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## **UNIT 2 PREHISTORIC PERIOD\***

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### **Structure**

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### **2.0 OBJECTIVES**

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In this Unit, you will learn about:

- the birth of Prehistory in India;
- how Palaeolithic and Mesolithic cultures are defined;
- the kind of archaeological evidence that is available to reconstruct tool typology, technology;
- sites and their regional settings; and
- the salient features of Indian Palaeolithic and Mesolithic cultures.

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### **2.1 INTRODUCTION**

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In this Unit, 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 Humans began to branch off from their ape-like cousins. This journey covers a time span of 2.5 million years. It involved improvements both in aspects of the biological make-up like bipedal posture and brain enlargement. In cultural behaviour the critical factor was the intentional preparation of tools out of natural materials like stone and wood.

In this Unit, we will be studying the Palaeolithic and Mesolithic cultures; archaeological evidence which has been used to reconstruct tool typology and technological aspects; different sites of these cultures, their regional setting and salient features.

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\* This Unit has been adopted from MAN-002, Block 5 and 6

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## 2.2 NOMENCLATURE

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The branch of archaeology which deals with the study of the 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. This stage is succeeded by **Proto-history** which is a transitional stage between Prehistory and History in India. The **Proto-History** stage covers the third and second millennia and early half of the first millennium before the Common Era. It is characterized by the rise of many early agro-pastoral Neolithic-Chalcolithic communities characterized by settled village life, domestication of animals like cattle and sheep/goat, cultivation of crops like wheat, barley, rice and millets, and the emergence of various crafts and arts. In the Indus valley, this phase eventually led to the growth of an urban civilization based on town planning and bronze technology.

Another way of classification is that of the division of human past or History into three main periods, namely:

- 1) Stone Age,
- 2) Bronze Age, and
- 3) Iron Age.

These are not simply technological stages. They do not just imply that tools and implements were made of stone during the Stone Age, of bronze during the Bronze Age and of iron during the Iron Age. These Ages imply much more than technology. They imply subsistence economy or the ways of acquiring food, social organization, including caring for the weak, sick and old, modes of disposing of the dead, art and other aspects of life.

Stone Age is divided into three periods, namely:

- 1) **Palaeolithic** or Old Stone Age,
- 2) **Mesolithic** or Middle Stone Age, and
- 3) **Neolithic** or New Stone Age.

The word 'lithic' is derived from the Greek word '*lithos*', meaning stone. Palaeolithic means Old Stone Age, Mesolithic means Middle Stone Age and Neolithic means New Stone Age.

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## 2.3 BIRTH OF PREHISTORY

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The birth of prehistory took place in 1859 when the findings of primitive stone implements in association with fossilized bones of extinct species of wild cattle and other large mammals were ratified before the Royal Society in London in northern Europe. It became clear that northern Europe was occupied by humans much before its landscape assumed its present form. A long phase of infancy was, thus, prefaced to human history. In his book *Prehistoric Times* (1865) Sir John Lubbock announced the birth of a new science called **Prehistory**. He divided the Stone Age into Palaeolithic (Old Stone Age), Neolithic (New Stone Age) Ages. And by the end of the 19<sup>th</sup> 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 recognized within the Palaeolithic: Lower, Middle and Upper.

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## **2.4 GEOGRAPHICAL FEATURES OF INDIA**

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India (or South Asia, for general geographical and cultural purposes) is a distinct geographical entity at the sub-continental level. The Indian landscape is 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 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.

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## **2.5 PHASES WITHIN THE INDIAN PALAEOLITHIC AND DATING**

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Indian Palaeolithic is divided into three developmental stages:

- i) Lower,
- ii) Middle, and
- iii) Upper.

The Lower Palaeolithic has two cultural traditions:

- i) Soanian pebble-tool tradition, and
- ii) The Peninsular Indian handaxe-cleaver tradition.

Lower Palaeolithic traditions involved the use of large pebbles or flakes for making choppers and chopping tools, hand-axes, 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 were made on long parallel-sided blades struck in a series from cylindrical cores by punch technique.

Besides relative dating, it has been possible, in recent years, 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.

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## **2.6 ARCHAEOLOGICAL RECORD OF THE PALAEOLITHIC**

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Palaeolithic sites are of two principal types:

- i) open air sites, and
- ii) caves or rock shelters.

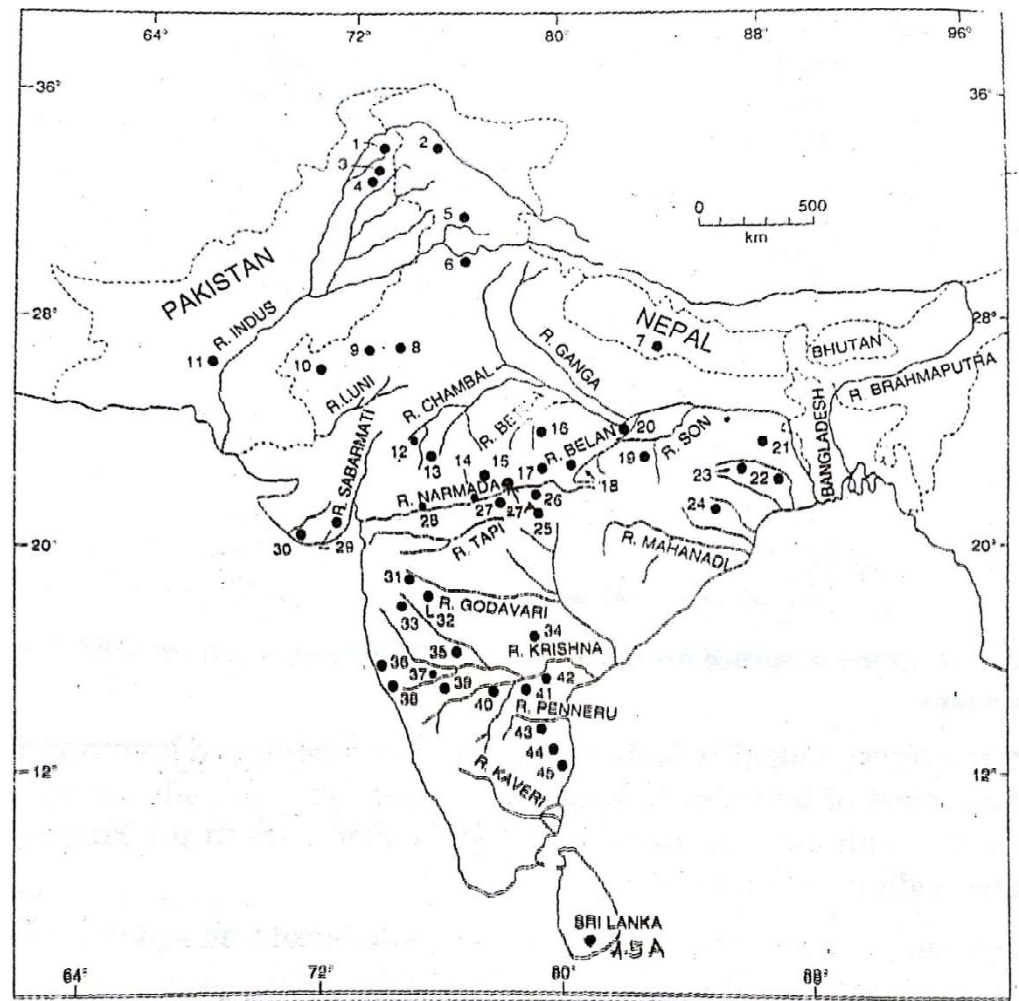
Open air sites are more common in all parts of India and occur on or close to large and small rivers and also in interior basins or valleys and foothill zones of

the 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 colluvium and river-borne gravels. Cave and rock shelter 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.

## 2.7 LOWER PALAEOLITHIC STAGE IN INDIA

As we have noted earlier, the Lower Palaeolithic phase in India (see map 2.1) 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



Important Lower Palaeolithic sites in South Asia: 1) Riwat; 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) Paisra; 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) Guddapah complex; 44) Rallakalava complex; 45) Kortallayar complex; 45A) Ratnapura complex.

Map 2.1: Lower Palaeolithic Sites in India. Source: MAN-002, Block 5.

- b) The Handaxe-cleaver or biface assemblages constituting the Acheulian tradition, which is widely known from the western half of the Old World (African, Western Europe, West and South Asia).

The term “**Old World**” is a term that is used in the West to refer to Africa, Europe, and Asia (Afro-Eurasia, or the eastern hemisphere), regarded collectively as the part of the world known to its population before contact with the Americas and Oceania or the “**New World**” (Western hemisphere).

