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Early Man and His Environment in Central India

V.N. Misra

Deccan College Post-Graduate & Research Institute, Pune

Introduction

Central India can be defined as the area delimited by the Indo-Gangetic alluvial plains in the north, by the Aravalli and Sahyadri mountains in the west, by the Tapti river in the south, and by the Eastern Ghats and Chota Nagpur plateau in the east. It is primarily a hilly and rocky land with hill ranges of varying sizes and elevations, rocky plateaus, and occasional deep gorges. This geographical diversity is enriched by alluvial plains of varying dimensions along numerous streams. The major mountain range is the Vindhya which runs in a northeast-southwest direction. Its northeast portion, known as the Kaimurs, together with the low rocky plateau to its north, abuts against the Gangetic alluvium. The second mountain range of significance is formed by the Satpuras which run roughly in an east-west direction between the Narmada and Tapti rivers. There are five large rivers - the Chambal, Son, Mahanadi, Narmada and Tapti - with numerous tributaries and sub-tributaries. Three of them - the Narmada, Son and Mahanadi - rise from the Amarkantak plateau of the Satpuras but flow in different directions, the Narmada to the west, the Son to the north, and the Mahanadi to the east. The region receives ample rainfall, mainly during the monsoon months of July-September, which steadily increases from about 800 mm in the west to about 2000 mm in the east.

Environment and Society

Because of adequate rainfall and rich soils much of the land was covered by dense natural vegetation which grades from dry deciduous woodland in the west to sub-humid forest in the east. These forests harbour a large variety of trees, plants and creepers many of which have edible leaves, flowers, fruits, seeds, roots and tubers. They and the numerous perennial and seasonal streams abound in a rich variety of terrestrial, avian and aquatic fauna which is an abundant source of animal food. With an assured and abundant supply of food and water, Central India formed an ideal habitat for hunter-gatherers. It is, therefore, no surprise that this bountiful environment has attracted human societies, particularly those living by hunting and gathering, from the earliest stage of human colonisation to the present. Abundant archaeological evidence of these societies is found in this region. Unfortunately, in recent decades, because of the pressure of growing human population and slackness in the enforcement of environment protection laws, both wild plant and animal resources have suffered considerable destruction.

Because of its hilly and forested environment, Central India was not particularly conducive to agriculture-based economy and hence, until recently, it did not invite colonisation by farmers and urban people on a large scale. As a result, large tracts of forest, with their wild plant and animal food resources, have still been preserved. It is, therefore, no surprise that this region has the largest concentration of aboriginal people who continue to subsist on a combination of most primitive agriculture and hunting-gathering.

Central India is also of special culture-historical interest because only here three of the sub-continent's major cultural streams - Indo-Aryan, Dravidian and Austro-Asiatic - with their distinctive languages and associated cultural traditions, are found. The Indo-Aryan peoples are represented by the speakers of Hindi, Gujarati, Marathi and Oriya languages, the Dravidians by the speakers of Gondi and Kurukh languages, and the Austro-Asiatic by the speakers of Korku, Munda, Santhali, Savra, Gadaba, Bondo and Didayi languages.

Antiquity of Man

Fossil evidence, painstakingly collected during last 140 years, has conclusively proved Charles Darwin's hypothesis that man evolved in Africa where his closest biological relatives - Chimpanzee and Gorilla - are still found. The antiquity of man, as a bipedal primate, goes back in Africa to around five million years. The earliest hominids - several species of the genus Australopithecine - A. ramidus, A. afarensis, A. africanus, and A. robustus, as also the oldest species of the genus Homo, H. habilis, were confined to Africa alone. It is only Homo erectus who migrated out of Africa, into Europe and Asia, somewhere between 2 and 1.5 million years ago. His fossils have been found in Java and China during this period. He could have reached these remote regions only by traversing the Indian sub-continent. Unfortunately, Late Pliocene and Early Pleistocene geological deposits are preserved only in the Siwalik Hills. But since the Siwalik region had become considerably cold by this time, it was unsuitable for habitation by early hominids. For this reason, we find evidence of early hominid presence only in peninsular India and that too from late Middle Pleistocene onwards.

Lower Palaeolithic: Acheulian Culture

In Central India, as elsewhere in the country, the oldest evidence of human occupation belongs to the Acheulian Culture of the Lower Palaeolithic period. It consists almost entirely of stone tools, and occasionally of animal fossils associated with them. Acheulian sites occur in three contrasting though not unrelated contexts. These are: (a) open-air stations, (b) caves and rock shelters, and (c) alluvial deposits.

