tools made of animal bones are known from a few Palaeolithic sites e.g. Middle Palaeolithic site at Kalpi in the Yamuna valley and Upper Paleolithic caves in the Kurnool area.

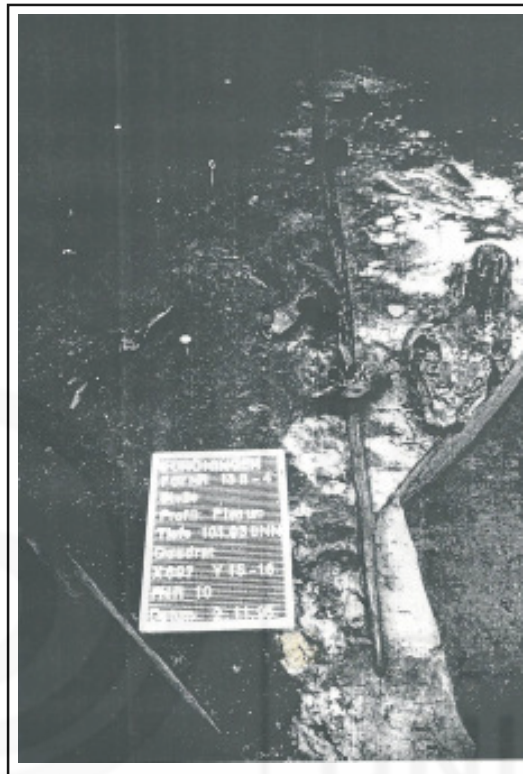


Fig. 1.7: Hunting spears of spruce wood dated to 0.4 million years ago from Schöningen in Germany

- 3) Apart from fossil faunal collections from river sediments and Kurnool caves, small amounts of bones of wild cattle, deer and other animals are found in association with cultural material, e.g. Acheulian sites in the Hunsgi and Baichbal valleys of Karnataka.
- 4) Plant remains are extremely rare. Remains of wild bread fruit and two types of banana occur at the Beli-lena Kitulgala cave in Sri Lanka (dated to 10,000 to 8,000 B.C.). Gesher Benot Ya'akov in Israel (dated to 0.8 million years ago) has yielded remains of a variety of wild nuts with evidence of fire treatment. Evidence of fire in the form of a hearth is known from Upper Palaeolithic caves in the Kurnool area and is dated to about 16,000 years ago.
- 5) Human skeletal remains are known from Hathnora on the Narmada river, but these are more common from the Mesolithic stage.
- 6) Some of the paintings from Bhimbetka and other caves may date to the terminal phase of the Upper Paleolithic. Personal ornamentation in the form of bone beads and pendants appears in the Upper Palaeolithic phase at Patne and other sites in Western India.

- 7) Structural remains consisting of ground plans of hut-like dwellings were exposed from the Acheulian levels at Hunsgi in Karnataka and Pairsa in Bihar and the Upper Palaeolithic site No.55 near Riwayat in Pakistan. Also a shrine-like rubble platform of stone, meant for the worship of a natural stone block with bright-coloured laminations as the manifestation of mother goddess, was found at the Late Palaeolithic site of Baghor in Madhya Pradesh.

1.9 LOWER PALAEOOLITHIC STAGE IN INDIA

As we have noted earlier, the Lower Palaeolithic phase in India (see map of sites in Fig. 1.8) consists of two principal tool-making or cultural traditions, viz., a) the Soanian tradition forming part of the East and Southeast Asian chopper-chopping tool tradition and b) the Handaxe-cleaver or biface assemblages constituting the Acheulian tradition, which is widely known from the western half of the Old World (Africa, Western Europe, West and South Asia). Movius Line formalised the geographical dichotomy between these two Palaeolithic traditions of the Old World.

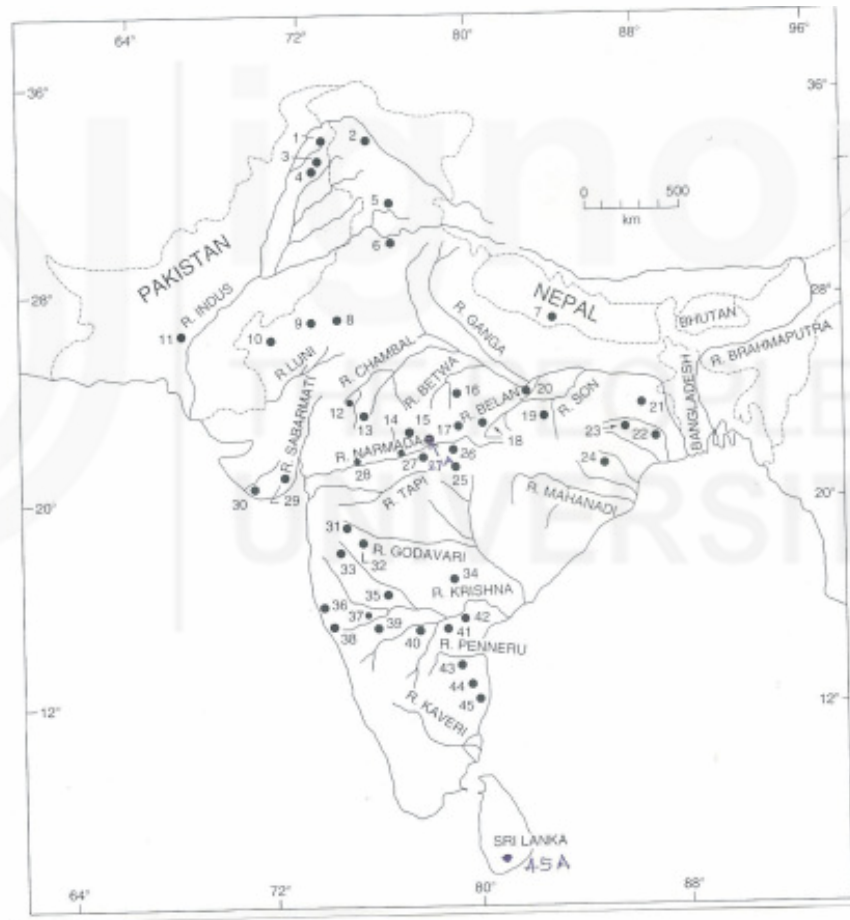


Fig. 1.8: Important Lower Palaeolithic sites in South Asia: 1) Riwayat; 2) Pahlgam; 3) Jalalpur; 4) Dina; 5) Beas-Banganga complex; 6) Sirsa-Ghaggar complex; 7) Dang-Deokhuri complex; 8) Didwana; 9) Jayal; 10) Jaisalmer-Pokaran Road; 11) Ziarat Pir Shaban; 12) Berach complex; 13) Chambal complex; 14) Bhimbetka; 15) Raisen complex; 16) Lalitpur; 17) Damoh complex; 18) Son complex; 19) Sihawal; 20) Belan complex; 21) Sisunia, 22) Singhbhum complex; 23) Pairsa; 24) Brahmani complex; 25) Wainganga complex; 26) Mahadeo Piparia; 27) Adamgarh; 27A) Hathnora; 28) Durkadi; 29) Samadhiala; 30) Umrethi; 31) Gangapur; 32) Chirki-Nevasa; 33) Bori; 34) Nalgonda complex; 35) Hunsgi and Baichbal basins complex; 36) Mahad; 37) Anagwadi; 38) Malwan; 39) Lakhmapur; 40) Nittur; 41) Kurnool complex; 42) Nagarjunakonda complex; 43) Cuddapah complex; 44) Rallakalava complex; 45) Kortallayar complex; 45A) Ratnapura complex.

1.9.1 The Soanian Cultural Tradition

The existence of this tradition was recognised in 1939 by H. de Terra of Yale University and T.T. Paterson of Cambridge University in the northwestern part of the subcontinent. On the basis of their field studies in the area they identified a series of five terraces on the river Soan, forming part of the Indus drainage system. They correlated these terraces with glacial and interglacial events of the Kashmir valley above. Further they collected stone artefacts from some of these terraces and, on stratigraphical and typological considerations, put up what has come to be called the Soan culture-sequence, comprising pre-Soan, Early Soan, Late Soan and Evolved Soan stages (Fig. 1.9). The tools consist of pebbles with working edges on their sides or ends, obtained by means of flaking from one or both surfaces (producing choppers or chopping tools) (Fig.1.10). The British Archaeological Mission led by Robin Dennell, which worked in this area (now in Pakistan) in the 1980s, raised serious doubts about the palaeoclimatic interpretations and cultural sequence put forward by de Terra and Paterson. But the term Soan culture has stuck on in Indian prehistory.

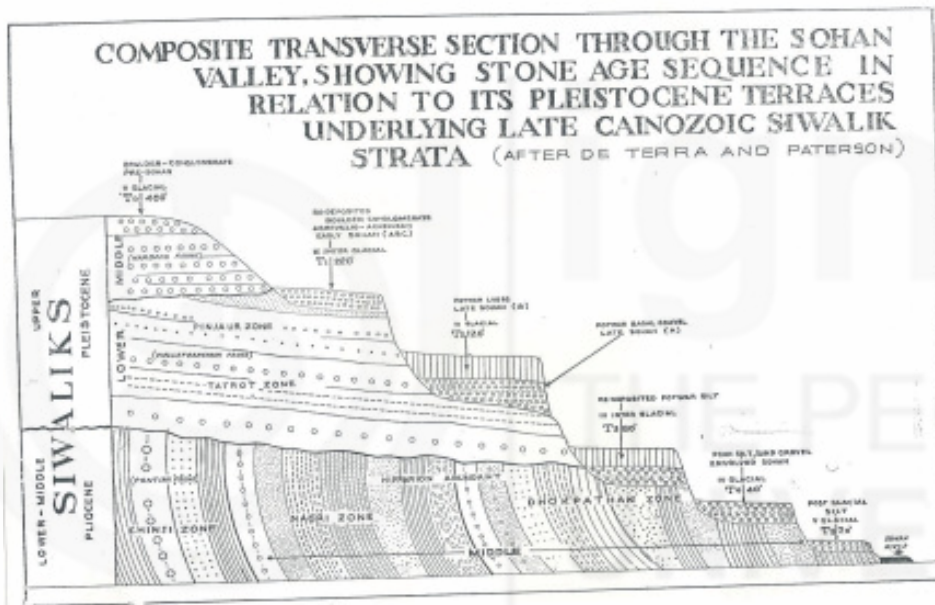


Fig. 1.9: Schematic section showing terrace stratigraphy and Stone Age sequence in the Soan valley of Pakistan

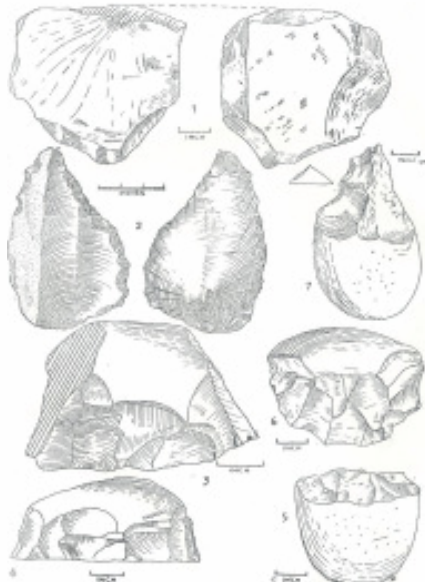


Fig.1.10: Choppers and flake tools of the Early Soan tradition

From the Indian side of the border, pebble-tool assemblages were found in the Sirsa and Ghaggar valleys of Haryana, Beas and Banganga valleys of Himachal Pradesh, and Hoshiarpur-Chandigarh sector of the Siwalik Frontal Range (Fig. 11). Curiously enough, bifacial assemblages were also found at more than 20 places in the latter area. This led some scholars to the interpretation that the hominin groups responsible for these two traditions co-existed in the same area – the Soanian tradition confined to duns or valleys of the Frontal Range and the biface tradition restricted to plateau surfaces. The Soan assemblages from Punjab have been assigned by some workers to the Middle Palaeolithic tradition.

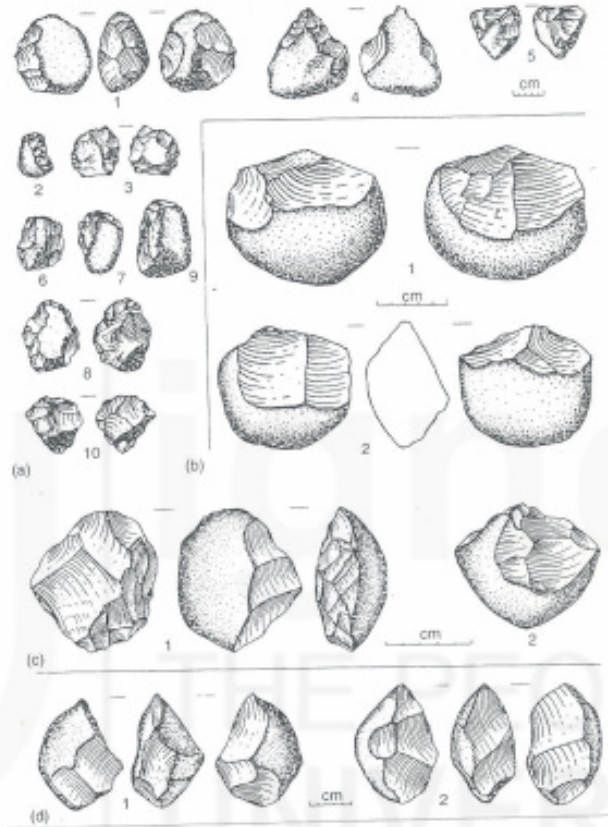


Fig.1. 11: Pebble-tools from Lower Palaeolithic sites in India: a) Nittur, Karnataka; b) Jaiselmer-Pokaran Road, Rajasthan; c) Sirsa valley, Haryana; d) Mahadeo Piparia, Madhya Pradesh.

In recent years the German archaeologist Gudrun Corvinus reported Soanian-like assemblages from the Dang valley in Nepal. Also claims of pebble-tool industries called the Mahadevian and the Durkadian have been put forward from the Narmada valley. Pebble tools have also been reported from Nittur in Karnataka and from some sites in Kerala. But all these findings still remain to be confirmed. The Ratnapura assemblages from Ratnapura gravels and silts in southern Sri Lanka also contain both pebble tools and bifacial artefacts.

1.9.2 The Acheulian Cultural Tradition

This tradition is better documented than the Soanian from the points of view of chronology, spatial distribution of sites and land use patterns. Large clusters of sites are known from the Kortallayar valley of Tamil Nadu, Kurnool and Cuddapah basins of Andhra Pradesh, Kaladgi and Bhima basins of Karnataka, Chhota Nagpur zone of Bihar and Jharkhand, hill-tracts of Uttar Pradesh south of the Ganges, Narmada and Son valleys of Madhya Pradesh, Saurashtra and mainland

Gujarat, the plateau tract of Maharashtra, Rajasthan including the desertic zone in the west, Aravalli ridges near Delhi, and the Siwalik zones of Punjab and Nepal. Some sites are also known from the Konkan coast and the northeastern coast of Andhra Pradesh.

Quartzite was the preferred rock for tool-making. Where it was not naturally available, the Acheulian groups made use of other available rocks like limestone in the Bhima basin, dolerite and basalt in Maharashtra, granite in Jhansi district of Uttar Pradesh, and fossil wood in Bihar and Bengal. Stone hammer, soft hammer and prepared core techniques were employed for detaching flakes and shaping them into implements. We will now briefly consider the evidence from major excavated primary sites.

1.9.2.1 Important Sites

Singi Talav (western Rajasthan) was a lake-shore site excavated by V.N. Misra and his team. This site yielded an assemblage of 252 artefacts of quartzite and quartz from two levels of silty clay. The assemblage comprised choppers, polyhedrons, bifaces, scrapers and points.

Rock-shelter III F-23 at Bhimbetka in Madhya Pradesh was also excavated by V.N. Misra. It preserved 4 m thick cultural deposit containing Acheulian, Middle and Upper Palaeolithic, and Mesolithic levels. The 2.5 m thick Acheulian level consisted of occupation levels paved with stone slabs and rubble. An excavated area of 16 m² yielded 4700 artefacts of quartzite. Adamgarh (also in Madhya Pradesh) also exposed an Acheulian level below Middle Palaeolithic deposits. Lalitpur (Jhansi district, U.P.) produced an early and *in situ* assemblage made up of granite tools.

Paisra (Munger district, Bihar) lies in an inland valley enclosed by hills forming part of the Kharagpur range. It was excavated by R.K. Pant and Vidula Jayaswal and exposed Acheulian levels below 1 to 1.5 m thick colluvial deposits. In addition to a large assemblage consisting of early Acheulian artefacts, the excavation exposed remains of hut-like dwelling structures in the form of alignments of post-holes and a circular arrangement of stone blocks.

At Chirki-Nevasa (Maharashtra) Gudrun Corvinus found the Acheulian cultural material in a colluvial gravel resting on a rock platform on the river Pravara. Trench VII (74 m² in extent) excavated here yielded 1455 artefacts of dolerite along with fossil bones of wild cattle and other animals. The large basalt blocks found in this layer probably formed part of the ground plan of a dwelling structure. The site was a seasonal camp used for multiple purposes. The artefactual collection included handaxes, cleavers and knives as well as a small-tool component made up of flake-tools of chert and chalcedony.

Morgaon is another important site from the Deccan basalt landscape; it is located in the upper reaches of the Bhima drainage system. It has preserved 2 to 15 m thick ancient sediments including a tephra (volcanic ash) layer. A trench (6 x 4 m) excavated by Sheila Mishra and Sushma Deo between 2002 and 2004 yielded artefacts from three horizons. The main horizon consisted of weathered basalt rubble found on surface of clay and produced 180 artefacts of local basalt. A second trench (5 x 5 m) dug in 2007 yielded an assemblage of 162 specimens including cleavers and handaxes.

Four Acheulian localities were excavated by K. Paddayya in the Hunsgi and Baichbal valleys of North Karnataka. Localities V and VI at Hunsgi in the Hunsgi valley and Locality VI at Yediyapur in the Baichbal valley preserved 20 to 30 cm thick *in situ* cultural levels on weathered bedrock (granite); these were covered by silt deposit measuring up to 50 cm in thickness. Rocky eminences or ridges above the beds of local streams were selected for camping and the open spaces found on these ridges were used for the erection of temporary shelters consisting of a framework of wooden posts and branches covered with grasses. The main trench (63 m²) at Hunsgi locality V yielded an assemblage of 291 artefacts of limestone. Yediyapur locality VI yielded nearly 600 artefacts of pegmatite from an excavated area of 60 m².

At Isampur in the Hunsgi valley K. Paddayya's detailed geoarchaeological investigations and excavations exposed a quarry-cum-camp site covering an area of three-quarters of a hectare. It is associated with a weathered rock outcrop made up of silicified limestone blocks of suitable sizes and shapes. It lay close to a palaeochannel with a perennial body of water. Five trenches were excavated here, covering an area of 169 m². The Acheulian level was 20 to 30 cm thick and was covered by 50 cm thick brown silt. Trench 1 (70 m² in extent) exposed seven chipping clusters containing unmodified limestone blocks, cores, flake blanks, finished implements and waste products of limestone, all found in mint-fresh condition (Figs. 1.12 and 1.13). Hammerstones required for flaking were acquired from the surrounding area in the form of rounded nodules of quartzite, basalt and chert. This trench yielded an assemblage of over 15,000 specimens, which made it possible to reconstruct the flaking methods adopted by the hominins for making handaxes, cleavers, knives and other implement types. Isampur excavation also yielded fossilised bones and dental remains of wild cattle and deer and shell fragments of land turtle. Isampur served as a localised hub in this part of the Hunsgi valley, from where the hominins radiated onto the surrounding limestone tablelands and valley floor as part of their daily foraging rounds.