Source: [https://en.wikipedia.org/wiki/Old\\_World](https://en.wikipedia.org/wiki/Old_World)

### The Soanian Cultural Tradition

The existence of this tradition was recognized in 1939 by H. de Terra of Yale University and T. T. Paterson of Cambridge University in the north-western part of the subcontinent. On the basis of their field studies in the area, they identified

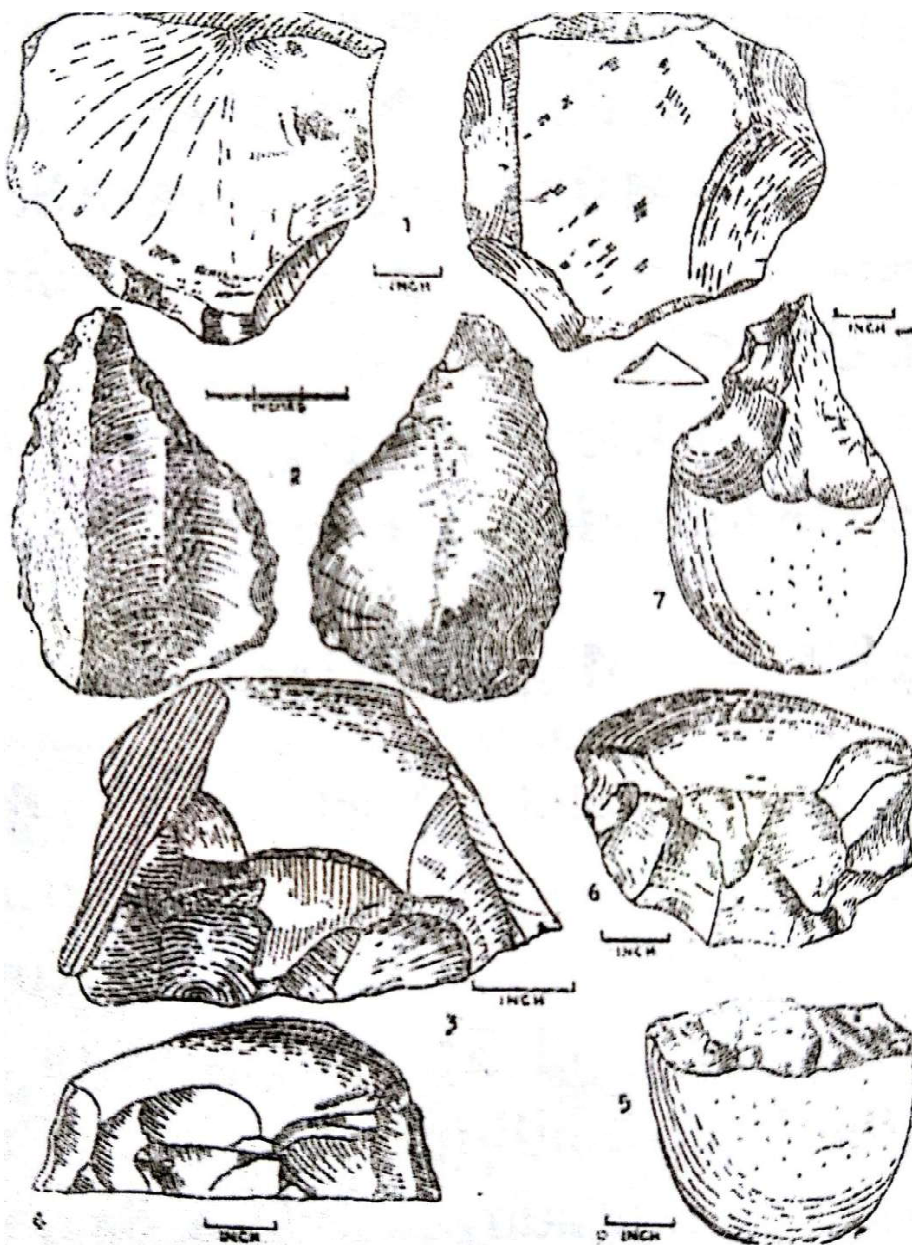


Fig. 2.1: Chopper and Flake Tools of the Early Soan Tradition. Source: MAN-002, Block 5.

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, and, on stratigraphical and typological considerations, put up what has been called the Soan culture-sequence.

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. 2.1).

Robin Dannel, who worked in this area (now in Pakistan) in the 1980s, raised serious doubts about the palaeo-climatic interpretations and cultural sequence put forward by Terra and Paterson. But the term “Soan culture” has stuck on in Indian Prehistory. 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 (Figure 2.2).

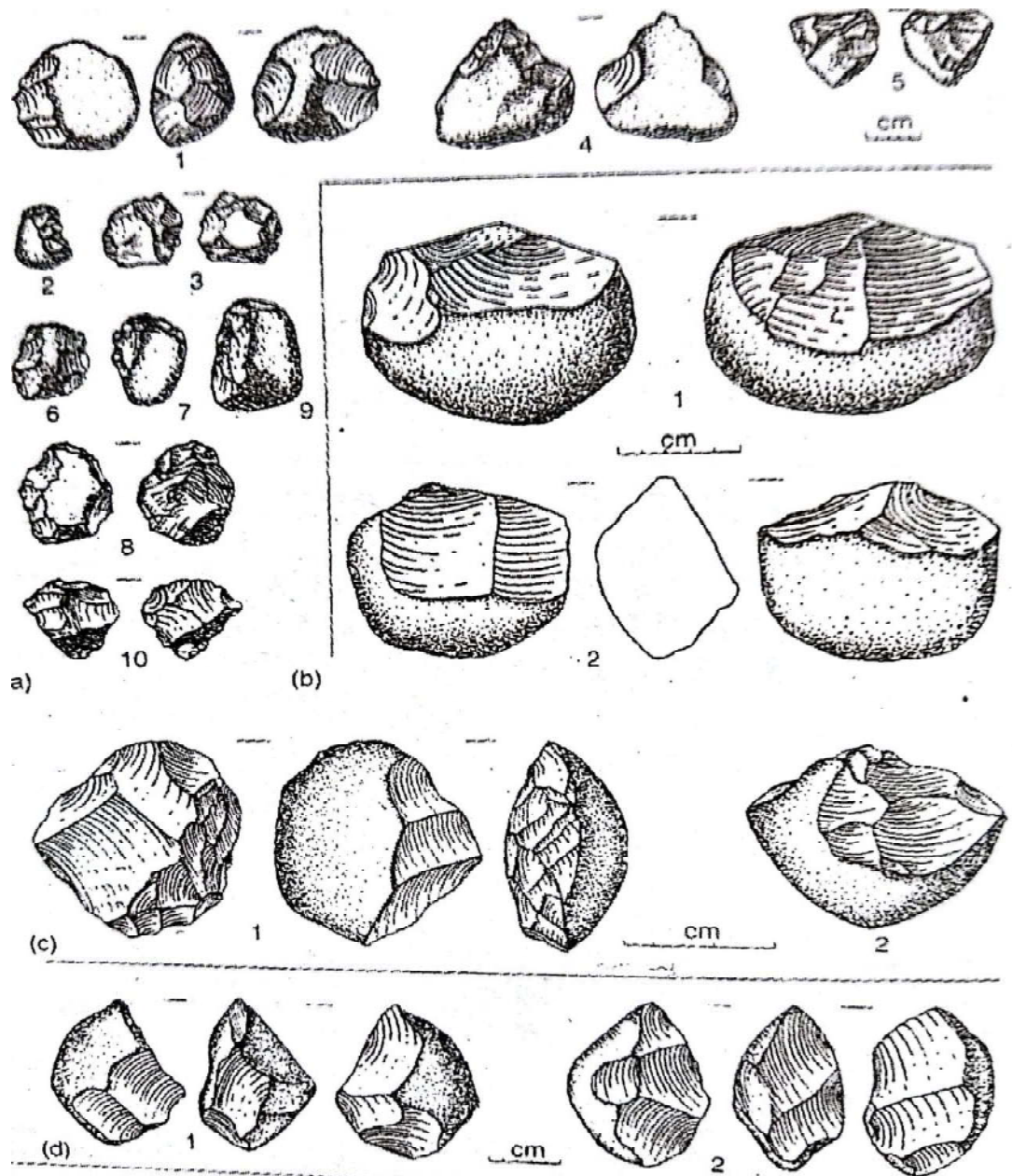


Fig. 2.2: Pebble Tools from Lower Palaeolithic Sites in India: a) Nittur, Karnataka; b) Jaisalmer-Pokaran Road, Rajasthan; c) Sirsa Valley, Haryana; d) Mahadeo Piparia, Madhya Pradesh. Source: MAN-002, Block 5.

The Soan assemblages from Punjab have been assigned by some workers to the Middle Palaeolithic tradition.

### The Acheulian Cultural Tradition

The term 'Acheulian' is used for hand-axes and cleavers found as tool assemblages and representing advanced and increasingly symmetrical shapes. 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, 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.

Stone tools are the main evidence through which an understanding of the prehistoric people's lifeways is arrived at. Archaeologists use certain terms to define stone tools. If a large piece of rock is intentionally broken into two or more pieces, the largest piece is called core and the tool made out of it called a core tool. The smaller pieces detached from the parent rock are called flakes and tools made on flakes are called flake tools.

#### Time Range

*Lower Palaeolithic in India:* 600,000 years BP to 150,000 years BP

*Middle Palaeolithic in India:* 165,000 BP to 31,000 years BP

*Upper Palaeolithic in India:* 40,000 years BP to 12,000 years BP

### Important Sites of the Lower Palaeolithic

- 1) Singi Talav in western Rajasthan has yielded an assemblage comprising of choppers, polyhedrons, bifaces, scrapers and points.



Fig.2.3: Acheulian Horizon Exposed in Trench I at Isampur, Karnataka. Source: MAN-002, Block 5.

