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Human Evolution: The Old Stone Age

African Ancestors of Human Beings

The earth is over 4600 million years old. The evolution of its crust shows four stages. The fourth stage is called the quaternary. It is divided into two epochs called Pleistocene (ice age) and Holocene (post-ice age). The first epoch lasted from 2 million BC to 12,000 BC, the second began in about 12,000 BC and continues to this day. Though life began on the earth around 3500 million years ago, it was confined to plants and animals for many millennia. Humans appeared on the earth in pre-Pleistocene and early Pleistocene times. Several types of humans, called hominids, lived in southern and eastern Africa about 6 million years ago. The earliest humans were not very different from apes which first developed 30 million years ago. The birth of the creature called *Australopithecus* was the most momentous step in the evolution of the human line. *Australopithecus* is a term that originated in Latin and means southern ape. This species or family possessed both apelike and human characteristics, and originated roughly between 5.5 million and 1.5 million years ago. This creature was bipedal and pot-bellied, with a very small braincase measuring 400 cubic centimetres. The Australopithecus was marked by some elements found in other living beings called homos or human beings. Humans form part of the hominid line of evolution and Australopithecus was the last of the pre-human hominids. That is why this species is also called proto-human.

The first important *Homo* or human was *Homo habilis* found in eastern and southern Africa about 2–1.5 million years ago. *Homo habilis* means a handy or skilful man. This first real human broke stone into pieces and sharpened the latter to use as tools. Fractured pieces of stone have been found in the same

places as the bones of *Homo habilis*. This creature had a lightly built braincase which measured 500–700 cubic centimetres. The second important step saw the appearance of *Homo erectus* dated to 1.8 to 1.6 million years ago. *Homo erectus* means an erect or upright man. Its skull was strongly built, its braincase measuring 800–1200 cubic centimetres.

New types of stone tools have been found with *Homo erectus.* The hand axe is considered the most distinctive. It is believed that the *Homo erectus* people discovered how to make and use fire, and this kept them warm in cold climates and protected them from wild animals. In sharp contrast to the *Homo habilis*, the *Homo erectus* travelled long distances. Their remains have been found not only in Africa but also in China, South Asia, and Southeast Asia.

The third step marked the emergence of *Homo sapiens*, which means wise man. Our own species evolved from *Homo sapiens.* It resembles the Neanderthal man found in western Germany around 230,000–30,000 years ago. It had a short body and very narrow forehead, but its braincase measured about 1200 to 1800 cubic centimetres. The race probably evolved in Europe, but the Neanderthal remains have also been found in the Near East and elsewhere in the Old World.

The full-fledged modern man called *Homo sapiens sapiens* is traceable to about 115,000 years ago in southern Africa in the late Stone Age called the Upper Palaeolithic. Compared to other hominid species, it had a large forehead and thinner bones. Modern man originally made diverse stone tools for different functions, but it is not clear whether he was anatomically equipped to speak. Till recent times it was thought that language originated around 35,000 BC but now this date has been pushed back to 50,000 BC. However, the *Homo sapiens sapiens* had a large rounded braincase of about 1200–2000 cubic centimetres in volume. This enabled the modern human to function much more effectively and enabled him to modify the environment.

The Early Man in India

Only a few fossils relating to human evolution have been discovered in the subcontinent. None the less, some of the earliest skull fossils have been found in the Siwalik hills covering India and Pakistan. These skulls appear in the Potwar plateau, in Punjab province of Pakistan, which developed on sandstone. These skulls are called Ramapithecus and Sivapithecus. They seem to possess some hominid features though they represent apes. Ramapithecus was the female, but both belonged to the same group. A representative of this group found in Greece

is dated around 10 million years ago. This may be a ground for dating Ramapithecus and Sivapithecus, but these skulls are considered *c*. 2.2 million years old. In any case, there is nothing to show that this species spread in other parts of the subcontinent. It seems that further evolution from the Siwalik category of hominids came to a dead end in the subcontinent, and this species became extinct.

Nevertheless, an almost complete hominid skull was discovered in 1982 in the middle valley of the Narmada at Hathnora in MP. This fossilized skull was called *Homo erectus* or upright human, but is now anatomically recognized as archaic *Homo sapiens.*

So far the remains of *Homo sapiens* have not been found elsewhere in the subcontinent. However, the remains of a full-fledged modern man called *Homo sapiens sapiens* have been reported from Sri Lanka. The find place is called Fa Hien, and the fossils found nearby are 34,000 years old. They represent the hunting and foraging life which is attributed to the Late Pleistocene and Early Holocene periods in Sri Lanka. Fa Hien cave seems to be the earliest Upper Palaeolithic site in the Indian subcontinent. Its artefacts are about 31,000 years old. Modern humans are considered 34,000 years old. In any case it seems that the earliest modern humans arrived in India from the South because of an early coastal migration around 50,000 years ago from Africa. They did not come from the North.