Fig.1.12: Acheulian horizon exposed in Trench 1 at Isampur, Karnataka

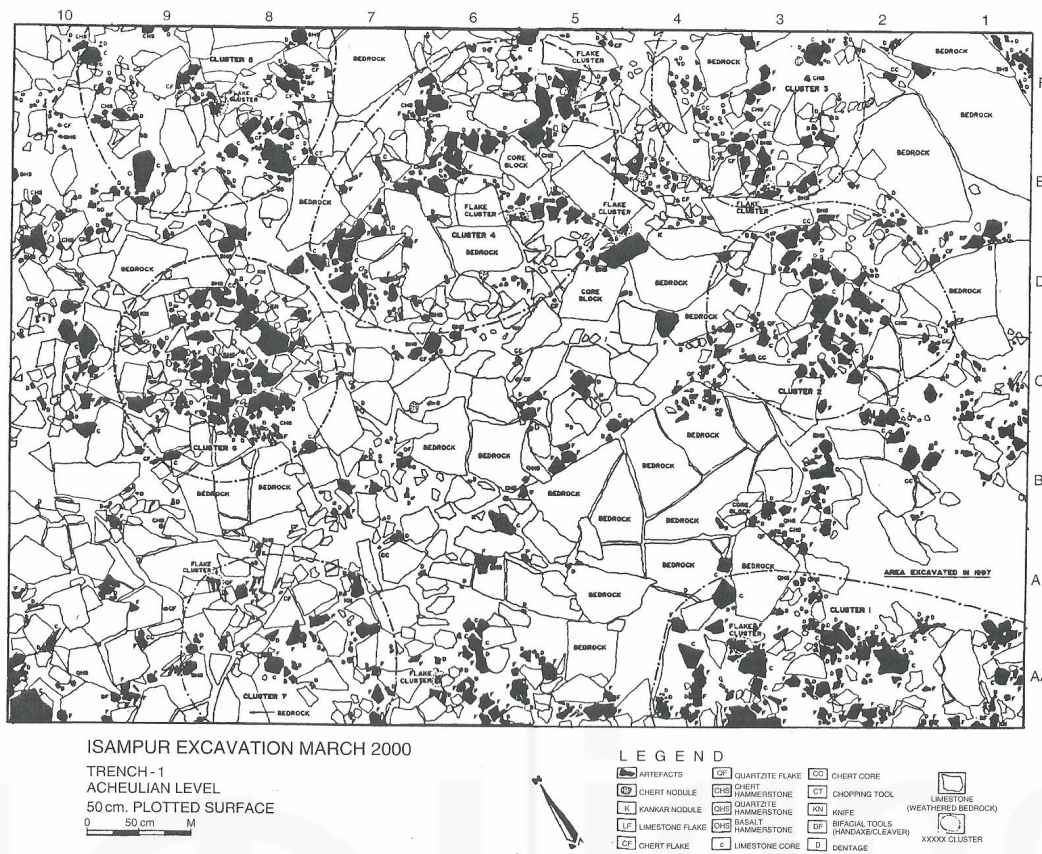


Fig.1.13: Acheulian chipping clusters for making stone artefacts exposed in Trench 1 at Isampur in Karnataka

Shanti Pappu's investigations in 200 km² area of the Kortallayar valley in Tamil Nadu brought to light many Acheulian and Middle Palaeolithic sites. The Acheulian sites at Mailapur and Pariculam are associated with low energy stream and sheet flood deposits. In the excavations at Attirampakkam an *in situ* Acheulian assemblage of quartzite was found in a thick layer of laminated clay; it also yielded fossilised bones of wild cattle and other species. This site has recently been dated to 1.5 million years by an advanced scientific technique.

1.9.2.2 Stages within the Acheulian Tradition

Although not documented stratigraphically at any one particular site, the Acheulian culture with a duration of nearly one million years has been divided into two developmental stages – Early Acheulian and Late Acheulian. The Early Acheulian assemblages are based on the employment of stone hammer technique. Hence handaxes, cleavers and large cutting tools are thick with irregular cross-sections and sinuous edges. Their surfaces are uneven and still retain large patches of cortex. Cleavers, handaxes, picks, knives, and polyhedrons are the principal types. Pointed shapes (pear-shaped, lanceolate and pyriform) are in a majority. This stage is represented by sites like Ziarat Pir Shaban in Sind, Singi Talav and 16 R Trench near Didwana in Rajasthan, Lalitpur, Chirki-Nevasa and Morgaon, Paisra, Attirampakkam, Hunsgi, Yediyapur and Isampur. As an example of assemblage composition, one may cite the collection from the bottom 10 cm portion of cultural deposit found in Trench 1 at Isampur. It is a limestone assemblage consisting of 13,043 specimens – 169 specimens being shaped implements and the rest simple artefacts. The shaped implements include handaxes (48), cleavers (15), knives (18), chopping tools (14), discoids (3), scrapers (65), perforators (5) and one indeterminate example (Fig. 1.14).

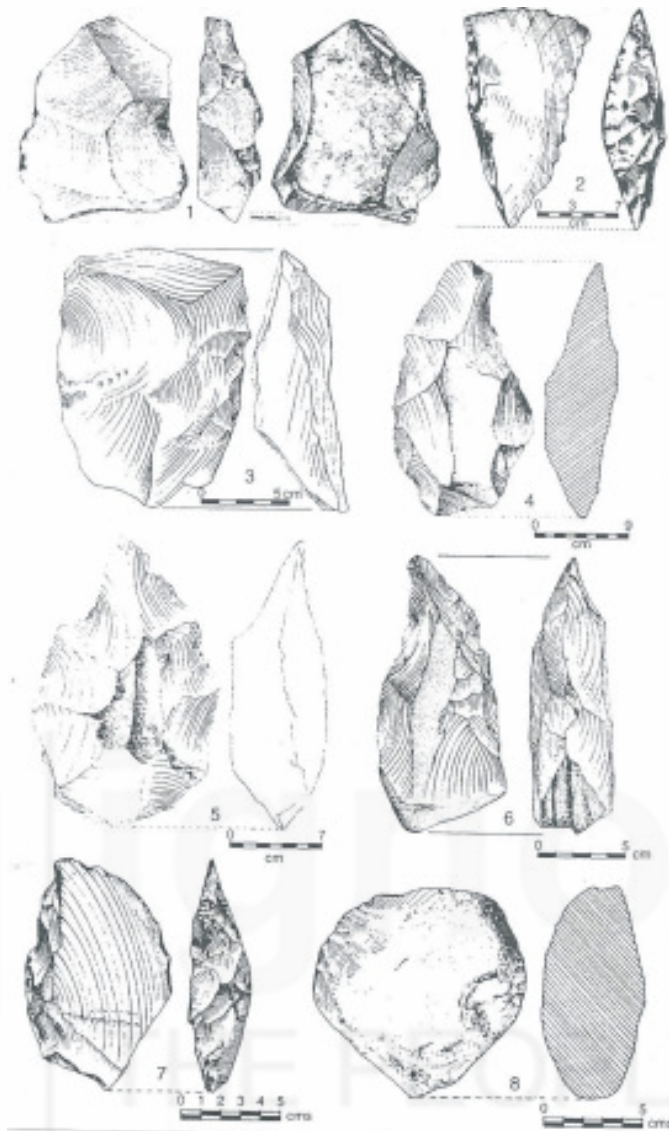


Fig.1.14: Lower Acheulian artefacts from Isampur, Karnataka: 1) core; 2&3) cleavers; 4&5) handaxes; 6) perforator; 7) knife; 8) hammerstone

The Late Acheulian is characterised by the use of soft hammer (wood or bone) technique, leading to the preparation of implements with thinner sections, smooth surfaces and less sinuous working edges. There is an increase in the number of cleavers and flake tools. Oval and triangular forms are common among handaxes. The assemblages from Bhimbetka and Raisen complex in Madhya Pradesh, Sihawal II in the Son valley, Gangapur in Maharashtra, Mudnur X and Lakhmapur in Karnataka, and the Rallakalava complex in Chittoor district of Andhra Pradesh are good examples of this stage. Some of the artefacts from the Ratnapura assemblages of Sri Lanka show Late Acheulian traits. Finished tools (all of quartzite) from III F-23 rockshelter excavation at Bhimbetka comprise handaxes (55), cleavers (150), side-scrapers (368), end-scrapers (108), backed knives (163), truncated flakes and blades (87), notches (111) and denticulates (78) (Fig. 1.15). In many ways the Late Acheulian tradition already foreshadows the flake-tool assemblages of the succeeding Middle Palaeolithic cultural stage.

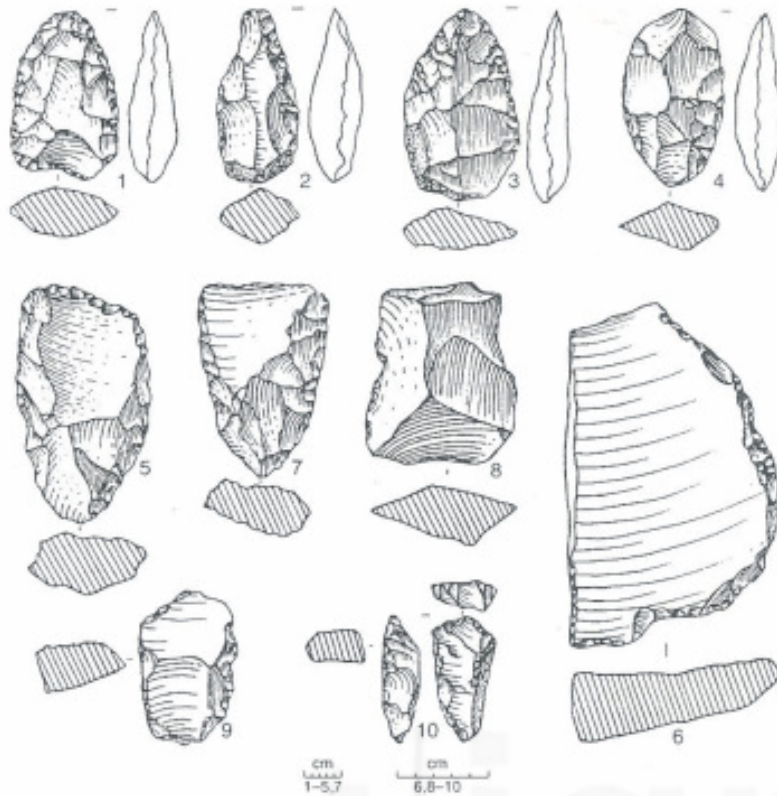


Fig.1.15: Developed Acheulian artefacts from III F-23 rock shelter at Bhimbetka, Madhya Pradesh: 1 to 4) handaxes; 5 & 7) cleavers; 6) convex scraper; 8) notched tool; 9) denticulate; 10) end-scraper

1.9.2.3 Hunting and Foraging

We have already noted that the entire Palaeolithic stage was characterised by a simple economic organisation consisting of hunting of wild animals and gathering of wild plant foods. Based upon the widely accepted premise that the various ecological or geographical zones of India supported rich animal life and vegetation in the Pleistocene periods we can safely infer that a wide spectrum of animal and plant foods was available for exploitation by the Stone Age groups. The archeological record does give us some interesting clues in this regard.

Since the middle of the last century large collections of fossil fauna of mammals have been obtained along with stone tools from the Narmada, Godavari, Krishna and other rivers. These findings gave rise to interpretations that Early Man was exploiting wild cattle, deer and other mammals for food purposes. This interpretation is now supported by the recovery of dental and post-cranial bone pieces of wild cattle and deer species, dental remains of wild horse and tusk pieces of wild elephant from primary Acheulian sites at Isampur, Teggihalli, Hebbal Buzurg and Fatehpur in the Hunsgi and Baichbal valleys, Chirki-Nevasa in Maharashtra, Attirampakkam in Tamil Nadu and other sites. Cut-marks and other taphonomic marks found on these bones indicate that these pieces formed part of food-processing and consumption. These skeletal remains either belonged to hunted prey or else were partly scavenged from kill-sites of carnivorous animals. Further, the occurrence of turtle shell pieces at sites like Isampur suggests that the Stone Age groups also exploited a variety of small fauna comprising insects, birds, fishes, rodents and amphibians by adopting simple collection strategies.

Now there is a worldwide realisation that plant foods also played an important role in the diet of Stone Age groups. Actually speaking, D.D. Kosambi already pointed out in 1965 that the Stone Age communities of tropical zones like India would have extensively made use of wild plant foods like fruits, berries, seeds and roots. Prehistorians have now realised the importance of looking for plant remains from Stone Age sites. M.D. Kajale recovered remains of wild bread fruit and two species of banana from Mesolithic levels (10,000 to 8,000 B.C.) of the cave site of Beli-lena Kitulgala in Sri Lanka. Also ethnoarchaeological studies conducted by M.L.K. Murty and D.R. Raju in the Eastern Ghats of Andhra Pradesh, K. Paddayya in Hunsgi and Baichbal valleys, and V.N. Misra and Malti Nagar in Madhya Pradesh have brought to light exploitation on a large scale of a wide variety of leafy greens, tubers and other root crops, fruits and berries, seeds and gums by tribal groups like the Chenchus, Yanadis and Gonds and also by the underprivileged sections of village communities.

1.9.3 Settlement Patterns

Some of the studies undertaken in recent years have proved to be helpful in the reconstruction of Stone Age land use patterns. The following deserve attention.

In 2004, R. Korisettar put forward the view that the sedimentary rock formations of peninsular India, viz. the Vindhya, Chhattisgarh, Cuddapah, Bhima and Kaladgi formations, were the core areas of Stone Age settlement. The principal reason put forward by him was that these areas offered many advantages to Stone Age groups, e.g. basin-shaped landforms, a variety of suitable rocks for tool-making, presence of caves and rockshelters, perennial water springs, and rich biomass with a variety of wild life and plant foods. This is a very useful proposition but needs some qualifications. First, erosional basins are very limited in extent in these geological formations which themselves cover very extensive areas. Secondly, erosional basins also occur in areas covered with Archaean and Deccan Trap formations e.g. Bhima and Ajanta basins in the Deccan Trap zone of Maharashtra and Sandur basin in the Archaean formations of Bellary area in North Karnataka, both containing a large number of Stone Age sites. Many such basins are found in other areas also.

In 1970s Jerome Jacobson identified as many as 90 Late Acheulian sites in a small valley enclosed by sandstone hills in the Raisen district of Madhya Pradesh. These probably represent winter-season occupation and the hunting groups moved to caves and rock-shelters of the adjacent Bhimbetka hills in the rainy season.

In 2004-2005, Ajith Prasad located a cluster of 40 Acheulian sites in a 300 km² stretch of the middle reaches of the Orsang river in Gujarat. These are primary context sites located in the foothill zone of hills or along the small feeder streams. A few sites were found around natural depressions on the landscape preserving water bodies till March. Also 70 types of wild plant foods were noted in the area.

The team led by V.D. Mishra and J.N. Pal found 17 Acheulian sites on the slopes of hillocks and rock outcrops marking the fringe of Kaimur range and overlooking the Belan river. Quartzite between available and rocks these are workshops where locally available rocks were used for tool-making. Their locations were suitable for the hominin groups to observe movement of game.

Pant and Jayaswal's work in the Paisra valley (15 km² in extent) of Bihar has revealed that a two-kilometer area around Paisra village served as the locus for camp-based activities. Many thin scatters of artefacts found in the surrounding uplands were interpreted as resource-procurement locations. The Paisra valley even today supports rich wild life and a variety of plant foods.

In the 1990s, R.S. Pappu and Sushma Deo investigated the Stone Age land use patterns in the Kaladgi basin of North Karnataka. They arrived at the inference that the Stone Age groups generally avoided the thickly forested and high rainfall tracts close to the Western Ghats and instead concentrated their activities on river banks and in foothill zone of hills in the middle reaches of the rivers Malaprabha and Ghataprabha.

K. Paddayya's three-decade long research since 1970 in the Hunsgi and Baichbal valley brought to light over 400 Stone Age sites. These two valleys form an erosional basin, which measures about 500 km² in extent and is enclosed by shale-limestone tablelands or granite hills. The Stone Age sites include 200 Acheulian sites which were investigated from the point of view of formation processes. Data pertaining to their distribution on the basin floor, excavation at four localities near Hunsgi, Yediyapur and Isampur, and ethnographic data about seasonal availability of surface water sources as well as wild plant and animal foods made it possible to reconstruct the Acheulian culture from a settlement system perspective. This reconstruction is briefly as follows.

Two features are striking about the distribution of sites across the basin floor. First, two major clusters of sites are noted – one near Hunsgi in the Hunsgi valley and the second one near Yediyapur in the Baichbal valley. Each cluster consists of 15 to 20 localities spread over a stretch of 2 or 3 km and both clusters are associated with perennial water sources resulting from seep-springs which emanate from the junctions of rock formations and antedate Stone Age occupation. The remaining sites were found in a scattered way all over the basin floor. Considering this differential distribution in conjunction with seasonal availability of water sources as well as wild plant and animal foods, it was inferred that the Acheulian settlement system of the area hinged upon two main seasonal resource management strategies. These are a) dry season aggregation of all Acheulian groups near perennial water pools (fed by seep-springs) in the two basins and probable reliance on large game hunting; b) wet season dispersal of the population in the form of small bands across the basin floor, dependence on shallow rainwater pools, and exploitation of a variety of seasonally abundant plant foods consisting of leafy greens, fruits, berries and seeds, and small fauna. It has further been inferred that for short-term or day-to-day purposes the Acheulian population organised itself into eight or nine groups or home ranges and occupied different parts of the basin.

1.9.4 Non-utilitarian Behaviour

Archaeological record has also preserved some strands of evidence regarding non-utilitarian aspects of the behaviour of Lower Palaeolithic groups such as cognitive and artistic abilities and personal ornamentation.

Bringing tenets of genetic epistemology developed by the Swiss psychologist Jean Piaget to bear on Stone Age technology, Thomas Wynn pointed out that the preparation of handaxes and cleavers reflects the employment of developed

cognitive principles of reversibility and whole-part relations. Developed cognitive abilities are also reflected in many aspects of land use. These include the selection of valley-like topographic settings as habitats for occupation, recognition of seasonal availability of water sources and food resources, and identification of certain rock outcrops as suitable spots for workshop-cum-camp sites.

Some of the handaxes in the Acheulian assemblages, particularly the thin specimens belonging to pointed, ovate and cordate forms, are very symmetric in shape and aesthetically pleasing. So the possibility cannot be ruled out that these specimens were valued as such by their makers. The cupules (small cup-like depressions) and simple engravings found on rock slabs from Bhimbetka, Daraki-Chatan and other caves in Central India have been interpreted by some archaeologists as artistic creations of the Acheulian groups.

There is some evidence of body decoration too. A few red ochre-like pieces were found at the Acheulian sites of the Hunsgi and Baichbal valleys. These were probably procured from vicinity and used for body smearing.

1.9.5 Hominin Fossil Record and Origins

Discussions about the biological identity of hominin groups responsible for the Lower Palaeolithic traditions groups of India are hampered by the woefully inadequate amount of fossil skeletal record available in the country till now. As yet only one true instance of the association of human skeletal record with the Acheulian cultural material is known. In 1982 Arun Sonakia of the Geological Survey of India found a fossil cranial vault (calvarium) in a 3 m thick gravel deposit of the Narmada river at Hathnora in Madhya Pradesh (Fig. 1.16). Initially classified under the *Homo erectus* group, this skull cap is now treated as representing an archaic form of *Homo sapiens*. Later a fossil clavicle was also reported from this site. Some bifacial implements and fossil fauna were also found from the gravel deposit.



Fig.1.16: Fossil skull cap of an archaic form of *Homo sapiens* from Hathnora, Madhya Pradesh

Now a few words about the origins of the Lower Paleolithic culture in India. Taking into account the high antiquity of hominin occupation in Africa and also the possible early dates for sites like Riwat and Uttarbaini in the Indian subcontinent, some workers have concluded that the Soanian type pebble-tool assemblages were a part of the spread of the Oldowan tradition of East Africa across Asia by a northern route between 1.8 and 2 million years ago. It has further been pointed out that the initial dispersal of the Acheulian into West Asia took place 1.4 million years ago and that its spread to South Asia occurred later either by a coastal route along the Arabian sea or else from the Levant (Mediterranean) zone of West Asia via a land route traversing the Iranian plateau. But there are some scholars who, based on the early dates for sites like Isampur, proposed an alternative hypothesis that the Acheulian culture may even have originated in peninsular India itself and spread in both eastern and western directions beyond the subcontinent's borders.