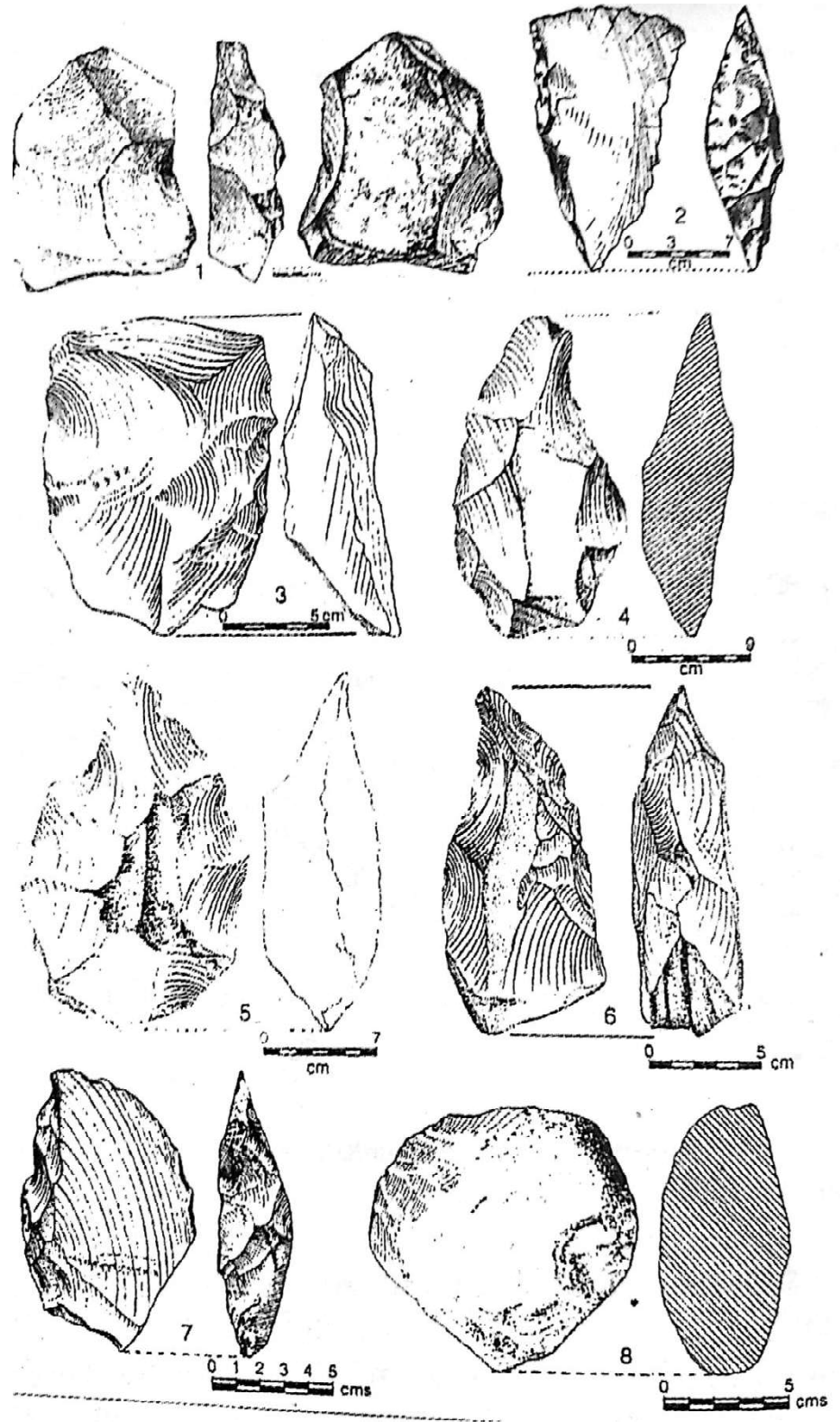
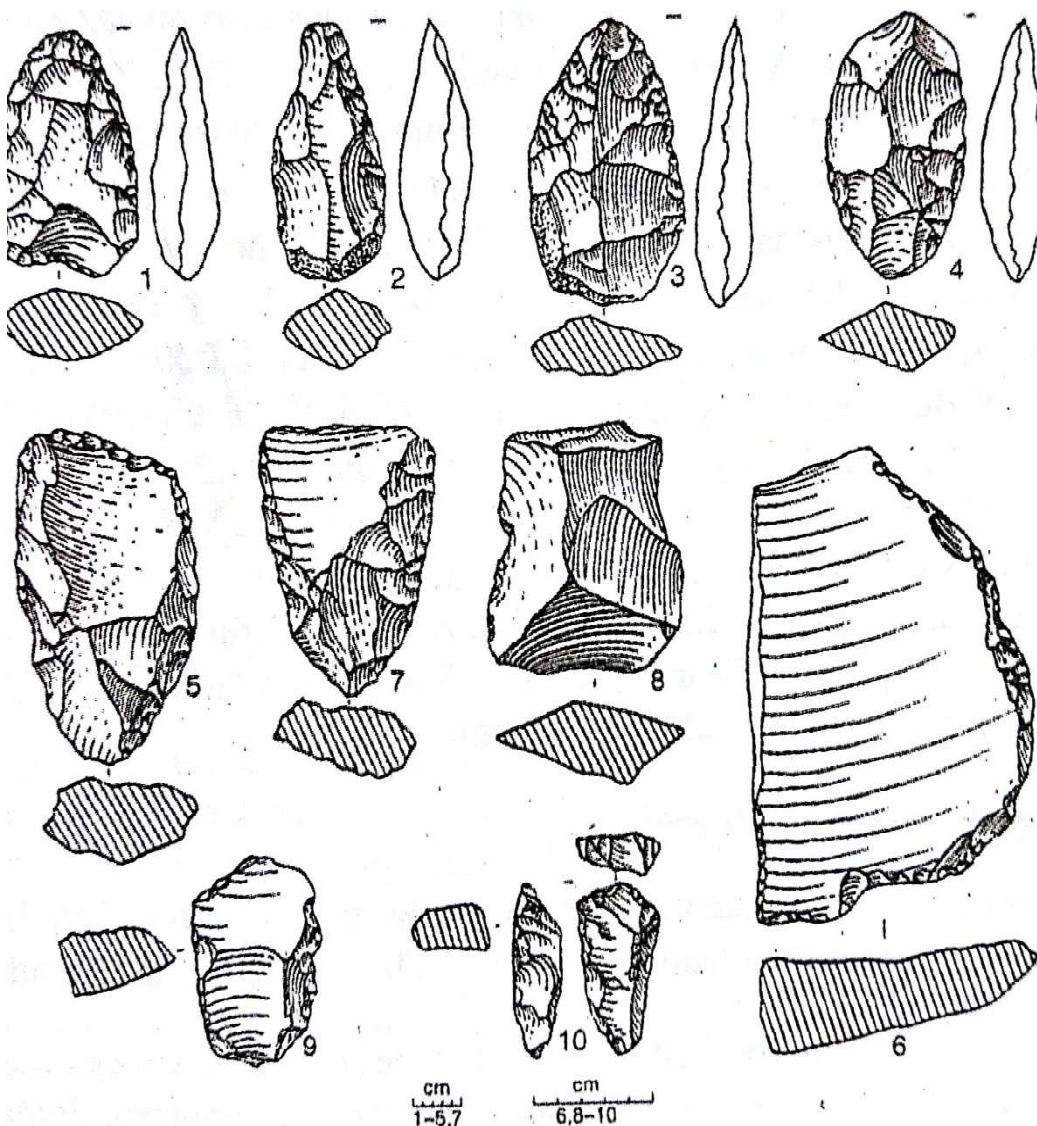


Fig. 2.4: Lower Acheulian Artefacts from Isampur, Karnataka: 1) Core; 2&3) Cleavers; 4 & 5) Handaxes; 6) Perforator; 7) Knife; 8) Hammerstone. Source: MAN-002, Block 5.

- 2) Rock shelter III F-23 (Figure 2.5) at Bhimbetka in Madhya Pradesh has yielded Acheulian, Middle and Upper Palaeolithic and Mesolithic levels.
- 3) Adamgarh in Madhya Pradesh has exposed an Acheulian level below Middle Palaeolithic deposits.
- 4) Lalitpur in Jhansi district of UP produced an early and *in situ* assemblage made up of granite tools



- 5) Paisra in Munger district, Bihar has yielded early Acheulian assemblage. The excavation exposed hut-like dwelling structures in the form of alignments of post-holes and a circular arrangement of stone blocks.
- 6) Chirki-Nevasa in Maharashtra has yielded dolerite artefacts along with fossil bones of wild cattle and other animals. The site was a seasonal camp used for multiple purposes. The artefactual collection included hand-axes, cleavers and knives as well as a small-tool component made up of flake-tools of chert and chalcedony.
- 7) Morgaon, a site from Deccan basalt landscape in the Bhima drainage basin has yielded an assemblage of 162 specimens including cleavers and hand-axes.
- 8) Hunsgi in the Hunsgi valley and Yedyapur in the Baichbal valley in north Karnataka have *in situ* cultural levels. They have yielded scores of artifacts.



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

Fig. 2.5: Acheulian Artefacts from Bhimbhetka. Source: MAN-002, Block 5.

- 9) Isampur in the Hunsgi valley in North Karnataka is a quarry-cum-camp site. It has yielded cores, flake blanks, finished implements and waste product of limestone (Fig.2.3 & 2.4). Deer and shell fragments of land turtle were also found. Isampur served as a localized hub in this part of the Hunsgi valley, from where the hominins radiated onto surrounding limestone tablelands and valley floor as part of their daily foraging rounds.
- 10) Attirampakkam (Tamil Nadu), an *in situ* Acheulian site has yielded an Acheulian assemblage of quartzite and fossilized bones of wild cattle and other species. The site has recently been dated to 1.5 million years BP by an advanced scientific technique.

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## 2.8 MIDDLE PALAEOOLITHIC CULTURES

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Middle Palaeolithic culture succeeded the Lower Palaeolithic culture. As stated earlier, Lower Palaeolithic culture is characterized by heavy tools like the hand-axes 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 specialized techniques. Therefore, it is widely referred to as flake tool industry. The Middle Palaeolithic culture of Europe, South-west Asia and Africa is called as Mousterian culture, named after the rock shelter of Le Moustier in France. The human species associated with Mousterian culture is the extinct *Homo neanderthalensis*. The popular name of this hominin is Neanderthal man. He lived during the period of Upper Pleistocene.

Hand-axe: generally a core tool. It is a bifacial tool since it is worked on both sides. It is roughly triangular in shape, broad at one end and pointed at the other. It is meant to be held in hand by the butt and sometimes hafted onto handles.

Cleaver: a flattish tool made on a broad rectangular or triangular flake, on one end of which is a broad and straight cutting edge.

Chopper: Large, unifacial tool, i.e. worked on one side only.

Chopping tool: a tool made on a core or a pebble and flaked alternately on both sides to produce a wavy cutting edge.