Phases in the Palaeolithic Age

The Palaeolithic Age in India is divided into three phases in accordance with the type of stone tools used by the people and also according to the nature of climatic change. The first phase is called Early or Lower Palaeolithic, the second Middle Palaeolithic, and the third Upper Palaeolithic. Until further and adequate information is available about the Bori artefacts, the first phase may be placed broadly between 600,000 and 150,000 BC, the second between 150,000 and 35,000 BC, and the third between 35,000 and 10,000 BC. However, between 35,000 and 1500 BC, tools relating to both Middle and Upper Palaeolithic ages have been found in the Deccan Plateau.

The Lower Palaeolithic or the Early Old Stone Age covers the greater part of the ice age. The Early Old Stone Age may have begun in Africa around two million years ago, but in India it is not older than 600,000 years. This date is given to Bori in Maharashtra, and this site is considered to be the earliest Lower

Palaeolithic site. People use hand axes, cleavers, and choppers. The axes found in India are more or less similar to those of western Asia, Europe, and Africa. Stone tools were used largely for chopping, digging, and skinning. Early Old Stone Age sites have been found in the valley of river Son or Sohan in Punjab, now in Pakistan. Several sites have been found in Kashmir and the Thar desert. Lower Palaeolithic tools have also been found in the Belan valley in UP and in the desert area of Didwana in Rajasthan. Didwana yielded not only Lower Palaeolithic stone tools but also those of the Middle and Upper Palaeolithic ages. Chirki-Nevasa in Maharashtra has yielded as many as 2000 tools, and those have also been found at several places in the south. Nagarjunakonda in Andhra Pradesh is an important site, and the caves and rock shelters of Bhimbetka near Bhopal also show features of the Lower Palaeolithic age. The rock shelters may have served as seasonal camps for human beings. Hand axes have been found in a deposit of the time of the second Himalayan inter-glaciation, when the climate became less humid. The people of the Lower Stone Age seem to have principally been food gatherers. They took to small game hunting and lived also on fish and birds. The Early or Lower Stone Age in India may be associated with the people of the *Homo sapiens* group.

The Middle Palaeolithic industries were largely based upon flakes or small pieces of stone which have been found in different parts of India with regional variations. The principal tools comprise blades, points, borers, and scrapers, all made of flakes. The geographical horizon of the Middle Palaeolithic sites coincides roughly with that of the Lower Palaeolithic sites. The artefacts of this age are found at several places on the river Narmada, and also at several places, south of the Tungabhadra river. The Belan valley (UP), which lies at the foothills of the Vindhyas, is rich in stone tools and animal fossils including cattle and deer. These remains relate to both the Lower and Middle Stone ages.

In the Upper Palaeolithic phase we find 566 sites in India. This may be due to the general presence of grassland dotted with few trees. The climate was less humid, coinciding with the last phase of the ice age when the climate became comparatively warm. In the world context, it marks the appearance of new flint industries and men of the modern type (*Homo sapiens sapiens*). In India, we notice the use of blades and burins, which have been found in AP, Karnataka, Maharashtra, central MP, southern UP, Jharkhand and adjoining areas. Caves and rock shelters for use by human beings in the Upper Palaeolithic phase have been discovered at Bhimbetka, 45 km south of Bhopal. An Upper Palaeolithic assemblage, characterized by comparatively large flakes, blades, burins, and scrapers has also been found in the upper levels of the Gujarat sand dunes.

The Mesolithic Age: Hunters and Herders

The Upper Palaeolithic age came to an end with the end of the ice age around 10,000 BC. It may be noted that the Pleistocene marked by a succession of ice ages coincided with the Palaeolithic age in the world context and lasted from two million years ago to 12,000 BC, and when it ended, the climate became warm and rainy. Climatic changes brought about changes in fauna and flora. Humans took advantage of adequate rainfall, dense vegetation, and forest. Since then no major changes have appeared in climatic conditions.

In 9000 BC began an intermediate stage in Stone-Age culture, which is called the Mesolithic age. It intervened as a transitional phase between the Palaeolithic and the Neolithic or New Stone ages. The Mesolithic people lived on hunting, fishing, and food gathering; at a later stage they also domesticated animals. The first three occupations continued the Palaeolithic practice, whereas the last developed in the Neolithic culture. Thus the Mesolithic age marked a transitional phase in the mode of subsistence leading to animal husbandry.