1.10 SUMMARY

In a popular book entitled *An Introduction to Archaeology* (1991) H.D. Sankalia summed up the whole purpose of archaeology in this statement: "... the aim is the total picture of man in the past. There is joy or delight not only in having this knowledge, but in its very pursuit." This is particularly true of prehistoric archaeology, which makes laborious efforts of all kinds to piece together various forms of evidence as in a jig-saw puzzle. Acquisition of knowledge about the distant Stone Age past not only calls for detective skills and a spirit of adventure and romanticism but entails familiarity with techniques and methods of various natural and social sciences. This hard-won knowledge is relevant in ways more than one.

First, it is an inherent attribute of man to show curiosity about animate or inanimate things around him. What we are as human beings and how we have come to be what we are – human nature and human origins - are legitimate domains of curiosity. In India even those who lack 'read and write' literacy do evince interest in knowing about the past and find it fascinating that the human society as we see it today, far from having been created on one fine morning by some supernatural agency, is actually the end product of a long process of change leading to more sophisticated developments in both biological and cultural domains. This fosters an attitude of awe and respect to changing relationships between man and nature across ages and thereby makes the human mind receptive to the concept of change.

Secondly, prehistory, because it deals with the inordinately long phase of infancy in human history and seeks to grasp the very genesis of human attributes, underscores the common roots of mankind and broadens one's world-view. Prehistoric heritage, irrespective of its present geographical locations in different parts of the world, forms the very bedrock on which history rests. As Jawaharlal Nehru put it aptly in his famous book *The Discovery of India*, the past is an inheritance common to the whole humanity.

Thirdly, Stone Age hunter-gatherer societies were based on subsistence economies geared to the seasonal availability of water and food resources as provided by nature. Surplus accumulation was an exception rather than a rule. This in fact explains their persistence over such a long period of time, without inflicting any

negative changes on their respective landscapes. In the world conference on environment held in Copenhagen in 1972, Indira Gandhi aptly termed the wanton destruction of natural environment by man in modern period as ecocide. The study of simple hunting-gathering societies of both the past and the present have some useful lessons to offer to the acquisitive and accumulative societies of our times.

Lastly, prehistoric studies also warn us not to lend credence to age-old negative characterisations of simple societies, as for example the seventeenth-century philosopher Thomas Hobbes' description of human life in the state of nature as "solitary, poor, nasty, brutish and short." Anthropological research on some of the existing hunter-gatherer societies clearly show that these societies have a high calorific intake, spend only limited hours of the day for food quest, and have much leisure time for story-telling, initiating the young into various life-skills and other social activities.

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Sample Questions

- 1) Define prehistory and examine its origins and development in the Old World.
- 2) Ascertain the place of man in the evolution of Primates.
- 3) Give an account of the Acheulian land use patterns in India.
- 4) Justify the relevance of prehistory.



UNIT 2 MIDDLE PALAEOOLITHIC CULTURES

Contents

- 2.1 Introduction
- 2.2 Mousterian Industry
- 2.3 Neanderthal Fossils
- 2.4 Traditions of Neanderthals
- 2.5 Middle Palaeolithic in India
- 2.6 Summary

Suggested Reading

Sample Questions



Learning Objectives

Once you have studied this unit, you should be able to:

- describe the Mousterian Culture of Europe;
- understand the cultural traditions of Neanderthal man; and
- discuss on the Middle Palaeolithic Cultures in India.

2.1 INTRODUCTION

Middle Palaeolithic Culture succeeds the Lower Palaeolithic culture. We have seen in the previous unit that the Lower Palaeolithic culture is characterised by heavy tools like the handaxes and cleavers. The Middle Palaeolithic culture, on the other hand, consists of a variety of tools made on flakes; and these flakes are produced by specialised techniques. Therefore it is widely referred to as flake-tool industry. The Middle Palaeolithic culture is best documented in the excavations of cave sites and open-air sites in Europe, Southwest Asia (also called the Middle East), and Africa. In these regions, the Middle Palaeolithic culture is referred to as the Mousterian culture, named after the rock shelter of Le Moustier in France. The human species associated with the Mousterian culture is the extinct *Homo neanderthalensis*. The popular name for this hominin is Neanderthal man. The fossil remains, that have been unearthed in the excavations of caves and rock shelters of Europe and Southwest Asia include some complete and several fragmentary skeletons of Neanderthal man; and these consist of a few hundred specimens. Neanderthal man lived during the period of Wurm glaciation (the last Ice Age/ The Great Ice Age, which is the last major glacial epoch of the Pleistocene period, i.e. Upper Pleistocene).

2.2 MOUSTERIAN INDUSTRY

As we have noted above, the culture of Neanderthal man is the Mousterian culture. This is characterised by specific stone tool assemblages which are called as the Mousterian industry. In other words, Mousterian industry is a Middle Palaeolithic tradition of tool making used by Neanderthals of Europe, Southwest Asia and Africa. This characteristic type of tool making is based on specialised techniques of production of flakes, which are made into a large variety of tools.

The widespread occurrence of stone tool industries in which flakes are predominantly used, in contrast to the handaxes and cleavers of the previous

cultural phase, begins at the close of the Middle Pleistocene period. The production of flakes heralds a technical change in the manufacture of advanced hunting tools. In this new technique, the development is the production of complete implement, at a single blow, from a core previously prepared so as to ensure that flakes when detached conformed to specific pattern of tools. Moreover, it was possible to strike off a series of flakes by reworking (or rejuvenating) the same core; therefore the technique was economical both of labour and raw material. Further, the flakes thus detached could easily be shaped by simple retouch into a variety of tools. It was easy to manufacture a whole range of tools to perform various functions. As already mentioned, stone tool industries, based primarily on the production of flake tools struck from carefully prepared cores, first developed in a broad zone covering North Africa and Southwest Asia to Western, Central and Eastern Europe (Figs. 2.1 and 2.2).



Fig. 2.1: Map showing Neanderthal sites in western Europe



Fig. 2.2: Map showing Neanderthal sites in Southwest Asia and Africa

The easily recognisable product of this new mode of making tools is the “tortoise shaped core”, from the undersurface of which a flake tool could be struck by a single blow. These types of cores were first recognised from sites in the locality of Levallois, a suburb of Paris. Hence the technique was given the name “Levalloisian technique”, and this is also called “Prepared Core Technique”. (Fig. 2.3). What is important, this flake technique makes its appearance in the preceding handaxe-cleaver (Acheulian) cultures but it rose to predominance over the Acheulian core tool traditions in the Middle Palaeolithic cultural phase. One good example to illustrate this is the industry consisting of flake tools alongside with small handaxes and well made cleavers in the culture named from the locality of Fauresmith, in the Orange Free State of Africa (the Fauresmith culture).

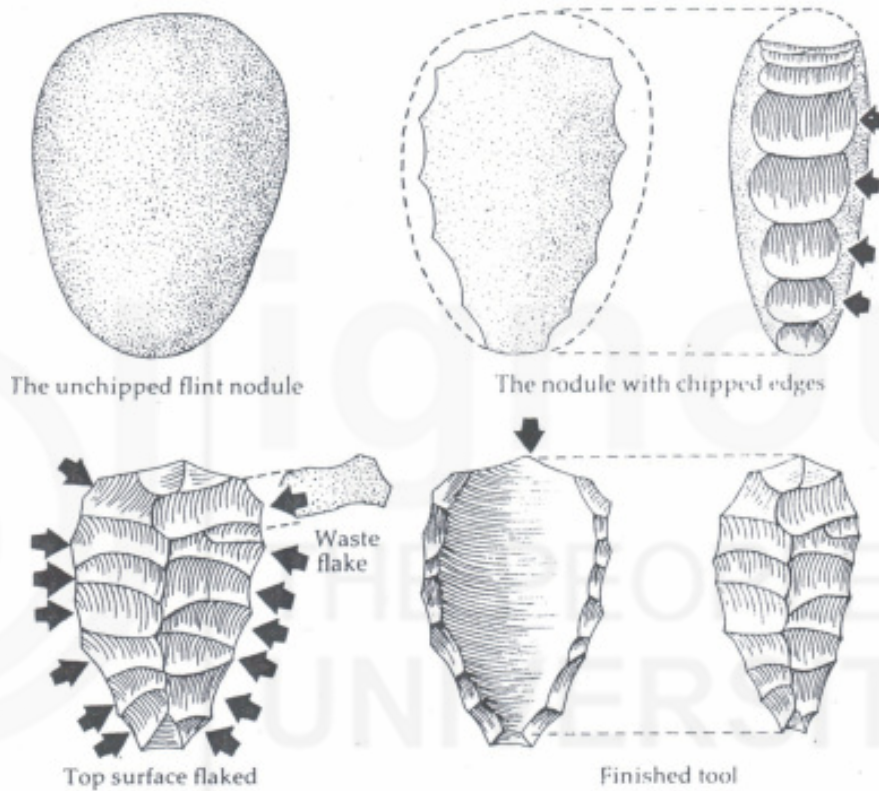


Fig.2.3: Steps in the production of finished flake tool by the Levalloisian technique (after Campbell 1979)

These flake tool industries, and for that matter an assortment of industries characterised by the predominance of flake tools, represent the Middle Palaeolithic cultures in different parts of the Old World. The cultural traditions of the Middle Palaeolithic, as already mentioned, are well documented in the excavations of caves and rock shelters in Europe, Southwest Asia (after referred to as the Middle East), and North Africa. These are called as the Mousterian culture (after the rock shelter Le Moustier in France, is the Mousterian). The deposits excavated at the Le Moustier cave, which have yielded these tools in large numbers, are dated to 55,800 Before Present (BP). The stone tool industries of the Mousterian cultures of Western Europe are closely allied to the Levalloisian but differ in that the cores were small and “disc-like” and shaped in such a way that a series of flakes could be detached without reworking the core. In other words, in this method called the “disc-core technique”, a stone is trimmed to a disc-shape, and numerous flakes are detached until the core is almost used up. And the flakes

thus detached are further retouched (secondary retouch) and shaped into a variety of tools (e.g. scrapers, Mousterian points, denticulate tools etc.). The caves of Southwest Asia, and Libya (in North Africa), on the other hand, yielded Levalloiso-Mousterian industries sharing elements from each. There is a significant degree of variation in the stone tools of the Mousterian industries. For example, Mousterian industries in France were distinguished into four main types. These are: (1) Typical Mousterian (Fig. 2.4); (2) Quina-Ferrassie or Charentian Mousterian (Fig. 2.5); (3) Denticulate Mousterian (Fig. 2.6); and (4) Mousterian of Acheulian tradition (Fig. 2.7 and Fig. 2.8).

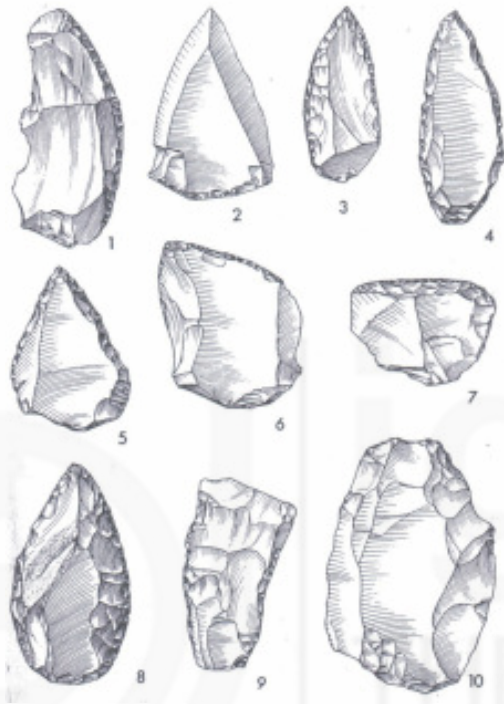


Fig. 2.4: Tools of typical Mousterian from the Dordogne region of southwest France (after Bordes 1978)

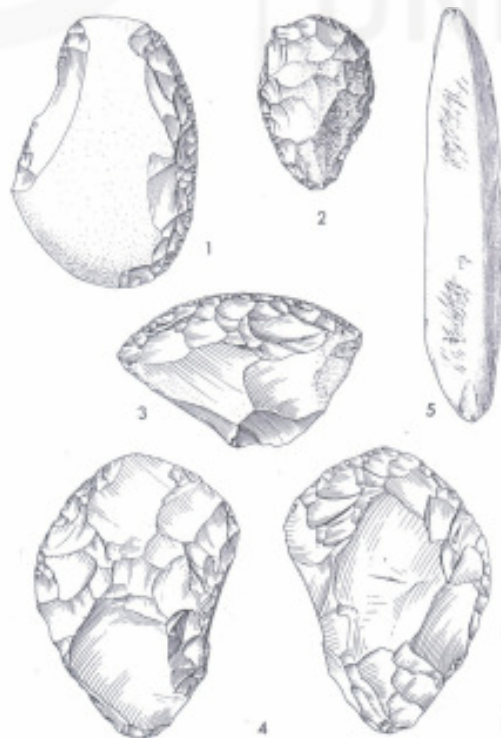


Fig. 2.5: Tools of Quina-Ferrassie Mousterian (after Bordes 1978)

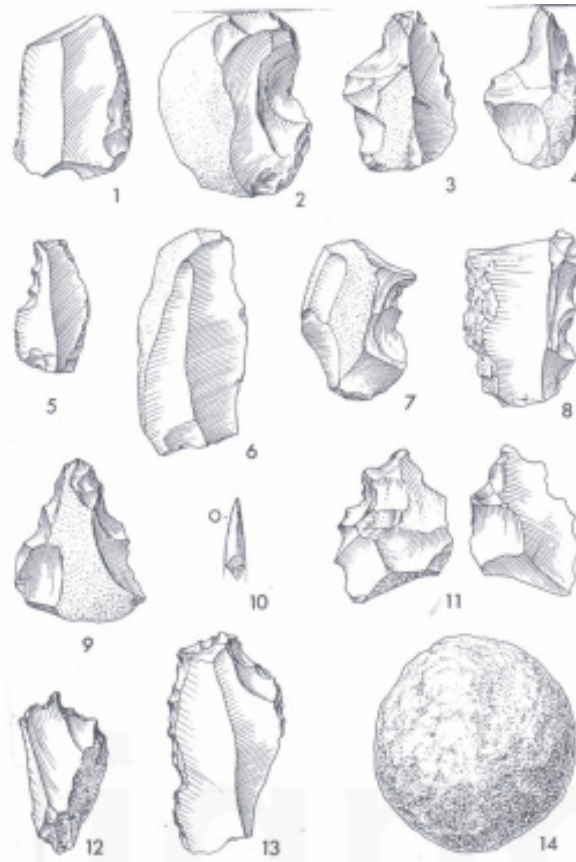


Fig. 2.6: Tools of Denticulate Mousterian (after Bordes 1978)

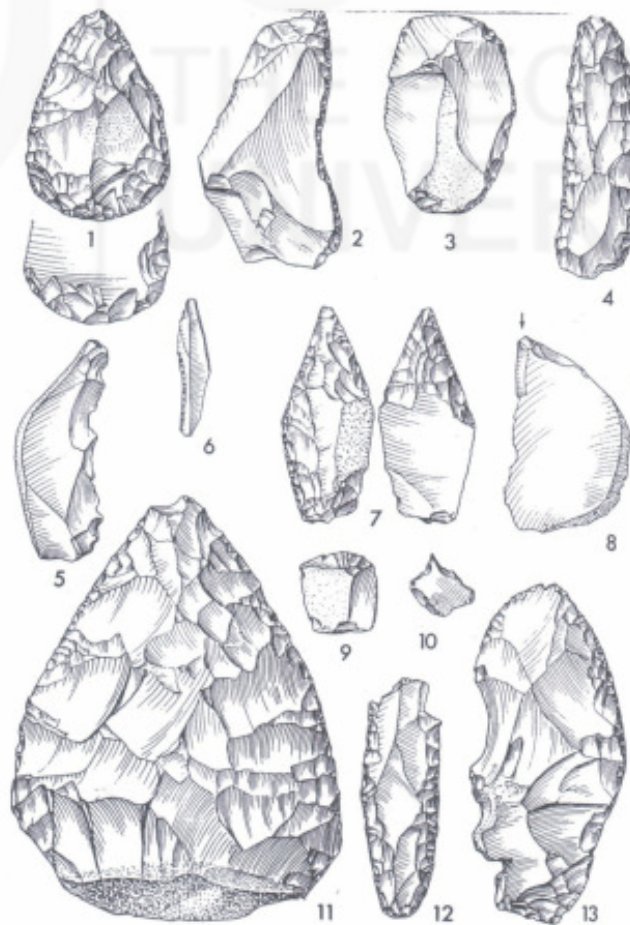


Fig. 2.7: Tools of Mousterian of Acheulian Tradition (after Bordes 1978)

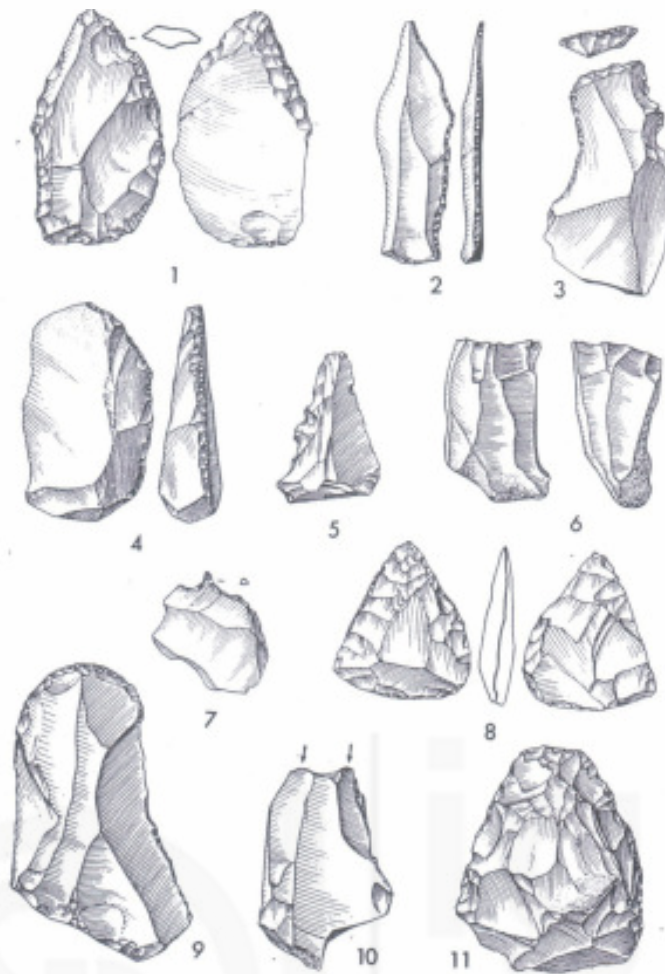


Fig. 2. 8: Tools of Mousterian of Acheulian Tradition (after Bordes 1978)

In Typical Mousterian, the Levalloisian technique was used to varying extents; percentage of scrapers varies from twenty-five to fifty-five; and points are well developed. The Neanderthal man found at Le Moustier was associated with the Typical Mousterian. In the Quina-Ferrassie or Charentian Mousterian (named after its predominance in the Charente region of France), the percentage of scrapers is very high (fifty to eighty percent); there are special type of scrapers like thick convex scrapers with scalariform retouch, transverse scrapers, scrapers with bifacial retouch over the whole surface (*tranchoirs*); a few or no handaxes; and a few denticulates. The Denticulate Mousterian is characterised by a great development of denticulated tools (from thirty-five to fifty-five percent) and notched flakes; no typical handaxes; a few points; and a few backed knives. The Mousterian of Acheulian Tradition is characterised by the occurrence of high proportion of handaxes (eight to fifty percent); flake tools are extremely varied, which include scrapers; points are fairly numerous, some with thinned butts, and some partly bifacial; carefully worked denticulate tools and notched flakes are numerous; and Upper Palaeolithic types (burins, end scrapers, borers, flakes, and truncated blades) occur in appreciable numbers than in the other types of Mousterian.