Source: H. D. Sankalia (1964) 1982: pp. 45-58

### Mousterian Industries

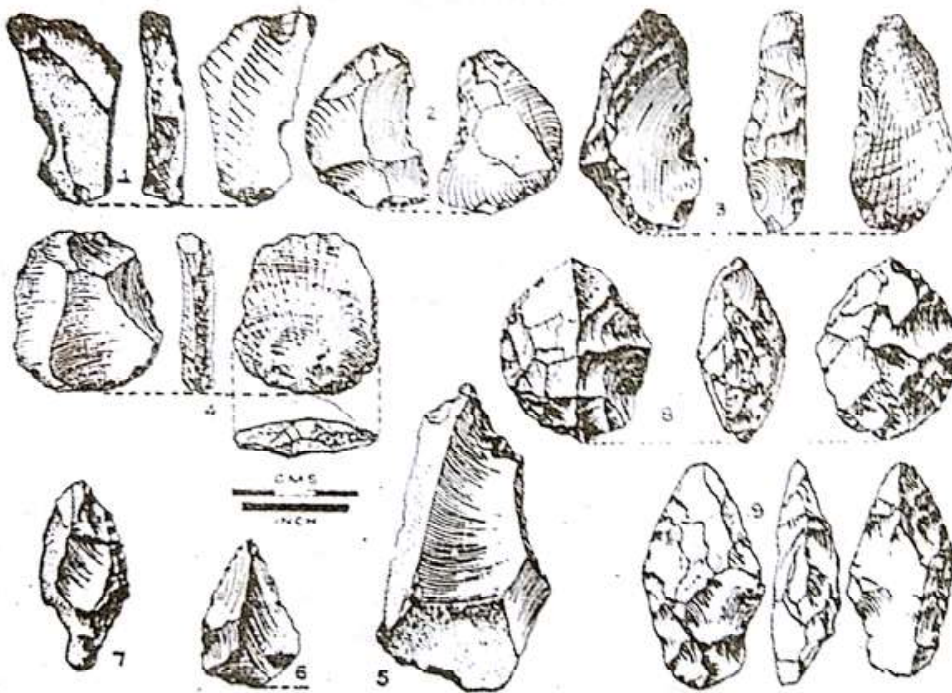
The Mousterian industry is a Middle Palaeolithic tradition of tool making used by Neanderthals in Europe, South-west Asia and Africa. The widespread occurrence of stone tool industries in which flakes are predominantly used, in contrast to the hand-axes and cleavers of the previous cultural phase, begins 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 a 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 range of tools to perform various functions.

## Middle Palaeolithic in India

The Middle Palaeolithic culture phase in India is characterized by flake tool industries. In 1956, H. D. Sankalia for the first time recorded and demonstrated these flake tools occurring in Pravara at Nevasa (Maharashtra) and then later in the Godavari valley in north Karnataka. He called this industry Nevasian (like Mousterian). Soon, his subsequent surveys revealed that Nevasian was not a local phenomenon but a generalized 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 and the specialized Levallois technique. In some regions, there is a continuity of Late Acheulian lithic tradition with refinement in bifacial flaking, and second marginal retouch, and inclusion of small sized hand-axes and cleavers. In many regions there is a 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.

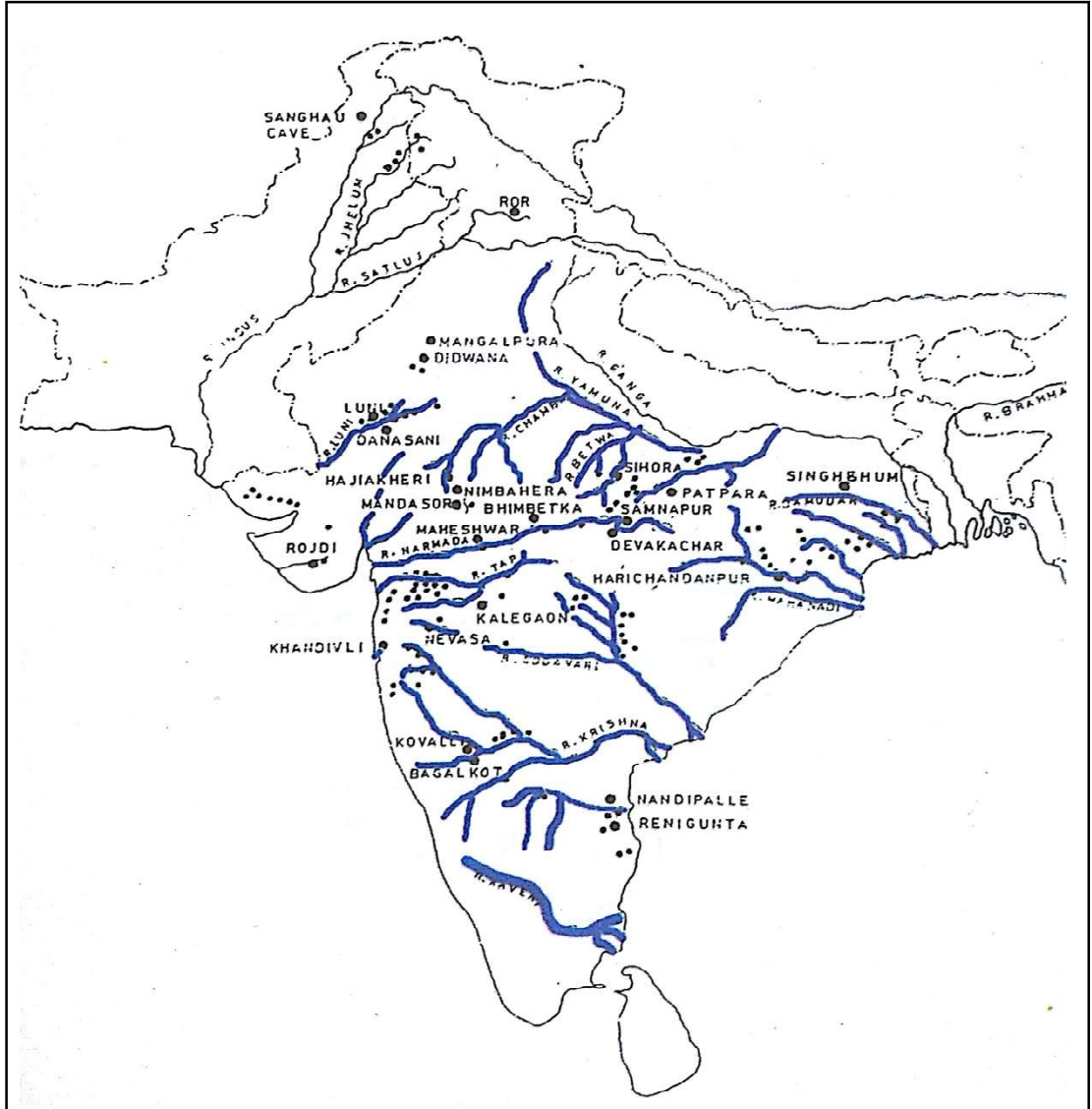
The tool types of the Indian Middle Palaeolithic are scrapers of various types: single side, double side, side-cum-end, straight, oblique, concave, convex, concavo-convex, notched, and core scrapers; awls; borers; simple unilateral or bilateral points; Levallois points; tanged or shouldered points; miniature hand-axes and cleavers; and utilised flakes. Anvils and Hammers are also found at some of the manufacturing sites (Figure 2.6).



**Fig.2.6: Tools of the Indian Middle Palaeolithic. Source: MAN-002, Block 5.**

Anvils and hammer stones are also found at some of the manufacturing sites. The techniques used for tool manufacture are stone hammer, cylinder hammer, and Levalloisian. The raw materials used for the manufacture of stone tools are medium to fine grained quartzite, chert, jasper and chalcedony.

Levalloisian technique – Named after the locality of Levallois, a suburb of Paris, from where a particular type of prepared cores were obtained, this technique is recognized from the production of a new mode of making tools from a ‘tortoise shaped core’ from the under-surface of which a flake tool could be struck by a single blow. This is also referred to as “Prepared Core technique”



Map 2.2: Middle Palaeolithic Sites in India (after V.N. Misra, 1989).  
Source: MHI-08, Block 2.

### Middle Palaeolithic Sites

Middle Palaeolithic sites (see map 2.2) have been found from most parts of the Indian subcontinent. Middle Palaeolithic tools have been found in river gravels and deposits which tell us about the prevailing climatic conditions. Some of these sites are the following:

- 1) Didwana in Rajasthan
- 2) Hiran valley in Gujarat
- 3) Potwar Plateau between the Indus and Jhelum rivers
- 4) Sanghao cave in NWFP of Pakistan

- 5) Budha Pushkar in Rajasthan
- 6) Luni river system denoting tool industries west of the Aravallis
- 7) Chirki Nevasa in Maharashtra
- 8) Kalpi in Uttar Pradesh

**Check Your Progress Exercise 1**

1) Stone Age is divided into how many periods? Write a few lines about the birth of Prehistory.

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2) Discuss the main cultural traditions within the Indian Lower Palaeolithic?

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3) Discuss any two sites of Indian Middle Palaeolithic?

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**2.9 THE UPPER PALAEOLITHIC CULTURE**

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

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 Home *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.



core. These cores have a prismatic or fluted appearance; hence this technique is called “prismatic-core” technique or “fluted-core” technique. These blades are subsequently 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. 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 is fine grained rock.

### Upper Palaeolithic in India

The Upper Palaeolithic cultural relics in varied physiographical zones of India (see map 2.3) are stone tools which are based on blade-tool technology. Since most of these are open-air occupations, tools made of organic materials such as bone are not known because organic remains are prone to disintegration in open-air situations. However, bone tools were recovered from the Kurnool caves (Andhra Pradesh) in which conditions for the preservation of organic remains were favourable.

