UPPER PALEOLITHIC CULTURE

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.

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.

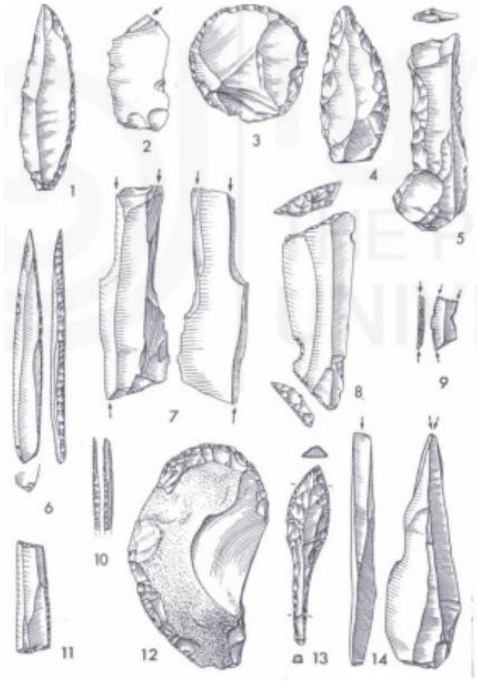
The first discovery of the skeletal remains of Homo sapiens was made in 1868 in Cro-Magnon, a rock shelter in the Dordogne region of southwest France, in a deposit containing Upper Palaeolithic tools. Hence this man is called Cro-Magnon man. He is anatomically identical to modern humans, but differed significantly from Neanderthals. Cro-Magnon man was tall, erect and well built. The CroMagnon 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.

Tools

The cultural period known as the Upper Paleolithic began in western Europe approximately 40,000 ya. Upper Paleolithic cultures are usually divided into five different industries, based on stone tool technologies: **Chatelperronian, Aurignacian, Gravettian, Solutrean, and Magdalenian**.

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)

Major environmental shifts were also apparent during this period. During the last glacial period, about 30,000 ya, a warming trend lasting several thousand years partially melted the glacial ice. The result was that much of Eurasia was covered by tundra and steppe, a vast area of treeless country dotted with lakes and marshes. In many areas in the north, permafrost prevented the growth of trees but permitted the growth, in the short summers, of flowering plants, mosses, and other kinds of vegetation. This vegetation served as an enormous pasture for herbivorous animals, large and small, and carnivorous animals fed off the herbivores**. It was a hunter's paradise**, with millions of animals dispersed across expanses of tundra and grassland, from Spain through Europe and into the Russian steppes.



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)

Chatelperronian is the earliest industry of the Upper Palaeolithic in central and south-western France. Chatelperronian appears to have been derived from the earlier Mousterian culture. 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.

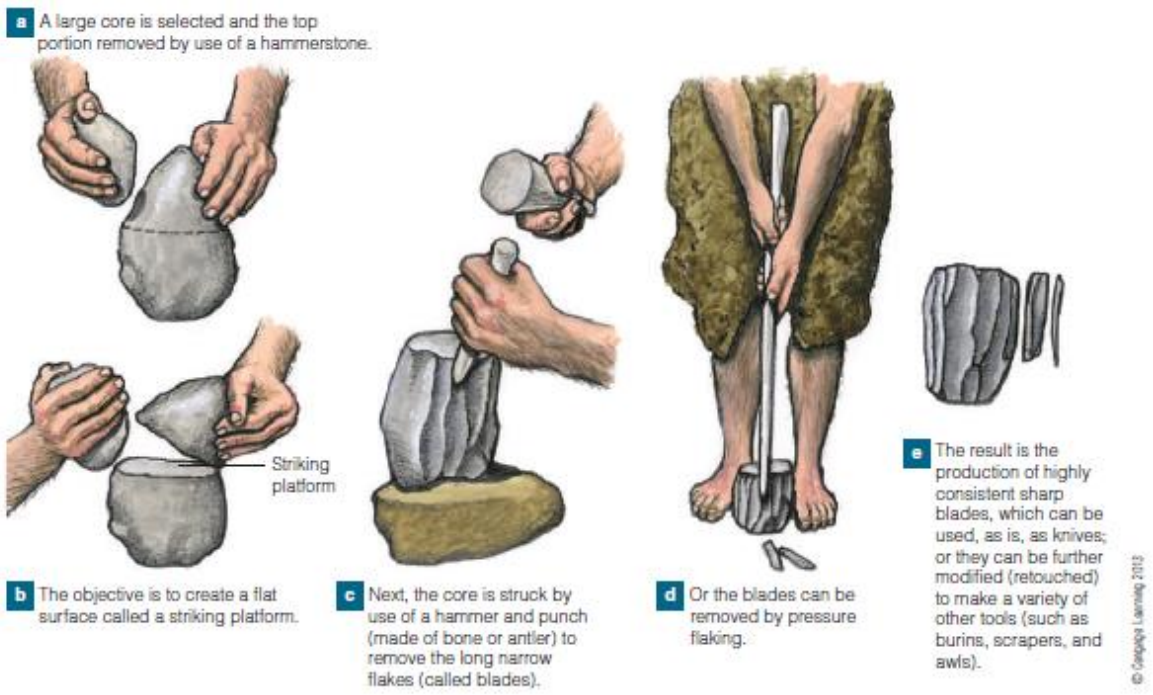
The Aurignacian culture is named after the type site Aurignac in southern France. In France it is stratified between the Chatelperronian and Gravettian. The Aurignacian culture is recognised by some special artifact types. These types are **"steep" and "nosed' scrapers.** Aurignacian is also recognised 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.