In Africa, the Middle Palaeolithic is designated the “Middle Stone Age”, and it appears at 280,000 BP. The various flake-tool industries of the Middle Palaeolithic, discussed above are called Mode III industries. The characteristic feature of the Mode III industries is the prepared-core flake tool technique. This technique, in Europe, begins to appear around 300,000 BP – 250,000 BP. The

human species associated with the Middle Stone Age in Africa are also Neanderthals, but termed variously as *Homo helmei*, *Homo rhodesiensis*, *Homo sapiens idaltu*, or *Homo sapiens archaicus*.

2.3 NEANDERTHAL FOSSILS

The first discovery of Neanderthal man (also referred to as Neandertal man) was made in 1856, not far from the city of Dusseldorf, Germany, where a tributary stream of the Rhine flows through a steep sided gorge, known as Neander Valley, “Neanderthal” in old German. The fossil skeletal fragments of this ancient human are given the name Neanderthal man, after this locality. The image of Neanderthal man for many years was that these Stone Age humans were shambling, beetle-browed lout, and grisly folk, who prowled the earth during the time of the glaciers. Subsequent discoveries and research showed that the Neanderthals from 100,000 years ago to 40,000 years expanded into different regions of the Old World, devised ingenious stone tools (which we have discussed above), developed a complicated society and opened the door onto the world of supernatural.

In 1856, a cave near a town called Spy in Belgium yielded two fossil skeletons; and palaeoanthropologists working in the Dordogne region of southwestern France brought to light numerous Neanderthal fossil skeletal remains and large quantities of stone tools. One of the first to turn up was the skeleton of an old man in a cave near the village of La Chapelle-aux Saints (Fig. 2.9). A cave at Le Moustier, nearby to the one from which large quantities of stone tools had been excavated earlier; yielded the skeleton of a Neanderthal youth, dated to 40,300 BP. Excavations at a rock shelter at La Ferrassie (Fig. 2.9) produced adult male and female Neanderthals and later the remains of seven children. Several Neanderthal skeletons have been recovered in the excavations of another rock shelter at La Quina. With the wealth of these skeletal materials from southwestern France, palaeoanthropologists were able to reconstruct what a Neanderthal looked like, and study the physical resemblances—or lack of them—between Neanderthals and modern Humans. As the years passed, Neanderthal fossils were found all over Europe, from Rumania and Crimea in the east to the western lands of Spain and the Channel island of Jersey. In 1921, some labourers mining lead and zinc ore in Zambia (previously Northern Rhodesia), thousands of miles from Europe, unearthed a skull and other human bones that resembled Neanderthals. These fossil fragments came from a cave in a knoll called Broken Hill, north of the Zambesi River.

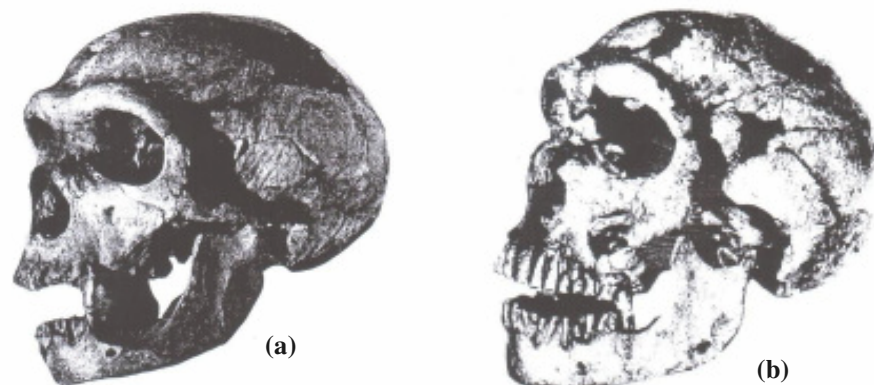


Fig. 2. 9: Skulls of Neanderthal man from (a) La Chapelle aux-Saints and (b) La Ferrassie (after Campbell 1979)

This fossil was given the name “Rhodesian man”. Many scientists now agree that this fossil was the African version of the Neanderthal type. During 1931 and 1932, fragments of eleven individuals were dug from the banks of the Solo River at Ngandong in Java. The fossils, collectively named “Solo man” consisted of several skulls that were almost perfect but lacked their bases and faces, and other bones that were badly shattered. Solo man is the Asian version of the Neanderthals. The gap between Java and Europe was filled in 1938 by a find in the desolate Bajsun-Tau Mountains of south-central Russia, about seventy-eight miles south of Samarkand. A cave in a cliff called Teshik-Tash yielded the fossil remains of a boy who was clearly Neanderthal. Neanderthal discoveries were made during the early 1930s by a joint Anglo-American expedition in what is now Israel, then called Palestine. These came from two of caves excavated by Dorothy Garrod on the slopes of Mount Carmel, overlooking the Mediterranean Sea, near the city of Haifa. These caves are Mugharet et – Tabun (Cave of the Oven) and Mugharet es – Skhul (Cave of the Kids). The first cave yielded a female skeleton, and from the second came the remains of ten individuals.

2.4 TRADITIONS OF NEANDERTHALS

Neanderthals very probably started some of the activities and beliefs that are considered most characteristic of humankind. They conceived life after death. They attempted to control their own destiny through magical rites. And they cared for aged and handicapped individuals. In fact, they were the first humans to display the complete spectrum of behaviour that can be considered to constitute modern human nature.

It seems probable that Neanderthals practiced hunting magic. Apparently, they attempted to manipulate the hidden forces of nature that controlled success and failure in hunt. One clue for this comes from the Grotto della Basura, the “Cave of Witches”, west of Genoa, Italy. In the depths of the cave, almost 1500 feet the entrance, Neanderthal hunters threw pellets of clay at a stalagmite, which to this day has a vaguely animal shape. The inconvenient location of the stalagmite rules out the possibility that this merely a kind of game or target practice. The fact that the Neanderthal hunters went so far back into the further reaches of the cave to throw the pellets suggests that this activity had magical meaning of some kind.

The evidence of a deer ceremony at a cave in Lebanon was brought to light by Ralph Solecki in 1970. Here, about 50,000 years ago, some Neanderthals dismembered a fallow deer, placed the meat on a bed of stones, and sprinkled it with red ochre. The natural pigment was certainly intended as a symbol of blood. This rite seems to represent a ritualistic or magical attempt.

The famous example of Neanderthal hunting magic is the bear cult. It came to light in the excavations conducted at the cave of Drachenloch by the German archaeologist Emil Bachler, between 1917 and 1923. This cave known as the “lair of the dragons” is located 8000 feet up in the Swiss Alps. The front part of the cave served as the occasional dwelling place for the Neanderthals. Deep inside the cave was a cubical chest made of stones and measuring approximately three and a quarter feet on a side. The top of the chest was covered by a single massive slab of stone. Inside were seven bear skulls, all arranged with their muzzles facing the cave entrance. Still deeper in the cave were six bear skulls,

set up in niches along the walls. Another evidence for the bear cult was discovered at Regourdon in southern France. Here was discovered a rectangular pit, covered by a flat stone weighing nearly a ton, which contained the bones of more than twenty bears.

The Neanderthals buried the dead and practiced death rituals. In the cave of La Chapelle-aux Saints, which was excavated in 1908, the excavators found the burial of man. The skeleton was found in a shallow trench, with a bison leg placed on his chest, and the trench was filled with broken animal bones and stone tools. These various articles might have been the provisions for the world beyond the grave, since it was well known that many primitive peoples bury their dead with food, weapons and other goods. The nearby rock shelter at La Ferrassie, appears to have served as a family cemetery. It contained six Neanderthal skeletons: a man, a woman, two children about five years old, and two infants. This Neanderthal cemetery is dated to 60,000 BP. Almost every Neanderthal burial site in Western Europe is associated with the tool making tradition known as the Quina-Ferrassie (discussed above).

The most amazing Neanderthal burial of all was that in the Shanidar cave in Iraq (Iraqi Kurdistan). Excavations conducted here by Ralph Solecki between 1935 and 1960 brought to light the remains of nine Neanderthals (Shanidar 1-9). At the back of the cave, in a layer estimated to be 60,000 years old, was the grave of a man (Shanidar 4) with a badly crushed skull. Analysis of the soil samples on which the skeleton was found indicated that pollen was present in the grave in unprecedented abundance. And pollen was found negligible in the other samples of the cave. Analysis of the pollen from the soil beneath the skeleton indicated that it came from numerous species of bright coloured flowers, related to grape hyacinth, bachelor's button, hollyhock, and groundsel. This has been interpreted as a "flower burial": This man was buried with bunches of these wild flowers on a flower bed. Another skeleton at Shanidar (Shanidar 4) belonged to a forty year old man who probably was killed by a rockfall. He suffered major injuries long before his death: he sustained a massive blow to the right side that badly damaged his right arm, foot and leg and a crushing fracture to the left eye that would rendered his left eye blind, and he could not have been an effective hunter. The fact that he survived up to the age of 40 with these disabilities indicates that he was treated with compassion and cared for by his fellow Neanderthals. The care shown to this cripple, who presumably had to keep close to the cave and can hardly have participated in hunting activities, reflects a degree of humanity not always displayed towards one another by members of civilised society.

At some of the Neanderthal burials, there is plentiful evidence of the darker side of the Neanderthals, such as violence and cannibalism. For example, a fossil of man found at Mugharet es – Skhul bears the traces of a fatal spear wound in his thigh bone and the socket of hip bone. There are enough evidences to indicate that Neanderthals, sometimes, killed their fellow beings. Mutilated remains of about twenty Neanderthals—men, women, and children—were found, in 1899, at the site of Krapina, in Yugoslavia. Skulls had been smashed into fragments; limb bones had been split lengthwise, presumably for their marrow, and there were traces of charring, hinting that the human meat had been cooked. In 1965, another collection of charred and smashed bones, again involving twenty individuals, was found at the cave of Hortus in France. The remains were mixed with animal bones and food refuse, as if the ancient inhabitants of the cave had drawn no distinction between human meat and that of a bison or reindeer.

The group of skulls excavated on the bank of the Solo River in Java suggests ritualistic motives. Though eleven skulls came out in the excavations, no other skeletal parts were found, except for two shin bones. The facial bones had been smashed off every skull, and not a single jaw or tooth was left. In some of the skulls, the opening at the base of the skull (foramen magnum) is widened. A practice of this kind, of widening the base of the skull, to take out the brain, is known in the ritualistic practices of present day cannibals. In a cave at Monte Circeo in Italy, was found a single skull, in a shallow trench that had been scooped out of the ground, encircled by stones in an oval shapes. This skull belonged to a 60,000 year old Neanderthal, who had been killed by a blow in the temple. Once again, the foramen magnum had been enlarged. This mutilation and the presence of ring of stones, indicates that a ceremony had been performed in the cave. These rites of burials and cannibalism of Neanderthals may be only the visible tip of an iceberg of hidden ceremonies. Practically all known primitive peoples have special rites and beliefs and practices pertaining to key steps in human life and it is reasonable to assume that the Neanderthals did too.

2.5 MIDDLE PALAEOLITHIC IN INDIA

The Middle Palaeolithic cultural phase in India is characterised by flake-tool industries. In 1956, Sankalia for the first time recorded and demonstrated these flake tools occurring in association with the second aggradational deposit of the river Pravara at Nevasa (Maharashtra) and then within the same context in the Godavari valley in north Karnataka. He called this industry Nevasian (like Mousterian, Levalloisian etc.). Soon Sankalia organised a large group of river valley surveys along Narmada, Son, Burhabalang, Krishna and its various tributaries. These investigations brought to light flake-tool industries to show that what he had provisionally called Nevasian was not a local phenomenon but a generalised feature of Indian Stone Age cultures. In the beginning the term Middle Stone Age was adopted for this phase in Indian prehistory. Subsequently, the term Middle Palaeolithic has been accepted.

The Middle Palaeolithic tools are made on flakes and flake-blades produced by flake-core, discoid core and the specialised Levallois technique. In some regions, there is a continuity of Late Acheulian lithic tradition with refinement in bifacial flaking, and secondary marginal retouch, and inclusion of small sized handaxes and cleavers, recalling the industries of Mousterian of Acheulian tradition of southwest Asia. In many regions there is switch over in the use of raw material from coarse grained rocks like quartzite of the preceding phase to fine grained rocks like chert, jasper, chalcedony, agate, etc. In some regions of central India and southeast coast, coarse grained and fine grained quartzite has been used.

The tool types of the Indian Middle Palaeolithic are scrapers of various types—single side, double side, side-cum-end, straight, oblique, concave, convex, concavo-convex, notched, and core scrapers; awls; borers; simple unilateral or bilateral points; Levallois points; tanged or shouldered points; miniature handaxes and cleavers; and utilised flakes. Anvils and hammer stones are also found at some of the manufacturing sites (Figs. 2.10 to 2.11).

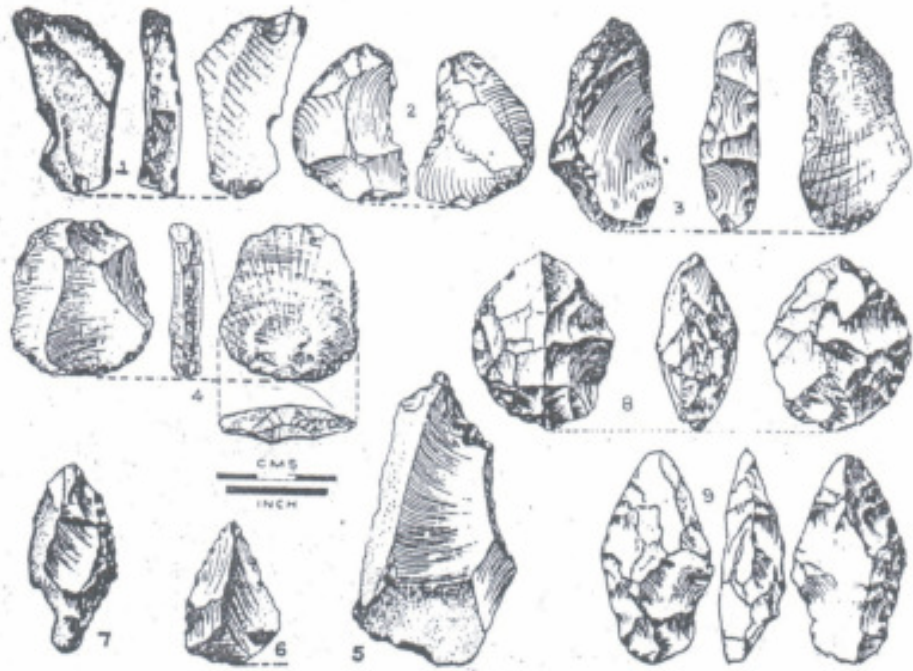


Fig. 2.10: Tools of the Indian Middle Palaeolithic

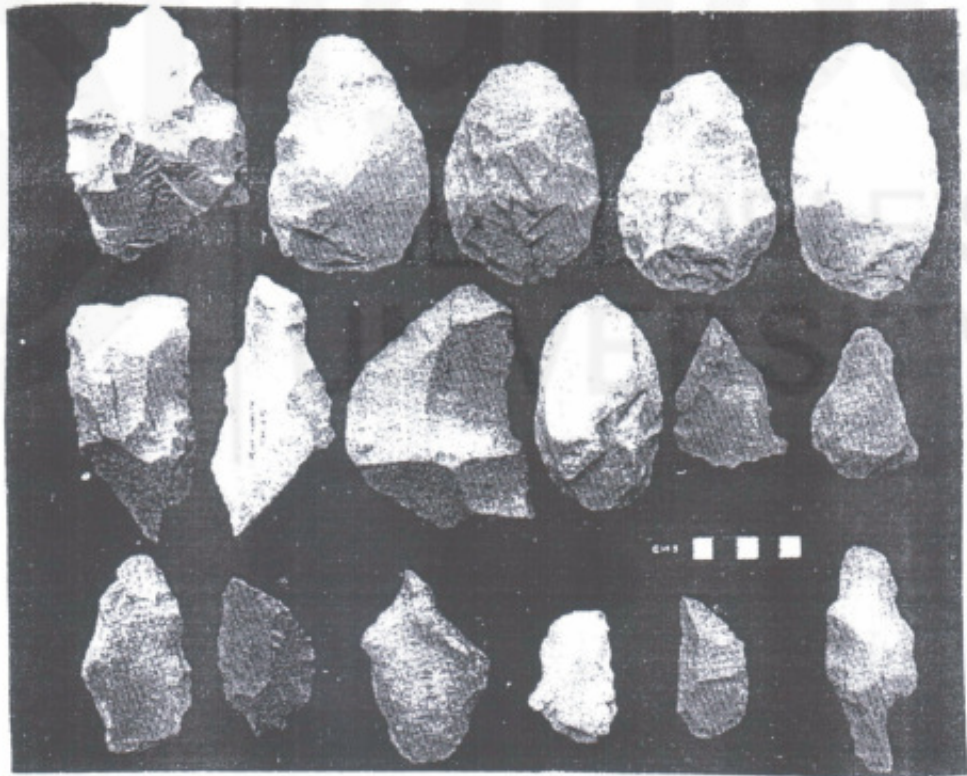


Fig. 2.11: Tools of the Indian Middle Palaeolithic

The debitage (waste products resultant of tool manufacture) comprises various kinds of flakes—simple, end-struck, side-struck and indeterminate; core rejuvenation flakes; chips; and flake cores. The flake cores are discoidal, globular, pyramidal and amorphous. The techniques used for tool manufacture are stone hammer, cylinder hammer, and Levallois. The tools are finished by secondary retouch; and characterised by shallow and small flake scars, step flaking, marginal secondary retouch and sharp edges. The raw materials used for the manufacture

of tools are medium to fine grained quartzite, chert, jasper and chalcedony. Some of the Middle Palaeolithic bifacial flake points, scraper types and retouched flake tools show typo-technological similarities to the Mousterian core and flake tools, recalling the Mousterian of Acheulian Tradition of Southwest Asia where the Mousterian culture is associated with *Homo neanderthalensis*.

If we take into account the distribution of Middle Palaeolithic sites in different parts of India, we find that the western dry zone is rich in occupations as at Budh Pushkar Lake, Didwana, or some parts of the Luni valley. The Luni industry is varied and richer in its typological content: convex and concavo-convex side scrapers, point of various types, burins, side choppers, handaxes, cleavers and edged blades. Upper Palaeolithic types such as retouched blades and blade cores are very infrequent in this zone. Therefore, in all probability, these represent a much younger variety than what has been recorded at Godavari or Narmada. The Nevasa and northern Karnataka sites yield rather large chunky jasper of a number of shades with several typical Levalloisian flakes in them. The point of impact of almost all these flakes maintains pronounced positive bulbs of percussion indicating stone hammer technique as the principal technique of manufacture. The most predominant type among these is the side scraper. Borers form the next frequent type while points occur with a frequency of around 10 to 15 percent. Several of these are thin and leaf shaped and often show a rudimentary shoulder near the butt-end. Abrupt retouching as also alternate retouching is quite common.

In Andhra Pradesh, wherever the Middle Palaeolithic industries are found in a stratified context, they succeed the Lower Palaeolithic (Gravel I) and occur in Gravel II. The Gravel II deposits in the river systems of the Deccan have been ascribed to late Middle Pleistocene to early part of Upper Pleistocene on the basis of geomorphological parameters.

Cammiade was the first to make a large collection of flake tools (which he called series II tools) from the district of Kurnool. Subsequently, Chittoor and Nalgonda districts were also systematically explored. Ramatirthampaye and Raigirvagu on Krishna are two of the richer sites. The tools are prepared on fine grained quartzite and show extensive use of cylindrical hammer technique. Many of these tools maintain pebble cortex and at times some are prepared on cores. There are several discoid tools or round scrapers, and elongated blades with burin edges prepared on them. Likewise, typical end scrapers are also prepared on such thick blades. It is significant that Levalloisian technique in these sites is not as frequent as in Nevasa-Karnataka sites.