Open-Air Sites

Open-air sites are known mainly from Raisen, Bhopal and Sehore districts of Madhya Pradesh where they have a high concentration and cover large areas; their scarcity in other districts is probably due to inadequate exploration. In Raisen district, for

example, Jerome Jacobson has located as many as 94 sites in an area of 175 sq km. The sites occur on rocky ground either completely exposed or buried under a thin deposit of black soil. They are usually located in thick deciduous forest in the vicinity of seasonal rivulets and 20 to 50 km away from perennial streams. Occupation at such sites must have been restricted to a few months of monsoon and early winter when water was available. The artefact clusters range in extent from 1500 to 4500 sq. m and their density varies from 1 to 7 pieces per sq. m. The artefacts are made of quartzite and clay stone which were abundantly available in the nearby Vindhyan Hills. They are remarkably fresh, showing minimal post-depositional dislocation.

Artefacts at these sites show a very high (over 70) percentage of shaped tools. This, coupled with the absence of large heavy cores, shows that large flakes and tools made from them were manufactured at or near the source of raw material rather than at the site itself. Bifaces, scrapers, knives and choppers are the main tool categories. The high proportion of broken bifaces indicates their use at the site. Among bifaces, cleavers are nine times more numerous than handaxes. Both Levallois and discoid core techniques are represented in cores and flakes. These tool assemblages are very similar to those of Bhimbetka rock shelters. Similar but even larger open-air stations occur at Barkhera a few kilometres away from Bhimbetka.

Cave Sites

Acheulian occupation in caves and rock shelters is represented at Bhimbetka, about 80 km west of the Raisen open-air sites. Over a thousand rock shelters are located on Bhimbetka and nearby hills in a densely wooded environment. In addition to a seasonal stream, there are several perennial springs at Bhimbetka and hence Acheulian occupation here could have been of a longer duration. Excavation in one of the shelters - IIIF-23 - produced a deposit of 3.80 m, comprising eight layers. The bottom three layers (6-8), accounting for a thickness of 2.50 m, produced Acheulian material. Layers 5 and 4 produced Middle and Upper Palaeolithic materials, respectively, and Layers 1-3, Mesolithic. At the moment this is the only site in India that has produced a continuous cultural sequence from the Late Acheulian to Mesolithic in an undisturbed context.

Nearly 19,000 artefacts were recovered from the Acheulian deposit. They are all made of fine-grained quartzite which was abundantly available around the shelter. A dark brown hard quartzite was used for making bifaces and an yellowish soft one for flake tools. The high proportion of manufacturing debris which includes, besides flakes and chips, massive cores weighing up to 20 kg as well as small carefully prepared Levallois and discoid cores, indicates that tools were made within the shelter. The proportion of bifaces is very high, and cleavers are twice as numerous as handaxes. All the cleavers and most of the handaxes are made on flakes, and among the cleavers all classic types are represented. The main component of the Acheulian industry consists of flake tools which include a large variety of scrapers, notches, truncated flakes, denticulates and knives. Floors paved with stone blocks and slabs were encountered at

several levels. The presence of used and broken tools as well as manufacturing debris shows that shelters were used for making tools as well as for using them for various activities. Unfortunately, the complete absence of organic materials and hearths restricts our knowledge of these activities. The close technological and typological similarity between artefacts from shelters and open-air sites suggests that both locations were used by the same people perhaps during different seasons.

River Valley Sites

The third type of Acheulian contexts, namely sites buried in the alluvium, are most common and known from numerous river valleys. Although the artefacts occurring in alluvial deposits are often derived from different spatial and temporal contexts and are therefore of limited value for reconstructing past adaptive patterns, their presence in well-defined lithounits, sometimes in association with fossil fauna, is of considerable value in building a relative chronology of stone tool industries and reconstructing contemporary environments. We shall briefly summarize the data from two better-studied river valleys, namely Narmada and Son.

Narmada Valley

In its middle portion, between Narsinghpur and Hoshangabad, the Narmada flows through an ancient trough and has preserved more than 150 m thick alluvium comprising layers of gravel, sand, silt and clay. Unfortunately, only about 30 m of it is exposed by erosion. This exposed alluvium was divided by de Terra and Paterson into three lithounits, namely (1) Lower Group, (2) Upper Group, and (3) Cotton Soil Group. The Lower Group comprises a basal conglomerate and a pink concretionary clay. The conglomerate contains Early Acheulian artefacts. The Upper Group, separated from the Lower Group by a major disconformity, consists of a gravel and sand unit at the base and a pink clay on top. This group yields Late Acheulian tools in the basal unit and Middle Palaeolithic to Upper Palaeolithic tools in the upper unit. Both groups, especially their basal units, are rich in fossil fauna. The Lower Group contains Sus namadicus, Bos namadicus, Elephas hysudricus, Equus namadicus, Hexaprotodon namadicus, Stegodon insignis and Stegodon ganesa that are considered to be of Middle Pleistocene age. The Upper Group contains Equus namadicus, Bos namadicus, Hexaprotodon palaeindicus, Elephas hysudricus, Stegodon insignis, Stegodon ganesa and Cervus sp., crocodile and turtle. These fossils suggest that the region enjoyed good rainfall and the river carried water perennially, had plenty of waterpools and supported forest as well as grassland vegetation along its banks. The hypothesis of higher rainfall than during the subsequent periods is also supported by the deep red weathering of the Acheulian bearing sediments in the Bhimbetka rock shelters.