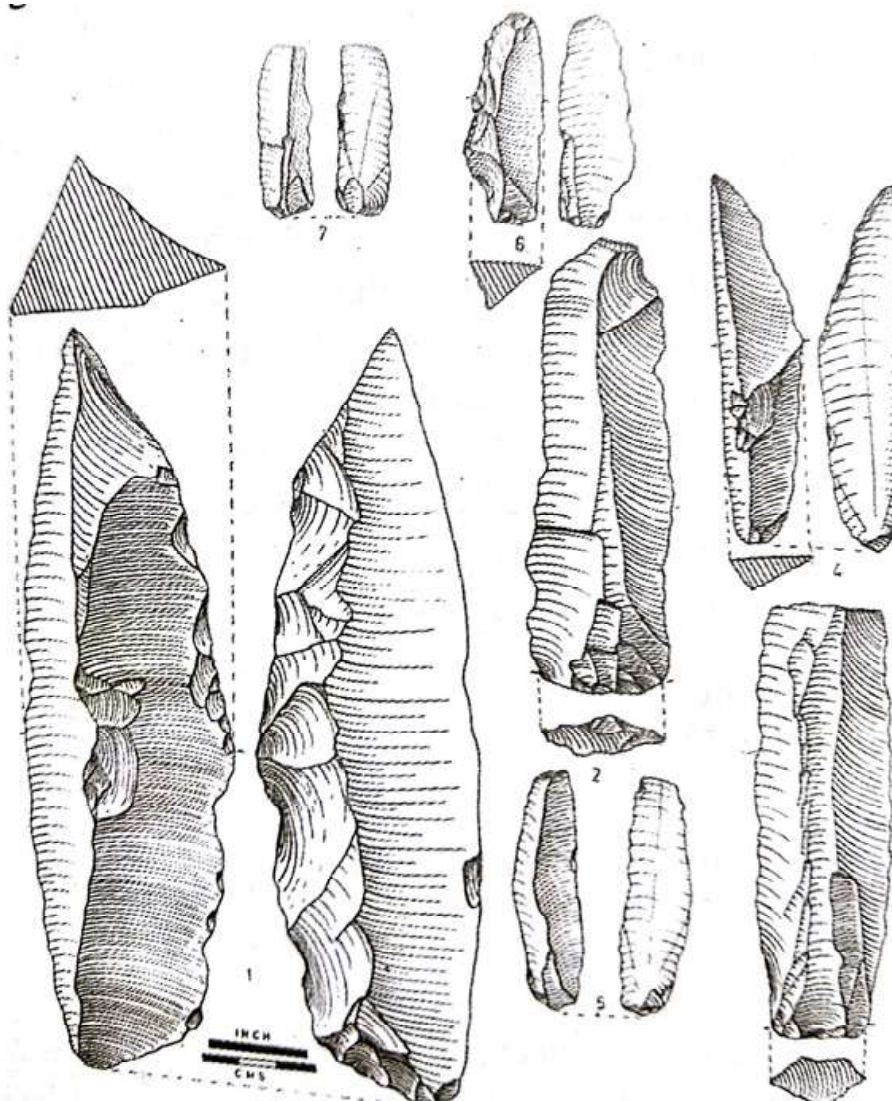


Fig. 2.7: Artifacts of the Blade-and-Burin Industry from the Rallakalava Valley, near Reniginunta. 1, 4, 6, Retouched Blades; 2, 3, 5, 7, Simple Blades (After Murty 1979).

Source: MAN-002, Block 5.

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 (Figures 2.7 – 2.10).

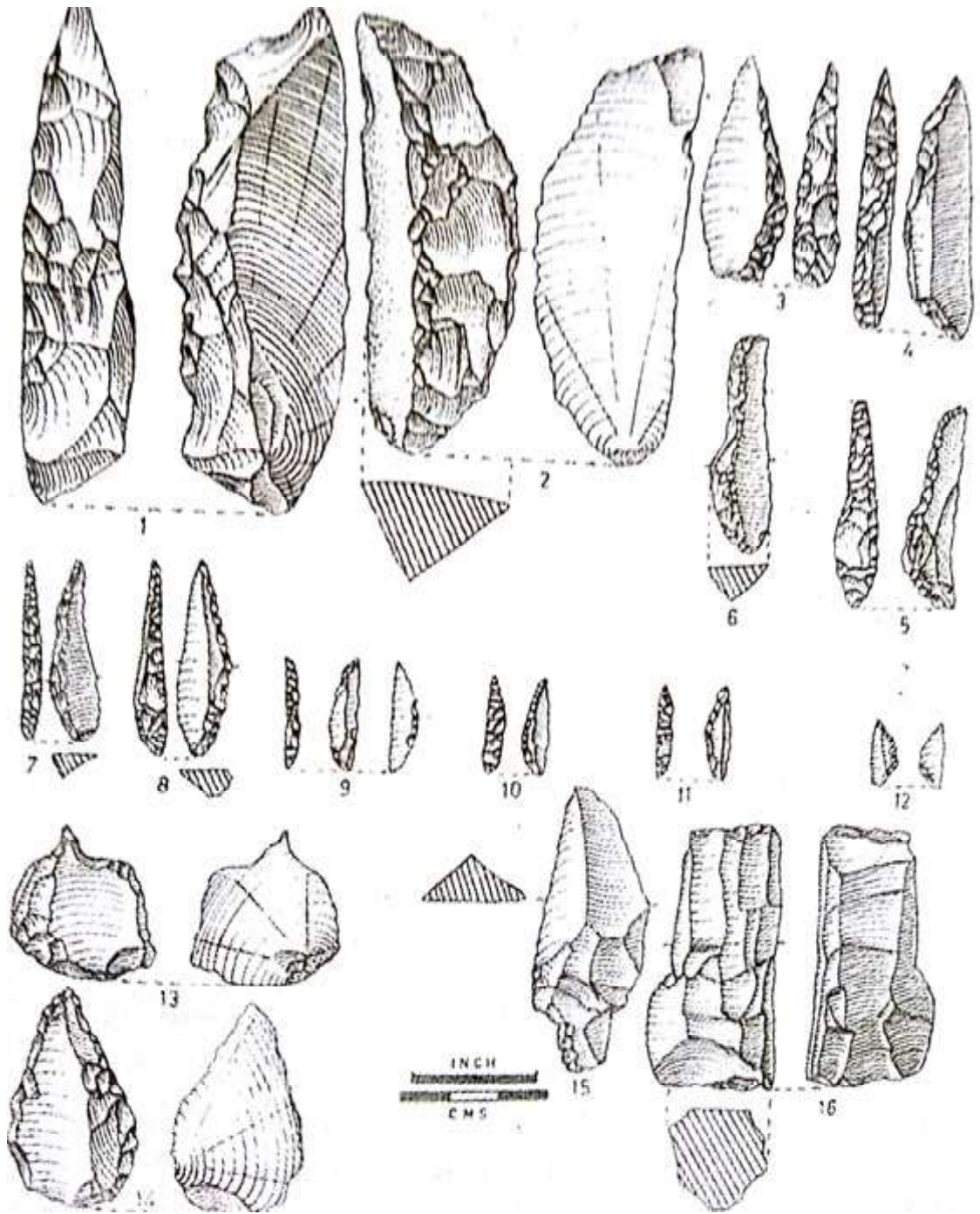


Fig. 2.8: Artifacts of the Blade-and-Burin Industry from the Rallakalava Valley, near Renigunta. 1-2, Backed Knives; 3-12, Backed Blade and Bladelet Tool Variants (5 and 6 are Backed Pen Knives); 13, Awl; 14, Unifacial Point; 15, Tanged Point; 16, Blade Core (After Murty, 1979). Source: MAN-002, Block 5.

Radiocarbon dates for the Upper Palaeolithic obtained from different part of India and the Thermoluminescence (TL) dates from the Kurnool caves indicate a time period falling in the range of 40,000 BCE to 8,000 BCE. The faunal remains from Kurnool caves, found in association with the Upper Palaeolithic also belong to the Late Pleistocene Age.



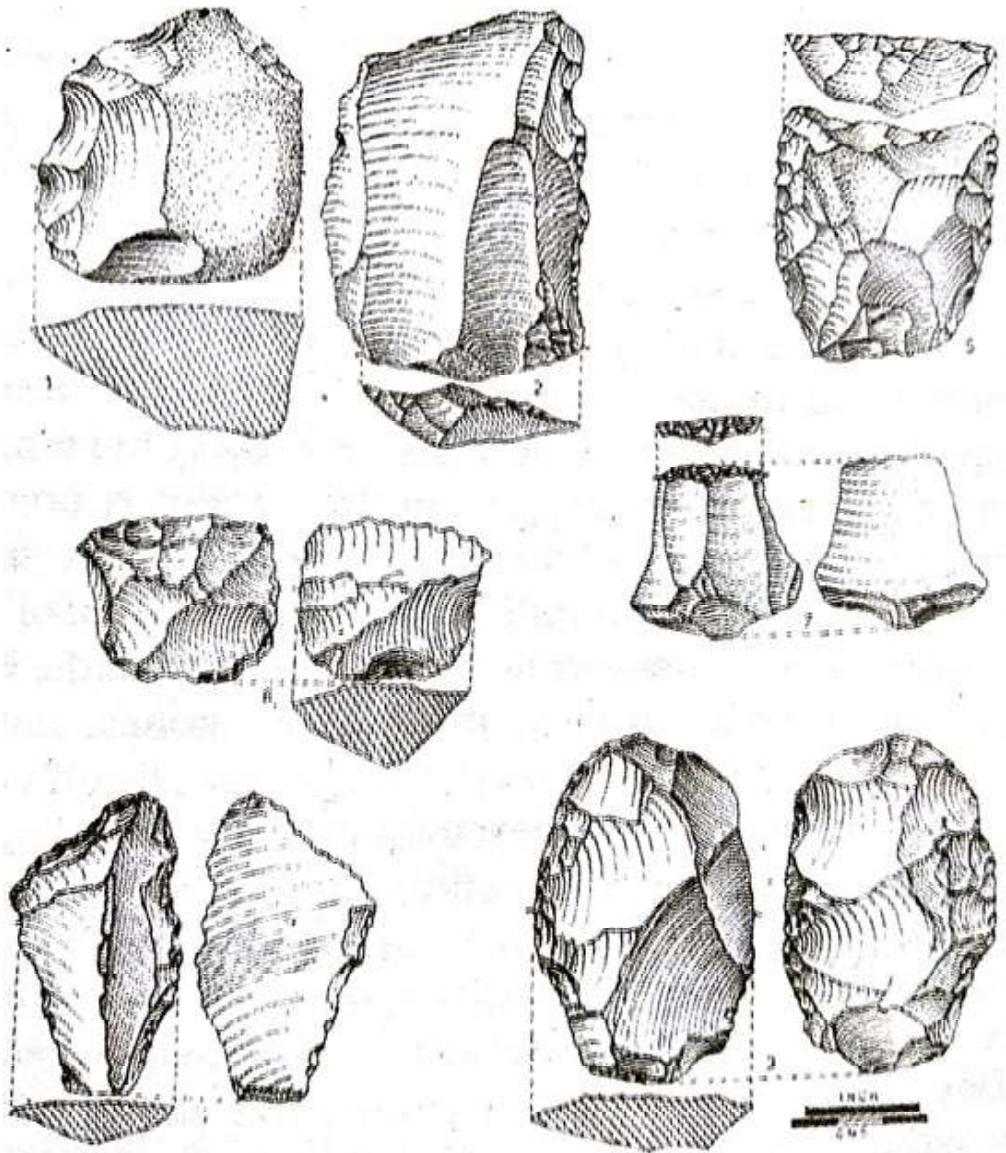


Fig. 2.9: Artifacts of the Blade-and-Burin Industry from the Rallakalava Valley, near Renigunta. 1, Convex Scraper; 2, 4, Side Scrapers; 3, Ovate Scraper; 5, 6, 7, End Scrapers (after Murty 1979). Source: MAN-002, Block 5.