In Madhya Pradesh and Bundelkhand region, the Middle Paleolithic is best represented. Besides the main Narmada deposits, the Betwa, Shivna, Chambal and numerous other water courses in the general area have yielded rich evidence of this cultural phase. Gonchi and Sihora on Betwa show patinated chert tools which include side-scrapers of various kinds measuring 13 cm to 7 cm in length. Levalloisian technique is well marked although not as much as in the western region. Bold retouching, often in an abrupt or semi-abrupt manner, is seen in the preparation of these types. Flakes are often flat and retouched bifacially. There are also some burins.

As one moves into the Chhatisgarh region and finally into the Chhotanagpur forest, the Middle Palaeolithic again tends to lose its identity and merge with the

Upper Palaeolithic. Blade cores abound in these assemblages. Mohapatra has recorded Middle Palaeolithic tools from almost all the Orissa rivers and shown that both pebble choppers and blade cores abound in them. Moving northwards across the Narmada into the Gangetic plain, we find that Middle Palaeolithic, like the preceding Lower Palaeolithic has also a wide distribution in the Belan valley in Allahabad district.

At Bhedaghat on Narmada near Jabalpur a section of Narmada has been exposed in recent flood. This has been studied by Sheila Mishra. The section reveals four distinct Quaternary phases; the lowest among these also yielded some Acheulian types. The layers yielding Middle Palaeolithic types had a date of 25,160B.P. The Middle Palaeolithic tools are prepared on chert and include varieties of side scrapers besides medium sized cleaver made on chert. The evidence from Bhimbetka right in the heartland of the Narmada zone, shows a Mousterian industry developing from within an Upper Acheulian base. But a hundred kilometers away, at Shivna in the main Narmada valley, Middle Palaeolithic appears as exotic because of the complete change of raw material heralding this phase.

The Mousterian in Afghanistan and the Zagros mountains farthest west seem to have many similarities with our desert zone Middle Paleolithic. Bridget Allchin suggests a period of 45,000 to 25,000B.P. for them. Maharashtra-Karnataka has a proper Levalloisian based Middle Palaeolithic and hence comes closer to Mousterian character. Even thin leaf-shaped tanged points are also from these sites. The Middle Palaeolithic from Kurnool to Chhatisgarh seems to be a local development.

A Thermoluminescence date from Didwana (Rajasthan) dates the Middle Palaeolithic to around 100,000 B.P. and Clark and Williams suggested that the Middle Palaeolithic in the Son Valley (north Central India) may be 40,000 or 50,000 years B.P. There is a single radio-carbon date on molluscan shells from a post Middle Palaeolithic context from Nandipalli in the Sagileru valley, a tributary of the Penneru, on the southeast coast of India. This date is $23,670 \pm 640$ years B.P. This date suggests that the Middle Palaeolithic in this region is older than ca. 23,000 yrs B.P.

By a review of TL, radiocarbon and Uranium/Thorium dates in a pan-Indian context, a time-bracket of ca. 125,000 years to 40,000 years before present has been suggested for the Indian Middle Palaeolithic by Sheila Mishra.

2.6 SUMMARY

The Middle Palaeolithic culture is widely spread in Europe, Southwest Asia, Africa and India. In Europe and Southwest Asia, it is called as the Mousterian culture, and the stone tool industries are termed as Mousterian industries. These industries are based on specialised techniques of flake production, called Levalloisian. In Europe, the Mousterian industries are divided into four major groups called (1) Typical Mousterian; (2) Quina-Ferrassie or Charentian Mousterian; (3) Denticulate Mousterian; and (4) Mousterian of Acheulian tradition. The Middle Palaeolithic in Africa is called as the “Middle Stone Age”. The Middle Palaeolithic industries in India are also based on the predominant use of flakes which include those detached by Levalloisian and disc-core

techniques. It is not possible to distinguish sub-divisions or typological groupings in the Indian Middle Palaeolithic, as in Europe, but stone tools from different parts of the country, nevertheless, variously display affinities to the Mousterian points, Levallois points, scrapers of different types including disc-core scrapers, and miniature handaxes and cleavers of the Mousterian or Acheulian tradition. The Mousterian culture in Europe, Southwest Asia, and Africa is the culture of the Neanderthals, the extinct human species called *Homo neanderthalensis*. The cultural traditions of the Neanderthals include hunting magic, burial customs and death rituals, and caring for the disabled and crippled; and on the darker side, they showed also the traits of violence, and cannibalism.

Fossil remains of human societies associated with the Middle Palaeolithic in India have not come to light so far. On the basis of technological and typological affinities of the Indian Middle Palaeolithic tools to the Mousterian industries, it can only be predicted that the authors of the Indian Middle Palaeolithic might as well represent a South Asian variant of the Neanderthal Man.

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Sample Questions

- 1) Discuss the salient features of the Mousterian industries of Europe and Southwest Asia.
- 2) Give an account of the cultural traditions of the Neanderthals.
- 3) Write short notes on the following:
 - i) Levalloisian technique
 - ii) Neanderthal fossils
 - iii) Middle Stone Age in Africa
 - iv) Mousterian of Acheulian tradition
 - v) Shanidar cave.

UNIT 3 UPPER PALAEOLITHIC CULTURES

Contents

- 3.1 Introduction
- 3.2 Upper Palaeolithic in Europe
- 3.3 Epi-Palaeolithic in Europe
- 3.4 Upper Palaeolithic in India
 - 3.4.1 Stone Tool Industries
 - 3.4.2 Bone Tool Industries
 - 3.4.3 Subsistence Economy
 - 3.4.4 Art
- 3.5 Summary
- Suggested Reading
- Sample Questions



Learning Objectives

Once you have studied this unit, you should be able to:

- understand the salient features of the Upper Palaeolithic cultures in the Old World;
- discuss the sub-cultural phases and regional variants of Upper Palaeolithic cultures in Europe and Southwest Asia;
- describe the stone, bone and antler tools of the Upper Palaeolithic cultures; and
- know about the Upper Palaeolithic cultures in India.

3.1 INTRODUCTION

The Upper Palaeolithic is the third and last subdivision of the Palaeolithic, and it is characterised by the first great climax of human achievements. Upper Palaeolithic cultures flourished in Europe, Southwest Asia, Africa, South Asia and Southeast Asia during the later stages of the Upper Pleistocene, often referred to as Late Pleistocene (Fig. 3.1).



Fig.3.1: Map showing important site of Cro-Magnon fossils and Upper Palaeolithic tools in the Old World (after Campbell 1979)

Very broadly, the age of the Upper Palaeolithic falls between 40,000 and 10,000 years ago. The human species associated with this cultural phase is Anatomically Modern *Homo sapiens* (AMHS), the extant and the only surviving human species. We belong to this species. Upper Palaeolithic cultures succeed the Middle Palaeolithic Mousterian or other flake tool cultures in different parts of the Old World.

The first discovery of the skeletal remains of *Homo sapiens* was made in 1868 in Cro-Magnon, a rock shelter in the Dordogne region of southwest France, in a deposit containing Upper Palaeolithic tools. Hence this man is called Cro-Magnon man. He is anatomically identical to modern humans, but differed significantly from Neanderthals. Cro-Magnon man was tall, erect and well built. The Cro-Magnon people varied in physical type from one region to another. Bones unearthed in the Soviet Union are different from those found in France or Africa or China.

The Upper Palaeolithic is marked by technological advances in stone tool manufacture by the production of parallel sided blades which are finished into a variety of tools finished by blunting one side or backing. Blades are flakes, but very refined flat narrow ones, elongated in shape and having parallel sides. For producing blades, the cores are first trimmed all around to remove the roughness. Then, by striking along the circumference of the core, using a punch, a series of blades are removed. That means blades are produced by indirect percussion but not by direct percussion. After the removal of the first series of blades, a second, third and fourth series and so on are removed, until the core is exhausted. Thus, in this blade production technique, numerous blades are removed from a single core. These cores have a prismatic or fluted appearance; hence this technique is called “prismatic-core technique” or “fluted-core” technique. These blades, subsequently, are further worked and finished, by blunting one side of the blade, into various tool forms. This kind of retouch is called backing and these tools are called backed blade tools. These are backed points, pen knives, thick (orange piece like) lunates and triangles. Blades are also finished, by secondary retouch, into shouldered or tanged points, scrapers (end scrapers being most characteristic), burins and awls. The Upper Palaeolithic industries also consist of a variety of flake and core tools like side scrapers, ovate scrapers, notched scrapers, discoid scrapers, and unifacial and bifacial flake points. Some of these flakes are produced by the Levallois technique, and the discoid core technique, indicating the persistence of the preceding Middle Palaeolithic traditions.

Some of the backed blades could have been used by hafting as barbs to harpoons. The raw material used for the stone tools are fine-grained rocks. A variety of bone points and harpoons with single row and double row of barbs made on antler were found in several Upper Palaeolithic sites in southwestern France and other parts of Europe.

Artistic work also blossomed during this period. Upper Palaeolithic art begins in the Aurignacian culture, develops in the Gravettian and Solutrean, and blossoms in the Magdalenian, both in the splendid decoration of ordinary objects, and in the superb polychrome cave paintings. A large variety of paintings on cave or rock walls and cave ceilings, and petroglyphs (engravings or line drawings on rock or cave walls) have been found especially in France and Spain. Another important category of art is in the form of ‘Venus Figurines’. These are small

statuettes of naked, and often obese or pregnant women, sculpted in mammoth ivory, stone or clay. These figurines may be fertility icons or emblems of security and success. According to some scholars, the appearance of language during this period made these behavioural changes possible.

3.2 UPPER PALAEOLITHIC IN EUROPE

Southwestern France is considered as the “classical region” in which all these Upper Palaeolithic developments are well preserved. The Upper Palaeolithic sequence of south-western France is used as a model for the Upper Palaeolithic cultural sequences because of the numerous well stratified sites. The stone tool industries of the Upper Palaeolithic, in this classical region, show a great deal of regional variations and sub-regional successions, which cover a time span of 40,000 – 12,000 years Before Present (BP). These industries are Chatelperronian (35,000 – 29,000 years ago), Aurignacian (34,000 – 29,000 years ago) Gravettian (28,000 – 22,000 years ago), Solutrean (21,000 – 19,000 years ago) and Magdalenian (18,000 – 12,000 years ago) (Figs. 3.2 – 3.6).



Fig.3.2: Upper Palaeolithic Tools from Southwestern France. 1) Chatelperronian knife; 2) Burin; 3) Scraper on flake; 4) Mousterian point; 5) Denticulated and truncated blade; 6) Gravette point; 7) Multiple burin on truncation; 8) Bitruncated blade; 9) Burin on bladelet (called Noailles burin); 10) Backed bladelet; 11) Truncated bladelet with retouch; 12) Flake scraper; 13) Backed point with a shoulder (called Font-Robert point); 14) Dihedral burin (after Bordes 1968)

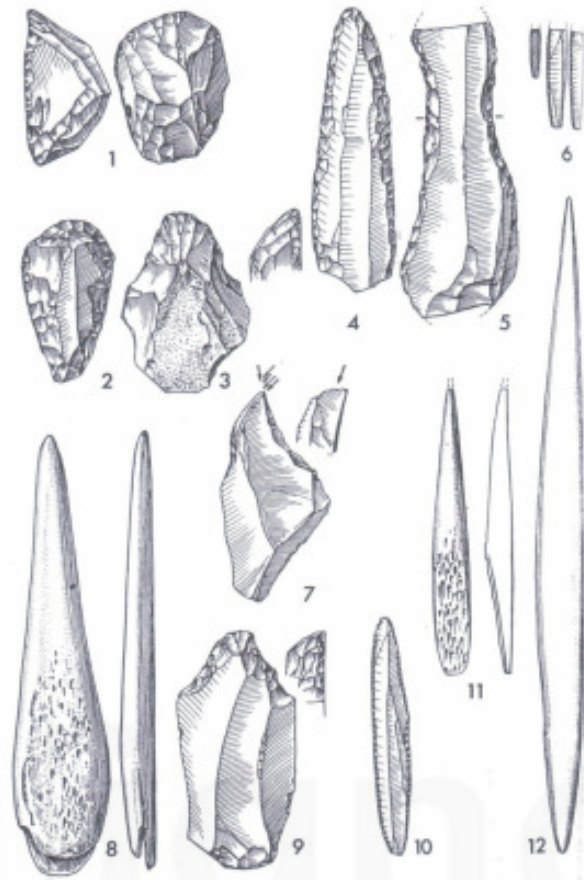


Fig. 3.3: Upper Palaeolithic Tools from Southwestern France (Aurignacian type).
 1) Carinated scraper; 2) Scraper on retouched blade; 3) Nosed scraper;
 4) Aurignacian blade; 5) Strangulated blade; 6) Bladelet; 7) Busked burin;
 8) Split-base bone point; 9) Flat nosed scraper; 10) Retouched bladelet; 11) Bone
 point with a bevel; 12) Lozenge shaped bone point (after Bordes 1968)

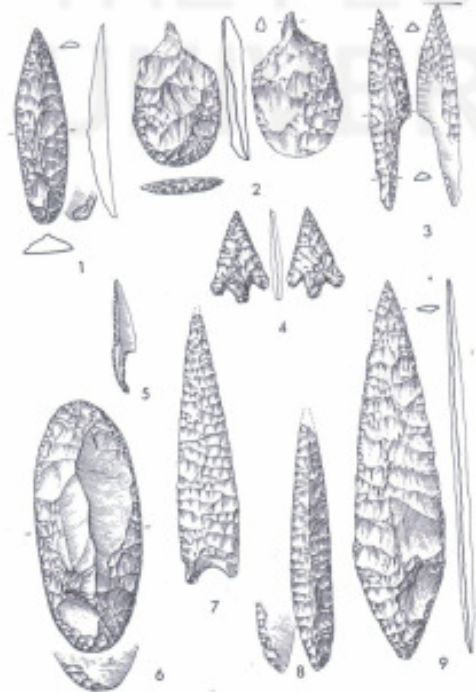


Fig. 3.4: Upper Palaeolithic Tools from Southwestern France (Solutrean type).
 1) Leaf shaped point with one flat face; 2) Borer-end-scraper; 3) Shouldered point;
 4) tanged and barbed point; 5) Shouldered point; 6) Finely retouched end scraper;
 7) Point with a concave base; 8) Willow leaf point; 9) Laurel leaf point (after
 Bordes 1968)

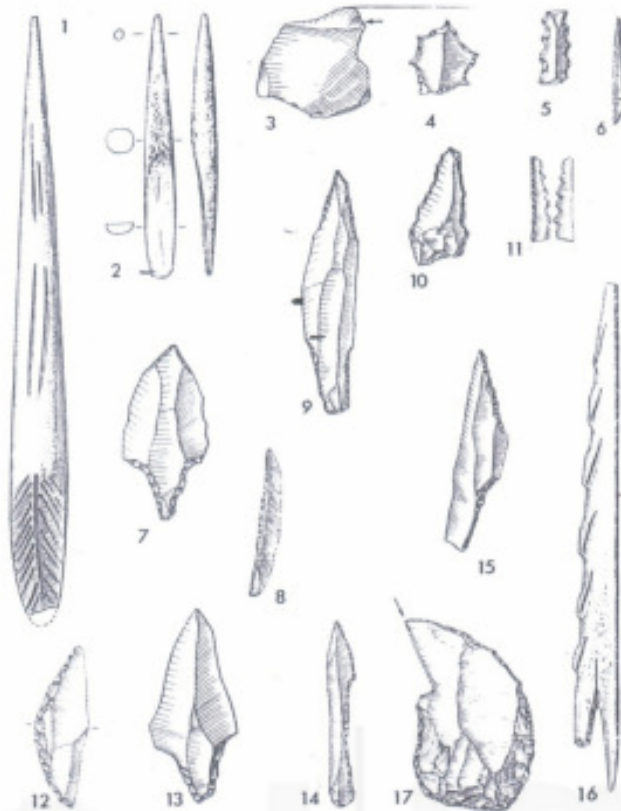


Fig. 3.5: Upper Palaeolithic Tools from southwest France (Magdalenian type). 1-2) Bone points; 3) Transverse burin; 4) Star shaped multiple borer; 5) Denticulated bladelet; 6) Triangle; 7) Tanged point; 8) Backed bladelet; 9) Tanged point; 10) Side scraper with abrupt retouch all around the edge; 11) Denticulated backed bladelet; 12) Backed point; 13) Tanged point; 14-15) Shouldered points; 16) Harpoon; 17) Parrot beak burin (after Bordes 1968)

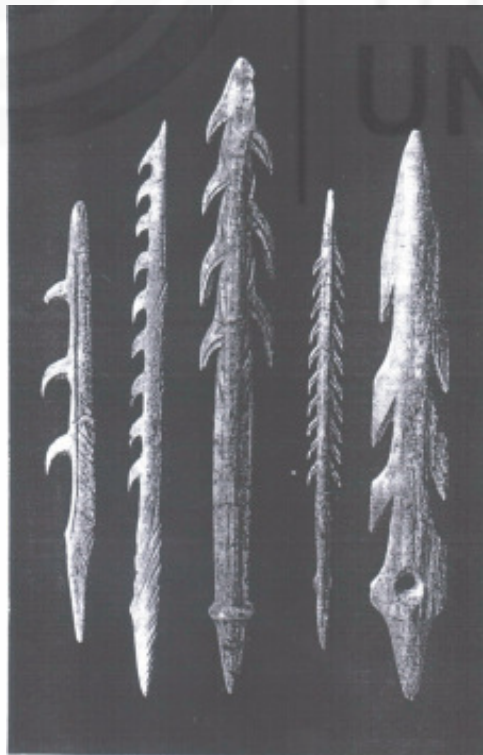


Fig. 3.6: Magdalenian bone harpoons from Southwest France. Harpoons with single row and double row (after Bordes 1968)

Chatelperronian is the earliest industry of the Upper Palaeolithic in central and south-western France. The Chatelperronian has been the subject of considerable controversy since its recognition in the early twentieth century. It has also been called the “Lower Perigordian”, “Perigordian I” and “Lower Aurignacian”. Chatelperronian appears to have been derived from the earlier Mousterian culture. Serious disagreement still persists about the status of the Chatelperronian. Majority of archaeologists appear to agree that most of the assemblages labeled Chatelperronian are the products of Neanderthals and that the industry was geographically restricted to a relatively small area of south-western France and northern Spain. Though Chatelperronian precedes Aurignacian technology, there must have been a few thousand years of overlap between the Chatelperronian and the Aurignacian.

The Chatelperronian culture is characterised by a stone tool called as the “backed point” or “backed knife”. It is a blade having one of its edges blunted for holding or hafting recalling a modern penknife blade. It is also called Chatelperronian knife. The other types of this culture are pointed blades with curved backs blunted by steep retouching, which are called Chatelperronian points; burins, made on blades, with a chisel like cutting edge, used for working on bone and antler, and also for engraving; end scrapers most commonly on flakes rather than on blades; side scrapers and round scrapers on flakes; and other kinds of flake tools. There are also bone awls, pierced teeth and bone pendants, but in general, bone tools are meager in the Chatelperronian.

The Aurignacian culture is named after the type site Aurignac in southern France. In France it is stratified between the Chatelperronian and Gravettian. The Aurignacian culture is recognised by some special artifact types. These types are “steep” and “nosed” scrapers. The other types like different kinds of scrapers, backed blade tools, a variety of burins, and flake tools are also common. Aurignacian is characterised by the use of well made long narrow blades which were expertly struck off from prepared conical cores. Aurignacian is also recognised for its bone and antler tools such as awls, pierced antler bars used as smoothing tools for making arrows (arrow strengtheners), flat elongated spearheads, split-based bone points, antler and bone; and ornaments like pierced shells and teeth, carved bone pendants, bracelets, and ivory beads. Some of the earliest ivory carvings of animals and human figures begin to appear during this period. Even musical instruments made on bone such as whistles and flutes have been found at some sites. Climate during this period was very cold and dry. They hunted herd animals adapted to cold climate such as reindeer, mammoth, woolly rhinoceros, steppe horse and bison. Engraved figures of these animals on bone and ivory are found at some of the Aurignacian sites. Aurignacian covers Europe, Levant (region around eastern Mediterranean and Aegean), and it continues far to the east into Siberia.