The Gravettian culture is named after the type site La Gravette in the Dordogne region of France. It succeeds the Aurignacian. 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.

Gravettian is known for **Venus's 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

Solutrean tools are good examples of Upper Paleolithic skill and likely aesthetic appreciation as well. In this lithic (stone) tradition, skill in modifying rock (called **"knapping")** developed to the finest degree ever known. Using specialized pressure flaking techniques, the artist/technicians. made beautiful parallel-flaked lance heads, expertly flaked on both surfaces. The lance points are so delicate that they can be considered works of art that quite possibly never served, nor were they intended to serve, a utilitarian purpose. 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 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.



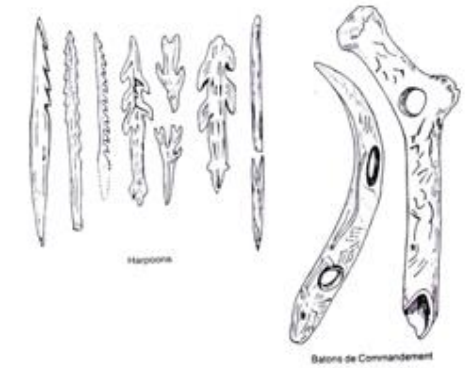
The punch blade technique.

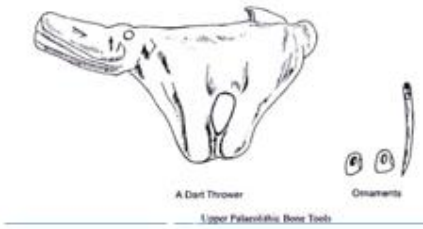
The last stage of the Upper Paleolithic, known as the **Magdalenian,** saw even more advances in technology. It is named after the type site La Madeleine in the Dordogne region of France. Magdalenian is best known for its elaborately worked bone, antler and ivory tools and other objects which served both functional and aesthetic purposes. 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 spear-thrower, or atlatl, was a wooden or bone hooked rod that extended the hunter's arm, enhancing the force and distance of a spear throw. For catching salmon and other fish, the barbed harpoon is a good example of skillful craftsmanship. There's also evidence that bows and arrows may have been used for the first time during this period. The introduction of much more efficient manufacturing methods, such as the **punch blade technique**, provided an abundance of standardized stone blades. These could be fashioned into burins for working wood, bone, and antler; borers for

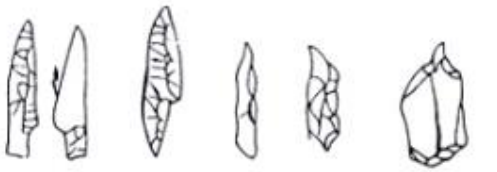
drilling holes in skins, bones, and shells; and knives with serrated or notched edges for scraping wooden shafts into a variety of tools.