The characteristic tools of the Mesolithic age are microliths or tiny tools. Mesolithic sites abound in Rajasthan, southern UP, central and eastern India, and also south of the river Krishna. Of them, Bagor in Rajasthan is very well excavated. It had a distinctive microlithic industry, and its inhabitants subsisted on hunting and pastoralism. The site remained occupied for 5000 years from the fifth millennium BC onwards. Adamgarh in MP and Bagor in Rajasthan provide the earliest evidence for the domestication of animals in the Indian part of the subcontinent; this could be around 5000 BC. The cultivation of plants around 7000–6000 BC is suggested in Rajasthan from a study of the deposits of Sambhar, the former salt lake.

So far, only a few finds of the Mesolithic age have been scientifically dated. The Mesolithic culture continued to be important roughly from 9000 to 4000 BC, and undoubtedly paved the way for the rise of the Neolithic culture.

Art in the Old Stone Age

The people of the Palaeolithic and Mesolithic ages practised painting. Prehistoric art appears at several places, but Bhimbetka in MP is a striking site. Situated in the Vindhyan range, 45 km south of Bhopal, it has over 500 painted rock shelters distributed in an area of 10 sq. km. At Bhimbetka, the rock paintings extend from the Upper Palaeolithic to the Mesolithic age and in some series even up to

recent times. However, a substantial number of rock shelters are associated with the Mesolithic occupation. Many birds, animals, and human beings are painted, and obviously most of the birds and animals that figure in the paintings were hunted for subsistence. Perching birds that live on grain do not figure in the earliest group of paintings. These paintings evidently belong to the hunting/gathering economy.

Why did the Upper Palaeolithic people practise art? It is argued that they did this for the sake of art. This would, however, suggest too much sophistication at a very early stage in human history. It is also said that they took to art and ritual to overcome social conflict. This may apply to a complex social structure which suffers from sharp social differentiation, which hardly existed in the Upper Palaeolithic society. In all probability, people depicted various wild animals to ensure control over them, for hunting was their principal source of livelihood. Although we find some human male and female figures, animals of various types figure frequently. These animal painting rituals were realistic in the context of hunting. In the Harappan context, animal paintings become conventional. Animals continue to be depicted on the Harappan seals although the people largely lived on the food they grew.

Earliest Human Organization

How were humans organized socially? It is not clear whether they lived in a band or pre-band society. Bands were formed for hunting, and the maximum number of persons could be around 25. There could have been a form of alliance between various bands for mutual aid, and the number in such a large group would not have exceeded around 500. Rituals could have been conducted to ratify such an alliance. Eventually the band turned into an exogamous group called clan in the Neolithic phase. Members of a clan would always marry outside the clan, but bands established mutual aid relationships. In the Upper Palaeolithic phase, members of a band shared the fruits of hunting and food gathering in a society based on these occupations. Formation of bands and groups of bands may have been facilitated by the use of language which seems to have originated in the Upper Palaeolithic phase, and communication may have played an important role in keeping the people together.

Chronology

(BP)	
4600 m years	Age of the Earth.
3500 m years	Birth of life on earth.
30 m years	Appearance of the earliest humans (who were not very different from apes) on earth.
6 m years	Appearance of hominids on earth (southern and eastern Africa).
5.5–1.5 m years	Appearance of *Australopithecus* on earth.
2.2 m years	Skulls of Ramapithecus and Sivapithecus in the Potwar plateau in Pakistani Punjab in the Siwalik hill area.
2 m years	Lower Palaeolithic age in Africa.
2–1.5 m years	Appearance of *Homo habilis* on earth (eastern and southern Africa).
1.8–1.6 m years	Appearance of *Homo erectus* on earth. Earliest stone hand axe. Fire discovered.
230,000–30,000 m years	Appearance of *Homo sapiens* on earth.
115,000 years	Appearance of *Homo sapiens sapiens* (modern man) in southern Africa.
(BC)	
2 m–12,000	Pleistocene (ice age).
700,000	The skull of archaic *Homo sapiens* from the Narmada valley.
34,000	Fossils of *Homo sapiens sapiens* in Sri Lanka.
600,000–150,000	Lower Palaeolithic age in India.
150,000–35,000	Middle Palaeolithic age in India.
50,000	Origin of language.
35,000–10,000	Upper Palaeolithic age in India.
9000–4000	Mesolithic age culture in India.
12000 to the present	Holocene (post-ice age).
7000–6000	Start of plant cultivation in India.
5000	Earliest evidence of the domestication of animals in India.