Aurignacian type industries are found eastwards to the Balkans, Palestine, Iran and Afghanistan. In the Levant, the early Upper Palaeolithic culture is the Emiran (known from the caves of Mount Carmel, Jabrud and several others), which used backed blades, burins and a variety of scrapers including end scrapers. The Emiran belongs to the same time period as that of the earliest Aurignacian. Another

culture, closely related to Emiran is the Dabba culture of north Africa and Cyrenaica.

The Gravettian culture is named after the type site La Gravette in the Dordogne region of France. It succeeds the Aurignacian. This culture is characterised by new technological innovations for survival in the cold climate. The stone tool industry is distinguished by a small pointed blade with one side blunted. This blunted side has a straight back. This is known as Gravette point. The Gravettian people were big game hunters. They used spear throwers for hunting. They hunted bison, horse, reindeer and mammoth. They invented animal traps and fish traps and may also have used darts to kill birds and small mammals. They were trapping hares and foxes for their skins, which they sewed into warm clothing using ivory needles with drilled eyes. They were making nets and baskets.

The Gravettian people are also known for their large skin tents, which were constructed over frameworks of mammoth bones, as a substitute for wood on the treeless steppes. Some of the Gravettian groups were dwelling in semi-permanent villages.

Gravettian is known for Venus figurines. These are statuettes of women carved from stone, bone or ivory, or molded in clay and fired. Gravettian culture stretched from France to Ukraine covering Italy, Austria and Czechoslovakia. It is divided into two regional groups—the Western Gravettian and the Eastern Gravettian. The Western Gravettian is mostly known from cave sites in France. The Eastern Gravettian is known from open-air sites of specialised mammoth hunters on the plains of central Europe and Russia.

The next culture in the French sequence is the Solutrean. It is different from its predecessors. This culture is known after the type site Solutre in eastern France. The Solutrean is a western European culture confined to France and Spain, and known from a few sites in England. The most striking tool-types are beautifully made, flat, bifacially worked “leaf-shaped points” often of superb craftsmanship. These are called “laurel leaf points” and “willow leaf points”. These are produced by pressure flaking. Pressure flaking is the technique of edge-to-edge flaking by applying pressure, and this required tremendous skill to create such delicate implements. Long spear points, with tang and shoulder on one side only are the other characteristic implements of the Solutrean. The other artifact types are barbed and tanged arrowheads, end scrapers, flint knives and saws. Bone and horn tools are also present. They hunted horse, reindeer, mammoth, cave lion, rhinoceros, bear and aurochs. The Solutrean culture existed for a short period between 21,000 to 19,000 years ago and disappeared as mysteriously as it appeared.

The Solutrean is followed by the Magdalenian culture. It represents the culmination of Upper Palaeolithic cultural developments in Europe. It is named after the type site La Madeleine in the Dordogne region of France. The Magdalenian culture was geographically wide spread in southwest France, northeast Spain, central Europe and Siberia, and later Magdalenian sites have been found from Portugal in the west to Poland in the east. The stone tools are a variety of backed blade tools, burins, scrapers, borers and projectile points. The

Magdalenian is best known for its elaborately worked bone, antler and ivory tools and other objects which served both functional and aesthetic purposes. These tools include a fine series of elaborate harpoons with single row and double row, spear throwers, adzes, hammers, rods, and eyed needles which are beautifully decorated with carved or incised patterns, or representation of animals. The motifs on these objects are square lattices, lattice of parallelograms, spirals, geometric designs, and carvings of heads of mostly horse and bison on bone handles. Items of personal adornment consist of sea shells and perforated carnivore teeth, which were possibly used as pendants for necklaces. Rock art in the form of cave paintings reached its zenith during the Magdalenian period. The world famous cave sites like Lascaux in France and Altamira in Spain are the best known examples of Magdalenian art which include beautifully rendered realistic figures in polychrome. These representations are animals (mainly horses and bisons), male and female human figures, positive and negative hand impressions, and dots and lines.

Magdalenian groups lived in caves, rock shelters, and tents in the open. They hunted predominantly reindeer, and Magdalenian sites also contain extensive evidence of hunting other large mammals such as red deer, horse, bison and other large mammals present in Europe at the end of the last Ice Age.

There is a small group of cultures known from Europe which in some cases is either contemporary, or of a later date, to the Magdalenian, but falling in the closing phases of the final episode of the last Ice Age. These are called epi-Palaeolithic. These are Hamburgian, Ahrensburgian and Feddermesser-Gruppen.

The Hamburgian culture (ca. 12,400 B.C. to 12,000 B.C.) of north Germany and Holland is a culture of reindeer hunters who lived in open sites in the summer season. Their tools consisted of a variety of harpoons recalling those of the Magdalenian, and a range of shouldered points made on blades finished by fine retouch. The Hamburgian (as well as the later East Gravettian and Magdalenian) flourished during the last main phase of the Wurm glaciation (last Ice Age). The ice sheets of the Wurm glaciation did not withdraw evenly, and there are marked warmer and colder oscillations. These Late-Glacial climatic events grade into those of the post-Glacial events. In the same fashion, the epi-Palaeolithic cultures develop into the post-Glacial Holocene Mesolithic cultures. As a matter of fact, there is “no marker horizon” for the beginning of the Mesolithic. These epi-Palaeolithic cultures fall in between the fully developed Upper Palaeolithic and the fully Mesolithic.

3.3 EPI-PALAEOLITHIC IN EUROPE

Ahrensburgian (ca. 10,700 B.C. to 9600 B.C.) is another epi-Palaeolithic culture. It is a reindeer-hunter culture which is similar to Hamburgian in several ways, but later in date than the Hamburgian. Stellmoor, near Meiendorf in Germany, is a very important Ahrensburgian culture. Here occupations of both Hamburgian and Ahrensburgian are found. The tools of Ahrensburgian are similar to those of Hamburgian. These are harpoons and tanged points, and wooden arrow shafts

are found abundantly in the Ahrensburgian levels at Stellmoor. The Ahrensburgian culture covers much of the same area as Hamburgian. It belongs to the very last close phase of the Ice Age. Another epi-Palaeolithic culture in which the tanged point is the most important tool is the Swiderian of Poland and Ukraine.

Further west, at the western end of north European plains, is a group of stone tool industries which fall in the category of epi-Palaeolithic. These have been given the collective name of Federmesser-Gruppen (ca. 10,000 B.C. to 8700 B.C.). Federmesser is the German name for pen knife. The stone tools of the Federmesser-Gruppen are characterised by a small backed blade which looks like a pen knife. Tanged points are also an important part of these stone tool industries.

Another epi-Palaeolithic culture known from Britain is the *Creswellian* culture. This is known from several cave sites in *Derbyshire*, south Wales, Somerset and Devon. The dominant feature of the Creswellian is the variety of backed blade types, including points and trapezes made on sections of blades, and also end scrapers and burins. Harpoons of Magdalenian style are found in Creswellian levels in some of the British cave sites (Aveline's Hole, Kent's Cavern). A fine bone needle, again similar to the Magdalenian is found at Cathole cave in the south Wales.

The various epi-Palaeolithic cultures, discussed above, may be regarded as ending with the close of Late Glacial conditions and the beginning of the warm conditions of the post-Glacial (Holocene) phase. To say that they ended merely means that they become merged into their more fully Mesolithic successors. The real changes that occurred in the Mesolithic are in response to climatic and environmental amelioration, and the growth of forests. The most prominent change in the Mesolithic, as a response to the growth of forests, is the appearance of first true axe for tree-felling and wood working. The first of these Mesolithic cultures is the Maglemosian (Star Carr in Yorkshire in England is the best known site), a culture of hunters and fishers which combined the use of flint axes with that of microliths.

The epi-Palaeolithic cultures in Southwest Asia are late Kebaran, Zarzian and Nebukian. These cultures have a considerable proportion of microlithic element, including geometric triangles and trapezes, and develop into the fully Mesolithic cultures during early Holocene. The Holocene period marks the end of Pleistocene Ice Age and the commencement of recent period.

The Upper Palaeolithic culture in India succeeds the Middle Palaeolithic culture and precedes the Mesolithic culture as in other parts of the Old World.

3.4 UPPER PALAEOLITHIC IN INDIA

The Upper Palaeolithic culture has a wide distribution in different physiographical zones in India (Fig. 3.7).

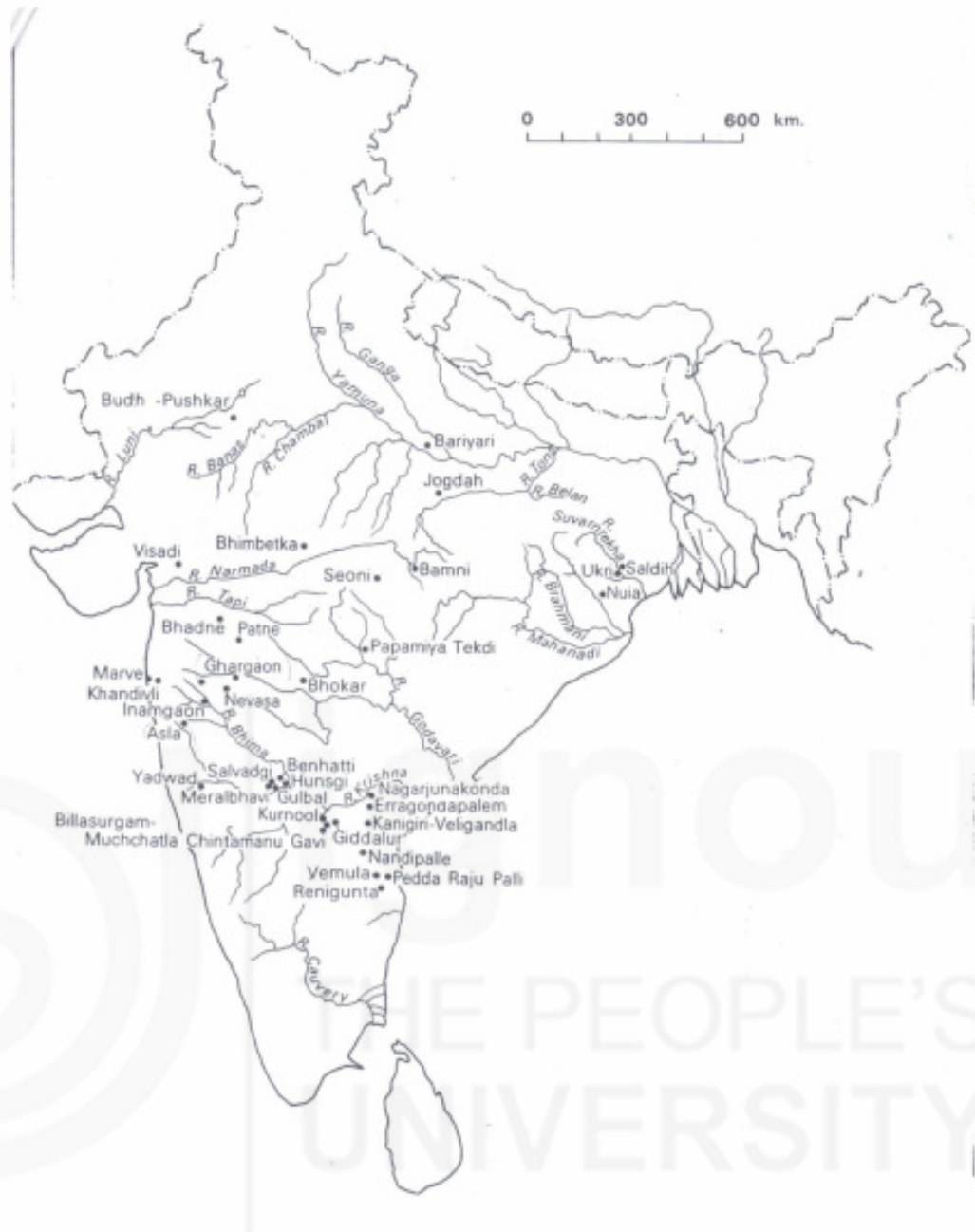


Fig. 3.7: Distribution of Upper Palaeolithic sites in India

It is known from Palmau (north Koel river valley) and Singhbhum (Subarnarekha and Sanjay river valleys) districts of Bihar; Garo Hill (valley of the Rongram river) in Assam; Allahabad, Banda and Mirzapur (Belan, Son, Tons and Yamuna valleys) districts in Uttar Pradesh; Mandla (river Banjer, a tributary of the Narmada) and Raisen (Bhimbetka caves) districts; Ajmer (in the vicinity of Budh Pushkar lake) district in Rajasthan; Baroda (in the sand dunes near Visadi) district in Gujarat; Dhulia (Kan river), Jalgaon (central Tapi Basin), Ahmednagar (Pravara Basin), Nanded (central Godavari Basin) and Pune (Ghod valley) districts of Maharashtra; Bijapur and Gulbarga districts of Karnataka in the tributary system of the Krishna valley (Salvadgi, Meralbhavi, Gulbal, Benhatti and Hunsgi are the best known sites); Karimnagar, Nalgonda, Guntur, Nellore, Kurnool, Prakasam, Kadapa, and Chittoor districts of Andhra Pradesh (several sites in the Eastern Ghats, in the river valleys and their tributaries of the lower reaches of the Godavari, Krishna, Tungabhadra, Penneru, Kunderu, Sagileru, Cheyyeru, Bhavanasi, Paleru, Gunjana, Rallakalava and Swarnamukhi river systems, and the Kurnool caves).

The Upper Palaeolithic cultural relics in varied physiographical zones of India are stone tools which are based on blade tool technology. Since most of these sites are open-air occupations, tools made of organic materials such as bone are not known because organic remains are prone to disintegrate in open-air situations. However, bone tools were recovered from the Kurnool caves in which conditions for the preservation of organic remains were favourable (see Kurnool caves).

Radiocarbon dates for the Upper Palaeolithic obtained from different parts of India (e.g. Bhedaghat, Dharampuri, Chandrasal, Mehtakheri, Nagda, Belan valley, Inamgaon, Nandipalle and Patne and the Thermoluminescence (TL) date from the Kurnool caves indicate a time period falling in the range of 40,000 B.C. to 8,000 B.C. The faunal remains from the Kurnool caves, found in association with the Upper Palaeolithic, also belong to the late Pleistocene age.

3.4.1 Stone Tool Industries

The Upper Palaeolithic culture in India is not marked by any sub-regional cultures (such as Chatelperronian, Aurignacian, Gravettian, Magdalenian and Solutrean in Europe) as in Europe. However, the Upper Palaeolithic industries in India show considerable degree of regional variation in tool types.

In Bihar and Assam the tools are made on thick broad flake-like blades. Hence, these are called flake-blades. Therefore, these industries in which tools on flake-blades are prominent are referred to as “flake-blade industries”. The common tools are points, scrapers and borers. The other, less common types are backed knives, borers, burins and small choppers. The raw materials are agate, jasper and other siliceous rocks.

The Upper Palaeolithic industries in Rajasthan, Uttar Pradesh, Madhya Pradesh, Orissa, Maharashtra, Karnataka, and parts of Andhra Pradesh are characterised by well defined blades and tools made on blades. The blade tool technology in these industries is standardised. Hence, they are referred to as “blade-tool industries. The tool types are large to small sized blades (some of the blades are quite thick and long); backed blade tools; and scrapers, points, awls and burins on flakes, flake-blades and blades. The occurrence of tools finished by backing, such as the backed points, is low. Also the burins occur in a low frequency. Variety of scrapers (convex, concave, round, and notched) on flakes and flake-blades are most common, and also retouched blades are in significant numbers. The raw materials are chert, jasper, chalcedony and agate. In parts of Madhya Pradesh (e.g. Bhimbetka cave IIIIF 23), coarse to medium grained quartzite is the raw material. In Andhra Pradesh, fine grained quartzite (e.g. Sagileru, Cheyyeru, Paleru river basins), and cherty-limestone (Kurnool caves) are also used.

In the excavations of Muchchatla Chintamanu Gavi (MCG I), one of the Kurnool caves, the blade-tool industry is found in association with a bone tool industry and Late Pleistocene fauna. In the lower Godavari valley the sites of Wankdi and Manikugudem (Adilabad district) have yielded considerable quantities of intentionally broken bones of large mammals, which are fossilised, in association with blade tools. These broken bones, in all likelihood, represent the leftovers of animals that were hunted and eaten. Grinding slabs are associated with the blade tool industry in the MCG I cave occupation. These grinding slabs suggest their possible use in processing plant foods, and also for milling wild grains. Here, large chunks of chocolate brown chert, quarried from the outcrops in the limestone beds were brought to the cave in considerable quantities. These large nodules are fire treated, by exposing to flame, for artifact production.

The Upper Palaeolithic industries especially in the Belan and Son valleys (Allahabad district) in Uttar Pradesh and in the southern belt of the Eastern Ghats in Andhra Pradesh are characterised by distinctive backed blade tool types and burins. Hence these are referred to as “blade-and-burin” industries. The distinguishing feature of these industries is the predominance of blades, backed-blade tools, and burins; a variety of scrapers (side, concave, convex, ovate, notched and discoid) on blades, flakes and flake blades; scrapers on blade cores; bifacial, unifacial, and shouldered points on flakes and blades, awls; and typical prismatic blade cores. An Upper Palaeolithic site in the Belan valley has yielded a barbed bone harpoon.

In the Belan, Adwa and Lilji river valleys, which are tributaries of the river Tons (a major tributary of the river Ganga) in Uttar Pradesh, there is a distribution of numerous Upper Palaeolithic and epi-Palaeolithic primary occupation sites in close proximity to perennial water sources on either side of the Kaimur ranges. In these sites which are called epi-Palaeolithic, in addition to regular Upper Palaeolithic tools, there are tools of microlithic proportion including different kinds of triangles and lunates. Some of the important epi-Palaeolithic sites in this region are Baghaikhor, Lekhahia and Lahariadih rock shelters in the Kaimur range; Chopani Mando in the Belan valley; and Maihar IV on a meander of Lilji river. The raw materials are chert, chalcedony, jasper, quartz and agate. These epi-Palaeolithic cultures reveal the transitional stage to the succeeding fully developed microlithic industries of the Mesolithic culture of the Holocene period.

The primary occupation sites in the Rallakalava (Vedulacheruvu, Nallagundlu) and Gunjuna (Peddarajupalli, Vodikalu, Bellu) valleys in the southern Eastern Ghats have yielded the best known evidence of the blade-and-burin industries in the country (Figs. 3.8 – 3.11).