Spear-thrower (atlatl). Note the carving.

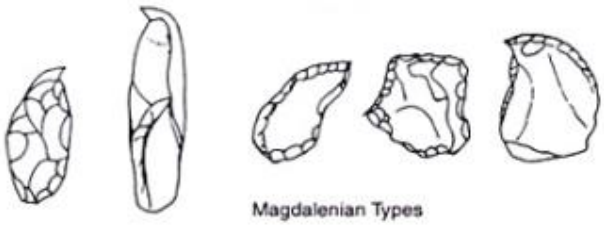




Upper Palaeolithic Bone Tools



Solutrean Types



Magdalenian Types

Subsistence

Much evidence supports the idea that modern humans exploited a wider variety of foodstuffs than those used by Neanderthals or archaic H. sapiens. Ultimately, this ability to exploit natural resources for food led to the development of agriculture, starting about 12,000 years ago, which allowed a sustained increase in population growth. However, by expanding their subsistence base in other ways, early anatomically modern humans may have established a pattern of increased population growth relative to other hominins at the very origins of our species, long before the introduction of agriculture.

One example is the use of aquatic resources, such as fish and shellfish. Although there is earlier evidence of the limited use of marine resources, including use by some Neanderthal populations, aquatic resources become a widespread and systematic part of human subsistence only in the Upper Paleolithic and Later Stone Age.

Symbolism, Burial, and Art

Burial

Perhaps the most striking difference between later modern humans and earlier hominins is the extent to which modern human archaeological assemblages incorporate clear evidence of symbolic behaviour. Whether found in caves or open air sites, Upper Paleolithic burials are composed of burial pits. More important perhaps, a number of Upper Paleolithic burials contain an elaborate array of grave goods, and multiple, carefully arranged bodies. Upper Paleolithic European burials often are covered in beads and bear other indications that the dead were buried in decorated garments representing hundreds or thousands of hours of time in their preparation. (Stringer & Gamble, 1993). Obviously, not every Upper Paleolithic burial is an elaborate affair complete with an abundance of finely made grave goods.

Art and Ornamental Objects

Unlike the equivocal engravings of Neanderthals, the artistic expression of Upper Paleolithic humans is astounding. Cave art and petroglyphs (rock carvings) occur not only in Europe but also in Africa and Australia. Ornamental objects like statues, beads, and pendants are also prevalent in the Upper Paleolithic.

These elaborate displays of human symbolic behaviour occur late in the archaeological record of modern humans, usually 40,000 years ago or later.

The earliest cave art known in Europe appeared about 32,000 years ago at Chauvet, France, and is complex in its technique and representation. Rock art discovered in Africa about 26,000 years ago at Apollo 11 cave in Namibia, and somewhat earlier than that in Australia, at places such as Carpenter's Gap, which may be 40,000 years old. The rock art of Australia, which spans thousands of years, provides a particularly rich record of human artistic expression.

The animals represented on cave walls in Chauvet were once interpreted as sympathetic magic to assist in hunting success. But when compared with animal remains at archaeological sites of the same period, these images suggest that people were mostly depicting animals they did not hunt. Perhaps the animals had some other symbolic or ritual importance for them.

Red ochre (iron oxide) and the color red were of great significance to modern humans. Evidence from one of the Lake Mungo burials in Australia indicates that the body may have been covered with red ochre. At the Qafzeh site, dating to about 92,000 years ago, seventyone red ochre pieces, including some that were flaked or marked in some way, were associated with remains of anatomically modern humans, and several stone artifacts were stained with red ochre, although there was no evidence that the bodies themselves were covered in ochre (Hovers et al., 2003). Erella Hovers and her colleagues suggest that the form and distribution of the red ochre pieces indicate they were deliberately mined from a variety of local sources.

Portable art and ornaments are also prevalent in modern human archaeological sites. The most famous are the so-called Venus figurines that represent various female figures, often interpreted as fertility totems. However, other figurines also exist, including many zoomorphic (animal) statuettes. All are small enough to be carried around in a pocket, although we do not know if they were. Pendants made from ivory and even from animal teeth, often from animals that Upper Paleolithic people did not eat, such as fox, are also found.