The Lower Group has yielded a hominid calvarium at Hathnora near Hoshangabad. This fossil, the only Pleistocene hominid fossil to be found in the subcontinent, belongs to an evolved Homo erectus or archaic Homo sapiens and helps confirm the Late Middle Pleistocene age of the Lower Group and associated Early Acheulian industry.

Son Valley

In the middle Son valley, some 400 km to the north of the Narmada, more than 300 sites of various stone ages have been located in the Sidhi district by researchers from the universities of Allahabad and California, Berkeley. Four major Quaternary formations, named Sihawal, Patpara, Baghor and Khetaunhi, have been identified in the alluvium. The Sihawal Formation consists of a basal gravel and an upper clay and it has been dated to the Middle Pleistocene, and Patpara and Baghor to the Upper Pleistocene. The gravels of the Sihawal Formation are believed to have been deposited in a semiarid climate with intermittent erratic rainfall and sparse to absent plant cover while the clay unit represents a humid climate and dense vegetation. This Formation is unconformably overlain by the Patpara Formation that is composed of coarse to medium sands and pebbles covered in places by dark red-brown mottled clay. These deposits are indicative of relatively moist conditions. The coarse member of the Sihawal Formation produced a Late Acheulian assemblage in many places, and the Patpara Formation has produced a Middle Palaeolithic industry.

Belan Valley

North of the Son, a number of small rivers rising in the Vindhya hills flow north to join the Yamuna or Ganga. The alluvial deposits of one of them, the Belan, a tributary of the Tons, are exceptionally rich in vertebrate fossils and Palaeolithic industries. A complete sequence of Palaeolithic and Mesolithic industries in association with fossil fauna has been found in this valley but unfortunately full details are not yet published.

Middle Palaeolithic

Middle Palaeolithic sites are not as plentiful as those of the Lower Palaeolithic. The evidence of this phase also is found in open-air sites, rock shelters and river deposits. Middle Palaeolithic tools tend to be smaller and made mainly on flakes. Bifaces are either completely absent or rare; instead the tools mainly comprise a variety of scrapers, points, borers and knives, besides flakes and blades which were also used as tools. At places where fine-grained rocks like chert and jasper were available, they were used in place of quartzite for making tools. At Bhimbetka, however, they continued to be made of quartzite. In the river deposits the tools occur in sandy gravels overlying the Acheulian bearing coarse sediments and in association with Late Pleistocene fauna. One of the best examples of land use by Middle Palaeolithic people comes from the site of Samnapur in Narsinghpur district. Here a Middle Palaeolithic industry is found buried in a highly localised rubble deposit in the silt of the topmost terrace of the Narmada. The site abuts a cherty quartzite hillock from which cobbles were washed down by rain water. The Middle Palaeolithic people chose the location for their encampment because it was too high to be regularly flooded by the Narmada. They utilized the cobbles of the rubble deposit for making their tools. During exceptionally high floods the site was buried under alluvium. It has been exposed by erosion due to rainwater and the tools are slowly being washed down in erosion gullies. The assemblage consists mainly of flakes and scrapers

and they are in a remarkably fresh condition, having been preserved in situ since they were manufactured and used.

Upper Palaeolithic

The Upper Palaeolithic period belongs to the later part of the Upper Pleistocene when the climate was dry world-wide. Probably because of this reason only a few sites of this period have been found. The widespread presence of ostrich, represented by the discovery of its egg shells at many sites, supports the theory of semi-arid climate during this period. The sites of this period too are located in open air, rock shelters and river sediments. The technology of this period predominantly consists of blades and tools made on blades like scrapers and burins. At Bhimbetka the tools were made of quartzite but elsewhere as in the Dindori region in the upper Narmada valley and in the Son valley they were made of fine-grained chert. Artistic activity, represented by incised ostrich egg shells and beads made on such shells, began during this period. An important discovery of this period is a possible shrine discovered at the site of Baghor in Sidhi district. It consists of a squarish stone-paved platform, buried under a living Upper Palaeolithic floor, with a conical sandstone slab, having multiple concentric rings, placed in the centre of it. Such stones placed on stone platforms are worshipped today by the local Baiga tribal people as representation of the mother goddess Kalka. If this ethnographic analogy is valid, then the shrine represents a remarkable continuity of mother goddess worship in the region over last nine thousand years or so.