### Upper Palaeolithic Sites

The following are some of the prominent Upper Palaeolithic sites in the Indian subcontinent:

- 1) Rohiri hills in upper Sindh
- 2) Milestone 101 in lower Sindh
- 3) Chopani Mando in Belan valley
- 4) Baghor I in Madhya Pradesh
- 5) Paisra in Munger district of Bihar
- 6) Lalmai hills of Bangladesh
- 7) Haora and Khowai river valleys in western Tripura
- 8) Kurnool in Andhra Pradesh
- 9) Muchchatla Chintamanu Gavi in Andhra Pradesh

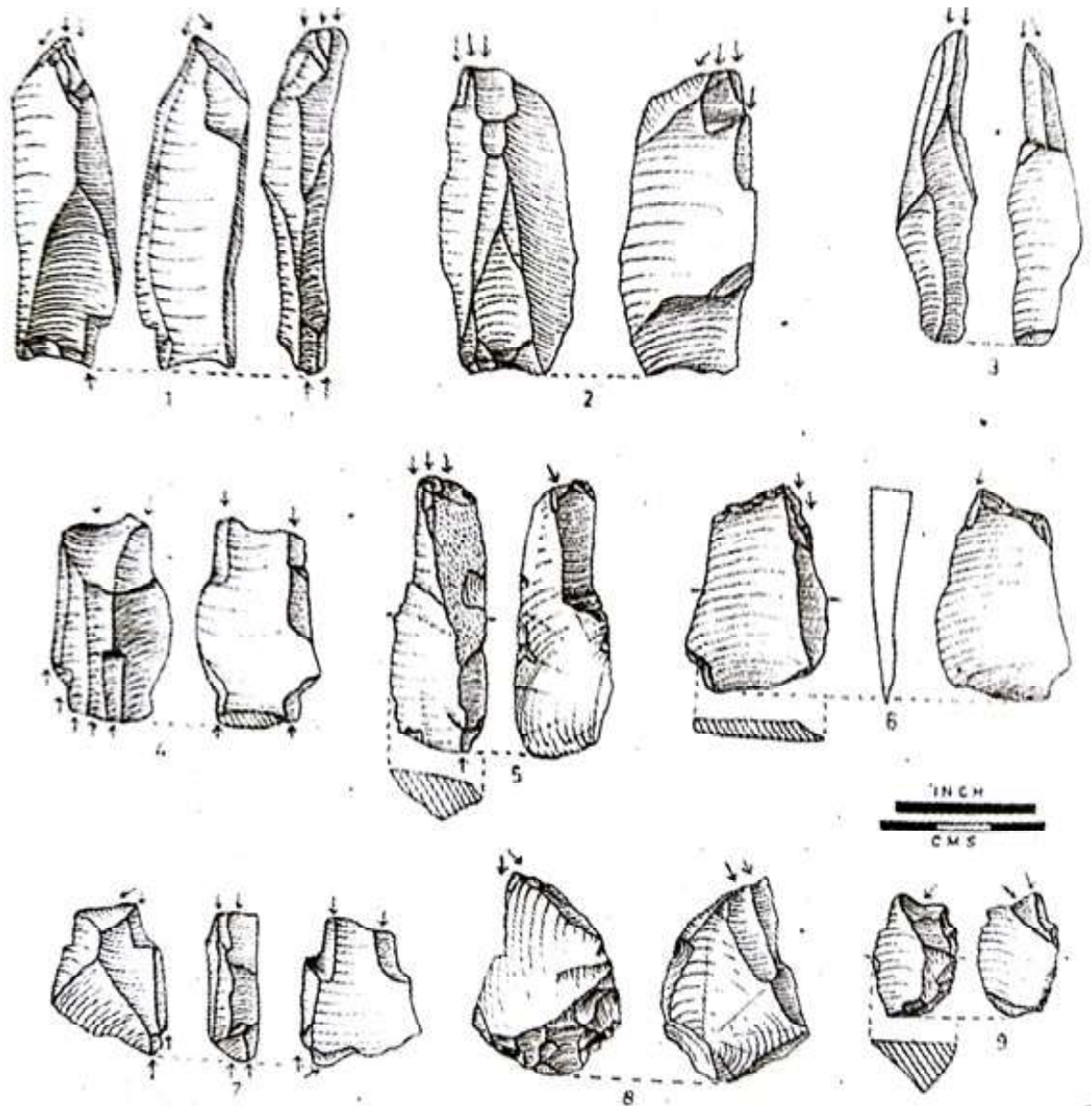
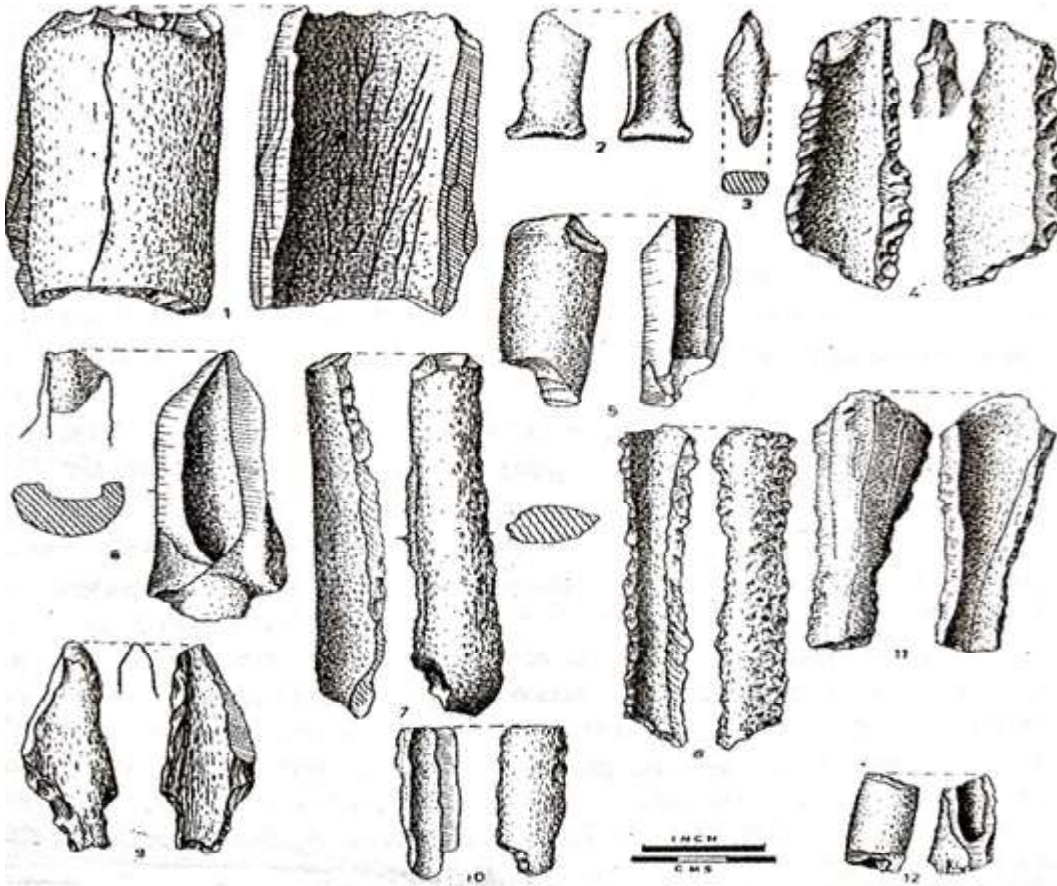


Fig. 2.10: Artifacts of the Blade-and-Burin Industry from the Rallakalava Valley, near Renigunta. 1-9, Different Types of Burins (After Murty 1979). Source: MAN-002, Block 5.

### Bone Tool Industries

Upper Palaeolithic bone tools are known from the Kurnool cave sites in Andhra Pradesh. 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 tools comprised awls, barbed and un-barbed arrowheads, daggers, scraper-knives, scrapers, chisels, gouge, wedges, axe heads, and sockets. Recent excavations conducted in the 1970s confirmed these findings. These 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. Further excavations in the Muchchatla Chintamanu Gavi cave (MCG I and MCG II) 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 (Figure 2.11).



**Fig. 2.11: 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). Source: MAN-002, Block 5.**

## 2.10 MESOLITHIC CULTURE

The Mesolithic Age began around 8000 BCE. It was a transitional phase between the Palaeolithic Age and the Neolithic Age. There was a rise in temperature and the climate became warm and dry. The climatic changes affected human life and brought about changes in fauna and flora. The warmer climate was associated with the onset of the Holocene Age. Holocene followed the Pleistocene. Holocene is known as the Recent or Neo-thermal phase. We are living in the Holocene period. Holocene began around 10,000 BCE.