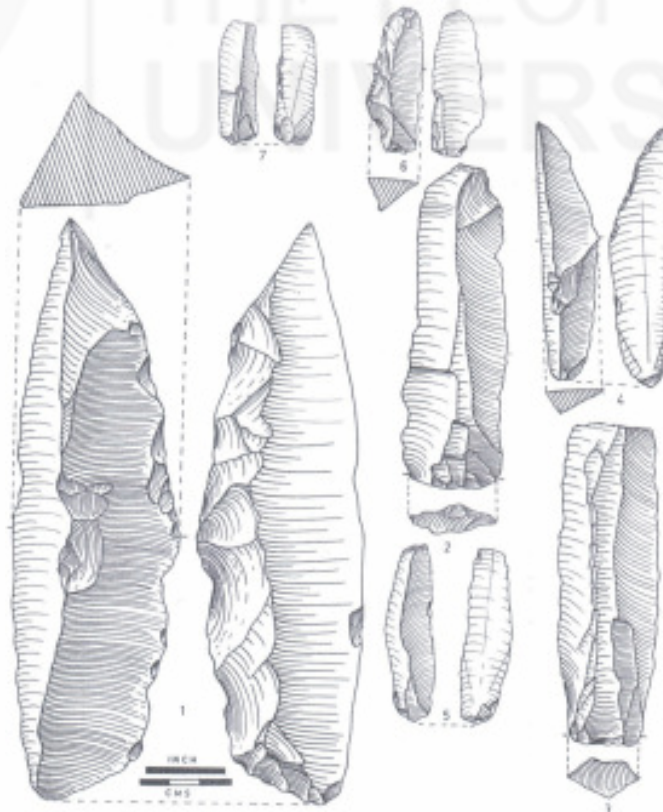


Fig. 3.8: Artifacts of the blade-and-burin industry from the Rallakalava valley, near Renigunta. 1, 4, 6, retouched blades; 2,3,5,7, simple blades (after Murty 1979)

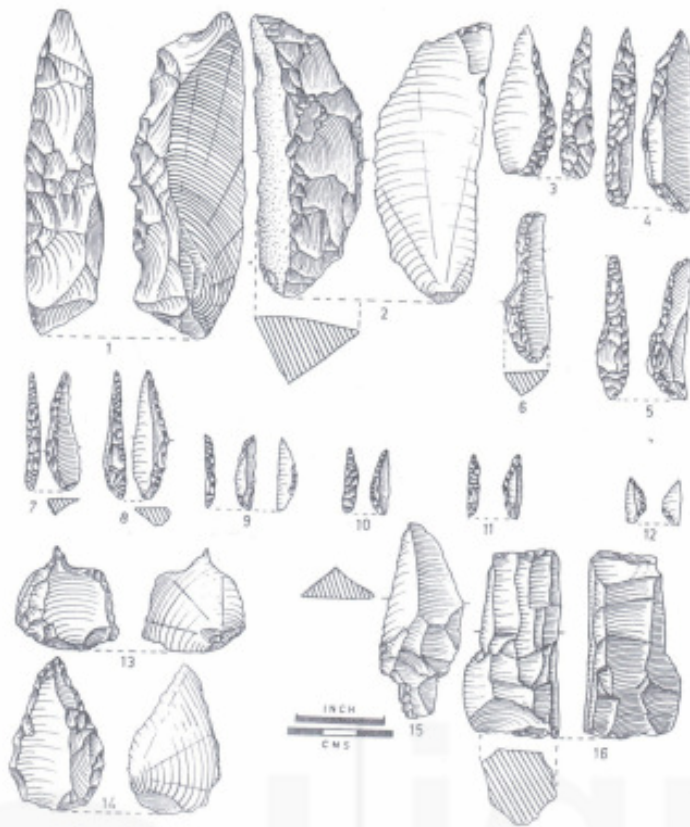


Fig. 3.9: Artifacts of the blade-and-burin industry from the Rallakalava valley, near Renigunta. 1-2, backed knives; 3-12, backed blade and bladelet tool variants (5 and 6 are backed pen knives); 13, awl; 14, unifacial point; 15, tanged point; 16, blade core (after Murty 1979)

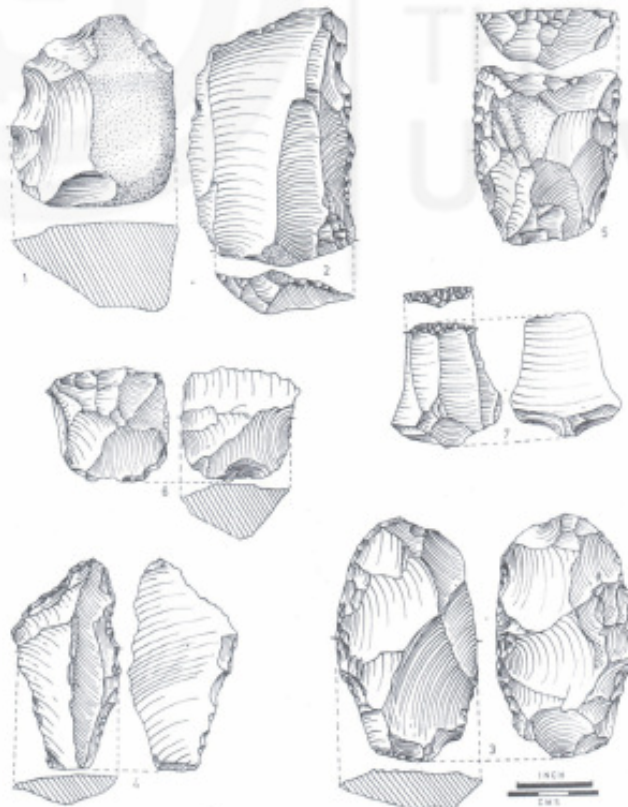


Fig.3.10: Artifacts of the blade-and-burin industry from the Rallakalava valley, near Renigunta. 1, convex scraper; 2, 4, side scrapers; 3, ovate scraper; 5, 6, 7, end scrapers (after Murty 1979)

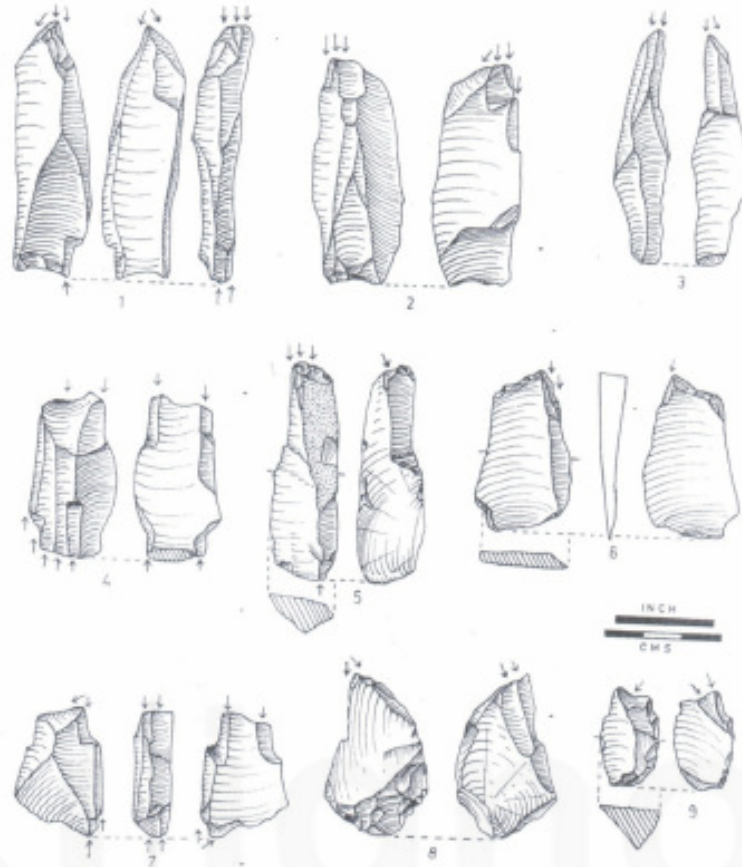


Fig. 3.11: Artifacts of the blade-and-burin industry from the Rallakalava valley, near Renigunta. 1-9, different types of burins (after Murty 1979)

What is most striking in these Rallakalava and Gunjana stone tool assemblages is the variety of backed-blade tools such as straight-back and curved-back points, points on truncated blades, pen knives, macro-lunates (as big as orange segments), macro triangles and macro-trapezes, and burins. These backed-blade tools, burins and scrapers display technological similarities to the Chatelperronian, Aurignacian and Gravettian types of Europe and Southwest Asia. These macro-lunates have damaged working edges due to use. They can be associated with working on wood and bone, as spoke shaves, for making hafts for projectile points. The raw material used for the manufacture of artifacts in this region is predominantly fine grained quartzite, and occasionally lydianite. The Rallakalava and Gunjana valley Upper Palaeolithic cultures also comprise a small proportion of microlithic tools such as triangles and lunates. Another noteworthy feature of the Rallakalava and Gunjana occupations is the occurrence of flat bored stones, and numerous grinding slabs. The flat bored stones indicate that they were possibly used as net sinkers for fishing. The grinding slabs suggest their use for processing of vegetal foods or even wild grains. The Upper Palaeolithic occupations in the Tons and Son valleys, and in the southern Eastern Ghats, are in close proximity to water sources. This indicates that aquatic foods also formed an important source of diet in these river valley occupations. Some of these occupations are extensive ranging from 5000m to 1000m in extant indicating that they were long-term occupations. They indicate sedentism in such habitats which provide varied seasonal food resources. The Upper Palaeolithic cultures in the Tons and Son valleys and in the Kaimur ranges of Uttar Pradesh and in the southern Eastern Ghats are notable for their evidences to trace the emergence of Mesolithic cultures.

At the Upper Palaeolithic site of Baghor I (Son valley) in Madhya Pradesh, there is evidence of worship of mother goddess. In the excavations of this site, has been found a female anthropomorphic stone with concentric triangles at the base, in the centre of a circle of sandstone rocks. In the vicinity of this site, there are similar stones in rock circles, which are currently worshipped as *mai* (mother goddess).

3.4.2 Bone Tool Industries

Upper Palaeolithic bone tools are known from the Kurnool cave sites. The excavations by Robert Bruce Foote and his son Henry Bruce Foote in the Billa Surgam caves, in the 1880s, yielded bone tools in association with Late Pleistocene fauna. The bone tools obtained from the Billa Surgam caves constituted 1700 specimens of worked and cut bones of which 200 were implements. The bone tools, as described by Foote, comprised awls, barbed and unbarbed arrowheads, daggers, scraper-knives, scrapers, chisels, gouge, wedges, axe heads, and sockets. Robert Bruce Foote observed that some of these bone tools are comparable to the Magdalenian culture of France. The occurrence of bone tools in the Billa Surgam caves is confirmed by recent excavations, in the 1970s by K. Thimma Reddy. Further, excavations in the Muchchatla Chintamanu Gavi cave (MCG I and MCG II), in the 1970s by M.L.K. Murty, have yielded blade tools and bone tools in association with Late Pleistocene fauna. The bone tools of MCG cave comprise scrapers, perforators, chisels, scoops, shouldered points, awls, barbs, spatulas, worked bones, and splinters (Fig. 3.12).

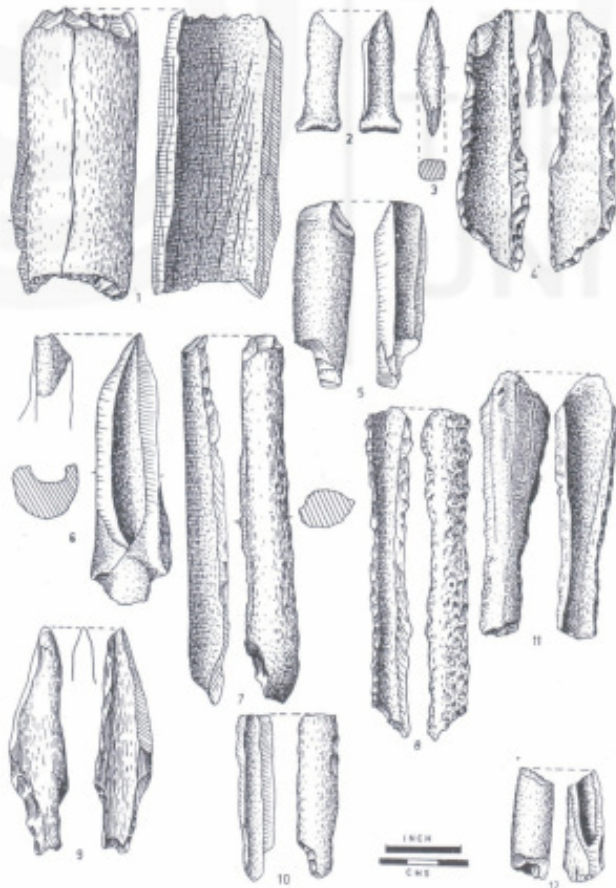


Fig.3.12: Bone tools from Muchchatla Chintamanu Gavi Cave I (MCG I), Kurnool caves. 1) scraper; 2-3) perforators; 4-6) chisels; 7-8) spatulas; 9) tanged point; 10) shouldered point, broken; 11) bone blank; 12) bone with both ends cut (after Murty 1979)

In a total collection of 1652 worked bones obtained from MCG I cave, 878 (47.40%) are bone blanks, and 151 (8.15%) are crudely finished tools; the rest representing broken bones and splinters. The MCG cave bone tools display a crude technology. This is because the cave is a short-term occupation and the possibility for complete representation of well finished artifacts is less likely in short-term occupations than in permanent occupations. In the manufacture of bone tools, in the first step, the ends of long bones selected for working are knocked off by striking obliquely on the shaft at the ends. Long and thick bones are transversely cut by chopping along the circumference at the desired point. From these prepared shafts of long bones, strips of bones (bone blanks) are removed by flaking and chipping. Some examples indicate that on a prepared shaft, parallel grooves are made along the long axis, and long strips are removed. These long strips are further reduced in size and are finished into tools by flaking along the margins, lateral chipping and grinding.

3.4.3 Subsistence Economy

The Upper Palaeolithic blade and backed blade tools, functionally, must have been used by hafting in wood or bone, as composite tools. They might have been hafted to make barbed points, harpoons, projectiles, arrows, hunting spears etc. The variety of scrapers, burins, borers and awls indicate their use in wood and bone working. The Upper Palaeolithic tools thus indicate the manufacture of specialised hunting tools for hunting big and small game, and fishing. The evidence of the animals hunted during the Upper Palaeolithic is well preserved in the Kurnool caves. They consist of jungle cat (*Felis chaus*), porcupine (*Hystrix crassidens*), black naped hare (*Lepus cf. nigricollis*), wild ox (*Bos* sp.), wild buffalo (*Bubalus* sp.), nilgai (*Boselaphus tragocamelus*), chinkara (*Gazella gazella bennetti*), blackbuck or Indian antelope (*Antelope cervicapra*), four-horned antelope (*Tetracerus quarricornis*), sambar (*Cervus unicolor*), spotted deer (*Axis axis*), barking deer (*Muntiacus muntjak*), mouse deer (*Tragulus cf. meminna*), Indian wild boar (*Sus scrofa cristatus*), pangolin (*Smutsia gigantea*), monitor lizard (*Varanus dracaena*), and a few bones of birds and dermal scutes (horny plate) of turtles. Hunting these animals is a difficult task. The hunting techniques of varied contemporary hunting–gathering communities in different parts of India provide us insights and analogies to envisage the prehistoric hunting practices. Some of these communities are Van Vagris of Rajasthan; Bhil, Aheriya, Baheliya, Kanjara and Pardhi of Ganga plains and central India; Birhor of Chota Nagpur and Orissa; Katkari of western India; Chenchu, Yanadi, Boya and Yerukula of the Eastern Ghats; Irulas of Tamil Nadu; Kadar of Kochin; and Mala Pantaram of Travancore. All these groups hunt big and small game (the species mentioned above are included), birds, and fish in the rivers, lakes and ponds. They use specialised hunting contrivances such as a variety of traps, nets, snares, bows and arrows for hunting and fishing. The hunting practices of these communities point out the possibility of use of prototypes of some of these specialised aids in the prehistoric past, without which the game would not have fallen a prey. In so far as the exploitation of plant foods in the prehistoric past is concerned, no evidences are as yet available. But again, drawing analogies from the communities which are adapted to forested environments, it can be suggested that a variety of wild plant foods such as yams and tubers, fruits, nuts, flowers, leafy vegetables, shoots, and mushrooms; insects; and honey might have been gathered for subsistence. From the Mesolithic rock paintings of central India, in which some of these subsistence activities (hunting, fishing, collection of plant foods and

honey) are depicted, it is possible to predict that such activities were in vogue during the Upper Palaeolithic times.

3.4.4 Art

Some examples of art are known during the Upper Palaeolithic phase in India. These artistic representations can be classified as portable art (movable objects, or art mobilier) and mural art (paintings on cave walls and ceilings, or art parietal). Examples of portable art are mostly ostrich egg shell beads and engraved fragments. The well known sites are Bhimbetka III A-28, Ramgar (Chambal valley) and Khaparkheda (Narmada valley) in Madhya Pradesh; Chandresal and Kota (Chambal valley) in Rajasthan; and Patne in Maharashtra. Examples of mural art are best known from the caves and rock shelters of Bhimbetka. The rock paintings here, assigned to Period I, are ascribed to the Upper Palaeolithic. These are linear representations in green and dark red colours of herds of huge animals like rhinoceroses, bisons, wild buffaloes, mammoths and boars. There are also stick-like human figures.

3.5 SUMMARY

Upper Palaeolithic cultures succeed the Middle Palaeolithic cultures and have a wide distribution in different parts of the Old World. These are associated with the fossil remains of Cro-Magnon man, who belongs to the species *Homo sapiens*, referred to as Anatomically Modern *Homo sapiens* (AMHS). The distinguishing features of these cultures are (a) specialised blade tool technology, (b) bone tool technology, and (c) art. In Southwest France, there are several regional phases in the Upper Palaeolithic cultures known as Chatelperronian, Aurignacian, Gravettian, Solutrean, and Magdalenian. These cultures flourished in the final stages of the last Ice Age. These Upper Palaeolithic cultures, at the closing stages of the last Ice Age are followed by epi-Palaeolithic cultures such as Hamburgian, Ahrensburgian and Federmesser-Gruppen. In Southwest Asia also there are local sub phases in the stages of Upper Palaeolithic. Upper Palaeolithic cultures in India also have a wide distribution, but there are sub-cultural sequences as in Europe.

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Sample Questions

- 1) What are the salient features of the Upper Palaeolithic cultures?
- 2) Give a review of the Upper Palaeolithic cultures in Europe.
- 3) Give a review of the Upper Palaeolithic cultures in India.
- 4) Write notes on:
 - i) Backed blade tools
 - ii) Magdalenian bone harpoons
 - iii) Hamburgian culture
 - iv) Bone tools from Kurnool caves
 - v) Animal remains from Kurnool caves and subsistence economy

UNIT 4 PALAEOOLITHIC ART

Contents

- 4.1 Introduction
- 4.2 Home Art
- 4.3 Cave Art
- 4.4 Summary
 - Suggested Reading
 - Sample Questions

Learning Objectives



Once you have studied this unit, you should be able to know:

- about the “home art” and “cave art”;
- about different kinds of Upper Palaeolithic engravings; and
- about different styles of Upper Palaeolithic paintings.

4.1 INTRODUCTION

Art refers to human skill as opposed to nature. This skill can manifest itself in innumerable ways which can be given individual names depending on the channels of expression. Thus, music is as much art as perhaps poetry. It is, however, important to note that every piece of human skill does not necessarily become art. In order to distinguish this, we can call art as that which refers to creation for non-biological needs.

In other words, the human skill in tool manufacturing need not be included in the consideration of Prehistoric Art. It will, therefore, be safer to call Palaeolithic art as visual or plastic art in contradistinction to the rest which is studied as prehistoric technology.

Prehistoric art, as it is known today, was executed by our ancestors either on stones or bones. At times, mud, charcoal, shell, teeth and horn have also been used. Art work executed on such movable materials is designated as “home art” or “*Art mobilier*”. Art executed on walls and ceilings of caves and rock shelters is called “cave art” or “*Art Parietal*”.

Art work executed on such movable materials is designated as “home art” or “*Art mobilier*”. Art executed on walls and ceilings of caves and rock shelters is called “cave art” or “*Art Parietal*”.

Besides engraving and painting, there are also numerous examples of modeling done with simple mud or bone ash mixed with it. These latter examples throw significant light on the additional ability of the prehistoric artist. It is important to appreciate that the skill required to represent an object by modeling is not of the same kind required to either paint or engrave.

Interest in cave art among archaeologists grew out of a layman’s discovery, in 1880, of the famous cave site of Altamira in Spain. Don Marcelino de Sautuola discovered the site when he was searching for his daughter, who because of her

small size could manage to get through a narrow crevice into this cave and thus came face to face with the magnificent panels of Palaeolithic Art.

Don Marcelino de Sautuola claimed prehistoric antiquity for these Altamira paintings. Edouard Harle rejected the possibility that the Altamira paintings are of prehistoric age. This controversy kindled enthusiasm in rock art research, and a planned and extensive search began for caves and rock shelters. In 1902 the first report of Les Combarelles was published and since then more than 120 caves and rock shelters with Palaeolithic Art have been recorded.

Objects of home art, at the same time, were also coming to light in the excavations of Upper Palaeolithic cave and rock shelter sites. The “Venus of Willendorf” was discovered by Szombathy in 1884. By the end of the first decade of this century eight monographs on cave paintings were published. In 1913, Reinach made a summary of Art from the Quaternary period. Finally, in 1952, Prof. Breuil published his classic work: *Quatre cents siècles d'art pariétal*.