Mesolithic

The Mesolithic period which started at the beginning of the Holocene is represented by remarkably rich archaeological evidence. The number of sites of this period is much larger than the sites of all the phases of the Palaeolithic put together. For example, in the Bhimbetka region, while the Palaeolithic remains are found in only a few rock shelters, Mesolithic occupation is represented in almost all of the over one thousand shelters. Also, the first human colonisation of the Ganga plains took place during this period, by migration of stone age hunter-gatherers from the adjoining Vindhya Hills, certainly due to population pressure. The increase in the number of sites is noted in almost all parts of the country. This dramatic increase in the number of sites and colonisation of virgin areas certainly represents a considerable increase in human population. This increase can be explained by three factors. First, palynological evidence from salt lakes and weathering of sand dunes in Rajasthan, and the formation of black soil deposits in the rock shelters in Central India definitely indicate a significant rise in rainfall. This would have led to a significant increase in plant and animal food resources. Secondly, the introduction of microlithic technology and use of bow and arrow must have enhanced the efficiency of hunting and increased the food yield from hunting. Thirdly, the introduction of food processing equipment like pounding and grinding stones and the regular use of fire for cooking must have increased the nutritional yield of plant and animal foods.

The technology of the Mesolithic period is based largely on microliths which were made from mass-produced tiny blades and used as tips and barbs of arrowheads and spearheads and for making sickles, daggers, etc. New items of technology like perforated stones, which were probably used as weights of digging sticks or as club heads, hammers, and grinding stones were introduced. The dead were regularly buried in graves and they were provided with grave offerings. This, together with thick habitation deposits, shows that the tendency for nomadism was declining and human groups were beginning to stay at one place either permanently or for long periods.

Another significant feature of the Mesolithic period is the abundance of art activity, mainly painting. Thousands of rock shelters in the Vindhyan sandstone region of Central India contain paintings on their walls and ceilings. These paintings constitute an important source of our knowledge about the aesthetic expression of Mesolithic people, their technology, subsistence, social life, religion and ritual, and contemporary animal environment. The paintings are made in red, white and green colours and usually depict wild animals in a remarkably realistic and dynamic manner and their hunting by single individuals or groups of them. There are also scenes of artificial dwellings, plant food collecting, trapping of birds and animals, fishing, and social and religious activities. Radiocarbon dates for Mesolithic sites range from about ten thousand B.C. to about the beginning of the Christian era.

Beginnings and Consequences of Agriculture

All through the Palaeolithic and Mesolithic periods people had lived by hunting and gathering only. Agriculture was introduced in Central India towards the end of the third millennium B.C. At present evidence for settled farming way of life comes mainly from sites in Malwa, like Nagda, Dhangwada and Kayatha in Ujjain district, Navdatoli in West Nimar district, Khapar Kheda in Dhar district, and Eran in Sagar district. The farmers of these settlements cultivated wheat, rice, urd, moong, peas, lentil and other crops, and domesticated cattle, buffalo, sheep and goat. They cooked their food on chulhas similar to those in use in the villages today. They, however, continued to hunt wild animals and practise fishing and fowling though on a reduced scale. They lived in simple wattle-and-daub houses. Their technology consisted of stone blades and copper tools like flat axes, chisels, nails, and fish hooks. Their ornaments comprise bangles and rings of copper and beads of semi-precious stones, copper and terracotta. The most distinctive feature of these village cultures is their attractive pottery which is largely wheel made and painted usually in black with geometric and occasionally naturalistic designs.

With the introduction of agriculture people started becoming permanently settled in villages. The hunter-gatherers slowly adopted agriculture and settled way of life but some of them have continued a mixed economy of farming, animal husbandry, hunting and gathering to this day. They are the various tribal communities of Central India like the Bhils, Gonds, Baigas, Korwas, Santhals and Mundas. Others like the Pardhis and Kuchbandhias were too conservative to adopt agriculture and have

persisted with the ancient hunting-gathering way of life to this day. As the resources for hunting and gathering have declined because of rapid deforestation and hunting for pleasure, these people had to take recourse to other avenues like making and selling craft items to farmers, petty trading and even to crime to ensure their survival in a changed physical and social environment. The diverse and complex society of Central India, as indeed of other parts of the country, can be understood only in the light of developments during the long prehistoric period.