There are even examples of pendants made from human molars. And thousands of beads have been found at Upper Paleolithic sites. Some beads were found isolated or in batches, and others were found laying on bodies within burials suggesting the individuals were decorated before burial. Experimental work by Randall White suggests that most beads were attached to garments and took a few hours per bead to make. Thus, the Upper Paleolithic peoples invested a huge amount of time into making these grave items and personal ornaments, indicating that they had significant symbolic meaning and probably were in some way important for survival.

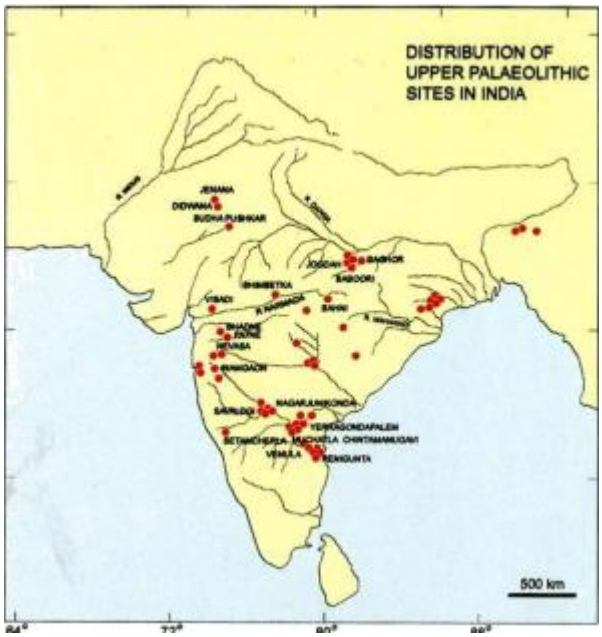
UPPER PALEOLITHIC CULTURE IN INDIA

Distribution

The Upper Palaeolithic cultures are distributed in several places in the States of Andhra Pradesh, Karnataka, Tamilnadu, Maharashtra, Madhya Pradesh, Bihar and Jharkhand in India.

A vast majority of the sites inhabited by the Upper Palaeolithic folk are **located in river banks in different Valleys like Krishna and Godavari river Valleys in Andhra Pradesh**, **Narmada and Banjer river Valleys in Madhya Pradesh**, **Krishna, Tungabhadra and Bhima river Valleys in Karnataka** and **Krishna river Valley in Maharashtra** and **Belan Valley in Uttar Pradesh**.

There are also cave sites like those situated at Billasurgam, Peddapuvudala Badegavi in Kurnool Andhra Pradesh and at Bhimbetka and Mori in Madhya Pradesh.



Environment

The Upper Palaeolithic lived in an environment which was not uniform. The climate was similar to that of the lower and middle paleolithic. The Northern part of India experienced cold climate and the Southern part experienced pluvial condition.

The Palaeontological and stratigraphic evidence reveals the presence of abundant flora and several large and small animals in the environment. The excavations at the cave sites in Kurnool District of

Andhra Pradesh yielded remains of carnivorous antelopes, gazelles, wild horses and wild elephants. Fragments of shells of ostrich eggs were found at the site of Patne in Jalgaon District in Maharashtra.

Chronology

There is no uniformity of opinion about the chronology of the Upper Palaeolithic culture in India.

i**. Sankalia** (1971-73) studied the stratigraphic, typological, and faunal evidence at Patne in Maharashtra and assessed that the Upper Palaeolithic culture existed between 10,400-17,500 before present.

ii. **De Terra and Paterson** (1935), Sen and Ghosh (1962) and Misra (1972) based their researchers on stratigraphic and typo-technological evidence in the Narmada Valley and concluded that the Upper Palaeolithic in Narmada Valley thrived during the closing phase of the Upper Pleistocene (40000-20000 years ago).

Materials

The materials used for making the Upper Palaeolithic tools include those of **stone and bone**. The lithic materials consisted of mainly quartzite of different grain varieties with olive green, light green as well as pale yellow and light shades.

Further, **jasper and chalcedony** were also used. **Stone tools included blades, burins, borers, scrapers, points, borers, flake- knives core flake tools** and so on. People used direct and indirect pressure flaking and blunting techniques for making backed blades.