### Geological Ages

Today, geologists divide the history of the earth into four eras or ages related to the evolution of life forms:

- i) Primary (Palaeozoic),
- ii) Secondary (Mesozoic),
- iii) Tertiary, and
- iv) Quaternary.

The Tertiary and Quaternary together form the Cenozoic or the Age of the Mammals which began about 100 million years ago. The Cenozoic is divided into seven epochs of which the last two — The Pleistocene and the

Holocene— are especially important in the story of hominid evolution. The Pleistocene began about 1.6 million years ago, and Holocene (or Recent Period in which we live) about 10,000 years ago.

Source: Upinder Singh, 2008, page 60.

The Mesolithic people, in their subsistence level were much like the Palaeolithic hunter-gatherers, however their mode of hunting-gathering became more intensified. Their long experience and interaction with plants and animals made them species-specific hunters and gatherers. This means that they favoured some species of plants and animals over others. Culture that was produced in Europe during the post Pleistocene period, that is early Holocene, is known as the Mesolithic culture.

### Terminology

A. C. Carlyle, an Assistant to Alexander Cunningham, founder Director-General of the Archaeological Survey of India, found a large number of small stone implements from the caves and rock shelters of Vindhyan hill regions of Central India. The assemblage comprised of small stone tools in form of crescents, trapezoids, triangles and delicate knife-lets. No tool was more than 1.6 cms in length. The tools were never found in association with polished or ground implements. Carlyle found enough stratigraphic evidence to suggest that these small implements were lying in an intermediate position between the Palaeolithic and Neolithic stages. The accompanying culture connected with both the ages. Carlyle termed this intermediate stage as the Mesolithic.

The end of Pleistocene is conventionally placed around 10,000 BCE. The date for Mesolithic in Europe is around 9,500 years BCE. Mesolithic is considered to have ended with the introduction of agriculture around 6000 and 5000 BCE (Price, 1991).

### Tool Types and Technology

Microliths are the predominating and the most common tool types of this cultural phase. Technologically, this is a continuation of types from the Upper Palaeolithic period. Microliths start occurring in the last phase of the Palaeolithic culture but they predominate in the Mesolithic culture. Three cms. is taken as the limit for the length for determining a microlith. Moreover, the microliths of Mesolithic period were made by highly skilled tool making techniques. This is mainly reflected in retouching of the working edge of the tool or blunting of the hafting edge of the tool.

The technique employed was punch and pressure, which developed during the Upper Palaeolithic period. For this reason, identification of Mesolithic microliths largely depends on the context of its finding and dates.

Microliths are described in terms of geometric and non-geometric shapes. Geometric ones are types such as trapeze, triangle, lunate or crescent. The non-geometric types are named by the nature of blunting of the back, such as partly, fully or obliquely blunted blades or after their functions such as scraper, point, knife, blade, awl, burin and borer (Figure 2.12).

Microliths were used as composite tools for plant gathering and harvesting, slicing, grating, plant-fibre processing; for lines, snares, nets and traps; shell openers;

bow-drill points and awls. The pieces were hafted onto wood, bone and antler. These were set in line to give a straight cutting edge. Very often they were set with slanting blades, micro-blades, broad trapezes, notched and serrated blades. Sometimes lunates and triangles were set vertically to give different kinds of saw edges. This tradition of composite tool making must have extended from the Upper Palaeolithic into the Mesolithic.

The microlith tool technique allowed the regular exploitation of small, nodular pebbles and even large artifacts. Microliths were easy to carry over long distances and even in places, where suitable rock was not available, Mesolithic people could settle down for long periods of time. In this way they exploited extremely sharp and hard materials like flint, chalcedony, agate, carnelian etc. which occur in the form of small nodules.

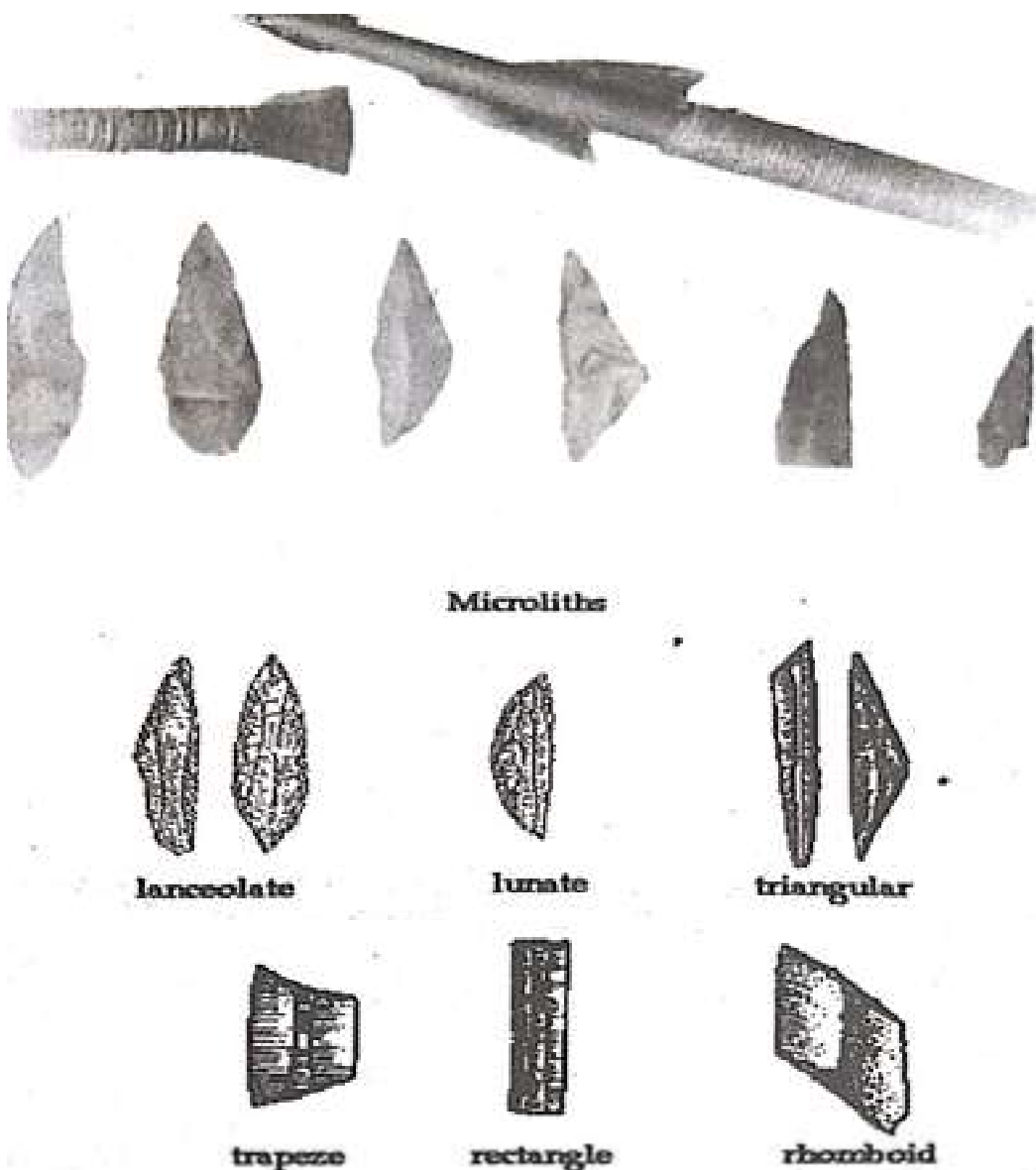


Fig. 2.12: Microliths. Source: MAN-002, Block 6.

Another type of tool used by the Mesolithic people is called the Macrolith (Figure 2.13). These were bigger than the microliths.

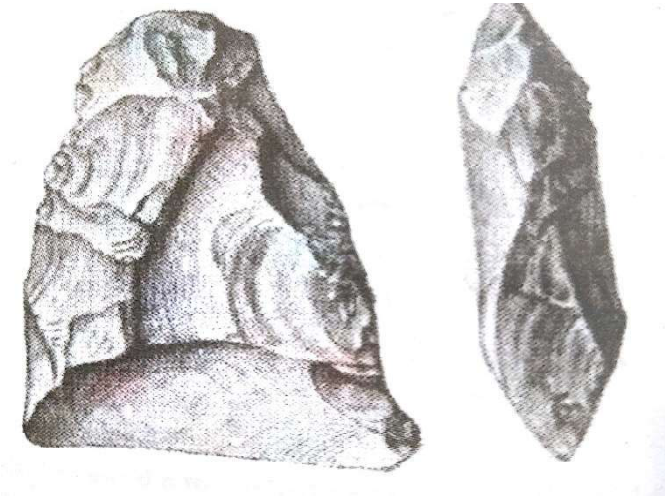


Fig. 2.13: Macroliths (Heavy duty tools). Source: MAN-002, Block 6.

They were a continuation of the Upper Palaeolithic types such as scrapers. New types are axes and picks. These are considered as heavy-duty tools. They are made on stone, mostly flint. The tools are made by flaking and making transverse working edge. According to the nature of the working edge they are termed as axe or adze. They are meant for working on wood. Axe, adze and picks were hafted on wood, bone or antler. These tools helped the users to cope with forested environments.

Bone (Figure 2.14) and antler tools are yet another category of tools used by the Mesolithic people. Bone tools are mainly found in the form of barbed harpoons. Harpoons vary in terms of number of barbs, location of barbs along the shaft and in terms of the nature and shape of barbs. They were used as fish hooks and points. Bones are also used as hafts for making composite tools.



Fig. 2.14: Fishing Hooks, Needles and Shuttles for Fishing Net made of Bone(Sergiyev-Posadsky District). Mesolithic. Credit: Ęãñöü. Source: WikimediaCommons ([https://commons.wikimedia.org/wiki/File:Fishing\\_tools\\_stone\\_age\\_SPMZ.jpg](https://commons.wikimedia.org/wiki/File:Fishing_tools_stone_age_SPMZ.jpg)).