4.2 HOME ART

The earliest evidences of prehistoric art are the numerous necklaces and pendants and such other objects of personal adornment. An engraved rib from an Acheulian level at Pech de l' Aze (France), datable to 300,000 BP, forms the earliest evidence of prehistoric art. The engraving is in the form of a festooned serpentine figure. A flat circular bone from the Middle Palaeolithic site of Tata (Hungary), dated to 50,000 BP, forms the earliest evidence of art from the Central Europe. It is a circular bone of 21mm diameter and bears an engraved + sign on one of the surfaces. It could be a charm amulet or a totemic sign.

Burnt clay, deer canine, shells and fish vertebrae were the other materials used for ornaments. With the increase of more direct evidence from early Gravettian onwards, it would seem that arm and leg bands as also necklaces may have been used.

In relatively later stages, these personal adornment objects show the highest degree of decoration engraved on them. For instance, the so-called zoomorphic ivory lockets from Pavlov (Czechoslovakia), five pieces of open-mouthed bangles or bands, 1cm in breadth with three holes pierced at both ends from Mezin (Soviet Union), and one ivory pin with flattened and pierced head from Kostienki are some examples. The Mezin arm bands carry an interesting pattern with squares drawn in spiral continuation. At the joining portions these take the shape of chevron designs. The decorations on these pieces show the control of hand and perfection in technique.

The female statuettes from Central and Eastern Europe during the same period indicate the definite use of ornaments. Burials unearthed further sustain the reality that jewellery was used by both the sexes, may be more by males than by females if we go by some specific evidences.

Numerous other home art objects are known from Upper Palaeolithic deposits. Vogelherd in West Germany yielded some remarkable ivory models measuring between 7-4cm in length. The animals shaped are horse, mammoth, reindeer, panther and cave bear. A series of crosses engraved along the belly and the shoulder of mammoth may indicate their specific use.

In 1954, Reik described two more of such art objects from the site. One of these is a pebble with a series of incision marks and eye-like depression. This has been identified as representing the head of a cave bear.

Peterfels, another West German Upper Palaeolithic site, yielded a number of batons with a single series of oblique or zigzag lines engraved along them. One of them carries a series of wild horse heads while in another two reindeers are engraved. One flat piece of coal carries a perfect engraving of a wild horse on it. Several other charcoal pieces have been rubbed into various anthropomorphic forms. These plain bars of coal with a curve in the centre have been identified as “sitting silhouette”.

In Czechoslovakia, Pekarna yielded engravings of animals and some plant representations on antler and ivory. The most significant art objects found here include two engraved horse ribs. In one of these, two bulls are shown with heads bent and pressing against each other in a fighting posture while a third bull is shown charging from behind. The other rib shows a row of grazing horses approaching another row of horses from opposite direction.

Dolni Vestonice is another site in Czechoslovakia known for its art material. Here, within a hearth, several lumps of clay with some kind of art representation have been found along with a female statuette. This, called “Venus”, deserves special mention because here, unlike in other “Venus” statuettes in Euro-Asia, the material used is mud mixed with bone ash and bone powder. The figure is 11.4 cm long with a pair of pendulous breasts and has slits made for eyes. Deep furrows on the back side show the mid rib and flesh folds near the waist. Four small grooves are made on the top of the head which could have been used to fix the ornament.

The other small lumps of similar material found in this hearth represent several animal heads. An engraved human face of ivory forms another interesting find which led many to interpret facial paralysis of the individual. A mammoth statuette of sand stone and several pieces of ivory lockets in the shape of a pair of breasts are the objects recorded from this site.

Similarly, a fork shaped bone piece and another elongated piece with a pair of hanging nodules at about a third of its length from top are taken to represent stylish figures. Besides these art objects several coloured and pierced shells, pierced animal teeth, small ivory cylinders with ornamental engravings and flat bones with holes driven in at their corners form the various personal adornment objects.

In Western Europe, home art develops more noticeably around utilitarian objects during this period. The deeply carved antler points and rods from Isturitz (France) are two examples of the superfine workmanship of the people. The Isturitz points are deeply curved in spiral and concentric grooves in such a manner that they look like a miniature kind of some of the palae-Indian ceremonial poles.

The Les Trois Freres spear-thrower fragment shows two headless (or broken when recovered) animals (which were perhaps Ibex) sitting face to face on stretched hind legs, their body upright and forelimbs locked together in a posture of combat. The muscles are stretched in such a posture that they have not escaped the artist’s attention.

The engraving of a bull with an U-turned head and numerous other depictions on the antler pieces at La Madalein indicates the tendencies of decorating mainly tools in Western Europe. These kinds of decorations are not entirely unknown

from Central Europe either. Kesslerloch (Switzerland) yielded animal engraving on flat stones exactly in French style representing a female “silhouette”. At La Ferrassie, several sex symbols are found engraved along with some animal heads on a piece of flat stone.

The famous “masked men” on the batons-de-commandement at Abri Mege (France) are widely known. These show a row of three vertical figures with snout and a pair of pointed ears representing the face. The body is shown with fur representation, and for the legs a pair of human legs slightly bent in the anterior direction is drawn. Whether these represent masked men with furs covering their body in some kind of a ritual dance is difficult to prove, but cannot be ruled out.

It will, therefore, be not entirely untrue to state that these grotesque human representations seem to be more common in home art of Western Europe. The rest of the objects depicted by prehistoric artists are more-or-less common in both these zones of Europe.

Another point of difference appears to be the medium chosen in the two regions. Engravings are found on the points and needles in Central Europe as well but it can be easily seen that utilitarian objects were not so often chosen for in this zone. Crisscross lines or a vague outline of an animal here and there may be all that can be recorded on them. On the contrary, the carvings of stylised figures, animals or female forms are done with skill and imagination. The female statuettes on the other hand, are not many from France. The maximum number of such representations till today is known from Eastern Europe of which Kostienki yielded 49 finished and unfinished ones and Menzin yielded 11 similar ones. The total number of such statues from the whole of Eurasia known till today is 133. In Asiatic Russia, Malta yielded about 18 such objects. As compared to these, Central Europe yielded only 9 statuettes. Southern coastal Europe, by far, shows a larger number of these figures than Central Europe. France has so far recorded a total of 16 such pieces.

It is however, important to note that sites like Brassempouy (France), Willendorf (Austria) (Fig.4.1), Grimaldi (Italy), Kostienki, Menzin and Malta (all in USSR) show multiple occurrence of the statuettes and hence can be considered archaeologically significant.

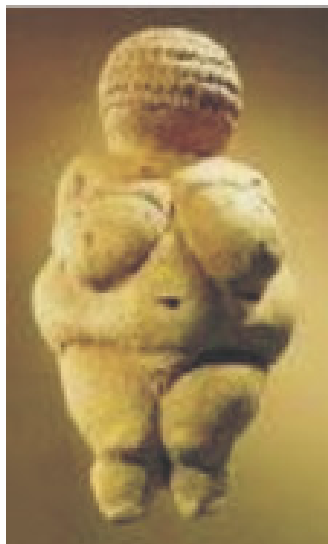


Fig. 4.1: Home Art of the “Venus of Willendorf” (Source: edwardlifson.blogspot.com)

The style of representation in all the Palaeolithic female statuettes is devoid of feet although hands in many instances have been represented. A personal ornament, at least in the form of a waist girdle, is shown in some instances. So far, only a single engraving at Laussel represents a male figure, besides a female.

The details of representation of these statuettes, and also the material chosen for their execution, vary a great deal from region to region. For instance, the unfinished statuettes of Willendorf fail to show the exaggerated features because they are worked on a flat ivory piece. The symbolic female representations, likewise, seem to have been constrained by the raw material. The Petersfels figures on charcoal and the stylised figures of Mezin may be some of the examples.

4.3 CAVE ART

Art work represented on cave walls, floors and ceilings are usually in the form of engravings, outline drawings or paintings. Mostly animals are represented singly or in groups of various sizes. Animals such as bison, wild cow, woolly mammoth, reindeer, ibex or wild horse are the commonly represented ones. Sometimes, cave bear, a solitary wolf, cat, rhinoceros or lion head are also drawn. Fish, bird or human forms form the rarest kind represented. These are either drawn in profile or in the so called “twisted perspective”, in a three-quarter profile. In later stages, a third dimension to the figures is attempted by shading the contours. Similarly motion seems to have been depicted by the representation of multiple legs.

Besides these animal representations, some abstract symbols called tectiforms, claviforms, or blazons are also found in almost every large cave site. It is difficult to interpret these signs, but these are apparently attempts in communicating some kind of messages.

In addition to these tectiforms, many cave walls carry a series of hand impressions. When the hand is dipped in colour and pressed on the wall it leaves a positive impression. In some cases it seems that the hand has been sprayed over, thus leaving a negative or stenciled hand impression. Many of these hand impressions show mutilated fingers.

Les Combarelles is a cave within the limestone range in the Dordogne. The cave was carved out by a river or stream originating from the heart of the mountain. This is an extensive and twisting tunnel measuring 200 m in length, 1.80 m in height and 1.20 m in breadth.

The paintings start occurring from about 73 m from the opening of the cave. The total number of representations exceeds a thousand. These are mostly engraved and are superimposed. There are only two paintings among these. These are an outline of an animal and a hand impression in black paint besides a tectiform. The engravings are often covered with a smear of weathered lime which has been taken as a proof of their antiquity.

The engravings are divided into two groups on the basis of the depth and boldness of the engraved lines. The finely engraved lines, on comparison with other known sites, are taken to represent a late style (Middle Magdalenian), while the heavy engravings are taken to be of an earlier date (perhaps, late Perigordian). The figures identified include several reindeer, ibex, horse, bison, mammoth and

some anthropomorphic designs. Some rather unusual representations of bear and lion have also been recorded. In average these figures measure between 60 cm and 90 cm in length.

In one of the best panels, a pair of mammoths is engraved in profile with their trunks curled round. Hatched lines have been drawn on head, leg and chest of the animal to represent the coat. In another panel, two grotesque human figures with peculiar animal-like features are shown with extended bellies. Some scholars described these as representations of a male following a pregnant female. Besides these, there are several delicately engraved horses with full details of mane and often superimposed by other animal forms.

Font-de-Gaume is another cave in the same region which has yielded valuable evidences of Palaeolithic art. These start appearing from about 60 m from the cave entrance. More than 50 representations were recorded from the cave. These include a series of mammoths, dark polychrome paintings (black, red and brown colours) of bison, reindeer, woolly rhinoceros, horses, ibex and a feline.

The art of the last period at Font-de-Gaume is best known for its highly characteristic form and style. Among the various representations, a panel representing some reindeer, bison and mammoths is worth noting. These are superimposed by two complete and four incomplete tent-shaped lined figures with colour and also engraved. Four of these signs are drawn in polychrome and its body around the shoulder is colour washed. On this washed surface occur outlines of a complete hut.

The reindeer, which are best represented, constitute the biggest figures in the panel. These are drawn facing each other. One of these is a female shown kneeling on its forelegs, the other is a male shown with a bent head nuzzling or sniffing the head of the reindeer. Both these animals are first engraved and then a reddish-brown wash is given to fill the inside. Black colour is finally used to give the contour effect in the bodies. The antler of male is painted in black while the horns of the female are painted in red. The rest of the drawings in this cave, which represent different animals, are equally good. Lascaux (Fig. 4. 2) is the finest of all cave-painting sites in France.



Fig. 4.2: Cave Art at Lascaux (source: lascaux.culture.fr)

The main chamber is decorated with polychrome paintings of bulls and some other animals. Among these also occurs the curious and much discussed painting of the so called “unicorn with double horn”. The main chamber tapers into a narrow 20 m long passage. Here, several single horses and a frieze of a group of small horses and three cows are painted in black outline but with washes of red and black for cows and brown and black for horses filling the insides.

The animals are delicately drawn, but differ in their style from the animals of the main chamber. One of the cows is superimposed on the horses. Many broken lances are shown pierced by a lance-head. In another, a long bull is drawn with a menacing look. A feathered arrow or lance is drawn in front of its face.

Another passage out of the main chamber shows a large number of engraved stags. On the floor of a shaft (called “shaft of the dead man”) from this chamber occurs a painting on a flat protuberant rock.

This painting shows an impaled bison standing with a human figure in a position of falling on his back facing the bison. The latter has its tail up with the hair of the body bristling. A spear is shown pierced through its hind quarters and some of its entrails hanging down from its belly. The human figure is schematically drawn with single straight lines representing the body outline, hands and legs. The head of the man is drawn like that of a bird’s head. The man has an erect phallus. A stick with a bird on it is shown on the ground by his side.

Gargas is a cave site in the Pyrenees which has yielded the maximum number of hand prints in black and red colour. Most of the stencils are left handed impressions and invariably show some of the fingers mutilated.

Montespan is a small cave situated near Gargas in the Pyrenees. This cave is famous for its clay models of animals. The most famous of these is the sculpture of a single headless bear measuring about 90 cm in length. The animal is sitting with its forefeet stretched in front of it. The claws of the right foot were well preserved. There is a deep hole in the neck. A bear skull with a hole in the neck was found lying on the foreground between the forefeet. It is surmised that the skull was inserted in the hole on the model and the body was covered with a bear skin for some kind of hunting ritual and /or practice.

In the Pyrenees lies another pair of interlocked caves called Les Trois Freres and d’ Audoubert. Excavations at both these caves revealed a late Upper Palaeolithic industry with stone and bone tools. The dart thrower with a pair of ibexes in combat, which has already been described in Home Art, forms a part of this assemblage.

One of the most referred works of art in this cave is found in an underground chamber reached through a vertical hole in the cave floor (nearly 3.5 m below the floor). This is also called sanctuary because of the famous engraving of the sorcerer in it.

The sorcerer engraving is about 90 cm tall with a human body, legs and a prominent phallus. The figure shows queer mixture of human and animal features. It has a long tail, ears of cat, only one branch of antler on head, small eyes and a furry bearded mask. The legs are painted in red and the body is heavily outlined with red colour. The rest of the body is repeatedly engraved. This entire depiction

is heavily superimposed by bison, ibex and horse engravings done with complete disregard of orientation. Another panel shows a wounded bear lying with thick lines protruding from the nostrils, mouth and body.

The other cave, d'Audoubert has the famous pair of clay bas-reliefs of bison, each measuring about 61cm. These clay models are done on a fallen stalagmite in a reclining angle. Only the dorsal side is modeled, the ventral side being the rock. The front bison is a female, its eyes shown by depressions and its tail shown bent up. The other bison is probably a male with protuberance eyes. The execution of the details of the bodies shows a masterly craftsmanship.

There are some deep human heel marks also found near about these two clay models. These are taken as the imprints of children (because of the low ceiling over these impressions) who probably danced around on their heels as part of some kind of initiation ceremony. On the ground, in the immediate neighbourhood, some clay sausage-like models were found. These are taken to be representations of the human phallus endorsing the view of initiation ritual.

Another long cave in the Pyrenees ranges in France called Niaux cave, shows some rare and interesting paintings. These include several horses and bison although the ibex, by far, forms the largest number. In one of the representations, a bison with flaring nostrils has been produced on the floor by cutting clay. Three natural holes are formed in its body by water dripping from the ceiling. These holes have been carefully shaped into three arrow heads, as if pierced into the body of the animal. Another important painting represents a fish, rather a rare object in Palaeolithic art.

In Spain, the Cantabrian ranges have yielded a large number of caves with Palaeolithic painting in them. Of these, the best example comes from Altamira (Fig.4.3) from the one that was first discovered at Altamira. This spectacular cave is in the Northern Province of Santander. Cantallhac and Breuil (1906) were the first to report the details of the painting in this cave.



Fig. 4.3: Cave Art of Altamira (Source: markandrewholmes.com)

This is a 280 m long cave, and the art, mostly executed in polychrome, compares well with the Fort-de-Gaume style. A small scale excavation inside this cave (Breuil and Obermaier, 1935) revealed Solutrean and Magdalenian layers with numerous stone and bone tools. Besides the characteristic stone tools, these yielded a large number of beveled points with crisscross engravings, spatulas, wands and decorated bone fragments. Among these, a bone piece with an engraved head of a doe appears to be remarkably comparable to a cave-wall engraving in Castillo, another cave painting site within 20 km distance from Altamira.

Nearly ten meters beyond the entrance, the main cave passage leads into a low-roofed, closed hall. Here the ceiling is covered with polychrome paintings of 15 bisons, some standing and some sitting with their legs curled under them. The larger figures individually measure about 1.5 m in length and are painted on large flat rock projecting from the roof of the hall.

The animals are painted in red and brown wash, with details of their mane, coats and legs emphasised with heavily-applied black paint and repeated engravings. This whole panel is taken to represent a single scene depicting a herd of bisons. The females shown relaxing on the floor while the males appear to be guarding the group. In other parts of the ceiling, in the same hall, occur some red painted and stenciled hands, some possibly engraved human figures and a group of “rayed tectiforms”. A group of tectiforms drawn with the finger on the once wet mud-coating on the wall forms another interesting find.

In Spain, there are as many caves with prehistoric paintings as in France, but they do not provide any additional information with regard to the “function” of art in the life of prehistoric people. Candamo, Covalanas and Pindal are some of the cave-sites with interesting and additional types of tectiforms and paintings of animals.

Caves and rock shelters with prehistoric art work are known from other areas as well, but there is a general agreement that these paintings belong to cultural phases later than the Palaeolithic period. The Spanish, Italian, Sicilian, and Levant and Southwest Asian finds are believed to be of the Holocene period. Another group of paintings from the rock shelters in the Arctic regions of Euro-Asia is believed to be even later in antiquity.

4.4 SUMMARY

The rock art, which flourished during the Upper Palaeolithic period, was one of the fascinating achievements of the prehistoric people. Art work executed on movable materials is called “home art” or “*Art mobilier*”. Art executed on walls and ceilings of caves and rock shelters is called “cave art” or “*Art Parietal*”. Examples of art on movable objects (home art), to mention some important, are the personal adornment objects with decorations engraved on them, such as necklaces, pendants, locketts, arm bands etc.; female statuettes; ivory models of animals such as horses, mammoth, reindeer, cave bear; engraved horse ribs; and carved antler points. Cave art is represented by engravings and paintings on walls, ceilings and floors of caves and rock shelters. The paintings are in single colour (monochrome) and multiple colours (polychrome, e.g. red, black and brown) and mostly animals are represented singly or in groups of various sizes. Animals which are most common in “cave art” are bison, wild cow, mammoth,

reindeer, ibex, wild horse, and woolly rhinoceros; the others include cave bear, wolf, cat, and human form.

In addition to these, representations of some abstract symbols described as tectiforms, claviforms, or blazons are also found in most of the large caves. It is difficult to interpret these signs, but these are apparently attempts in communicating some kind of messages. There are also a series of hand impressions—both positive impressions and negative or stenciled impressions. Some of these hand impressions show mutilated fingers.

Manifestations of prehistoric art have been explained by scholars as representations of the preoccupations of these Ice Age hunters involving economic, religious or magical activities such as hunting magic. The animals engraved and/ or painted in panels on cave walls (bison, mammoth, horse, bear etc.) are those on which the Ice Age hunters depended for their food. The cave art, according to one interpretation, is the means for gaining some control over the wild animals on which the prehistoric hunters depended. It also shows their ability in making authentic representations of these animals, based on lifetime's experience of watching the attitudes and behaviour of their victims in the course of their hunting. According to one school of thought (as argued by Leroi-Gourhan and his followers), cave art, far from being an adjunct of hunting magic, was centered on the complementary nature of the male and female principals. The animals themselves can, according to this school, be divided into “male” and “female” moieties, and the signs symbolise the male or female sex.

Suggested Reading

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Hole, H. and R.F. Heizer. 1969. *An Introduction to Prehistoric Archaeology*. New York: Hold, Rinehart and Winston, INC.

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Sample Questions

- 1) Write an essay on Palaeolithic art.
- 2) Discuss “home art” with suitable examples.
- 3) Discuss “cave art” with suitable examples.
- 4) Write notes on the following:
 - i) Dolini Vestonice
 - iii) Lascaux
 - iv) Female statuettes