The materials used for making bone tools were mostly **shafts of long bones**. People made bone tools like shouldered points barbs perforator, scups, chisels, scrapers, spatulates, and needle points by three processes; knocking of epiphyses and transverse cutting; longitudinal cutting; and lateral chipping and finishing.

Subsistence

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 here (Lepus cf. nigricollis), wild ox (Bos sp.), wild buffalo (Bubalus sp.), nilgai (Boselaphus tragocamelus), chinkara (Gazella gazella bennetti), blackbuck or Indian antelope (Antilope 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 gigantean), monitor lisard (Varanus dracaena), and a few bones of birds and dermal scutes (horny plate) of turtles.

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.

Cultural Diversity

The Upper Palaeolithic cultures in India show uniformities and diversities. For the sake of understanding these cultures may be divided into five zones:

Zone	Site	Tools
The Southern Zone	Andhra Pradesh	stone blades of burins and bone tools comparable to Magadalenian tradition of Central Europe
The South-Central zone	Karnataka	Abundant stone blades
The Western Peninsular zone	Maharashtra and Gujarat	blade and burin industries; and the earliest object of ornament namely ostrich egg shell fragments
The Central zone	Madhya Pradesh	stone blades and burins comparable to Aurignacian tradition
The North Eastern zone	Uttar Pradesh and Bihar	Blade and burins industries; and female figurine curved on bone

i) The Southern zone is widespread in the states of Andhra Pradesh. **M.L.K. Murthy** (1963-64) excavated four villages located on the right bank of Rallakaluva, a tributary of river Swarnamukhi, near Renigunta in Chittor District of Andhra Pradesh. Of the total number of tools excavated 13% were finished tools, 19 % were blades and the remaining 68% included burins, backed blades, awls, points, choppers, scrapers, flake, tools cores etc.

Murthy (1970) and his associates excavated a cave site called Muchatla Chintamanugavi and found a number of Upper Palaeolithic tools.

ii) The Western Peninsular zone spreads across Maharashtra and Gujarat. In 1939 **Todd** discovered blade and burin industry in clay deposit at Borivili and Kandvili sites near Bombay. Between 1971-73, **Sankalia** conducted excavations at Patne, South of Chalisgaon town in Jalgaon District and obtained classical Upper Palaeolithic tools including disc bead on an ostrich egg shell bearing an engraved criss-cross design and this is believed to be the earliest object of ornament.

iii) The Central zone extends across Madhya Pradesh. De. Terra and Paterson (1936) excavated the sites at Wainganga and Hoshangabad on the banks of river Narmada and found there the Upper Palaeolithic blade and burin industries. Sen and Ghosh describe and illustrated the Upper Palaeolithic (1962) factory sites near Jabalpur in the Narmada Valley.

Mishra (1973) excavated the rock shelter Bhimbetka and found burins made on thick blade flake tools and different types of scrapers.

iv) The North-Eastern zone runs across the southern parts of Uttar Pradesh and Bihar. G.R. Sharma (1972) dug a site in Belan Valley in Allahabad District of Uttar Pradesh and acquired upper Palaeolithic tools including a female figurine carved on bone.

Arts

1. In the Upper Palaeolithic period, we see a proliferation of artistic activities.
2. Subjects of early works confined to simple human figures, human activities, geometric designs, and symbols.
3. The first discovery of rock art we know of was done in 1867 by Archibald Carlyle, then First Assistant of the Archaeological Survey of India, in the sandstone hills of the **Mirzapur District**
4. In India, remnants of rock paintings have been found on the walls of caves situated in several districts of Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Telangana, Karnataka, Bihar.
5. 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).
6. 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 (Chanbal valley) in Rajasthan; and Patne in Maharashtra.
7. 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.
8. Some of the examples of sites early rock paintings are **Lakhudiyar in Uttarakhand, Kupgallu in Telangana, Piklihal and Tekkalkotta in Karnataka, Bhimbetka and Jogimara in Madhya Pradesh etc**.
9. Paintings found here can be divided into three categories: **Man, Animal, and Geometric symbols**.
10. Paintings are linear representations, in green and dark red, of huge animal figures, such as Bisons, Tigers, Elephants, Rhinos and Boars beside stick-like human figures.
11. Mostly they are filled with geometric patterns.

BHIMBETKA CAVES