Mostly shredded antlers are used for making tools. The antler was cut down along the brow region and shaped into axe, adze. Sometimes axes and adzes were found to be hafted into the antler.

### **Indian Mesolithic Culture**

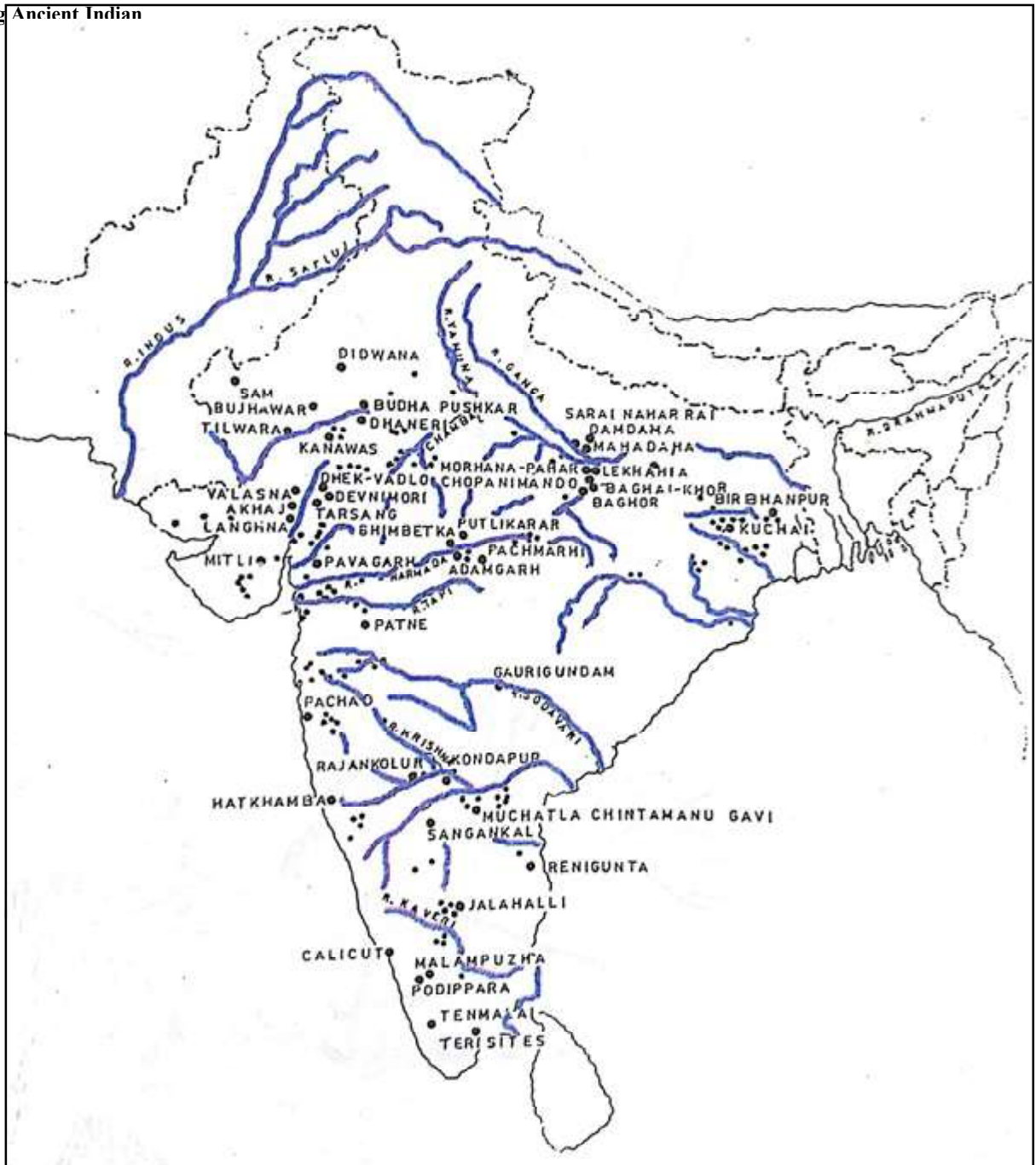
Mesolithic or Middle Stone Age was of a much shorter period than Palaeolithic. It lasted from over thirty thousand years in Sri Lanka and parts of Africa to only about ten thousand years in India and West Asia. Besides the use of microliths, the Mesolithic people made a number of technological innovations like the bow and arrow for hunting, querns, grinders and hammer stones for grinding and pulverising plant foods like roots, tubers etc. They created a large volume of art in the form of several thousand paintings and engravings, which not only tell us about their aesthetic taste but also their capability for innovating new technological elements, modes of subsistence economy, items of material culture, social organization and religion.

### **Sites of Indian Mesolithic**

The earliest discovery of microliths and other Mesolithic tools was made by A.C.L. Carlyle. He discovered microliths, rock paintings, pigment pieces with marks of grinding, human skeletons, animal bones, ash, charcoal pieces in the rock-shelters of Mirzapur district of Uttar Pradesh. He also discovered paintings depicting scenes of wild animals being hunted with spears, bows and arrows and hatchets. This was the first discovery of paintings portraying the Mesolithic way of life. Subsequently, further researches were conducted in Uttar Pradesh, Kurnool caves in Andhra Pradesh and other sites in South India and Gujarat. The Mesolithic sites are found almost all over India except the Northeast (Map 2.4). Even the Indo Gangetic plains, where stone resources are scarce, were also occupied. This shows that Mesolithic hunter-gatherers had colonized the whole country. This had happened for the first time in the entire prehistoric period of two million years.

Major excavated sites in India:

- Tilwara, Bagor , Ganeshwar in Rajasthan
- Langhnaj, Akhaj, Valasana, Hirpura, Amrapur, Devnimori, Dhekvadlo, Tarsang in Gujarat
- Patne, Pachad, Hatkhamba in Maharashtra
- Morkhana, Lekhahia, Baghai Khor, Sarai Nahar Rai, Mahadaha, Damdama, Chopani Mando, Baidha Putpurihwa in Uttar Pradesh
- Pachmarhi, Adamgarh, Putli Karar, Bhimbetka, Baghor II, Baghor III, Ghagharia in Madhya Pradesh
- Paisra in Bihar
- Kuchai in Odisha
- Birbhanpur in West Bengal
- Muchatla Chintamanu Gavi, Gauri Gundam in Andhra Pradesh
- Sanganakallu in Karnataka
- Tenmalai in Kerala.



Map 2.4: Mesolithic Sites of India (After V. N. Misra, 1989). Source: MHI-08, Block 2.

Sites like Bagor, Sarai-Nahar-Rai, Mahadaha and Adamgarh are truly Mesolithic sites because of their early dates and associated material culture.

The above excavated sites have provided us with a vast amount of information regarding technology, material remains, burial practices, anatomical remains, customs associated with burial, art and charcoal for dating of the sites.

We have nearly sixty radiocarbon and eight Thermoluminescence (TL) dates from over twenty sites. These show that the Mesolithic people lived between 10,000 and 2,000 BCE. In the later part of their history they came into contact with many rural and urban cultures. As a result of this interaction, their nomadic and hunting-gathering way of life underwent transformation. The majority of the hunter-gatherers got settled, took up agriculture and other sedentary occupations and were gradually assimilated into the Hindu caste based society.



1) Name two sites of the Upper Palaeolithic culture of India? Discuss any one in detail.

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2) What are Microliths? Give a few examples.

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## 2.11 SUMMARY

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Indian Palaeolithic is divided into three phases which show development in technology, tool types. These are: Lower Palaeolithic, Middle Palaeolithic and Upper Palaeolithic. The Lower Palaeolithic cultural tradition is characterized by hand-axe and pebble chopper-chopping tool traditions. Limestone, Dolerite, quartzite were the preferred rock material for fashioning tools besides river pebbles. Stone hammer, soft hammer and prepared core techniques were employed for detaching flakes and shaping them into implements. The Middle Palaeolithic culture consists of a variety of tools made on flakes which are produced by specialized techniques. Mousterian and Levallois techniques are the most common. The Upper Palaeolithic culture is based on blade-tool technology. Besides, bone tools have been found from Kurnool caves in Andhra Pradesh. The Mesolithic culture began around 10000 BCE and is a post-Pleistocene culture. It is an intermediate stage between the Palaeolithic and Neolithic Ages. It is characterized by the use of Microliths which are tiny composite stone tools, made with advanced technology by using fine siliceous materials.

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## 2.12 KEY WORDS

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- Archaeology** : Study of material remains to understand the past.
- Artefact** : Any object that has been fashioned or altered by human hands.
- Assemblage** : All artefacts of one culture or one time period found within the context of an archaeological site.
- Carbon 14 dating** : Also known as radiocarbon dating technique. It is an absolute dating method which measures the radioactivity present in an organic material.

- Hominid** : The family of modern and ancient forms of human beings.
- Site** : An area of the landscape that shows evidence of past human activity.
- Stratigraphy** : The sequence of ancient cultural activities that have taken place in a site. They are seen in the form of layers superimposed one above the other.
- Thermoluminescence dating** : Absolute dating method that measures the amount of thermoluminescence emitted by a substance, usually pottery, when heated.

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## 2.13 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress Exercise 1

- 1) Old Stone Age or Palaeolithic, Middle Stone Age or Mesolithic, New Stone Age or Neolithic. See Section 2.2 and 2.3
- 2) Soanian and Acheulian. See Section 2.7 for details.
- 3) Didwana in Rajasthan and Budha Pushkar in Rajasthan. See Sub-section 2.8 for details.

### Check Your Progress Exercise 2

- 1) Renigunta in Andhra Pradesh and Kurnool in Andhra Pradesh. See Sub-section 2.9 for details.
- 2) Microliths are small stone tools in the form of crescents, trapezoids, triangles, delicate knife-lets etc. which are not more than 3 cms. in length. They are mainly associated with Mesolithic culture. For examples, see under the heading 'Tool Types and Technology'.

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## 2.14 SUGGESTED READINGS

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